2013 LTER IMC Annual Meeting Report

Meeting page: http://im.lternet.edu/node/1159

The annual LTER Information Managers Meeting was held July 24-25, 2013 in Fairbanks, Alaska at the University of Fairbanks, Alaska. In attendance at the meeting were representatives from 24 sites, and 3 representatives from the network office (LNO). In addition to a full 1.5-day schedule for the IMC, included in the agenda were two fields trips, an optional (23rd) tour of the Alaska Satellite Facility and an afternoon field trip (25th) to the Permafrost Tunnel Research Facility.

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Participants

Dan Bahauddin (**CDR**), Susan Barrott (**CDR**), Sven Bohm (**KBS**), Emery Boose (**HFR**), James Brunt (**LNO**), John Chamblee (**CWT**), James Conners (**PAL**), Jason Downing (**BNZ**), M. Gastil-Buhl (**MCR**), Scott Gordon (**CCE**), Corinna Gries (**NTL**), Don Henshaw (**AND**), Hope Humphries (**NWT**), Nicole Kaplan (**SGS**), Jim Laundre (**ARC**), Mary Martin (**HBR**), Eda C. Meléndez-Colom (**LUQ**), Margaret O'Brien (**SBC**), John Porter (**VCR**), Linda Powell (**FCE**), Ken Ramsey (**JRN**), Ryan Raub (**CAP**), Suzanne Remillard (**AND**), Dave Richardson (**VCR**), Inigo San Gil (**MCM**), Mark Servilla (**LNO**), Wade Sheldon (**GCE**), Aaron Stephenson (**NTL**), Philip Tarrant (**CAP**), Theresa Valentine (**AND**), John Vande Castle (**LNO**), Kristin Vanderbilt (**SEV**), Jonathan Walsh (**BES**), Yang Xia (**LNO**)

Agenda

Tuesday, July 23 (travel day)

- All Day: Arrivals
- Optional Self-organized Working Group Meetings

  Location: MURIE RM 103
  1000: Controlled Vocabulary (J. Porter)
  1300: Dataset Design (M. O'Brien)
  1500: NSF ABI (C. Gries)

- **1630**: Alaska Satellite Facility Tour (optional)
- **1930**: Mixer/Dinner @ Silver Gulch Brewery in Fox, Alaska

Wednesday, July 24 (IARC, Room 401)

- **0730**: Breakfast (provided)
- **0800**: Agenda review, welcome, additional nominations for leadership roles
- **0900**: Plenary talks (up to 15min each)
    - DEIMS (K. Vanderbilt)
    - Metabase / Matlab (W. Sheldon, J. Porter)
    - Sensor and Sensor Data Management Best Practices (D. Henshaw)

- **1000**: Break
    - Controlled Vocabulary (J. Porter)
    - PASTA / DataONE latest news (M. Servilla)
- **1100**: Metrics reports – presentation/discussion of mock-ups (P. Tarrant)

- **1200**: Lunch
- **1300**: Breakouts to discuss/outline anticipated issues related to network data cataloging. All groups will consider several major topics. (Moderators: J. Porter, P. Tarrant, D. Bahauddin, M. O'Brien)
    - Communications and planning ahead, potential benefits
    - Data catalog portal(s)
    - Best practices for PASTA and/or data package design

- **1600**: Breakouts report back
- **1700**: IMC adjourns
- **1730**: Distill material from breakout discussions (IMExec & volunteers)
- **DINNER** (on your own)
- **2000**: Poster and demo sessions

Thursday, July 25 (IARC, Room 401)

- **0730**: Breakfast (provided)
- **0800**: Business meeting
    - Elections: Co-chair (1), NISAC (1), IMEXEC (1), EB-rep (1)
    - 2014 Meeting (C. Gries)
    - Preparations for NSF discussion

- **0900**: Discussion with Saran Twombly (NSF)
- **1000**: Report back from IMExec: Action items from Wednesday's discussions
- **1030**: Break
- **1100**: Workshops with no report-out, as requested by IMC *Self-organized Working Groups*
    - Working Group A: GeoNIS (T. Valentine)
    - Working Group B: Sensor Management Best Practices (D. Henshaw)
    - Working Group C: Metabase (M. O'Brien)
    - Working Group D: DEIMS (I. San Gil)

