

What I Learned At...



Presented by Will Mitchell, GISP

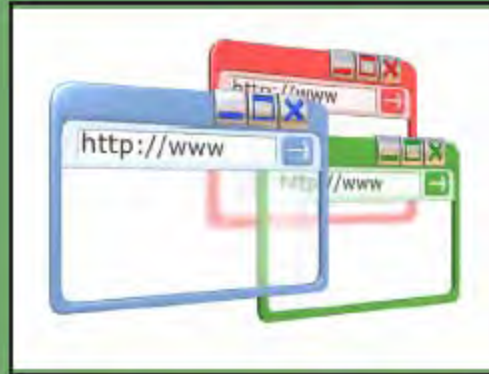
Principal at  NBT SOLUTIONS

Geospatial Solutions



IT PLANNING SERVICES

- IT Needs Assessment and Strategic Planning
- Business Process Modeling
- Software Requirements Specifications
- System Architecture Design



APPLICATION DEVELOPMENT

- Web Application Development
- Database design and implementation
- Web services
- Cloud Computing
- Application Hosting



GIS

- ArcGIS and Extensions
- Remote Sensing
- GPS
- GeoData Development
- Mobile GIS
- Analyses and Modeling
- PBBI-MapInfo Platforms[®]
- Google Maps and Google Earth
- GIS Design and Delivery
- Training and Knowledge Transfer
- GIS Project Outsourcing

What Is FOSS4G?

FOSS4G is the global conference focused on Free and Open Source Software for Geospatial, organized by OSGeo



The Open Source Geospatial Foundation...

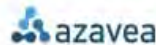
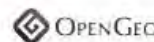
OSGeo was created to support the collaborative development of open source geospatial software, and promote its widespread use.

Past Events:

- Barcelona 2010
- Sydney 2009
- Cape Town 2008
- Victoria 2007

Who Participates In FOSS4G?

*2011 was largest yet, with over 900 attendees from around the globe,
And the following sponsors...*



Tools and Projects: A Supported Core Stack



Tools and Projects: PostGIS



PostGIS adds support for geographic objects to the [PostgreSQL](#) object-relational database.

PostGIS "spatially enables" the PostgreSQL server



Tools and Projects: **GeoServer**



GeoServer is an open source software server written in Java that allows users to share and edit geospatial data.

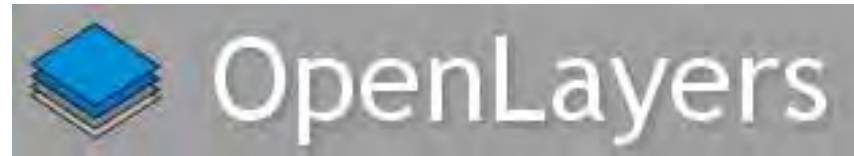
Designed for interoperability, it publishes data from any major spatial data source using open standards.

Tools and Projects: GeoWebCache

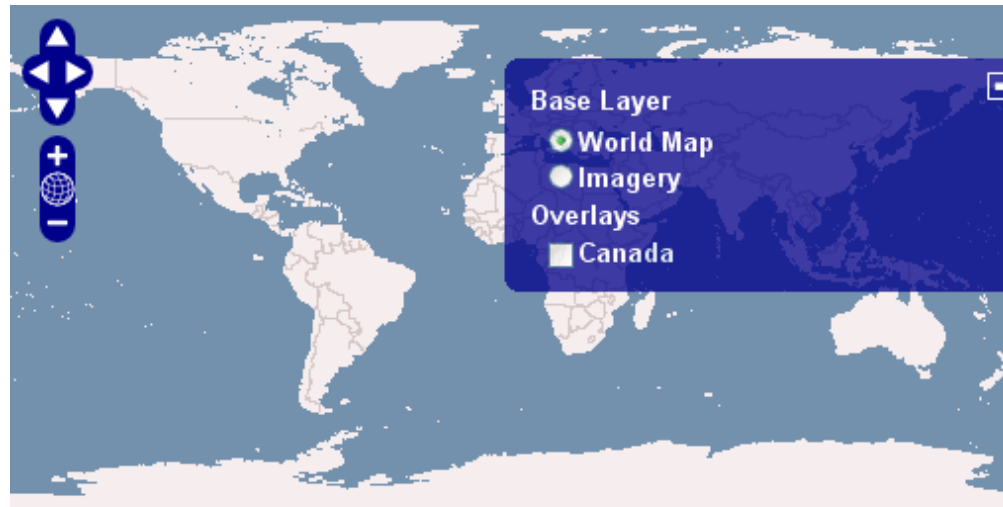


GeoWebCache optimizes web mapping application delivery by saving (caching) map images, or tiles, as they are requested, and reusing previously rendered images or tiles from memory

Tools and Projects: OpenLayers



[OpenLayers](#) is a JavaScript library for displaying maps in your browser



Put an open map widget in any web page!

