Mapping With Drupal
Mapping with Drupal

- SpatialTools
- Addressfield
- FileField
- Geocoder
- Views GeoJSON
- Views GeoJSON
- Geofield
- SyncPostGIS
- ApacheSolr
- PostGIS
- GeoServer
- MapBox
- TileMill
- TileStache
- Lat / Lon HTML5
- Draw on Map
- Shapefiles KML
- Address KML
- Geotagged Image KML
- GPX

OpenLayers Maps
- Styles
- Maps
- Layers
- Behaviors

Providers:
- Google Maps
- Yahoo Maps
- Bing Maps
- CloudMade Maps
- OpenStreet Maps
**Geometry Types:**
- Point
- LineString
- Polygon
- MultiPoint
- MultiLineString
- MultiPolygon
- GeometryCollection

**WKT Example:**
```
POLYGON ((30 10, 10 20, 20 40, 40 40, 30 10))
```
User enters an address
Address is stored independently
Does not store lat / lon

KML (Google Earth)
GPX (Hand-held GPS)
Geo-tagged Image (smart-phone)

Handlers call service
Google
Yahoo
Yandex
MapQuest

Handlers parse uploaded file into a geoPHP geometry object

Direct user input
Is also supported
Lat / Lon
HTML5
Draw on Map
More!
ESRI Shapefiles can be imported into geofields using OSGeo’s GDAL ogr2ogr library.

Requires download and install of ogr2ogr.
Latitude, Longitude 127 24’ 66” N, 23 23’ 56” W

GeoJSON {"type":"Point","coordinates":[-123.3,30.78]}

WKT POLYGON ((30 10, 10 20, 20 40, 40 40, 30 10))
OpenLayers and Views

Repeat after me

“I need to create two views. One view hold the layer. The other view holds the map.”
GeoJSON View
(views_geojson module)
1. Create a page view
2. Add geofield field to field list
3. Set format to GeoJSON feed and select geofield

GeoJSON Layer
Layer should automatically appear in your layers list

OpenLayers Map View
1. Create a page, block or pane view
2. Set format to OpenLayers Map
3. Optional: set-up exposed filters identically to first view
4. Profit!

OpenLayers Map
1. Add layer to map and configure map as desired
2. Click “Preview” to make sure your map is working

Exposed & Contextual Filters
Layers

Two classes:
1. Base-Maps such as google maps or other “tiles”
2. Overlays that come from views or feeds

Behaviors

Behaviors are JavaScript snippets that make the map interactive in different ways or provide map UI functionality.

Maps

Brings Behaviors and Layers (and implicitly Styles and Layer-Types) together in a JavaScript widget for displaying spatial data.

Styles

Provide static and dynamic styling to overlay layers.
-- Find all pubs located within 250 meters of a hospital.
SELECT h.name, p.name FROM bc_hospitals h, bc_pubs p WHERE ST_DWithin(h.geom, p.geom, 250);

-- What is the largest municipality in British Columbia, by area?
SELECT name, ST_Area(geom) as area FROM bc_municipality order by area limit 1;

-- What is the total length of all roads in BC, in kilometers?
SELECT sum(ST_Length(geom))/1000 as km_roads from bc_roads;
PostGIS can be used as a spatial-query service in the same way that solr is used as a search-query service. This example shows us associating “Location” nodes with “Region” nodes using Geofield, node-references, and SyncPostGIS.
TileMill

PostGIS
ShapeFiles
GeoTIFF
KML
More!

GeoServer

Tile Stache

VARNISH CACHE