- **1230**: Lunch and continue working groups
- **0230**: Field trip to permafrost tunnel
- **0600**: Dinner (on your own)
- **Evening**: Free for self-organized working group meetings

Friday, July 26 (optional half-day, MURIE Room 103)

- 0800: IM System Guidelines (K. Vanderbilt)
- 1000: Workflows

Working Group Results

Controlled vocabulary (Organizer: J. Porter)

Determined next steps for the controlled vocabulary and expanding uses for the existing controlled vocabulary. The working group will also provide a forum for sites interested in better incorporating the Controlled Vocabulary with their site information systems.

LTER guidelines for Site IM Systems (Organizer: K. Vanderbilt)

Started process of re-framing the old 'review criteria' to be guidelines we set for ourselves.

EML inter working group BP - initial organization

Data set design (Organizer: M. O'Brien)

Membership: Margaret O'Brien (chair), Theresa Valentine, Jonathan Walsh, Dan Bahauddin, Linda Powell, Eda Melendez-Colom

This group started at the IMC meeting in Fairbanks, and has met twice since then over VTC. The group began by examining data package design patterns at their own sites, and outlining how each might be accommodated in PASTA as it is currently evolving. Our discussions has highlighted practices at sites that may be difficult to reconcile, and so we have constructed a spreadsheet of sample data types which may pose problems with the PASTA system (as the back-end of the Network catalog). This group intends to be able to make technical recommendations for data set design. We anticipate though, that there are still some areas where policies are unclear, and we will not be able to propose a data package design solution until we have a clear policy and fully understand the PASTA implementation.

GeoNIS (Organizer: T. Valentine)

Notes from GeoNIS Working Group meeting, July 25th, 2013

Present: Theresa Valentine, Dave Richardson, Mark Servilla, James Brunt, John Van de Castle, Linda Powell, Jonathan Walsh, Jamie Hollingsworth, Ryan Raub, Hope Humphries, Jack Peterson (VTC), Dave Richardson Might have been others as well..

Summary: The GeoNIS project (http://geonis.lternet.edu/) interface will provide links to the Rest webservices for LTER sites.   Information about the PASTA data packages are included. The programming was supported by ARRA funds from the Network Office. Currently there are two modes of operation, testing and production. The production mode has not been activated to automatically check for PASTA datasets with spatialraster and spatialvector tags in the EML.

The goal would be to create a geoprocessing service that PASTA would be able to use to initiate the test mode when someone wants to check and see if their data will make it through PASTA and the GeoNIS workflows. We would need additional funds for programming this. (approx. $4000).

The GeoNIS team needs to move the service to production, and that should happen this fall/ winter.

Here are detailed notes of the discussion at the meeting:

Theresa Valentine gave a detailed demo of the GeoNIS workflow for checking the contents of EML with spatial raster or spatial vector tags, and providing web mapping services for each site's spatial data.

- The workflow finds EML docs with spatial raster or vector tags, unzips them and brings them into an SDE database on the server. Quality checks are done. From the SDE DB, the data are loaded into an mxd, and get refreshed as a web service. The submitter of the data is sent a link to a report if there is an error that stops the workflow.
- The programmers are working on displaying titles along with entity names for clarity.
- A data package can fail at various places along the set of steps.
- Tabs in the GeoNIS spatial data report: View Map, Map Service, Image Service.
    - There are different web mapping services for vector and raster data.
    - Can display in Arc, Google Earth, etc.
    - Can save, share, drop into a website.
- If a spatial data package is now in PASTA, need to do a new version to correct any possible errors detected by the GeoNIS workflow.

Mark Servilla asked whether this could be integrated with PASTA. Do quality checks as are currently done for tabular data. Bring EML in, download data, and make a call to the GeoNIS system.

Theresa: need to trigger the workflow from PASTA to make this happen. The constraint is that the programmers are only available until the end of August. GeoNIS now scans every package for packet IDs it hasn't seen before.

Mark: Use event notification in PASTA to notify GeoNIS when a new package comes in.

