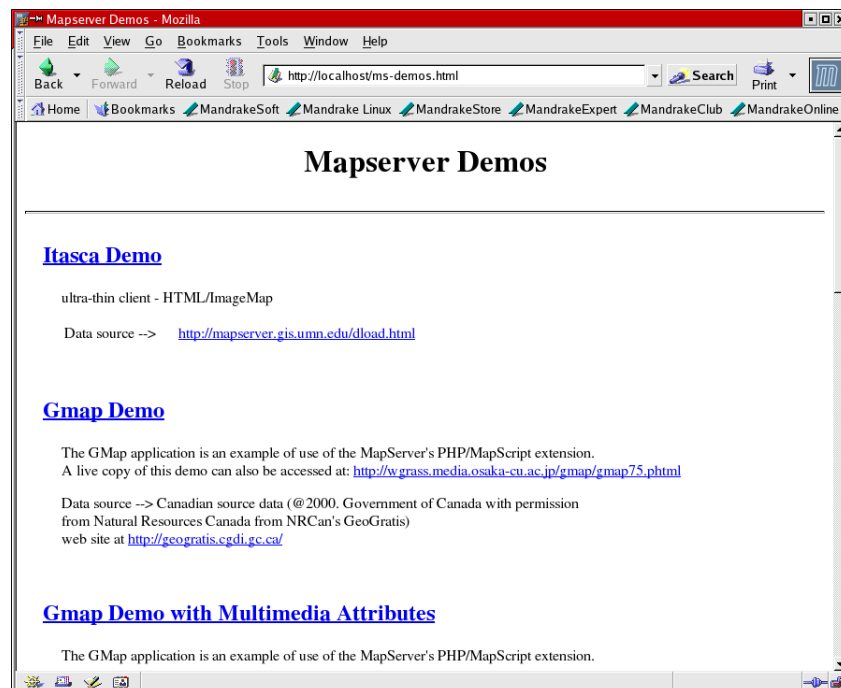


Training Module Section II

MapServer Demos

1. Introduction

The installation script automatically installs several demonstration applications. The main demo page can be accessed on the users machine by invoking the top demo page URL “<http://localhost/ms-demos.html>” (shown below). All the demo applications can be accessed from this page.



2. Objective

The objectives of this training module are:

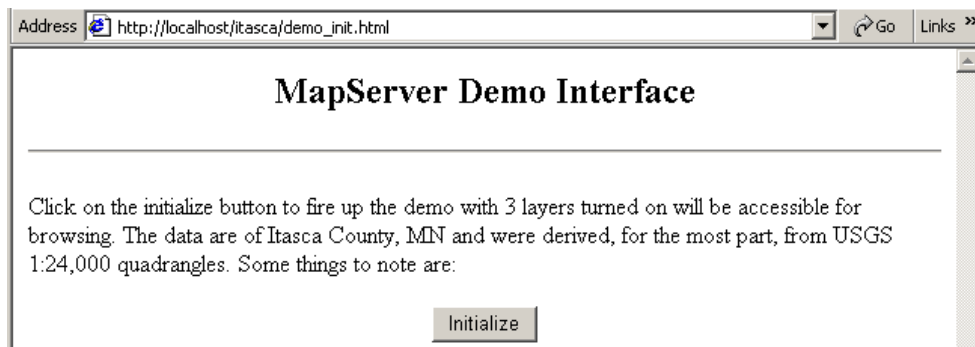
- 2.1. To interact with MapServer demo applications
- 2.2. To familiarize with thin and thick client interfaces for map browsing
- 2.3. To familiarize with single and multiple query of maps
- 2.4. To retrieve map features in GML format

3. Procedure

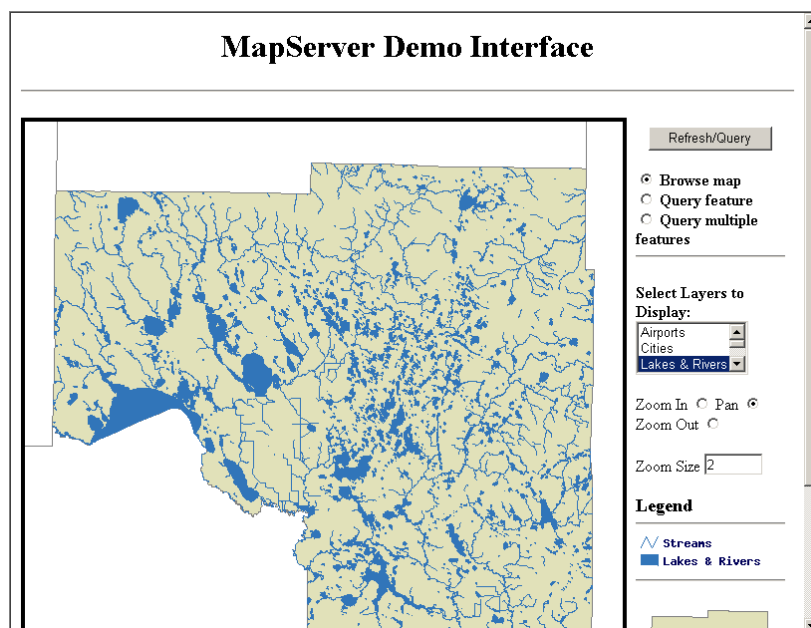
3.1. Itasca Demo Application

The Itasca demonstration is a thin-client application that uses a simple HTML/Imagemap to display raster and vector layers.

