

[Internet Mapping: Building web applications for researchers](#) [1]

Submitted by jhollingsworth on Thu, 2014-04-17 12:36 Thursday, July 10, 2014 - 11:00 to 12:30

Event: [Summer Meeting 2014](#) [2]

Session Type: [Workshop](#) [3]

Collaboration Area: [Geospatial](#) [4]

Abstract/Agenda:

Currently, there is an increase in demand for serving various types of spatially referenced data. Additionally, there is an increase in the number of options for displaying these types of data. In this session, we will discuss some of the options available for serving and displaying spatially referenced information. We will also talk about challenges in displaying geospatial locations and associated metadata on the internet. Specific topics may include: how to pick an appropriate software package, determining and analyzing various data source types (e.g. dynamic versus static), workflows for creating web services, and the extensive variety of tools a user may have access to.

In this session, we welcome input and discussion from those interested in internet mapping, regardless of experience. We encourage participation from data managers currently looking for ideas on how to create internet mapping products as well as more advanced programmers willing to share experiences and insight.

The format of this session will be as follows: Firstly, we expect to discuss and record shared experiences. Secondly, we will present demos of existing internet mapping tools, and explore existing services and current internet mapping options. Finally, we will discuss future applications of internet mapping within the context of ecological data management.

Session Length: This session will be two hours in length. 45 minutes will be spent discussing what internet mapping options are currently available, one hour be used to demonstrate internet mapping applications and the process for creating one using existing data sources, and 15 minutes will be spent looking towards the future of internet mapping. Participants are encouraged to submit examples prior to the session.

Notes:

Mapping servers: Arc, mapserver, geoserver

javascript libraries: openlayers, google maps, openstreet maps

Mostly local data used

Lots of progress lately towards mobile geodata consuming

Demos:

- GEONIS: <http://geonis.lternet.edu/> [5]
 - visualize data from LTER (long term ecological research) sites and provide web services
 - tools used to build GEONIS: <https://github.com/rbeloin/pasta2geonis> [6]
- DEEPWAVE: <http://catalog.eol.ucar.edu/deepwave> [7]
 - Displaying images and KML layers
 - Imagery has dates that they are valid for
 - has mobile view
- GIBS: <http://earthdata.nasa.gov/gibs> [8]
 - <https://github.com/nasa-gibs/gibs-web-examples> [9]
 - <https://earthdata.nasa.gov/labs/worldview/> [10] - also on github (opensource)
 - encouraging other users to use their services
 - Uses a tile caching server (apache plugin) with an optimised storage container
- Arcgis flex: <http://resources.arcgis.com/en/communities/flex-viewer/> [11]
 - build a tool with little effort
 - Example: http://www.vcrlter.virginia.edu/mapserver/VCRLTER_Sites/ [12]
- GRASS GIS: <http://grass.osgeo.org/> [13]
 - http://grasswiki.osgeo.org/wiki/Main_Page [14]

Discussions:

- How are people showing profile data (beyond 2D mapping) ?
 - deepwave does this
 - czoom javascript library
 - GRASS GIS does this also
- Opensource issues?
 - There are too many options to pick from
 - They require some expertise (javascript) to get working
- Tile Servers?
 - Provide caching for performance
 - The trade offs (disk space and management) are worth it for GIBS.
- Google Map engine work?
 - They have a limited number of requests per month before you have to pay
 - examples
 - <http://lternet.edu/sites/map> [15]
 - <http://andrewsforest.oregonstate.edu/lter/data.cfm?frameURL=173> [16]
 - <http://earthexplorer.usgs.gov/> [17] - paid for use from google
- Issues with google earth:
 - doesn't support Linux
 - requires software to be downloaded and installed
- Citizen Science use of maps online?
 - Blurring responses - accuracy issues?
- Styles for Vector data
 - Rasterization in addition to vector layers
 - Use a Standardized symbology
- Arcgis online for organizations

**Notes posted by Kyle Nelson, ESIP Student Fellow. Notes taken by Ryan Raun (@RyanRaub). Thanks Ryan!

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