

UW-Milwaukee GIS Day November 17th

Open Source Alternatives to Commercial GIS Tools

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Applied Population Laboratory

- Department of Community and Environmental Sociology at the University of Wisconsin – Madison
- Since 1965
- applied demography; spatial information and analysis; community development and planning; and information applications



My background in GIS Open Source

- Started Using Open Source 4 years ago
- Frustrated with lack of flexibility and software bugs
- 85% to 90% of the tools I use are Open Source



What is Free Open Source software?

- Very often developed in a public, collaborative manner
- It's freely distributed
- Source code must be included
- Anyone can modify the source code
- Can be redistributed
- The license must not require the exclusion of other software or interfere with the operation of other software

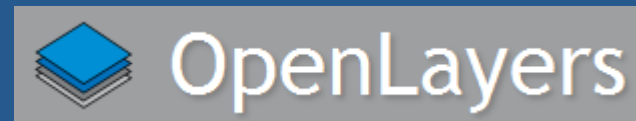


Commercial (proprietary) Software

- It's NOT freely distributed. You are given the right to use the software under certain conditions
- You can NOT modify the source code or reverse engineer
- Can NOT be redistributed



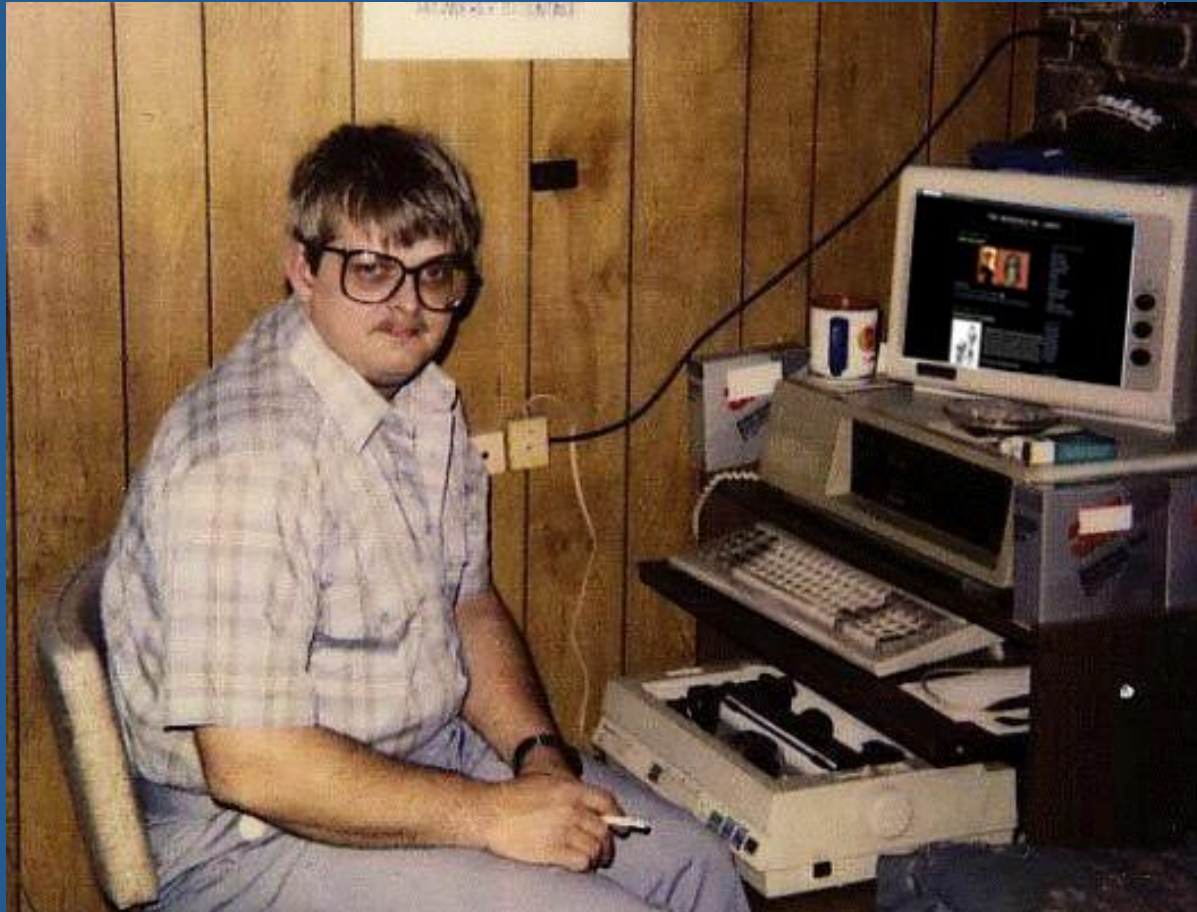
Can I use Open Source?