- 3.1.1. Select the “Itasca Demo” after invoking the <http://localhost/ms-demos.html> on your browser.

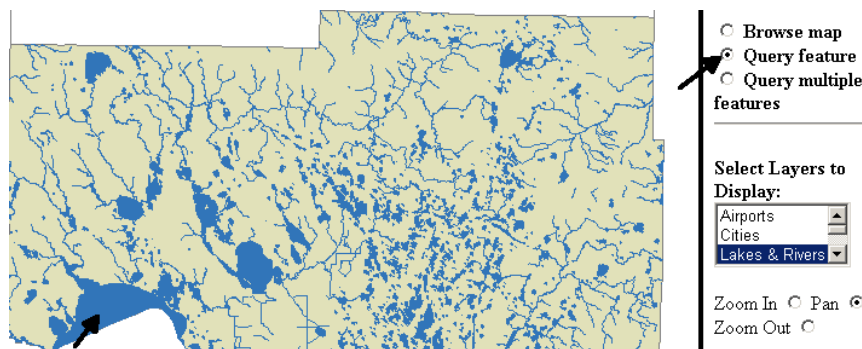


- 3.1.2. Click “Initialize” button, MapServ Demo Interface will show.



- 3.1.3. Try to browse over the area, query a feature, select layer to display, change mode of operations from “zoom in”-“pan”-“zoom out”, change zoom-scale. Then notice changes on the web browse.

- 3.1.4. Try Query feature by click at “Query feature” and then click at the “WINNIBIGOSHI” lake.



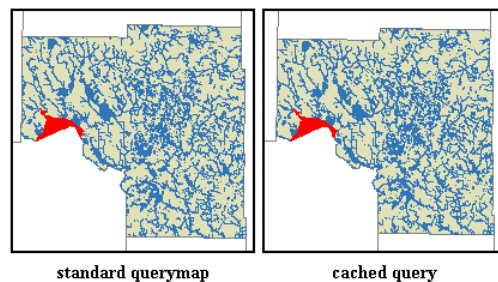
- 3.1.5. A result search window will appear.

SEARCH WINDOW: 388107.634400 5200301.166444 500896.339020 5313063.023754
 QUERY POINT: (108, 286) image coordinates or (444501.986710, 5256682.095099) map coordinates
 QUERY METRICS: number of layers with results=1, total number of results=1

Layer: lakespy2

AREA	PERIMETER	USCLASS	DOWLKNUM	DOW_VERIF	LAKE_NAME	LAK
91781301.01047	85638.66754	421	11014700	1	WINNIBIGOSHI	26

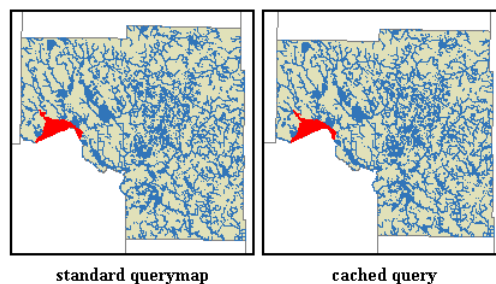
Query Map Examples



[download GML version](#)

- 3.1.6. Try to query again with with standard “OGC/ISO” Web Map Specification Interface Standard by click at the link “download GML version”.

Query Map Examples



[download GML version](#)

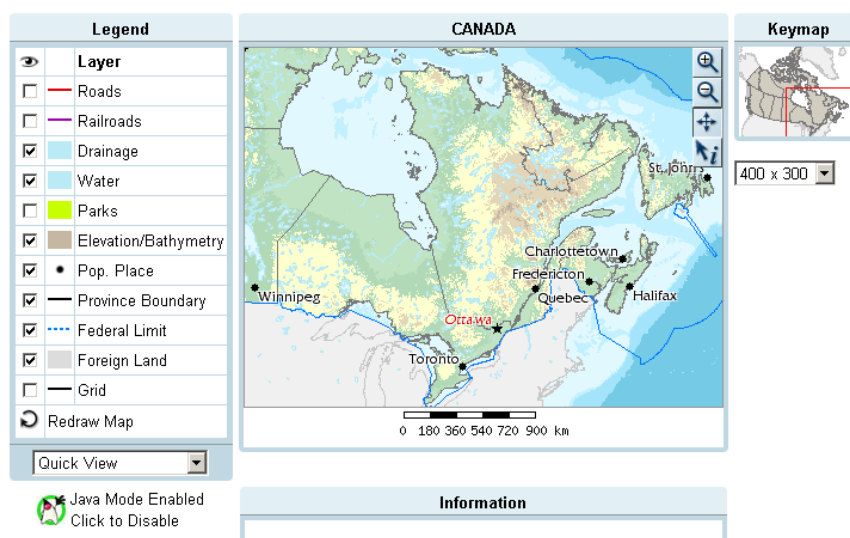
- 3.1.7. Result of the querying object “WINNIBIGOSHI” will show up but in GML format. Use mouse click at the node “+” or “-” on structured data to explore the data.