Jack Peterson and Mark could get together to make this happen.

Jack: What kinds of errors would stop the data from going into PASTA? Put something on the front end of PASTA?

Mark: Could convert to RESTful web service.

Theresa:
- Further work to do on querying the image service.
- Esri has an open source product, Geoportal Server, which has a configuration set up for EML - can submit EML docs to Geoportal. Can discover and access resources registered with the geoportal, make your own map, drag and drop into ArcGIS, do searches, access web services. We could customize this to something we could use.
- GeoNIS is only retaining the most recent version of the data in the web services. They will always have the most updated data (might have to clear you cache first).
- The toolboxes are done through Python and web service presentation is Javascript. The web services run on ArcServer (Esri is going with Python and Javascript).

Dave Richardson: How serious are the data problems that break the workflow?

Theresa: Places in the workflow where things break: unzipping to SDE and loading to mxd. Need to decide which checks the data have to pass.

Jack: Some things that break the scripts are script problems and some are data problems. Can add flexibility to the scripts to deal with certain kinds of errors - "edge cases". Everyone is encouraged to put their spatial data into the staging area as soon as possible to help debugging/error-finding process.

Theresa: Also, this helps people clean up their data, e.g., attribute names that get truncated, spaces in names, etc.

Jack: Send along requests for particular features anyone would like to see in the reports.

Landsat data update:
- LNO has the metadata for the original archive.
- GeoNIS won't bring these data in; have links through some kind of image portal?
- There are data sets for each site - total is in the thousands.

- Andrews is doing atmospheric correction of the raw data - processing is almost complete and then will be submitted to PASTA.

Mark: Have previews of spatial data portal page. Need to know what the link is going to be at the entity level.

Theresa: Note: figure out how to tie web service preview image back into the metadata in PASTA portal.

Problem with having the same file name in the same scope, e.g., two files called 'roads'. May have a data set with good spatial data that fails the checks only because of name duplication, but could still be loaded into PASTA.

Metabase users group (Organizer: M. O'Brien)

Membership: Margaret O'Brien (chair), M. Gastil-Buhl, Mary Martin, Wade Sheldon, John Chamblee

This group met at the IMC annual meeting. The SBC and MCR groups reported on progress populating the model and on export code written by a programmer hired with supplement funds. CWT had already successfully adopted the model (as originally configured by GCE). Suzanne Remillard expressed an interest in the model since the Andrews Forest is anticipating migrating away from their current software which will soon be unsupported. Since the meeting, SBC and MCR have completed their population of the model and the EML-export system, and additionally, the proof-of-concept code for maintenance via web services. SBC and MCR have since sent their adapted model to Mary Martin at HBR, and the model has been installed there and it's population initiated.

DEIMS (Organizer: I. San Gil)

Current status of DEIMS project
- Automated PASTA submission.
- Automated DOI retrieval.
- Automated version management.
- Cool metadata forms that make use of all tricks:
  1. suggest LTER units (on autocomplete)
  2. pre-populate attribute information
  3. Preview the data on overlay (modal pop-up) to facilitate filling forms
- Faceted search for metadata -- don't settle for the initial, bloated, result set (if any)

- New *data* queries!
- Filter data dynamically before downloading the CSV:
    1. dynamically create filters for data based on the columns : date ranges, numeric, code-sets!
    2. ability to subset your data for download, not just the whole set!
- Attention to the User Interface: Adaptive technology
- Even the slideshow is adaptive: Iphone, tablets, large screens - we adapt harmoniously
- Solr !
- yes, we do EML..

NSF ABI funding to support PASTA readiness for long term community data sets (Organizer: C. Gries)

We (NTL, SEV, NCEAS) recently received NSF funding to develop a long-term community change analysis toolkit. A large part of the funding is dedicated to help sites get their long term community data sets PASTA ready. I.e. we have a person at NTL who can help with data cleaning, EML generation and uploading into PASTA. The questions are: who is interested in collaborating; how should we best go about this, i.e. what approach would help most. It would be great to get some feedback.