Its not only on Linux



You don't have to be a programmer



Perceived advantages of Commercial over Open Source

- Packaged, comprehensive
- Reliable
- Professional support
- Easy to use
- More secure than Open Source



Debunk perceived advantages of Commercial over Open Source

In many cases Open Source does as well as or better than commercial software

- Packaged, comprehensive
- Reliable
- Professional support
- Easy to use
- More secure than Open Source



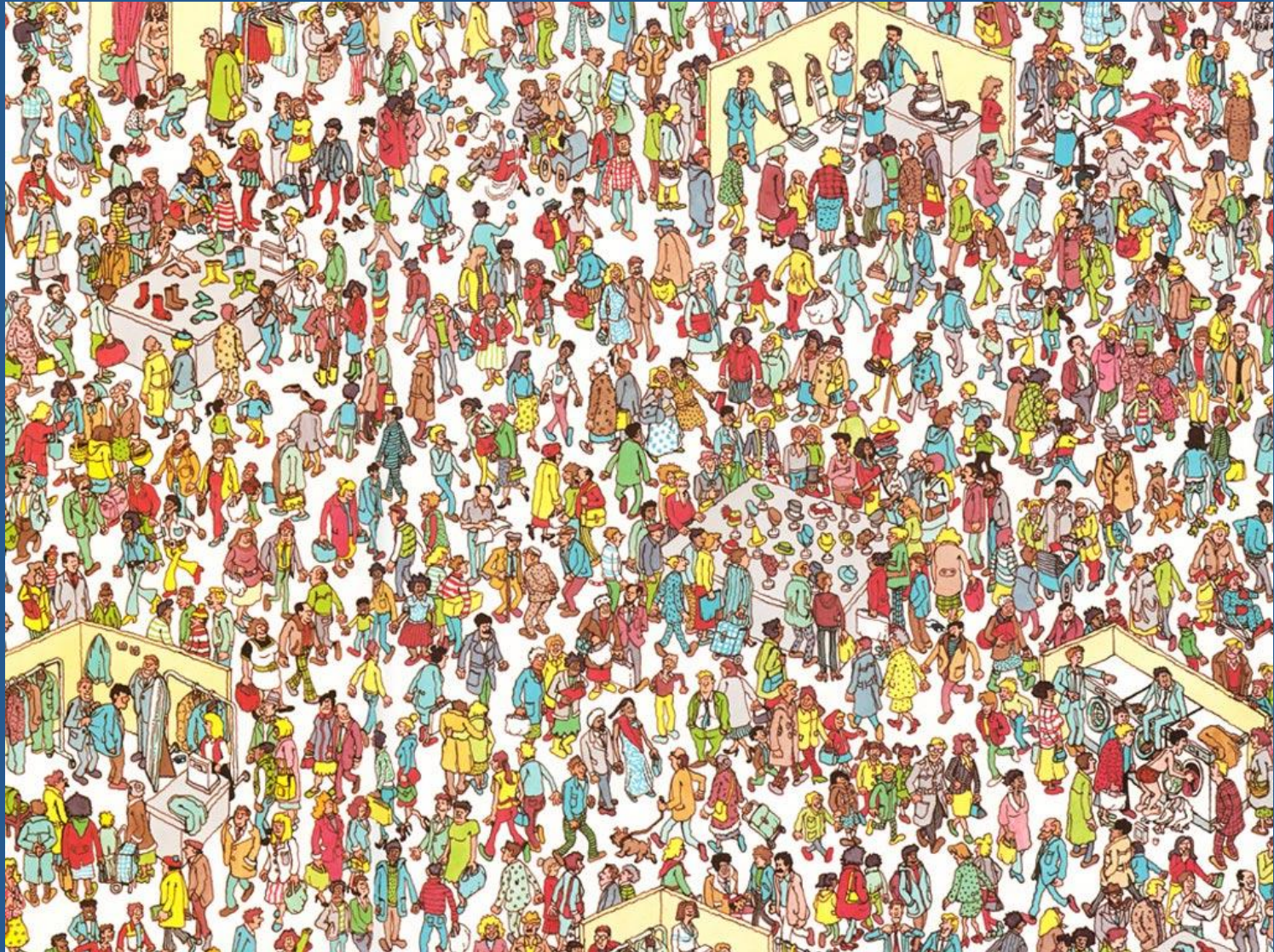
Packaged, comprehensive



Reliable



Professional Support



Easy to Use



More secure then Open Source



Other Open Source advantages

- Innovation
- Freedom
- Flexibility
