



A Practical Introduction to MapServer

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MapServer Past

- 1995 - C program -> ArcPlot AML
- 1996 - NASA sponsors ForNet
- 1997 - *shapelib* released
- 1999 - NASA sponsors TerraSIP
- 2000 - MapServer 3.0 release
- 2003 - MapServer 4.0 release
- 2007 - MapServer 5.0 release

MapServer Present

- 5.2 is the current version
 - 5.4 actively being developed
- 10+ developers worldwide
- 2,200+ mailing list subscribers
- Part of OSGeo Foundation

Meeker County Mapper: Minnesota DNR

http://www.dnr.state.mn.us/lands_minerals/aggregate_maps/online_maps/meeker.html?map=%2Fusr%2I

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Home > Lands & Minerals > Aggregate Maps > Online Maps >

Meeker County

Reference Map

- Zoom In
- Zoom Out
- Re-center
- Query features

Only Aggregate Potential layers and Observations layers can be queried.

Query results open in a new window. If you cannot see query results disable your browser's pop-up blocker.

Layers

Aggregate Potential
 Not viewable below a scale of 1:24,000

- Highly Desirable Sand & Gravel
- Moderately Desirable Sand & Gravel
- Less Desirable Sand & Gravel
- Aggregate Potential Outlines

Observations

- County Well Index
- Gravel Pits
- Field Observations

Hydrography

- Wetlands
- Streams
- Lakes

Overlays

- PLS Lines
- Roads
- Municipalities

Background Images
 You may need to zoom in several levels for some background images to display.

- Elevation
- 2003 FSA Photos
- 1991 NAPP Photos
- USGS Topo Map

Update Layers

Reset to defaults

Select County

0 5 10 mi 0 8 16 km

Approximate Scale ~ 1:294000

[Aggregate Mapper Feedback](#)

Getting MapServer

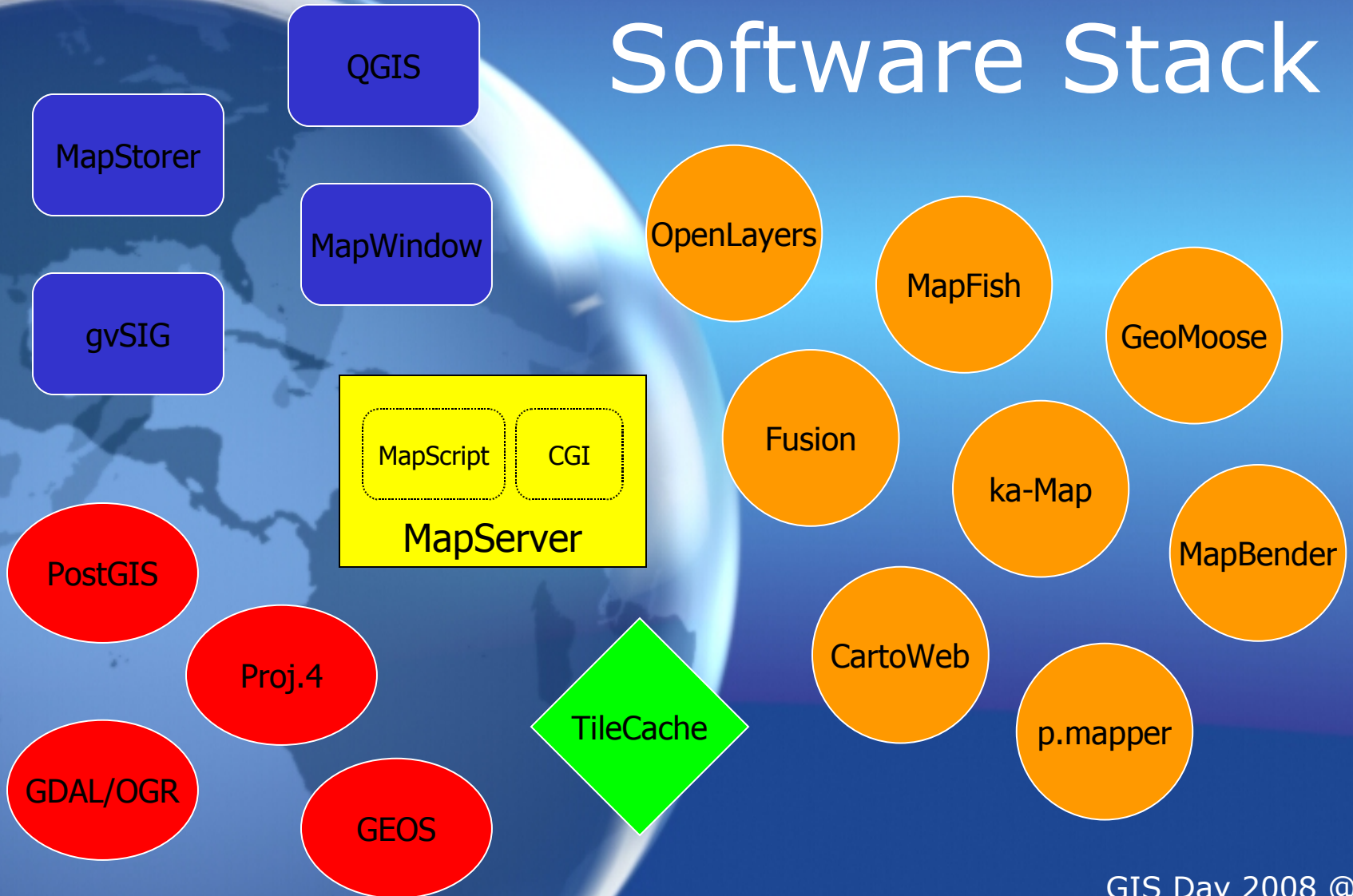
- Compile from source
 - mapserver.gis.umn.edu/download
 - subversion access
- Binary distributions
 - Windows: maptools.org/ms4w/
 - Mac and Linux (package/VM)
- Hosted environments