Sensor management Best Practices (D. Henshaw)

Workflows

For those who missed the Workflows Workshop, to learn how to write a workflow, subscribe to an event, re-submit the workflow product, or perhaps just where to begin or find resources. Overlaps with EML Best Practice in how to cite provenance and cite workflow software in the product dataset's EML. Possibly begin planning of next Workflow Workshop?

Distributed File Systems (R. Raub)

I'm willing to lead a discussion of experiences and/or learning about Distributed File Systems and how they can be used to help manage data (both large and small). There are a number of different vendors/systems and approaches. You can leverage these systems to automate a lot of different management tasks (like backups, versioning, scaling, allocations, redundancy, integrity checks, etc)

Business Meeting

Elections

At the 2013 IMC Annual Meeting, the following positions were available: 1 IMC Co-Chair, 1 EB Representative, 1 NISAC and 2 IMExec. Below are the statements by the nominated candidates and the election results.

Candidate Statements

Position: **IMC Co-Chair**

Philip Tarrant

I am pleased to accept the nomination to serve as co-chair for the IMC. I have been part of the LTER IM community since joining CAP LTER in January 2010, and I currently serve on the IM Exec (since 2012).

In my view the early introduction of PASTA, combined with changing expectations from NSF, means that the Information Managers are having to accommodate significant changes in the way in which we serve our colleagues and the wider ecological community. I think my scientific training and my background in industry, in particular my experience of running large business improvement projects, gives me a perspective that will be valuable to the IM community during this challenging period. If elected, I believe I can contribute ideas and strategies that will help our community adapt to the future information management needs of the LTER network.

Position: **EB Representative**

Margaret O'Brien

Emery Boose has done an exemplary job as the IMC's representative on the Network Executive Board, and rotates out of that role in May 2014. Corinna Gries served as the first information manager in that position, between 2008 and 2011. I am honored to be considered as the next representative. The Executive Board rep attends all EB calls and meetings and summarizes their discussions, highlighting those that that are particularly important to the IMC. S/he also communicates our mission to the EB and NSF at the appropriate level. The position demands a broad, experienced point of view, combined with an understanding of site's individual concerns and needs. It has been a privilege to work with our community recently as IMC co-chair and on IMExec, and the experience has allowed me to cultivate relationships with Network leadership. Working with individual sites as they prepare data for PASTA and studying the diversity of their data products and systems has provided me with Network-wide knowledge of information management practices and needs. Together, these experiences provide an appropriate perspective for this position.

Wade Sheldon

I am honored to be nominated for the important role of Executive Board Representative for the IM Committee. Although Emery Boose will be a hard act to follow, I believe I would bring both experience and vision to this position. I have been a very active member of the LTER community since GCE joined the network in 2000, participating in and leading numerous IMC working groups, including EML Best Practices, ProjectDB and Web Services. I have also served on IM-Exec and notably co-chaired NISAC for four years, leading this committee through several critical tasks including CI implementation planning following release of the LTER Network Decadal Plan (ISSE) and review of LNO's ARRA Operational Plan. More recently, I participated in a special network-wide visioning committee on a future LTER network office, where I was tasked with summarizing the network-level IM recommendations in the report for NSF.

This is a tumultuous time in LTER, as we face increasing scrutiny over data availability, engage with new technology (e.g. PASTA and DataONE) and look towards an uncertain future as NSF prepares to re-compete the network office. I think my experience, combined with the strong rapport I have developed with LTER leaders and site PIs over the past 13 years, will allow me to be an effective liaison as well as a strong advocate to ensure that the IMC perspective is represented in EB discussions.

Position**: NISAC Representative**

Mary Martin
It is an honor to have been nominated for a NISAC position. I am a relatively new LTER Information Manager, having joined Hubbard Brook (HBR) in 2012. My home institution is the University of New Hampshire, where I am also involved in research and education outreach grants (NSF/USDA/NASA). Prior to joining HBR, my LTER
involvement has been through a number of research projects at the Harvard Forest (HFR; 1988-2010).

I have made an effort in this first year to understand the full scope of the NIS - to ensure that our site makes the best use of available resources and that we develop the capacity to contribute required data and information to the NIS. This has been a challenging and exciting process, and interactions with the LTER-IM community through workshops/meetings/mentoring have been invaluable. My interest in serving on the NISAC stems from a desire to learn more about the NIS, increase my level of involvement with the broader LTER community, and to offer a perspective based on two decades of research, outreach, and information management. Thank you for your consideration.