- Free to try

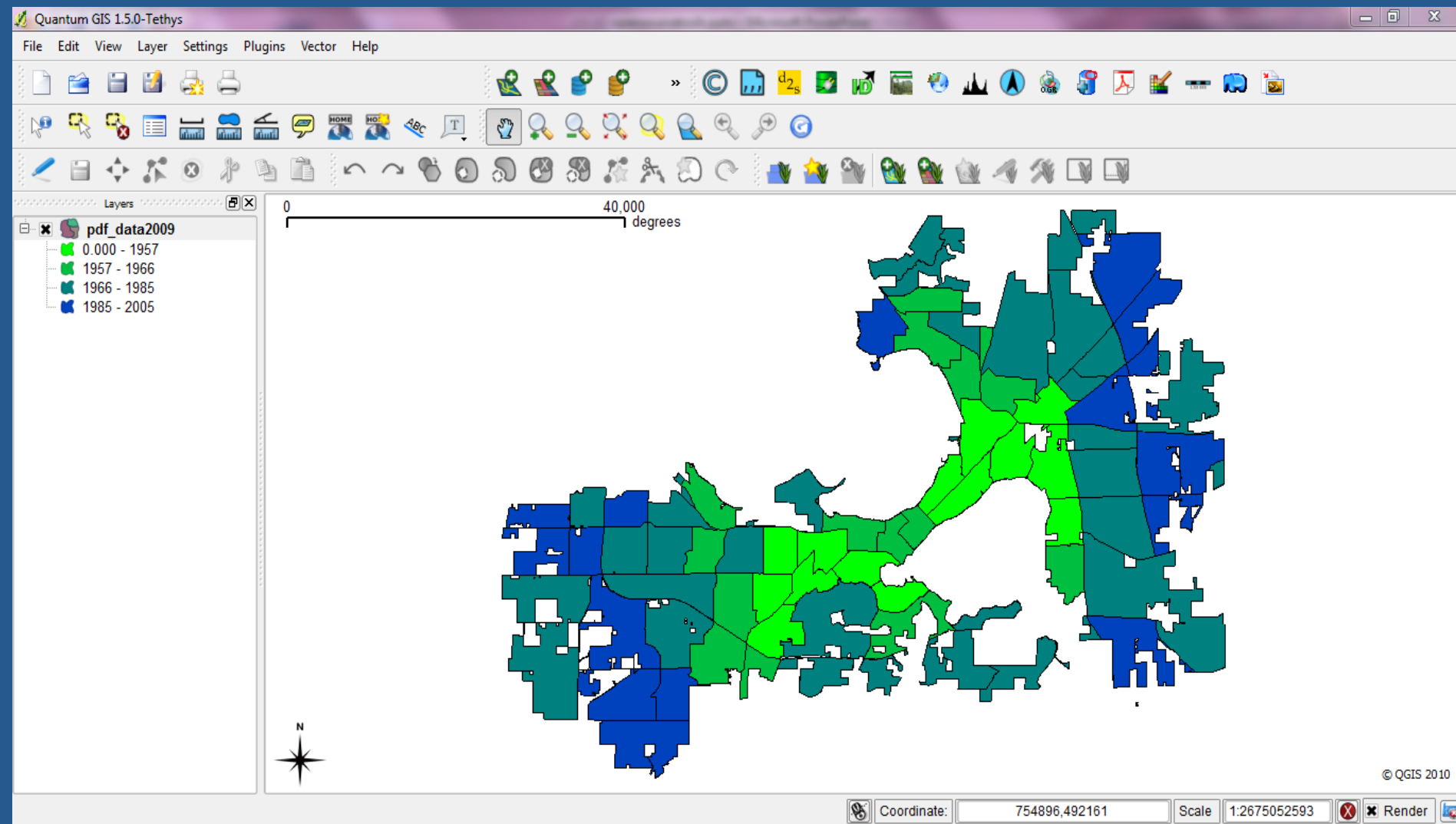


Open Source Desktop GIS

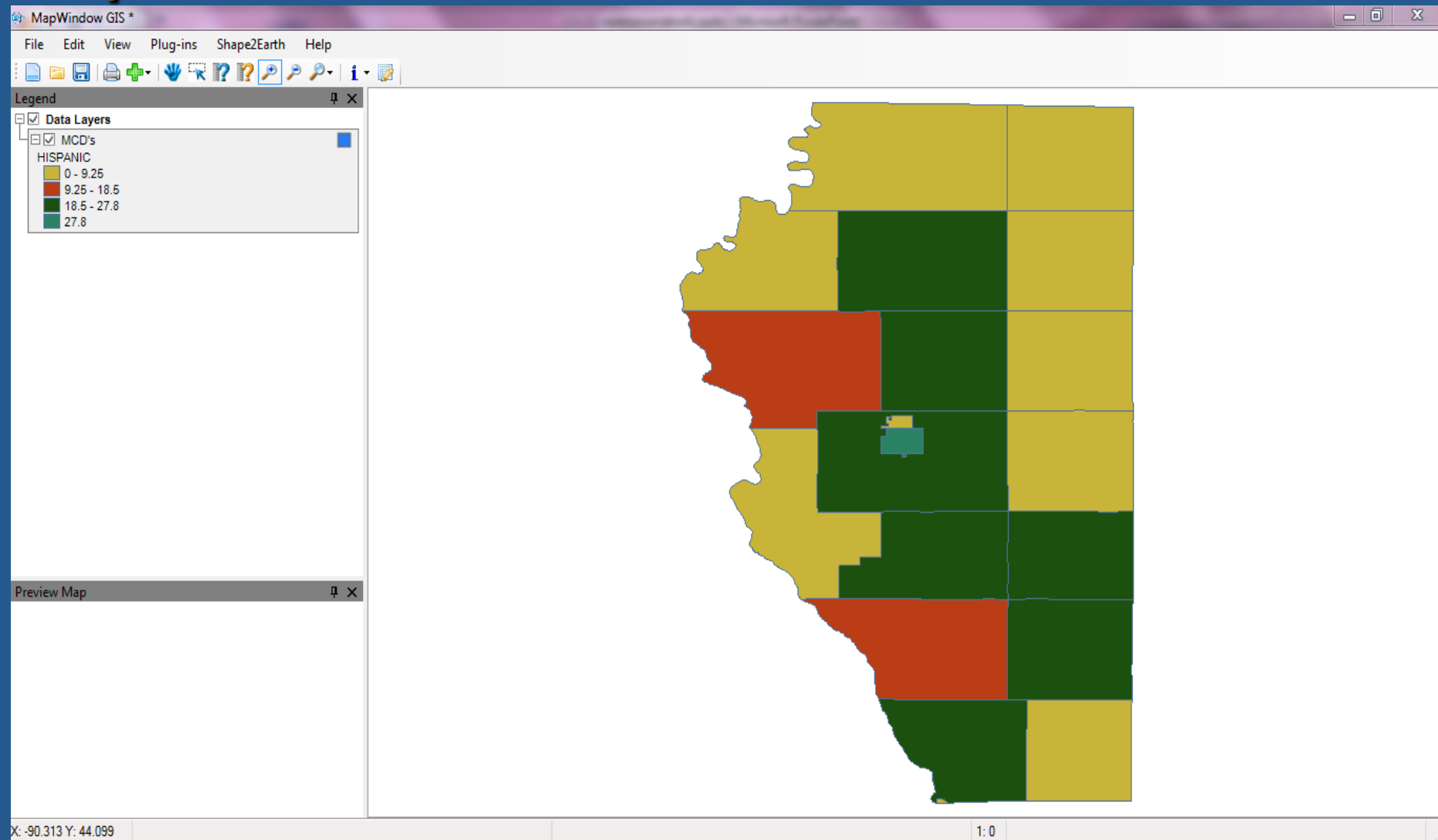
- Quantum GIS (<http://qgis.org>)
- MapWindow GIS (<http://www.mapwindow.org/>)
- GRASS GIS (<http://grass.osgeo.org/>)
- SAGA (<http://www.saga-gis.org/en/index.html>)
- OpenJUMP (<http://jump-pilot.sourceforge.net/>)



