

IM Compensation Proposal:

PersonnelDB Web Services Development at CCE

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One of the major initiatives of the Web Services Working Group (WSWG) is PersonnelDB, a relational database and set of XML schemas envisioned to provide a new solution for some of the LTER Network Office's central personnel management needs while simultaneously giving sites the ability manage local and network personnel records through a single, locally driven, set of integrated processes. The specific proposed solution is to develop a suite of three RESTful web services that would allow information exchanges between local and network resources in any of the following ways:

1. Allow site IMs to manage their personnel records through a single interface provided by LNO and then redisplay that content on their own websites by incorporating a web service call within a small web application designed to work at their own site.
2. Allow site IMs to develop automated methods to populate or update their own site-level databases using information from LNO.
3. Allow site IMs to provide automated updates or additions to LNO records using output from their own site-level resources.

As of this writing, the WSWG has achieved several milestones in the development of PersonnelDB, including a well-developed software stack comprised of the following:

- A completed database schema and accompanying MySQL draft database
<https://svn.lternet.edu/websvn/listing.php?repname=WSWG&path=%2FpersonnelDB%2Fdocs%2Fdatabase%2F&rev=HEAD>
- Completed XML Schema and accompanying documentation
<https://svn.lternet.edu/websvn/listing.php?repname=WSWG&path=%2FpersonnelDB%2Fdocs%2Fxml%2F&rev=HEAD>
<https://svn.lternet.edu/websvn/listing.php?repname=WSWG&path=%2FpersonnelDB%2Flib%2Fxml-schema%2F&rev=HEAD>
Prototype XSLT transforms to generate EML from PersonnelDB Documents
<https://svn.lternet.edu/websvn/listing.php?repname=WSWG&path=%2FpersonnelDB%2Flib%2Fxslt%2F&rev=HEAD>
- A working prototype web site with sample data:
-- <http://sunshine.lternet.edu/personnelDB/>

These resources were developed by the entire WSWG, but the lead developer was Mason Kortz, formerly of the PAL LTER. Since Mason's departure, his collaborator James Conners is now the person within the LTER network who is most familiar with the technologies used for PersonnelDB, the work rules for building them, and the coding style behind them. As such, James is the best choice to complete the tasks associated with PersonnelDB and provide a working product. However, before James can proceed, interim steps will be

required of the. WSWG The next page outlines the preliminary steps required the WSWG will take, detail the work to be done by Conners himself, and provide a project timeline. There are three challenges to overcome prior to developing a final product for use by LNO and the community at large:

1. Documentation for the work done to this point is incomplete.
2. LNO's goals for integrating personnel data and identity management are unclear.
3. We are not aware of the full range of use cases for PersonnelDB.

Between December 1, 2011 and October 1, 2012, the WSWG working group will move forward on several initiatives to address these problems. Our tasks and timeline are:

1. Edit and upload to the IM intranet site all existing documentation from CCE / PAL, GCE, and KBS on this project (January 2012).
2. Obtain a complete dump of data from the current LTER Personnel Directory and load into PersonnelDB (February 2012).
3. Work with LNO to clarify the relationship between PersonnelDB and NIS Identity Management Services. Develop sample solutions accordingly (April 2012).
4. Develop site-based examples for two demonstration projects – one using the XML based web service exchanges to populate the PersonnelDB and then pull down data for a local site database and one using an XSL approach that allows users to skin their site with results directly available from PersonnelDB web services (July 2012).
5. Develop and host LTER ASM symposium / working group on potential use cases for PersonnelDB and incorporate the results into a work plan. (September 2012).

Once these activities have been completed, Conners will be able to use the month of October 2012 to more fully develop the interfaces and tools needed to make maximum use of PersonnelDB across the network. His goals will be as follows:

1. Complete interfaces for viewing, adding, deleting, and updating PersonnelDB entries at a centralized location.
2. RESTful web services for downloading generically formatted, normalized data for import into local site databases.
3. RESTful web services for uploading updates and additions from local databases into PersonnelDB.
4. RESTful web services displaying read-only results from PersonnelDB and generic sample XSL style sheets suitable for adaptations at local sites.
5. Tools and protocols for integrating PersonnelDB with NIS Identity Management Services.
6. Documentation for items 1 through 5.

Conners has an expected completion date of November 1, 2012. While this is later than the normal expected completion date, we believe that the added functionality proposed by the Site IMs who are participating in the WSWG will add value to the project and increase the likelihood of the project's success, thereby justifying the delay in project completion.

BUDGET

LNO Information Management Support Request Proposal guidelines state:

“Site management will invoice the LNO for compensation for IM time. Sites must invoice as a lump sum compensation and may not include salary, fringe, or in-direct costs in the invoice. LNO will pay an invoice lump sum as compensation to the site.”

The total budget for this project includes one month of IM time at CCE, to be compensated with a single lump sum payment of **\$7,500**.