Tools and Projects: MapServer



MapServer is an open source development environment for building spatially-enabled web mapping applications and services.

Support for popular scripting and development environments:
PHP, Python, Perl, Ruby, Java, and .NET

Advanced cartographic output

Speed

Tools and Projects: Mapnik



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Welcome

Mapnik is a **Free** Toolkit for developing mapping applications. Above all Mapnik is about making beautiful maps. It is easily extensible and suitable for both desktop and web development.

[More ...](#)

Support Mapnik

[Donate](#)

Getting Started

- » [Get source!](#)
- » [Documentation \(Trac Wiki\)](#)

Get Mapnik **2.0.0**

[Source](#)



Tools and Projects: Tilemill

The screenshot displays the MapBox TileMill web application interface. At the top, the MapBox logo and navigation links (Design, Hosting, Support, Showcase, Documentation) are visible. The main header features the TileMill logo and the tagline "Design beautiful maps". Below this, a navigation bar includes icons for Data, Design, Interaction, and a highlighted Download button. The central workspace is divided into two main sections: a map view on the left and a style editor on the right. The map view shows a dark-themed map of Europe with city names and country borders. The style editor displays a list of style files (style.mss, labels.mss) and a code editor with the following content:

```
7 Map { background-color:@base; }
8
9 .water-poly { polygon-fill:@base; }
10
11 #land:glow-inner[zoom>0] {
12   line-color:#225160;
13   line-width:1.2;
14   line-join:round;
15   line-opacity:0.4;
16 }
17 #land:glow-innere[zoom>1] {
18   line-color:#225160;
19   line-width:2.5;
20   line-join:round;
21   line-opacity:0.2;
22 }
23 #land:glow-out[zoom>2] {
24   line-color:#225160;
25   line-width:4;
26   line-join:round;
27   line-opacity:0.1;
28 }
```

Tools and Projects: MapBox



Login

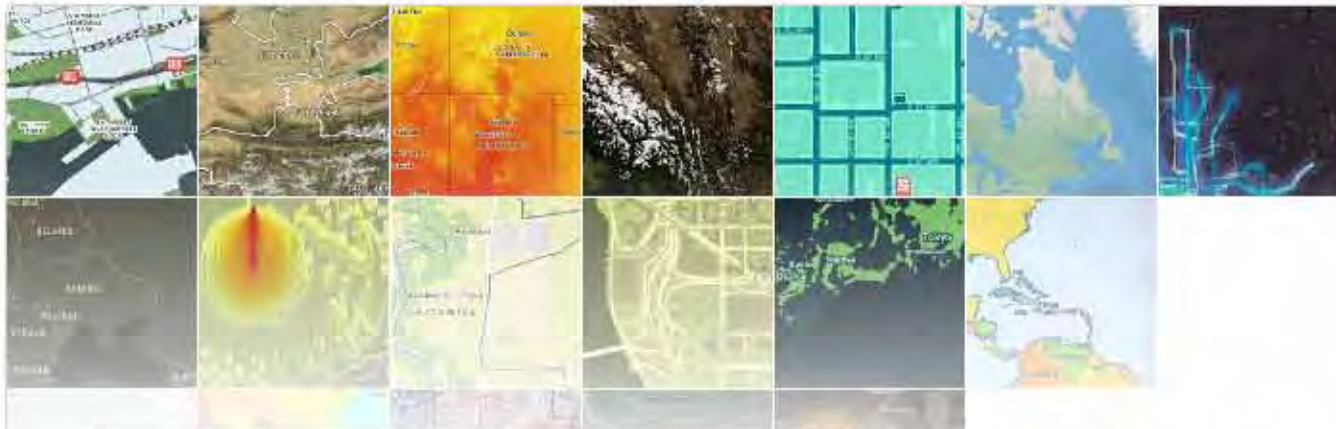
Design

Hosting

Support

Showcase

Documentation



Make beautiful maps.
Share them anywhere.
That's MapBox.

Make maps

Easy map design with TileMill.

Free
download



Host maps

Fast, reliable hosting with MapBox.