MapServer Overview

MapServer is a collection of software that is used to put together web mapping applications in a particular way. When built you have:

- C library (*libmap.a/.dll*) and API
- CGI interface (*mapserv*)
- Utility programs for automating map components
- Utility programs for manipulating GIS data
- Various flavors of a scripting API called *MapScript*

Open Source GIS Software Stack



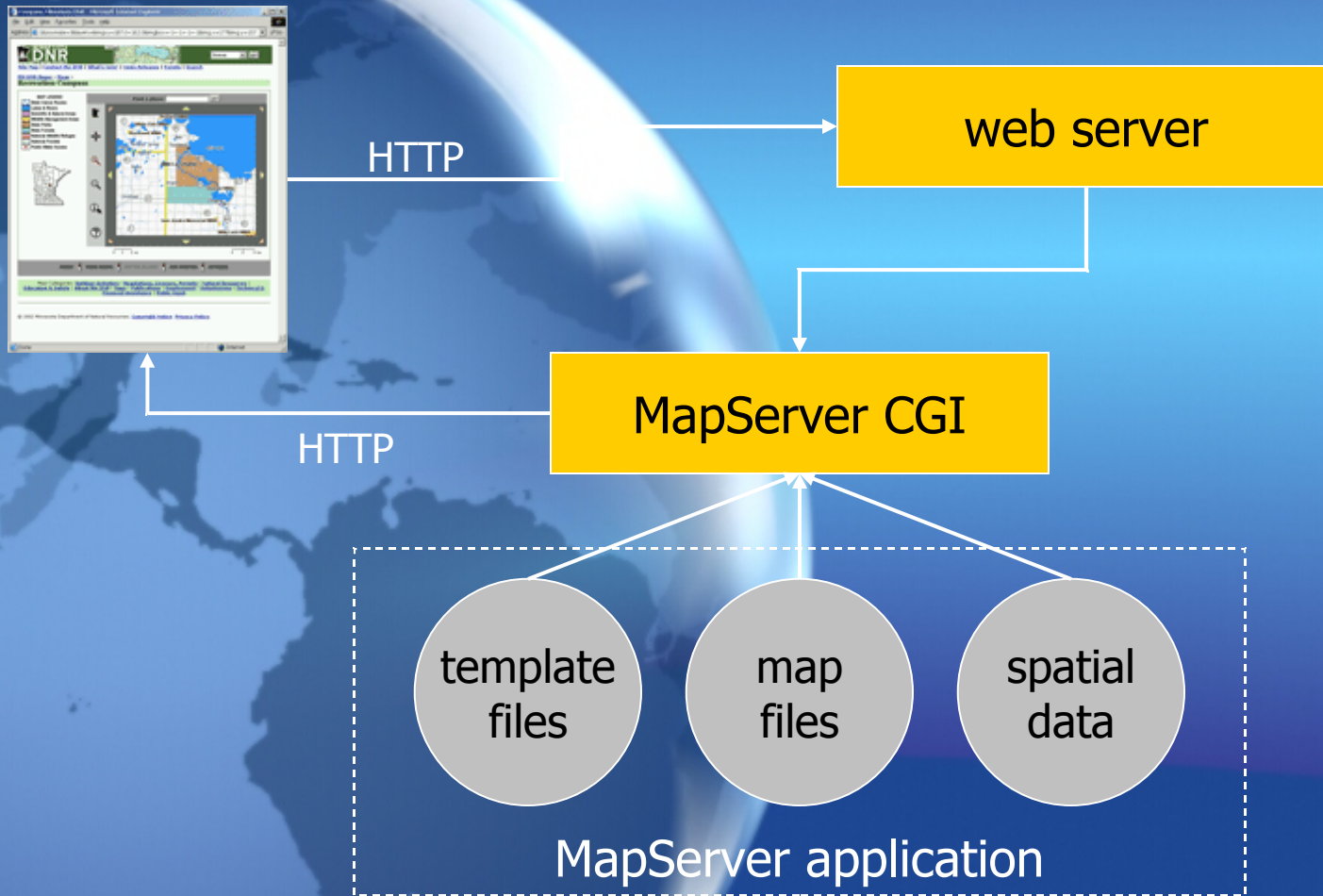
MapServer License

- Basically MIT/X11
- Give credit where credit is due but no warranty
- Theory was that a liberal license leads to adoption
- Takes a positive view of human nature

MapServer Features

- Simple, robust and fast
- Map and map component rendering, feature query
- Support for dozens of GIS data formats including spatial RDMS
- Pragmatic support for most OGC web service specifications

