

# Using MapServer to Build WebGIS Sites

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# MapServer Overview – What is it?

- MapServer is Open Source IMS software developed by the University of Minnesota and Minnesota's DEP
- It is both a cgi program, and a library that can be used from a variety of languages.
- MapServer's website is at [mapserver.gis.umn.edu](http://mapserver.gis.umn.edu)

# MapServer Overview – Why use it?

- Easy to install – installs in less than 3 minutes.
- Easy to use – no programming required and the documentation is less than 50 pages.
- Very efficient – maps render quickly, will run on older computers with limited resources, handle large load relative to the alternatives
- Very stable and easy to maintain. The only thing you have to do is clean out the image directory periodically. It is not tied to any operating system, so OS updates don't effect MapServer and installing MapServer will not effect other applications.
- Runs on all common web server operating systems - Unix/Linux and windows from 95 to XP.

# MapServer Overview – Why use it? (cont.)

- Educational purposes. Anyone can install MapServer anywhere they want, and do anything they want with it.
- Software is free and comes with no restrictions on use
- Great support on the mailing list.
- No programming required on the server, but, if you want to, it works with several languages – Perl, PHP, Python, Tcl, or Java.

# MapServer Overview - Disadvantages

- Comes with minimal pre-built symbology
- Automatic label placement isn't as nice as some of the commercial alternatives
- Not as well known as the commercial alternatives so more explanation is generally needed if you propose using it

# MapServer Installation on Windows

- Download from MapServer web site and unzip file
- Place mapserv.exe in cgi-bin directory
- Put dlls in a directory on your PATH, or add the dll directory to your PATH
- Copy proj directory to c:/proj for on the fly reprojection
- Create a directory to write the map images to. Anonymous web users must have write permission to this directory

# Requirements to Serve a Map

- Map configuration file – defines map extent; defines map projection; formats reference map, scalebar and legend; defines layers' symbologies, projections, etc.
- Map template – formats the output of a map request. It is often an html file used to define the user interface
- Query templates – formats the results of a queries.