Position**: IM Exec Representative**

Dan Bahauddin
I am happy to be nominated to return to the IM Exec Committee for a second term. This is an especially challenging time for LTER information management. As we integrate new protocols and procedures into our site practices, each of us faces shared and unique challenges. During

my time as representative on IM Exec, I have worked to understand the wide variety of needs and perspectives across the network. Since beginning my position at Cedar Creek in 2007, I have served on a number of committees, working groups, and Tiger Teams. In addition to my role on IM Exec, I currently work with the EML Best Practices and the Congruency Checker groups. I believe my experiences make me a strong candidate for representing and serving the LTER IM community.

James Conners
I am pleased to accept my nomination for serving on IM-Exec. I welcome the potential opportunity to serve the community with the experience I have gained through various activities and contributions. My involvements in the IM community include annual IM meetings since 2008 and participation in various working groups such as the Unit Registry, Web Services and IM Website Redesign. I've also been a member of two NIS Tiger Teams and was an ASM panel member for the "Synthesis through Data Discovery and Use: Past, Present and Future" workshop in 2009. I have served twice as editor for the Databits newsletter. I would be pleased to serve the LTER IM community if elected.

Results

IMC Co-Chair (Philip Tarrant)
EB Representative (Margaret O'Brien)
EB Representative (Wade Sheldon)
NISAC Representative (Mary Martin)
IM Exec Representatives (Dan Bahauddin, James Conners)

2014 Annual Meeting

We had an extended discussion of the 2014 Annual Meeting that focused both where and what to do with the 2014 meeting and on what to do about our general meeting format overall during years in which we did not have a meeting that ran concurrently with the All Scientists Meeting (ASM). It has become clear that the LTER IMC and DataOne cannot continue to supporting the Environmental Information Manager's Conference (EIMC) without a large amount of additional support and infrastructure. As noted in the 2012 meeting at the ASM, such efforts would likely involve the founding of another organization and recruitment of a broad base of membership. Based on the activity from the last 12 months, this does not seem like a viable option.

Instead, Corinna Gries presented the group with a proposal whereby the LTER IMC holds their Annual Meeting concurrently with either the summer or winter meeting of the Earth Science Information Partners Federation (ESIP). Corinna's presentation emphasized the need for the IMC to interact with other Ecological IM professionals and to demonstrate the contributions we make and generally expand our horizons. In this presentation, we were also given a picture of a very flexible meeting format -- flexible enough in fact to allow us to embed the IMC within the ESIP meeting -- including a closed business meeting.

Both during this discussion and afterwards, the IMC endorsed an effort to assess the feasibility of attending ESIP. However, both during the open discussion and at later times during the meeting, some IMC members expressed their concern over the possibility of having two out of three meetings embedded in other meetings. This group and others expressed their belief in the value of site-based, IMC only meetings as a means to help move
LTER Information Management forward at both the site and Network level.

As planning for the 2014 meeting goes forward, the challenge will be to balance concerns about in-group with interaction and the advancement of internal goals with the need to reach out to the broader environmental information management community. Note that the ASM may be moved because of the LNO transition. maybe to 2016. Possibly, we could hold our 2015 meeting in DC.

Thursday Notes & Action Items

Discussion with NSF Program Officer Saran Twombly

We had a detailed discussion with Dr. Twombly regarding our recent activities. In addition, she had several questions and ideas to share with us. Finally, since the sound quality was poor, we had a good follow up discussion among ourselves after the call was completed, so that the group was clear on the content of the call. An outline of the overall dialog is below.

A. Our recent activities included:
- Developing best practice and policy infrastructure for PASTA
- Finalizing tools that interact with PASTA
- Adding Data to PASTA 18 sites have data in this year (up from 1-2 in Feb)
- Reviewing datasets and editing them for PASTA to improve quality and repackage data into more usable forms.