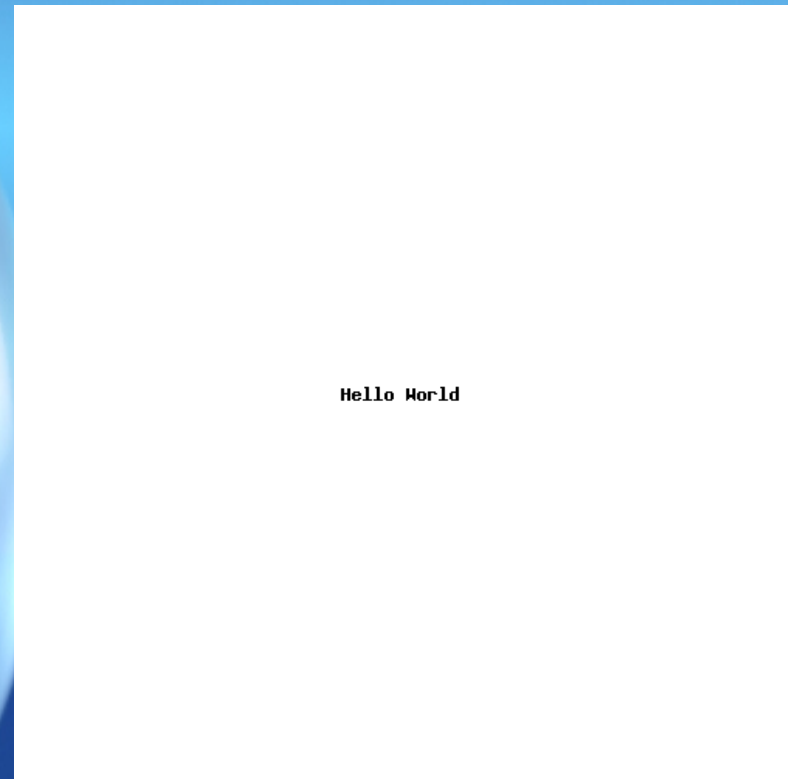
How it Works



MapServer Mapfiles

```
MAP
  NAME 'hello_world'
  SIZE 300 300
  IMAGECOLOR 143 188 143
  EXTENT -200 -200 200 200

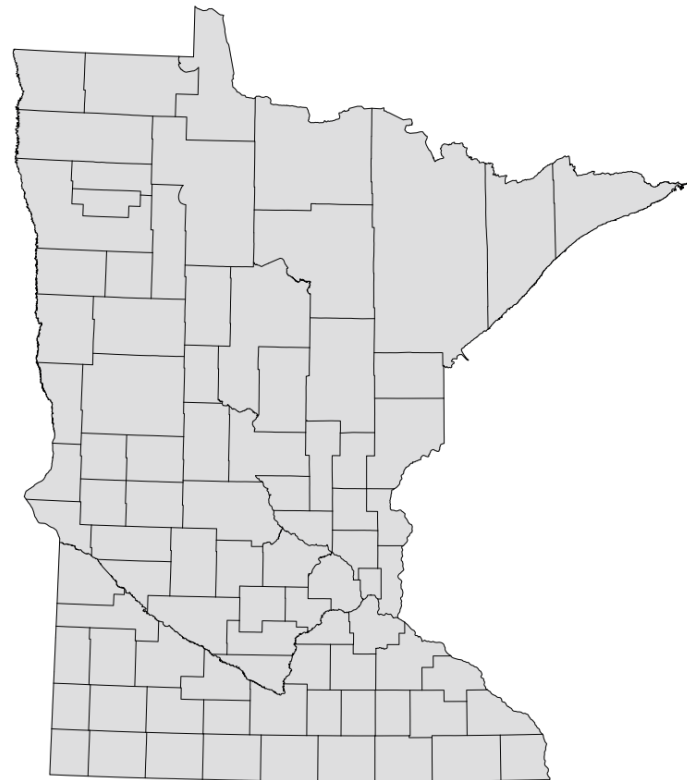
  LAYER
    NAME "howdy"
    STATUS DEFAULT
    TYPE ANNOTATION
    FEATURE
      POINTS
        0 0
      END
      TEXT 'Hello World'
    END
  CLASS
    LABEL
      TYPE BITMAP
      COLOR 0 0 0
    END
  END
END
END # end of map
```



MapServer Mapfiles

```
MAP
  NAME 'MN Counties'
  SIZE 300 300
  IMAGECOLOR 255 255 255
  EXTENT 125105 4785412
          788393 5488749

  LAYER
    NAME "counties"
    DATA "counties.shp"
    STATUS DEFAULT
    TYPE POLYGON
    CLASS
      STYLE
        COLOR 181 181 181
        OUTLINECOLOR 0 0 0
      END
    END
  END
END # end of map
```



MapServer Post-Google Maps

- Rich internet applications
- Reliance on services/mashups
- Tiles are back in vogue
- User (and organizational) expectations elevated
- Desktop GIS as a niche

Home > Maps >

Recreation Compass

download map | how to use

Clickable layers:

