# Web Services Working Group

# Information Manager Time Buy-Out Proposal and Statement of Work

## Summary Statement

The Web Services Working Group (WSWG) was established at the 2009 IMC meeting in response to a recognized need for guidelines in implementing a web service-oriented architecture in the LTER Network Information System. The WSWG has also been tasked by LNO and IMExec with exploring possible redevelopment paths for network resources, including the personnel, all-site bibliography, and site description databases.

In order to meet these needs, the WSWG proposes that .75 months (approximately 3 weeks) of salary be bought out for the chair of the working group, currently Mason Kortz. The chair will organize working group activities, lead design and development of new and updated LTER network databases, and author drafts of the LTER Web Services Recommendations document. The time provided for in this proposal will focus on the redesign and redevelopment of the LTER personnel database, led by the WSWG chair. The chair will commit at minimum one full month of time to these activities; time in excess of that provided for in this proposal will be paid from site discretionary sources.

## Scope of Work

A redesigned personnel database will be available for all sites and the LNO to use via a web service interface. This interface may be used for the two distinct approaches currently in use by the LTER sites: 1) used directly by local site applications, or 2) used as a target for sites doing both read and write synchronization with the network. Other elements of the NIS, including PASTA, the all-site bibliography, and the site description database, will also interact with the personnel database web services to provide context to other data and metadata. A web-based GUI interface will be developed for site and LNO users to browse, search, and update the contents of the personnel database.

## Products

1) **Redesign of the LTER personnel database.** The personnel database will be redesigned by the WSWG in conjunction with members of LNO. The WSWG chair will lead the redesign effort and be responsible for compiling feedback and revisions from the working group, IMC, and LNO. This redesign will address, at minimum, the storage schema, the web service syntax, and the LNO-hosted GUI interface. Further design work may include additional client applications such as a Drupal module, website ‘widgets’, and/or a bridge to the existing ProjectDB.

2) **Implementation of the LTER personnel database.** Following the redesign of the personnel database, the specification developed by the WSWG will be given to the development subgroup, lead by the WSWG chair. The development subgroup will develop the storage backend, service interface, and user interface as designed by the WSWG. Additional client applications proposed during the design phase will be addressed as developer time permits.

## Tasks

1) **Personnel database redesign.** The personnel database will be redesigned based on requirements gathered from the IMC and LNO. The WSWG chair will organize a design meeting at LNO in early 2011 as part of the WSWG’s product-oriented working group funding. WSWG members who are not present will be involved via VTC. The design meeting will result in the following: a storage schema, a web service syntax (supporting both read and write operations), and a set of specifications for an LNO-hosted web-based GUI.

2) **Personnel web service development.** The specifications created in Task 1 will provide a basis for the development of the personnel web service. This development will consist of three phases. The first phase will be to implement the storage schema in a database application. The second phase will be to develop a web service that provides access to this database according to the syntax designed in Task 1. The third phase will be to populate the database with records from the existing LTER personnel database. This task will involve development by members of the WSWG, with the chair acting as coordinator and lead developer. Portions of this task will coincide with Task 3, below.

3) **Client development.** The specifications created in Task 1 will provide a basis for the development of one or more clients for the personnel web service. The initial client will consist of a web-based GUI with browse, search, and update capabilities. Additional clients may be developed based on available developer time. These additional clients may include, but are not limited to, a Drupal module and a library of JavaScript widgets that other sites can incorporate into their local information systems. This task will involve development by members of the WSWG, with the chair acting as coordinator and lead developer. Portions of this task will coincide with Task 2, above.

## Participants

The buy-out time requested in the proposal will be used to fund .75 months of time for the WSWG chair, currently Mason Kortz, PAL and CCE LTER sites.

## Budget

The projected budget for the buy-out requested is $7,342 (see Budget Justification, below).

## Budget Justification

### Salary and Benefits

Salary and Benefits Costs (0.75 months): $4,125

### Other Costs

Administrative and infrastructure costs: $627

### UCSD On-Campus Indirect Costs

On-campus indirect rate (54.5%): $2,590

### Totals

Total Cost: $7,342

**Note:** The duration of the proposed work is 1 month. Costs beyond those provided for here will be paid from site discretionary funds.