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
- <msGMLOutput xmlns:gml="http://www.opengis.net/gml" xmlns:xlink="http://www.w3.org/
  xmlns:xsi="http://www.w3.org/2000/10/XMLSchema-instance">
- <lakespy2_layer>
- <lakespy2_feature>
  <AREA>91781301.01047</AREA>
  <PERIMETER>85638.66754</PERIMETER>
  <USCLASS>421</USCLASS>
  <DOWLKNUM>11014700</DOWLKNUM>
  <DOW_VERIF>1</DOW_VERIF>
  <LAKE_NAME>WINNIBIGOSHI</LAKE_NAME>
  <LAKE_CLASS>26</LAKE_CLASS>
  <ELEVATION>1296</ELEVATION>
  <ACRES>22679.159</ACRES>
  <PERFEET>280980.468</PERFEET>
- <gml:boundedBy>
- <gml:Box srsName="EPSG:26915">
  <gml:coordinates>400105.083685,5252199.822997
    421283.079983,5267231.262751</gml:coordinates>
  </gml:Box>
</gml:boundedBy>
+ <gml:Polygon srsName="EPSG:26915">
</lakespy2_feature>
</lakespy2_layer>
</msGMLOutput>
```

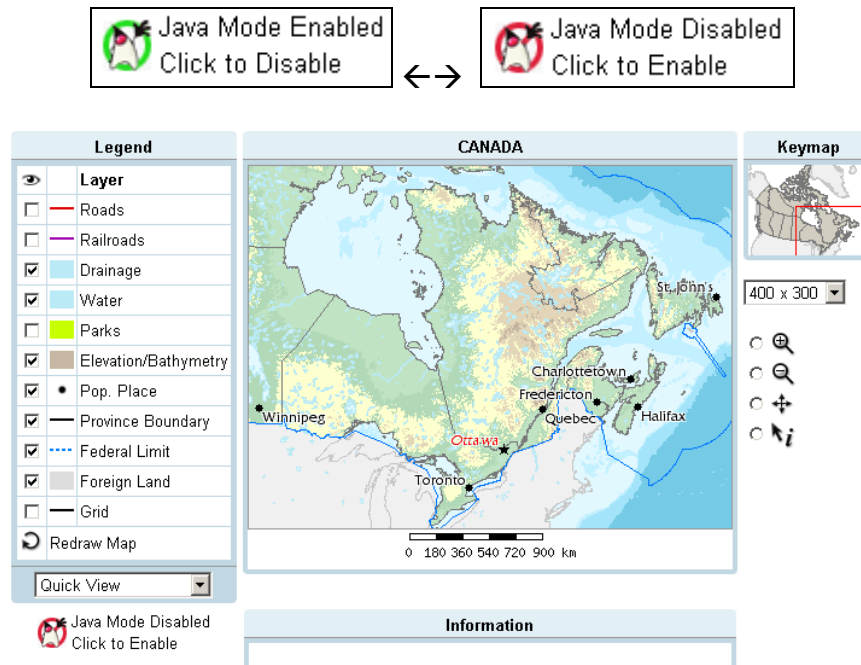
3.2. Gmap demo application