B. News and Questions Dr. Twombly presented from the NSF
Dr. Twombly had already attended 4 of 6 site reviews The overall impression from the reviews was that IM systems were working well. However, one question that came up related to the fact that sites seem to be implementing new systems, rather than adopting something already in place. Dr. Twombly asked for help understanding the pros/cons of this choice, particularly why sites choose to not adopt a system already in place, perhaps in the form of a white paper. It could be an abstracted or more targeted version of the "centralized IM report"

After the call, the IMC developed the following proposed outline: based around the question of whether a single system is reasonable and if not, why?
1. consider: institutional differences and constraints,

2. frequently a site implements a new system at time of review, or when turnover. why do you choose not to adopt something from another site
3. when is it a good idea to spend $$ to re-develop, or innovate
4. cost of IM is not borne by LTER alone. almost always includes some institutional funds (to varying degrees). This partnership comes with other obligations for the system that results.
5. include pros/cons/risks of both standard/central system and home-grown system.
6. managing risk, and speed of implementation are often the primary drivers for choosing home-grown
7. writing code for broad (multi site) use is much more expensive and time consuming.

Process we will use:
1. write an abstract
2. vet in IMC
3. send to Dr. Twombly, confirm this what she wants 4. write paper

B. Questions we had for Dr. Twombly:

1. IMS review guidelines - we plan revise the two current documents as internal LTER guidelines for our site IM systems. We understand that NSF may or may not share these with review teams. given this change, what advice do you have for site Info managers as they prepare for renewals and reviews?
2. There are many repositories accepting data, under various agreements, eg, requirements from journals, or from NSF directorates, and for specific scientific domains (genbank). Sometimes, these are not appropriate for PASTA. Does NSF have an opinion on how we should handle these situations,so that they can be linked effectively to LTER,even if not in PASTA? Genbank, ameriflux, usgs, lidar, nadp, czo, bco-dmo
3. Do you have an idea of how the 2014 RFP is going to handle our adoption of PASTA?
4. For a while, there were real concerns about LTER data availability. Have we addressed those concerns, and what additional work is needed?

Question 1: REVIEW GUIDELINES Dr. Twombly indicated that NSF would likely always refer to such guidelines and that they are useful for everyone, especially for outside reviewer. However, the docs should not be titled as if they are NSF approved and should be titled and treated as internal LTER documents.

In our post-call discussion we determined that the IMC will use the typical LTER process:
1. a working group will draft a revision (2) of the current docs
2. review by entire IMC
3. forward draft to EB for their approval
4. post at http://im.lternet.edu/resources/im_requirements

Side note: some of the pages and urls on the IM website should be retitled as well. Per Dr. Twombly, these are NOT "NSF Review Criteria", these are guidelines.

Question 2: Site Renewal RFPs for 2014 and our concern that the data catalog is in a transition period. How is NSF regarding this transition, vis-a-vis site data-products, inventories and submissions?

Answer: The RFP will ask for a standard proposal section. (typically 5pp for LTER). If sites need to describe how their data submissions are going, do it there.

But: Dr. Twombly does want to know how much site data is in the LTER catalog. so if your site catalog lists 100 datasets, and there are 50 in pasta, you are 50% done.

Action Item for the whole IMC: Dr. Twombly would like to know how all sites are doing with population of the network catalog. Twice last year, she asked for a report, and twice we said that [what we knew then] was too preliminary to be shared.

After the call we decided that we need to come up with something we can share, ASAP. This is not the same as the reports that the metrics -wg is designing. Sites should self -report. Per paragraph above, we could generate a one- page report that can show proportions. This would be a distillation of each sites pasta -population -plan.

   A. site name
   B. num packages in pasta today
   C. num you plan to contribute
Sites will probably want to include a note, but ideally, these should be collected and summarized in 2-3 paragraphs.