Plans &
pricing



Tools and Projects: CartoDB

Your cloud based geospatial database.

CartoDB allows you to map data & develop location aware applications quickly and easily. With plans starting from free, take CartoDB for a test drive today!

The screenshot displays the CartoDB web interface. The browser address bar shows 'you.cartodb.com'. The main header includes 'CartoDB' and user information. Below the header, the dataset 'uk_20riot_20locations' is selected, with a 'private' status indicator. Two tabs are visible: 'Table' (active) and 'Map'. The 'Table' view shows a data table with columns for various attributes, including location names, dates, and times. The 'Map' view shows a geographical map with data points overlaid as green markers.

id	source	what_ha...	street_n...	location...	street...	date	time	
(1)	Met Police pr...	29-year-old fat...	Haringey	Ferry Lane, Jc...	Minoub	Thursday	August 4, 2011	18:15:00
(2)	placemark_circl...	Pearce's petri...	Haringey	396 High Rd, ...	Tottenham Pol...	Saturday	August 6, 2011	17:20:00
(3)	placemark_circl...	Rivers brack L...	Haringey	396 High Rd, ...	Tottenham Pol...	Saturday	August 6, 2011	20:20:00
(4)	placemark_circl...	The shop on...	Westminster	68 Marchmont...	Gay's The World	Saturday	August 7, 2011	0:25:00
(5)	placemark_circl...	Set on fire	Haringey	Tottenham Hale	Copyright shop	Saturday	August 6, 2011	0:28:00
(6)	placemark_circl...	Set on fire	Haringey	Tottenham Hale	Post Office	Saturday	August 6, 2011	0:35:00

Tools and Projects: GeoKettle

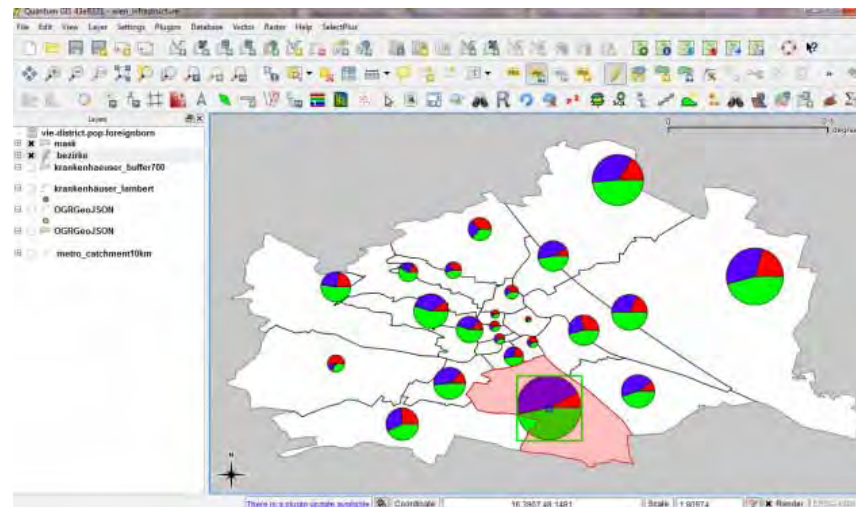


Tools and Projects: Quantum GIS



Quantum GIS is a full fledged desktop GIS package. It provides a continuously growing number of capabilities through core functions and plugins.

You can visualize, manage, edit, analyse data, and compose printable maps.