The thick-client “gmap” demonstration application includes Canadian dataset was. The “gmap” uses the Rosa Java applet that improves server-side web applications by adding some simple features on the client-side. The Rosa applet extends the standard form of control (zoom/pan, query). It displays an image (JPEG or PNG) on which operations such as single click query and dragging a rectangle to define an area of interest can be performed. It can also have a toolbar and/or floating buttons with various functions attached to them. Rosa is available as FOSS, which means that it can be freely in developing customized applications.

- 3.2.1. Select the “Gmap Demo” after invoking the <http://localhost/ms-demos.html> on your browser.



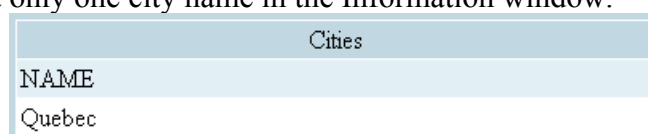
- 3.2.2. Try all functions on gmap: layer selection, zoom-in, zoom-out, click-to-center, changing sized of map and quick view.
- 3.2.3. Change “Java Mode” to “HTML mode” by clicking at Java Mode switch.



- 3.2.4. Try identify/info button and select single city or multiple cities. To select single city simple click onto that city.



- 3.2.5. It result only one city name in the Information window.



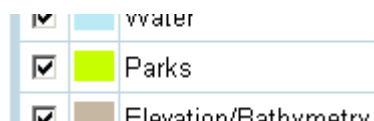
- 3.2.6. To selection multiple cities specify the window by click-drag-and-release over the group of cities.



- 3.2.7. It results showing information on four Cities in the Information window below.

Information	
Cities	
NAME	
Quebec	
Fredericton	
Charlottetown	
Halifax	

- 3.2.8. Same as above, but select the layer “Parks” and try to user identify the park and note the result.



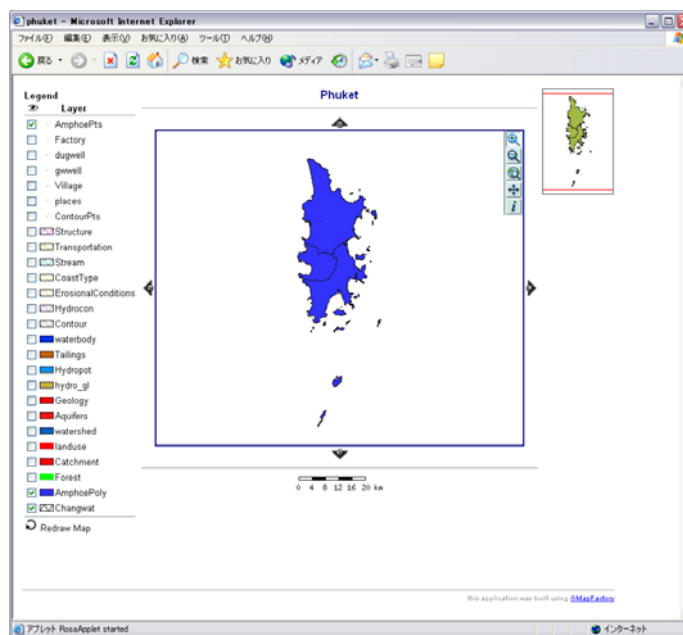
- 3.2.9. Try to get similar result as below.

Parks		
NAME_E	YEAR_EST	AREA_KMSQ
Prince Albert National Park	1927	3874.600
Riding Mountain National Park	1929	2975.900
Grasslands National Park	1981	906.500
Grasslands National Park	1981	906.500

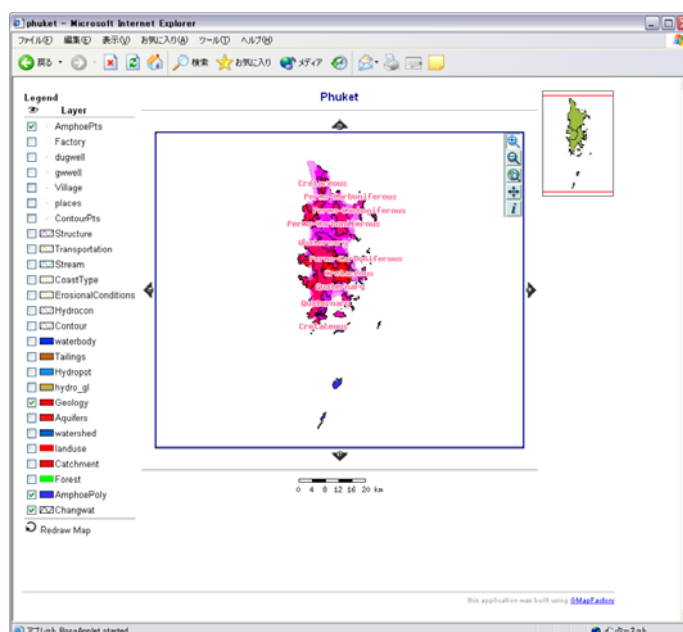
3.3. Phuket Island, Thailand and Hanoi City, Vietnam Demo application

Two applications using datasets for Phuket, Thailand and Hanoi, Vietnam that were published by Geological Survey of Japan under the aegis of the DCGM-III (Digital Compilation of Geo-scientific Maps of East and Southeast