We developed a proposed table as follows: columns 1 and 2 were prefilled from https://portal.lternet.edu/nis/browse.jsp on Friday, 26 July, right after the IMC meeting

Site	Number in PASTA as of 2013-07-26	Total number planned to contribute	Porportion as of 2013-07-26	Estimated Completion date
AND	7			
ARC	314			
BES	0			
BNZ	179			
CAP	56			
CCE	0			
CDR	228			

CWT	1			
FCE	116			
GCE	0			
HBR	0			
HFR	130			
JRN	0			
KBS	50			
KNZ	70			
LUQ	89			
MCM	177			
MCR	45			
NTL	190			
NWT	10			
PAL	0			
PIE	0			
SBC	4			
SEV	26			
SGS	0	148	2.7	2013-12-31
VCR	17			

Question 3: Regarding the fact that there are many other repos accepting data under various agreements, (eg, from journals, NSF programs or scientific communities), and that there is LTER data in these, too. Ideally, it should be clear that data in these other catalogs are "LTER data" in addition to what we contribute our network catalog. Does NSF have an opinion on how we should handle these situations so these data can be effectively linked to LTER?

Answer: good question. we have no answer now, but NSF will think about it.

Question 4: Data availability concerns -- How are we doing? have we alleviated concerns? yes. we've alleviated a lot of the concerns. Remember though: Dr. Twombly would like to know for each site what percent of your suitable data is in PASTA.

2014 Annual Meeting- we told her we are going to propose that LTER join ESIP, and that the IMC would likelyold its 2014 annual meeting with ESIP.

Dr. Twombly agreed that was appropriate. Additionally, she encouraged us to write a proposal to NSF for a workshop in Washington. where we invite others, agencies, NSF program officers. This is probably an extra meeting for us, although it came up in the context of our regular meeting. In 2013, at IMExec,the discussion started with the idea of a small group of IMs going to NSF (also per Dr. Twombly). this seems larger. If a proposal is involved, the process is expected to take more than a year.

We will plan to go to ESIP for our next meeting (Boulder, July 2014) . A workshop at NSF would be outside of our regularly scheduled meetings.

In the post-meeting discussion, the IMC suggested that IMExec suggested outline the options, and request feedback and a time frame from Dr. Twombly for the workshop.
   A. mini-symposium
   B. other…

LNO recompetition: there is going to be a panel funded by NSF to look at alternative models for the LNO. she needs to know the consequences -- how we would be affected if
   A. the lno moved away from UNM
   B. there was no LNO at all.

The panel's job is to get recommendations to inform the RFP process. She specifically asked how our interaction with PASTA would be affected by changes in the lno structure. We asked about NSF commitment to pasta.

During the LNO visioning discussion, we asked about the future of PASTA. The response suggest, that in a perfect world, PASTA continues to develop and grow and Dr. Twombly noted that NSF has made a significant investment in PASTA. However, she could not indicate what NSF might decide. The panel will examine other options for network organization, eg, splitting up the network office functions, namely meeting organization and cyber infrastructure. she also mentioned site support (e.g., data curation). The panel needs to be done by Jan 2014. RFP earliest Jun 2014 plus 90 days = Sept 2014 ** IMC should be prepared to give input to the panel. Probably IMC leadership will be contacted.

In the post-meeting discussion we learned that LNO is proposing transition funds we should focus on the core needs for network facility, and the consequences (at site and network level) of those are not met. eg, personnel db. pasta, offsite backup, websites,

Wrap-up

--After the NSF discussion concluded, IM Exec presented final action items. After these were discussed, the broke for lunch and then headed for a final set of break-out sessions. After the break-out sessions we had a great field trip to the permafrost tunnel and somewhere out there some of us saw a moose!

Report Back from IMEXEC & Action Items on Thursday

1. Data submission best practices working group needs it's own doc.
   a. how to use the services (staging, production)
   b. how to deal with exceptions
      i. all of the known cases: solution
      ii. all of the unknown cases: develop a process for finding the solution.
      iii. codify the 5 essential elements (from the EB) **WHO**: linda, theresa, dan, eda, jonathan, margaret
2. Begin experimenting with search **WHO**: inigo, gastil, john porter corinna, james, wade, emery, jamie
3. IMC communications working group:
   a. make sure internal communications are effective
   b. promote IMC accomplishments outside the IMC (but not with reporters!) Their first task: they could be the ones who promote the 5 essential features, eg, before the bp group gets to it **WHO**: jonathan, eda, philip, inigo
4. IMExec: schedule vtcs with each of these groups in the next 6 months.