

# THE **GINA MAP LAYERS** JAVASCRIPT LIBRARY

Will Fisher  
Geographic Information Network of Alaska  
University of Alaska Fairbanks

January 2013



# OUTLINE

- ▶ Introduction to GINA Map Layers library
- ▶ Create a map using Google Maps
- ▶ Create a map using OpenLayers
- ▶ Add more layers
- ▶ Switching projections



# RECOMMENDED TOOLS



# RECOMMENDED TOOLS

- ▶ Github - <https://github.com/gina-alaska/gina-map-layers>



# RECOMMENDED TOOLS

- ▶ Github - <https://github.com/gina-alaska/gina-map-layers>
- ▶ Example Code - <http://tinyurl.com/akmss-examples>



# RECOMMENDED TOOLS

- ▶ Github - <https://github.com/gina-alaska/gina-map-layers>
- ▶ Example Code - <http://tinyurl.com/akmss-examples>
- ▶ Text Editor
  - ▶ Notepad, TextMate, VIM, etc...



# RECOMMENDED TOOLS

- ▶ Github - <https://github.com/gina-alaska/gina-map-layers>
- ▶ Example Code - <http://tinyurl.com/akmss-examples>
- ▶ Text Editor
  - ▶ Notepad, TextMate, VIM, etc...
- ▶ Google Chrome - <http://www.google.com/chrome>
  - ▶ Developer Tools - built into Chrome



# RECOMMENDED TOOLS

- ▶ Github - <https://github.com/gina-alaska/gina-map-layers>
- ▶ Example Code - <http://tinyurl.com/akmss-examples>
- ▶ Text Editor
  - ▶ Notepad, TextMate, VIM, etc...
- ▶ Google Chrome - <http://www.google.com/chrome>
  - ▶ Developer Tools - built into Chrome
- ▶ Firefox - <http://www.mozilla.org>
  - ▶ Firebug - <http://getfirebug.com>



# GINA MAP LAYERS LIBRARY

Quick and easy method to add GINA's tile layers to existing JavaScript map applications.

Code: <https://github.com/gina-alaska/gina-map-layers>



# GINA MAP LAYERS LIBRARY

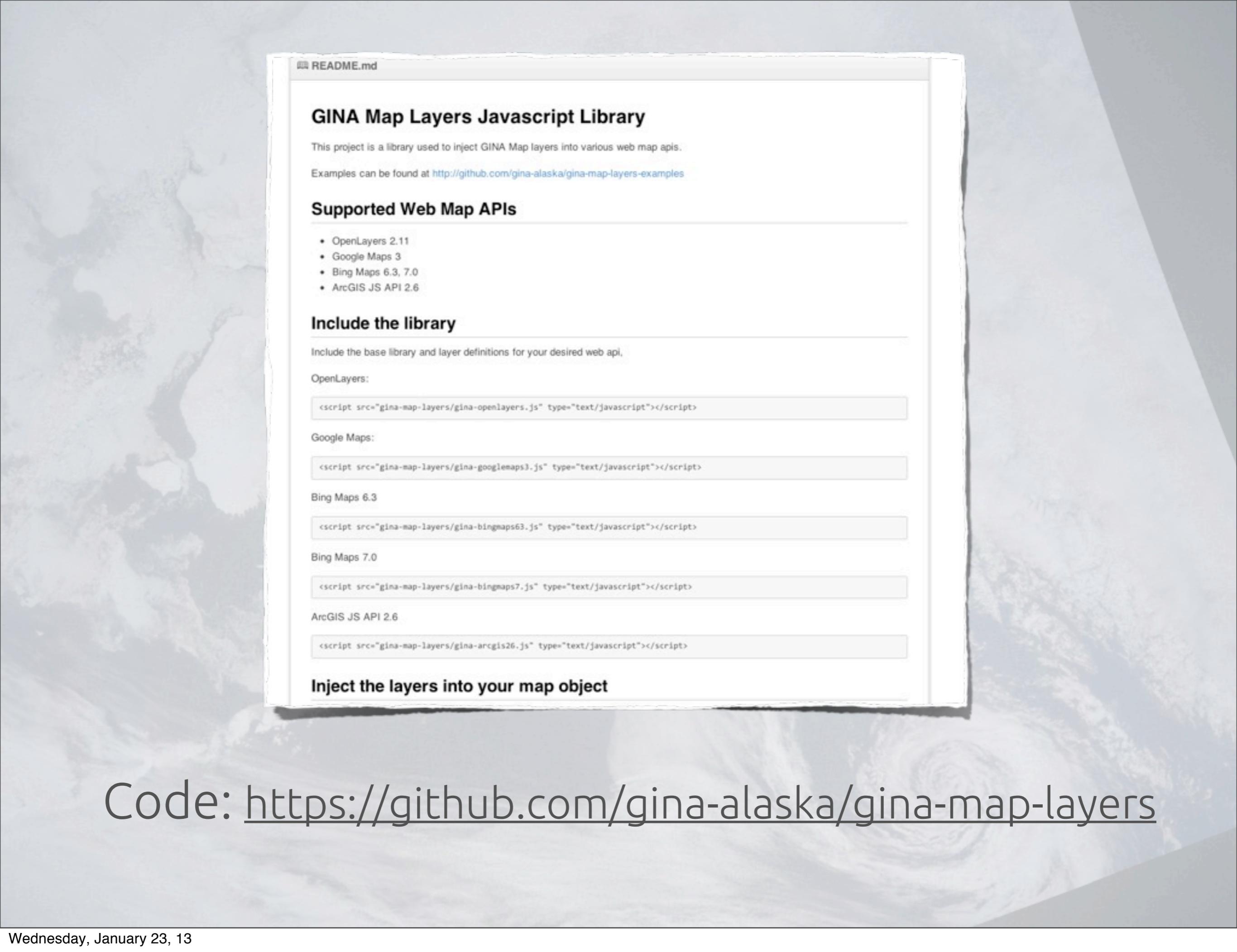
Quick and easy method to add GINA's tile layers to existing JavaScript map applications.