Asia, Phase III) were also developed. These applications use the “gmap” interface and thick-client Rosa Java applet and were implemented using the Maplab RAD toolkit.

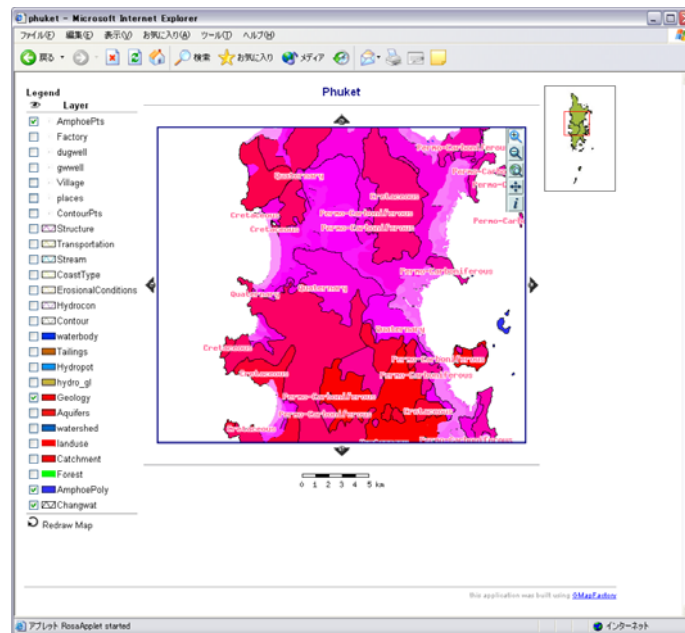
- 3.3.1. Select the “Phuket Island, Thailand Demo” after invoking the <http://localhost/ms-demos.html> on your browser.



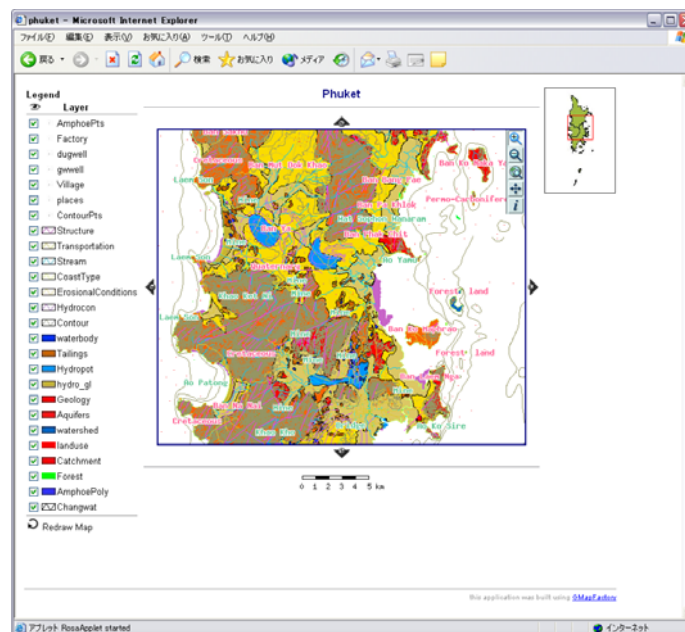
- 3.3.2. Select geology layer.



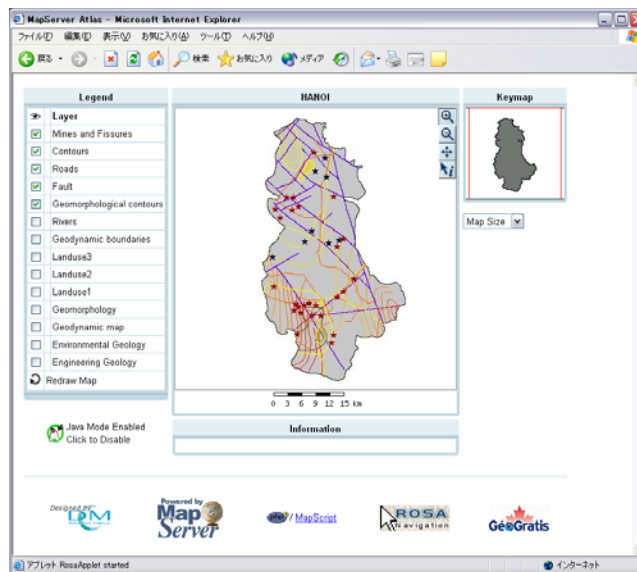
3.3.3. Zoom in.



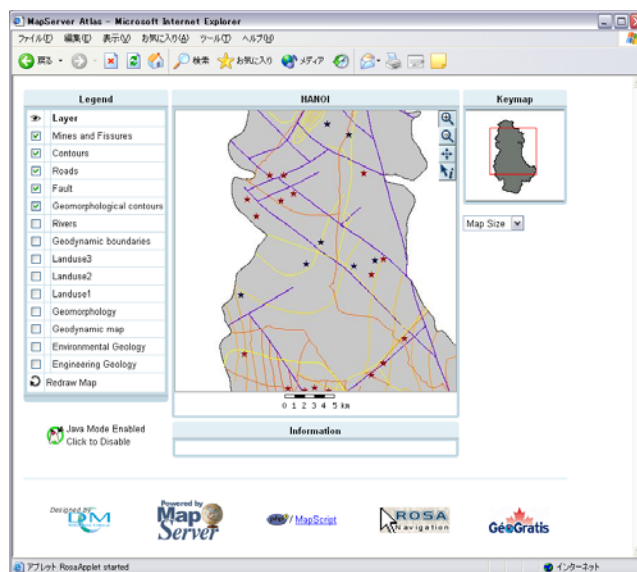
3.3.4. Select all layers.



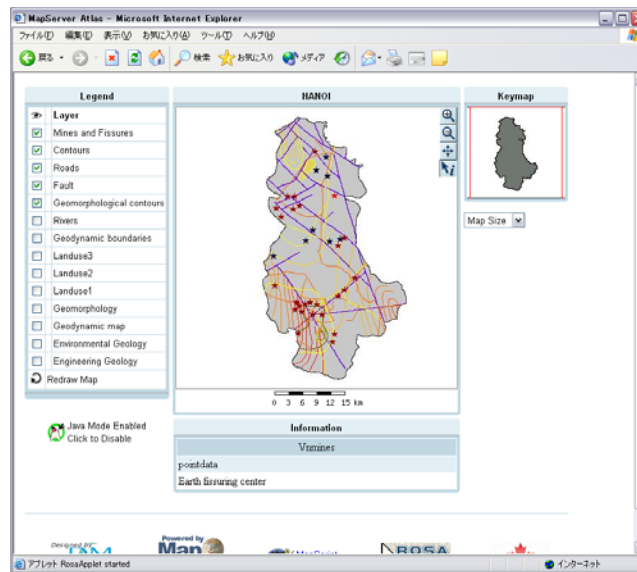
- 3.3.5. Select the “Hanoi City, Vietnam Demo” after invoking the <http://localhost/ms-demos.html> on your browser



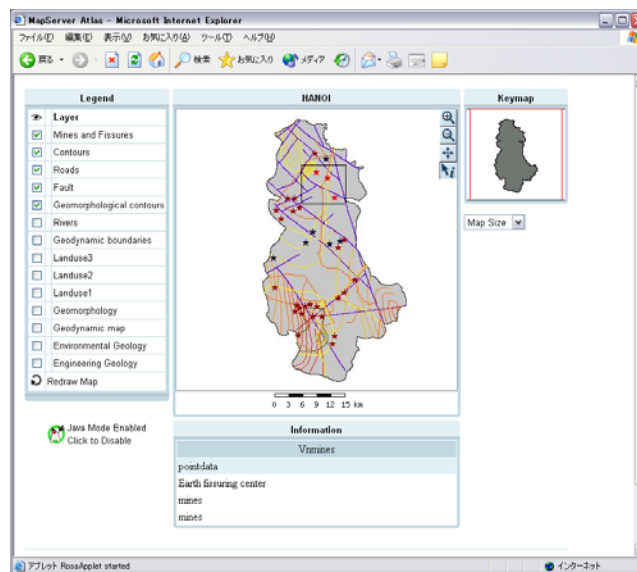
- 3.3.6. Zoom in.



3.3.7. Identify/info button (single).



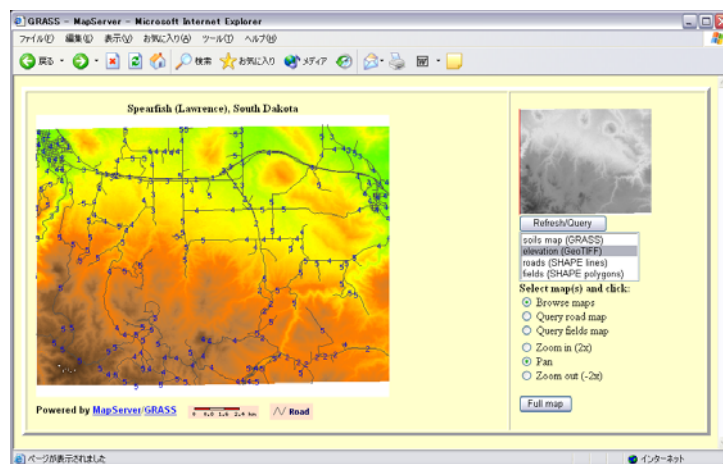
3.3.8. Identify/info button (multiple).



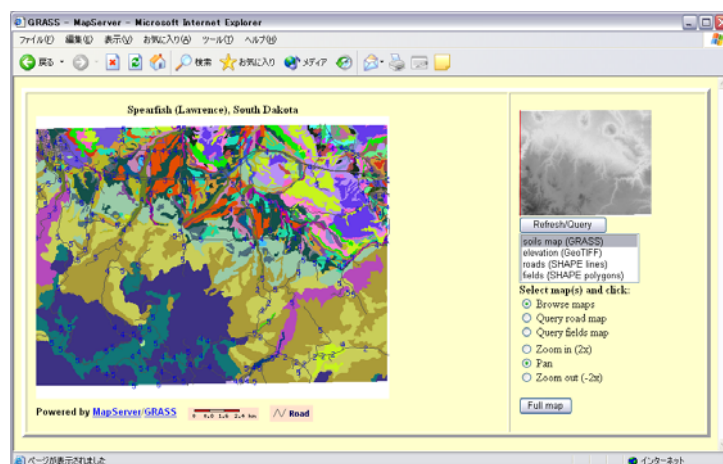
3.4. Demo applications using multiple data formats