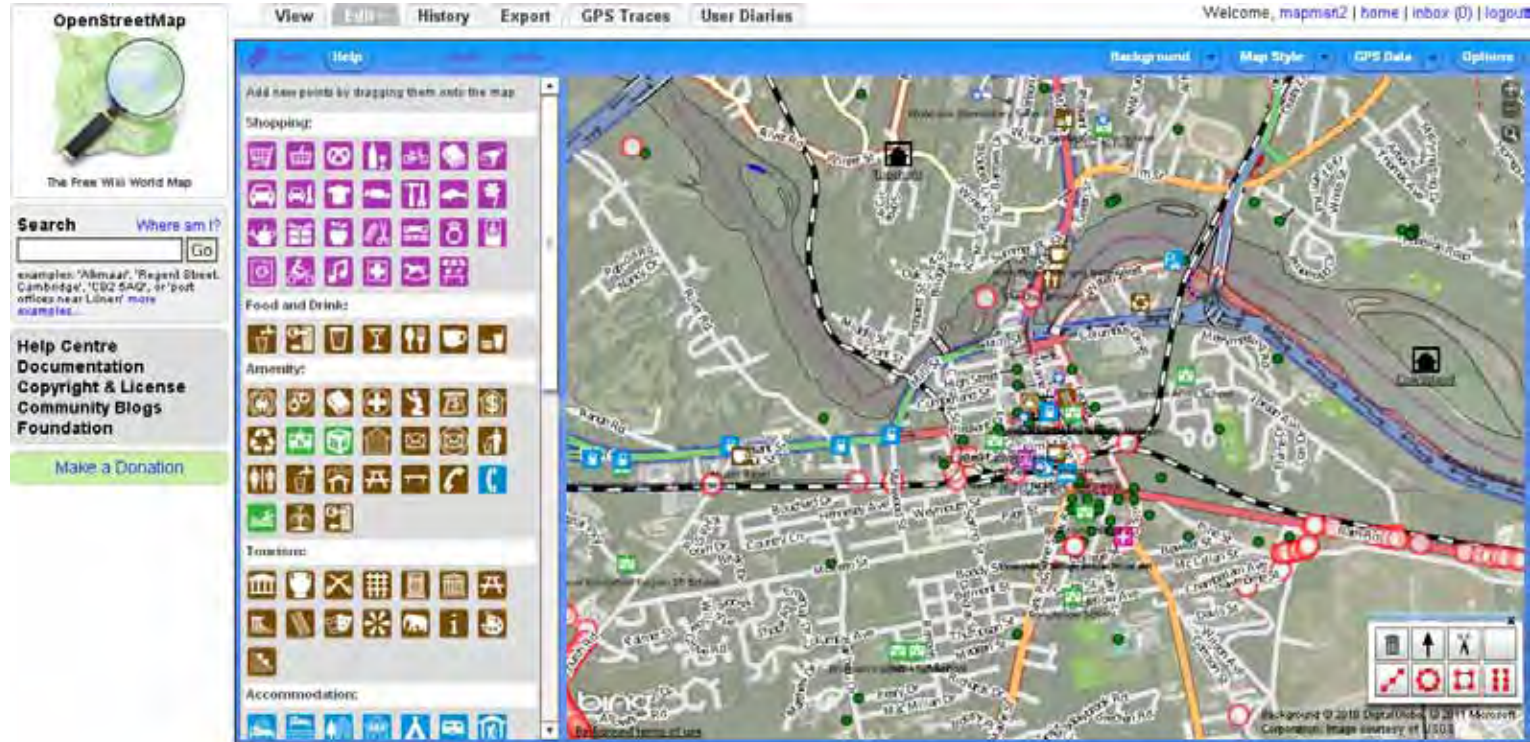


Tools and Projects: Open Street Map (OSM)

The screenshot displays the OpenStreetMap website interface. At the top, the browser address bar shows 'www.openstreetmap.org'. Below the address bar are navigation tabs: 'View', 'Edit', 'History', 'Export', 'GPS Traces', and 'User Diaries'. The main content area features a map of the Portland, Maine region, showing roads, water bodies, and numerous airports. On the left side, there is a sidebar with several sections: 'OpenStreetMap' with a magnifying glass icon and the text 'The Free Wiki World Map'; a 'Search' section with a text input field and a 'Go' button, including examples of search terms; a text block describing OpenStreetMap as a free, editable world map; a 'Help Centre' section with links to 'Documentation', 'Copyright & License', 'Community Blogs', and 'Foundation Map Key'; and a green 'Make a Donation' button. A scale bar at the bottom left indicates 10 km and 5 miles.

CrowdSourced Base Map of the WORLD

Tools and Projects: Open Street Map (OSM)