Quantum GIS



MapWindow GIS



Creating an GIS Open Source Website

GetFacts
Applied Population Laboratory

Thematic Mapping and Data Extract

Select Local Characteristics:

Census SF1 Variables:
--Select a Variable--

Census SF3 Variables:
--Select a Variable--

Other Variables:
--Select a Variable--

Level of Geography
--None--

Update Map Reset Map

Click to extract data as shapefiles or Excel files.

Legend

Visible	Label
<input checked="" type="checkbox"/>	County Boundaries
<input type="checkbox"/>	Municipal Boundaries
<input type="checkbox"/>	Tract Boundaries
<input type="checkbox"/>	Block Group Boundaries
<input type="checkbox"/>	Basin Boundaries
<input type="checkbox"/>	Watershed Boundaries
<input type="checkbox"/>	Tribal Land Boundaries
<input type="checkbox"/>	Zip Code Boundaries

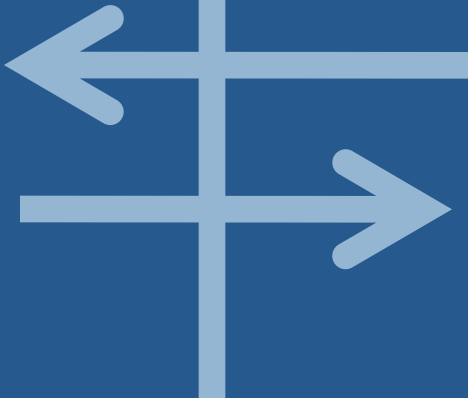
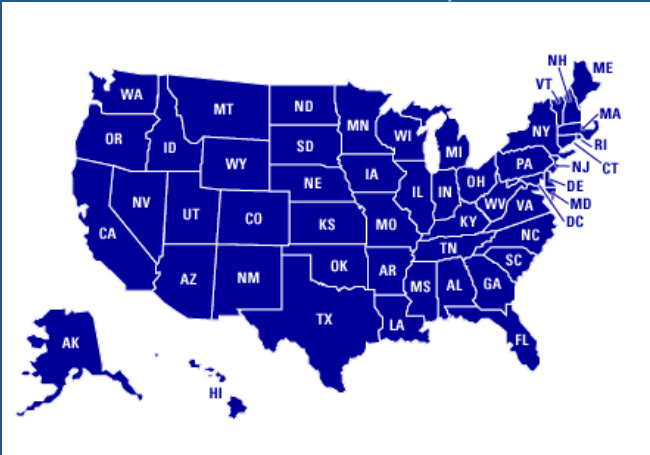
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Basic needs for a GIS web site



Client

Internet



Spatial Database Management Systems

- PostgreSQL /PostGIS (<http://postgis.org>)
- MySQL Spatial (<http://www.mapwindow.org/>)
- TerraLib (<http://www.terralib.org/>)
- Spatialite for SQLite (<http://www.gaia-gis.it/spatialite/>)



Web Map Server

- Geoserver (<http://Geoserver.org>)
- Mapserver (<http://www.mapserver.org/>)
- MapGuide (<http://mapguide.osgeo.org/>)
- Spatialite GIS (<http://www.gaia-gis.it/spatialite/>)



Software Development Frameworks and Libraries (for web applications)

- OpenLayers (<http://openlayers.org>)
- Google, Yahoo, Mapquest
- MapFish (<http://www.mapfish.org/>)
- GeoMoose (<http://geomoose.org/>)
- MapBender (<http://www.mapbender.org/>)



Questions?

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