Compiling libgrass against GDAL allows Mapserver to read GRASS raster data directly. This demo applications use GRASS GIS raster layers along with data layers in other format (ERSI Shape and GeoTiff). First demo uses a thin-client a simple HTML/Imagemap to display raster and vector layers. Another thin-client includes javascript-based panning and DHTML (Dynamic HTML) rubber-band zoom/query capability was also installed and tested using datasets in multiple formats.

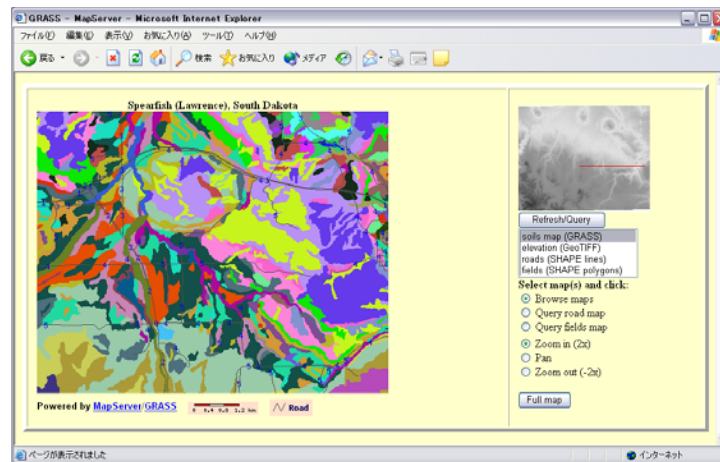
- 3.4.1. Select the “GRASS Demo1” after invoking the <http://localhost/ms-demos.html> on your browser.



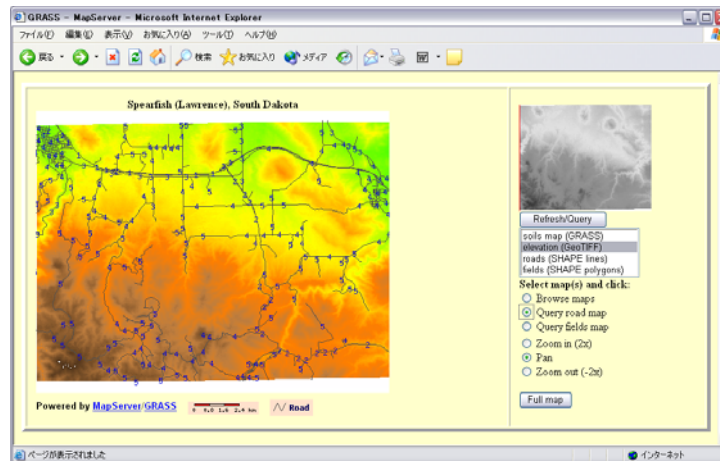
- 3.4.2. Select soil map layer (data in native GRASS raster format).



3.4.3. Zoom in.



3.4.4. Query road map.

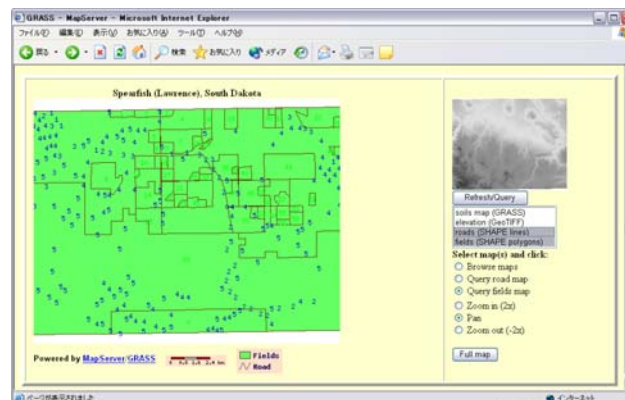


3.4.5. Query result.

Spearfish (SD) spatial query:

Road ID:	5	unimproved road	598968.000000E 4921912.960000N
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3.4.6. Query fields map.

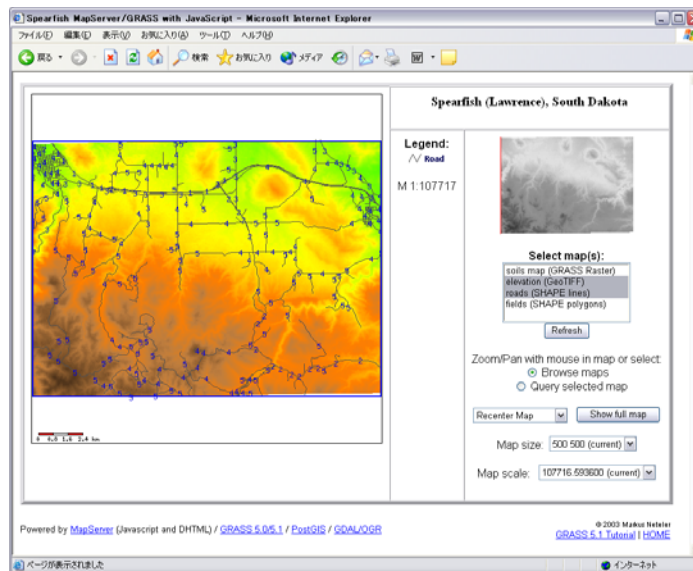


3.4.7. Query result.

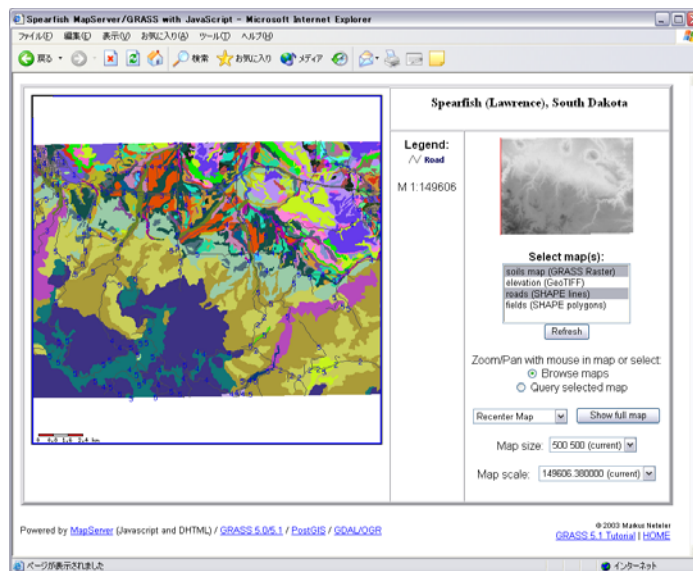
