

Enhancing NIS Data Portal Tiger Team to facilitate matching the function of the NIS Data Portal to LTER community needs – William Pockman, Mark Servilla & John Porter

Background: One of the highest priorities of the LTER Network is to foster new ecological knowledge at diverse spatial and temporal scales through the analysis and synthesis of long-term data collected at LTER research sites. To realize this goal, the LTER Network is in the midst of developing a Network Information System (NIS) that, when complete, will provide a central point of access for core and derived LTER data products and their associated metadata. NIS development is scheduled to release a functional prototype in June 2012, followed by a full production release in 2014. The NIS is designed after a Service Oriented Architecture pattern, along with a separate web-browser client application, the NIS Data Portal, for user interaction. The NIS Data Portal is perhaps the most critical component of the Network Information System because it is the outward-facing interface that scientists, students, and the public will use to access LTER data and metadata. Initial planning for the NIS Data Portal begins in November 2011, with development work continuing through April 2012. As such, The Data Portal development process must address the needs of the LTER community while using, as much as possible, the technology and approaches developed for other successful science portals.

Summary and Justification: It is paramount that members of the community help guide the design and implementation of the NIS Data Portal (NDP) as they will ultimately be the primary users of its service. This proposal requests funds to maximize LTER community input to the development of the Data Portal by bringing together a team of vested parties for a charrette that will result in a strategic design plan. Recent experiences in the LTER Network (i.e., the Robbins Video) have focused attention on the need to have interfaces that expose, not obscure, system capabilities. This activity will provide critical input to the PASTA development team from a spectrum of user perspectives. Like other elements of the NIS, the development of the Data Portal already involves a Tiger Team, a group of LTER community members who volunteer time for providing input and evaluation during the development process. While this mechanism has provided valuable feedback for other elements of NIS development, the pivotal role of the Data Portal in the success of the NIS merits additional effort to match Data Portal functionality to user needs.

Why now? Data Portal development is slated to begin its planning phase in November 2011. The Tiger Team supporting Data Portal development has already been constituted and will have its first meeting in late November 2011. Time is therefore critical if input from the community is to be incorporated in guiding Data Portal development from the outset.

Goal: The purpose and outcome of this charrette will be a strategic design plan that will set the overall development goal of the NIS Data Portal. This strategic design plan will also include a methodology for collecting and analyzing usability feedback from a broader audience anticipated at both the 2012 LTER Science Council meeting in May 2012 and the LTER All-Scientists Meeting in September 2012.

Scope of Work: We anticipate a two phase approach: 1) we will hold an in-person workshop involving a group of community members to evaluate potential interface designs

of the Data Portal and to prepare materials that will be used to 2) solicit input at the 2012 LTER Science Council Meeting and 2012 LTER All-Scientists Meeting. Based on the responses from the Science Council Meeting, the Data Portal will be revised and additional input solicited at the All-Scientists Meeting. We propose a two-day charrette at the Sevilleta LTER field station that will bring together a crosscutting team of LTER principal investigators, information managers, system developers, and graduate students, to develop a strategic design plan for the NIS Data Portal. This group will consist of the NDP Tiger Team and others from the LTER community not directly related to NIS development. To better focus our efforts, we will contract with a usability professional to assist and guide our group in the process of usability testing and evaluation for the NIS Data Portal.

Tasks and Products:

- 1) Storyboards to illustrate potential features of the Data Portal. These will be used to show the different ways that scientists might discover and extract data from the NIS for various types of data and analyses. The discussion at the in-person meeting will be synthesized in a report to the development team to provide initial guidance about Data Portal functionality by February 2012.
- 2) Science Council Meeting: The storyboards and other resources developed at the in-person workshop and during Tiger Team meetings will be used as the basis of a presentation and questionnaire at the SC meeting. The feedback generated by this activity will be summarized and presented to the Data Portal development team.
- 3) Iteration of Data Portal concepts based on Science Council Meeting feedback: The Tiger Team will work with Mark Servilla and the NIS development team to revise the storyboards produced at the in-person meeting to produce elements that are more tailored to the expressed opinions of site scientists. This process will continue to guide Data Portal development.
- 4) All-Scientists' Meeting: After incorporating the revisions recommended at Science Council Meeting, the iterated Data Portal concept will be presented at the All Scientists Meeting in Sept 2012 to seek input from the larger and more diverse set of participants anticipated at this meeting. The input generated will be used to guide continuing development toward the final production goal in 2014.
- 5) Final discussion of the ASM input by the Tiger Team and workshop participants and submission of final summary to Data Portal development team by November 2012.

Participants: Participants will include the Data Portal Tiger Team (Pockman (SEV), Porter (VCR), Ramsey (JRN) and Gelfand (KBS), NIS Development team (Servilla, Costa et al.) and investigators and graduate students from the SEV LTER site.

Budget:

Activity	Attendees	Air Travel	Mileage	Per Diem	Meeting cost	Total
SEV mtg	16	3000	402	1536	100	5054
Consultant	1	600	0	192	1000	1793
SC 2012	1	600	0	384	0	985
ASM 2012	1	600	0	384	0	985
Total						8817

Budget Justification:

Funds are requested to support an in-person meeting at the Sevilleta LTER (SEV). Using this location, travel costs are minimal for Pockman and Servilla, and low for Ramsey (\$102 in mileage). We have budgeted \$300 to use UNM vans to transport additional people from the University of New Mexico to SEV each day to provide additional input from graduate students, postdocs and LTER scientists and staff.