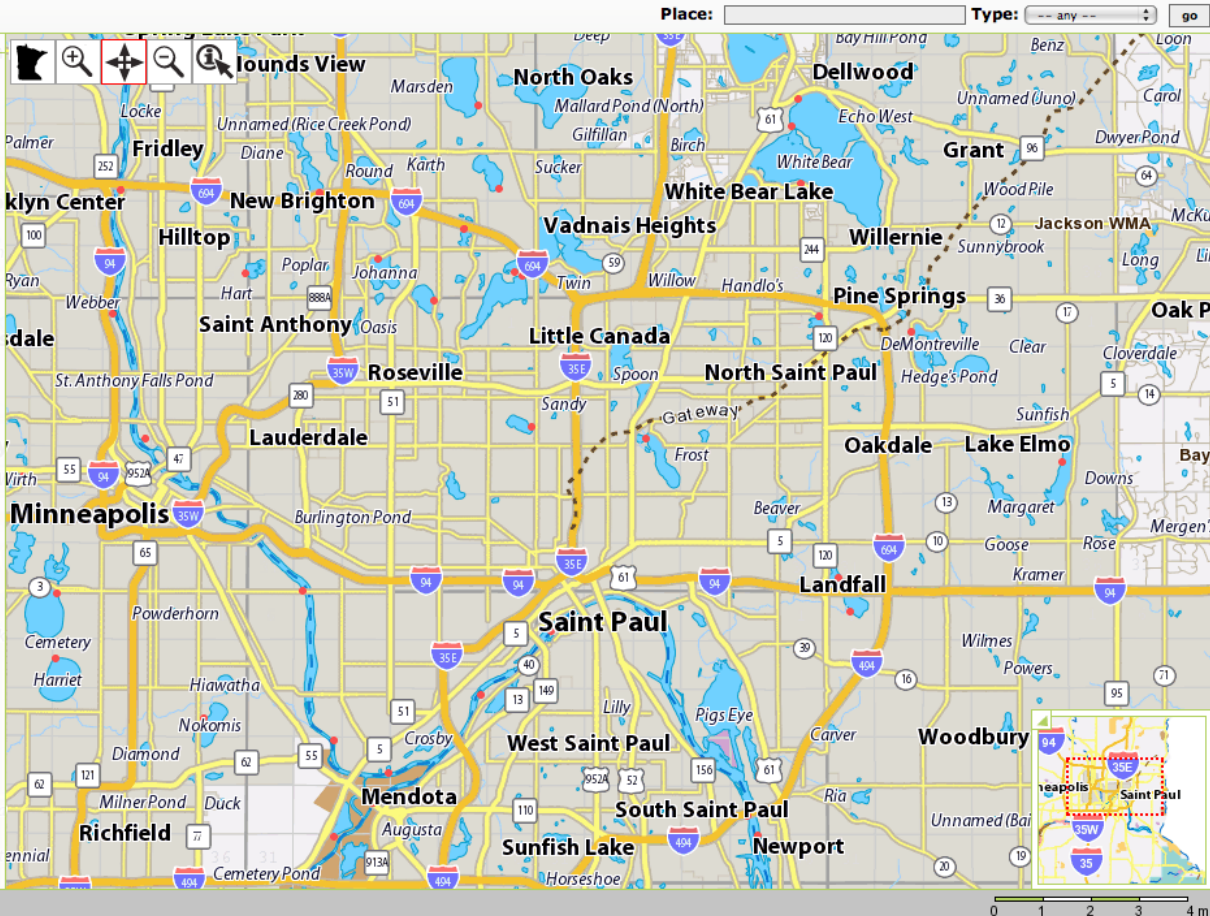
- Lake
- National Forest
- National Wildlife Refuge
- Scientific & Natural Area
- State Canoe Route
- State Forest
- State Park
- State Trail
- Water Access
- Wildlife Management Area

Click the information tool and then click on map features to get detailed information.

Additional layers:

- BWCWA Boundary
- Waterfowl Production Area

These layers have no detailed information available.



MapServer Future

- Stay true to qualities that have made MapServer a success
 - Performance
 - Rendering options and quality
 - Tiled rendering support
- Improved documentation and website
- Improved security

More Information

- Steve.Lime@dnr.state.mn.us
- mapserver.gis.umn.edu
- www.dnr.state.mn.us
- www.osgeo.org