Spearfish (SD) spatial query:

Fields ID:	63	Black Hills Natl. Forest	598341.000000E 4919078.980000N
------------	----	--------------------------	--------------------------------

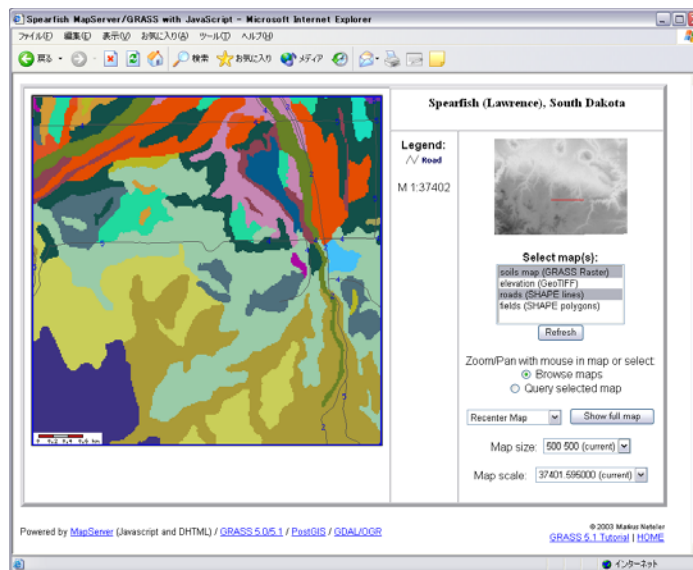
3.4.8. Select the “GRASS Demo2” after invoking the <http://localhost/ms-demos.html> on your browser.



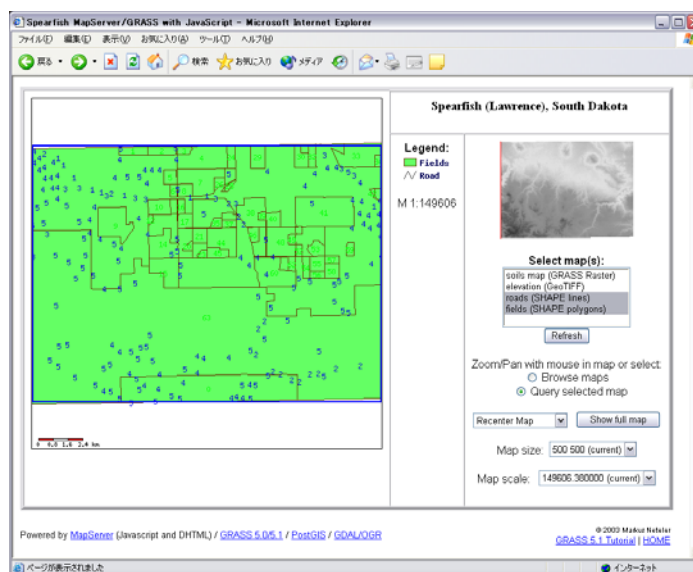
3.4.9. Select soils map layer.



3.4.10. Zoom in.



3.4.11. Query selected map.



3.4.12. Query result.

Spearfish (SD) spatial query:

Fields ID:	63	Black Hills Natl. Forest	598341.000000E 4919078.980000N
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4. Conclusion

In this training module various demonstration application and interaction with thick and thin map browser applications have been demonstrated. The user can communicate with MapServer in CGI mode and browse the maps and query single or multiple features. Results of the query are displayed as text attributes on the browser. Map features can also be retrieved in OGC/ISO compliant GML format.