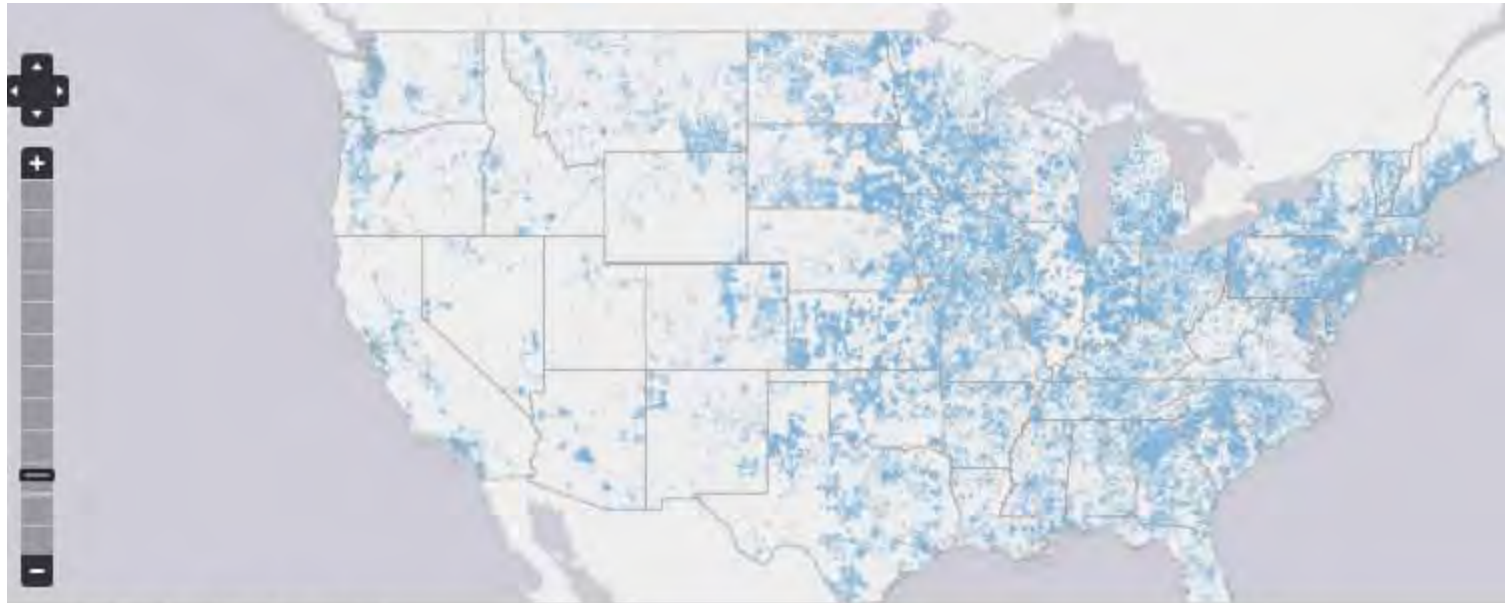


Name	Screenshot	Platform	Add POIs	Edit / Delete POIs
Amenity Editor [1]		win, linux, macos	Yes	Yes
Blueshape [2]		win, iphone	Yes	
GeorgeMap [3]		win5	No	No

Many Editors available

ArcGIS Editor for OpenStreetMap


Real World Examples: Broadband Mapping



Type of Technology Available

Description: This map displays broadband technologies offered to end users (e.g. DSL, cable, wireless, fiber, etc.).



 The **National Broadband Map** is a tool to search, analyze and map broadband availability across the United States.

Real World Examples: Fiber Locator

The screenshot displays the FiberLocator web application interface. At the top left is the logo "FiberLocator" and a search bar with the placeholder text "Find an Address...". To the right of the search bar are navigation links: "Output", "Session", "Support", and "Logout". Below the search bar is a "Layers" panel with a "Dynamic Legend" section. The legend contains a table of fiber network providers with their respective icons and status checkboxes.

Icon	Name	Info
	Rail America (ROW)	<input type="checkbox"/>
	Fibertech	<input type="checkbox"/>
	Sidera Networks	<input type="checkbox"/>
	Maine Fiber Co Proposed	<input type="checkbox"/>
	Burlington Telecom	<input type="checkbox"/>
	Data Centers	<input type="checkbox"/>
	TelJet	<input type="checkbox"/>
	Qwest Metro Leased	<input type="checkbox"/>
	Qwest Metro	<input type="checkbox"/>
	Level3 Metro	<input type="checkbox"/>
	Sprint Long Haul	<input type="checkbox"/>
	XO Metro Fiber	<input type="checkbox"/>
	Lighttower Leased	<input type="checkbox"/>
	Oxford Networks	<input type="checkbox"/>
	Lighttower Owned	<input type="checkbox"/>
	Level 3 Long Haul	<input type="checkbox"/>

The main map area shows a geographical view of the Northeastern United States, including parts of New York, Vermont, New Hampshire, and Maine. Various fiber optic routes are overlaid on the map in different colors, corresponding to the legend. Major cities like Burlington, Montpelier, St. Johnsbury, White Mountain National Forest, Lehigh, Concord, Manchester, and Portland are labeled. A scale bar at the bottom left indicates 50 km and 20 mi. In the bottom right corner, there is a "Powered By: FiberLocator" logo and the coordinates "-73.2693, 42.7731".