

Introduction to Web Mapping

MapServer – GeoMOOSE 2.0 Training

August 4-6, 2009

Houston Engineering, in cooperation with the Southwest MN GIS User Group is excited to offer low cost training that will give you the skills and tools needed to create your own web mapping applications. This class will introduce participants to three widely used open source applications which can be acquired for no cost! Class size is limited to 12, allowing for plenty of time for hand-on training and questions.

Where: Southwest Minnesota State University, Marshall, MN in a computer lab

When: Tuesday, Aug 4: 9am – 5pm
Wednesday, Aug 5: 8am – 5pm
Thursday, Aug 6: 8am – 3pm

Every day will have time for breaks and lunch.

Cost: \$500/person (light snacks, CD with software, and a workbook). There are numerous hotels in Marshall, MN available if you are traveling from out of the area.

Registration or more information: Please contact Len Kne at Houston Engineering to register for the class. 763-493-4522 or lkne@houstoneng.com.

Instructor: Len Kne, GIS Developer, Houston Engineering.

Intended participant: This class is designed for the beginner person with little or no experience with MapServer or GeoMOOSE. Participants should have basic knowledge of HTML and GIS. The class will be taught on a Windows XP operating system with Apache web server.

Format: Short lectures followed by hands-on exercise. Class size is limited to 12. Computers will be provided in the lab for each student enrolled in the course. Depending on class size, limited assistance may be available to help participants install the applications on their own laptops (administrator access is needed).

Goals: After completing this course, participants will:

- Have an understanding of web GIS applications
- Develop a working web mapping application with GeoMOOSE and MapServer
- Be able to install MapServer and GeoMOOSE
- Modify data layer cartography within Mapfiles
- Make modifications to the GeoMOOSE interface



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Course Outline:

The schedule below highlights the topics to be covered each day. Hands-on exercises and time for questions follow most of the topics. Every day will have time for breaks and lunch.

Day 1 (Getting started with web mapping)

9:00 – 9:15	Welcome/Introductions/Logistics
9:15 – 9:30	Introduction to web applications and terminology
9:30 – 10:00	Introduction to open source software and internet GIS
10:00 – 10:15	Break
10:15 – 12:00	Installation of MapServer and GeoMOOSE
12:00 – 1:00	Lunch
1:00 – 2:15	Introduction to the GeoMOOSE Mapbook and XML primer
2:15 – 3:15	Adding data layers to GeoMOOSE
3:15 – 3:30	Break
3:30 – 4:45	Consuming Web Mapping Services (WMS)
4:45 – 5:00	Review/Questions

Day 2 (Configuring Mapfiles and GeoMOOSE 2.0)

8:00 – 10:00	MapServer Mapfiles
10:00 – 10:15	Break
10:15 – 12:00	MapServer template files
12:00 – 1:00	Lunch
1:00 – 2:00	MapServer Mapfiles continued
2:00 – 3:00	GeoMOOSE Services - identify, popups, select, buffer and printing
3:00 – 3:15	Break
3:15 – 4:45	GeoMOOSE Services continued
4:45 – 5:00	Review/Questions

Day 3 (Customizing GeoMOOSE 2.0)

8:00 – 9:45	Customizing the GeoMOOSE interface – tools and menus
9:45 – 10:00	Break
10:00 – 12:00	Customizing the GeoMOOSE interface – colors, logos and fonts
12:00 – 1:00	Lunch
1:00 – 1:30	Utilities for creating Mapfiles
1:30 – 2:00	Using Microsoft Internet Information Server (IIS)
2:00 – 2:30	Introduction to PostgreSQL and PostGIS
2:30 – 3:00	Wrap-up/Questions



Background: OpenSource has become a foundation for many organizations around the world. In recent years the OpenSource Geospatial community has grown by leaps and bounds and provides all of the functionality of proprietary applications such as ESRI.

MapServer: MapServer is an open source development environment for building spatially-enabled web mapping applications and services. It is fast, flexible, reliable and can be integrated into just about any GIS environment. Originally developed at the University of Minnesota, MapServer is now maintained by developers around the world.

<http://mapserver.gis.umn.edu/>

GeoMOOSE: GeoMoose is a Web Client Javascript Framework for displaying distributed cartographic data. GeoMoose is currently built as a client framework for MapServer (CGI). Because of this, it can utilize any of the output functions that MapServer provides, including Raster, XML, and OGC compliant formats. Each data layer can be displayed as a raster image, a Imagemap for displaying Popups on a per layer basis, as well as be used as a basis for doing additional data requests based on polygons, or buffered elements in a layer.

<http://www.geomoose.org/moose>

Advanced Web Mapping

The *Introduction to Web Mapping* course will give you the knowledge and resources needed to create complex mapviewers, but of course there is always more to learn. Possible topics for an advanced class include:

- Adding External Services to GeoMOOSE - Database Searching, Geocoding
- GeoMOOSE Feature Editor – Inserting, modifying and deleting GIS data
- Installation and configuration of PostgreSQL and PostGIS
- Google and OpenLayers map mashups
- MapServer CGI and MapScript

Let us know if any of these topics interest you.



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