Code: <https://github.com/gina-alaska/gina-map-layers>

Supports:

Google Maps 3  
OpenLayers 2.11+  
Bing Maps 6.3, 7.0  
ArcGIS JS API 2.6





README.md

## GINA Map Layers Javascript Library

This project is a library used to inject GINA Map layers into various web map apis.

Examples can be found at <http://github.com/gina-alaska/gina-map-layers-examples>

### Supported Web Map APIs

- OpenLayers 2.11
- Google Maps 3
- Bing Maps 6.3, 7.0
- ArcGIS JS API 2.6

### Include the library

Include the base library and layer definitions for your desired web api,

OpenLayers:

```
<script src="gina-map-layers/gina-openlayers.js" type="text/javascript"></script>
```

Google Maps:

```
<script src="gina-map-layers/gina-googlemaps3.js" type="text/javascript"></script>
```

Bing Maps 6.3

```
<script src="gina-map-layers/gina-bingmaps63.js" type="text/javascript"></script>
```

Bing Maps 7.0

```
<script src="gina-map-layers/gina-bingmaps7.js" type="text/javascript"></script>
```

ArcGIS JS API 2.6

```
<script src="gina-map-layers/gina-arcgis26.js" type="text/javascript"></script>
```

### Inject the layers into your map object

Code: <https://github.com/gina-alaska/gina-map-layers>

# THE TILE LAYERS

- ▶ Best Data Layer
  - ▶ Includes 2010 Alaska Ortho delivery
  - ▶ 2011 will be added soon (in time for Alaska Surveying and Mapping Conference)
- ▶ Alaska Ortho Project
  - ▶ Overlay layers for Natural Color, Color Infrared CIR, Grayscale imagery
  - ▶ Includes 2010 and 2011 Alaska Ortho deliveries
- ▶ OpenStreetMaps
- ▶ USGS Topographic DRG
- ▶ NOAA Nautical Charts
- ▶ Landsat Panchromatic
- ▶ Shaded Relief



# ADDING LAYERS IN 3 EASY STEPS



# ADDING LAYERS IN 3 EASY STEPS

## 1. Include the GINA Map Layers library in the page

```
<script src="gina-map-layers/gina-<map type>.js" type="text/javascript"></script>
```



# ADDING LAYERS IN 3 EASY STEPS

1. Include the GINA Map Layers library in the page

```
<script src="gina-map-layers/gina-<map type>.js" type="text/javascript"></script>
```

2. Inject the map layers into the map

```
Gina.Layers.inject(<map object>, <layer list>)
```



# ADDING LAYERS IN 3 EASY STEPS

1. Include the GINA Map Layers library in the page

```
<script src="gina-map-layers/gina-<map type>.js" type="text/javascript"></script>
```

2. Inject the map layers into the map

```
Gina.Layers.inject(<map object>, <layer list>)
```

3. Profit!

View the website in your browser



The screenshot shows the SDMI website interface. At the top left is a logo of a green map icon. To its right is the text "ALASKA MAPPED". On the far right is a yellow silhouette of the state of Alaska with the text "SDMI Statewide Digital Mapping Initiative". Below the logo are links for "program overview | contact info", "Home | Browse | Cart | Log In".

The main area features a map of the UAF campus with various buildings and roads labeled. On the left, there's a sidebar titled "Show Available Data" with a "Refresh" button and an "Options" dropdown. It lists several categories: "GINA Data Vault", "By Resolution", "By Year", "By License Type", "By Data Type", and "Aerial Photos". Under "Aerial Photos", it shows "By Resolution" with options for "0.08 m" and "0.25 m", followed by a long list of items starting with "AERIAL.UAF.MAY2007.UAF\_AREA".

# GOOGLE MAPS

# GOOGLE MAPS



examples/google.html



# GOOGLE MAPS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <meta name="viewport"
      content="width=device-width, initial-scale=1.0, user-scalable=no">
    <meta charset="UTF-8">
    <link rel="stylesheet" href="/application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script type="text/javascript" src="http://maps.googleapis.com/maps/api/js?sensor=false"></script>

    <script type="text/javascript">
      var map;
      function initialize() {
        map = new google.maps.Map(document.getElementById('map'), {
          center: new google.maps.LatLng(64.856, -147.849),
          zoom: 8,
          mapTypeId: google.maps.MapTypeId.ROADMAP,
          mapTypeControlOptions: {
            mapTypeIds: [google.maps.MapTypeId.ROADMAP]
          }
        });
      }
      google.maps.event.addDomListener(window, 'load', initialize);
    </script>
  </head>
  <body>
    <div id="page">
      <h1 id="google_maps_example">Google Maps Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```

# GOOGLE MAPS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <meta name="viewport"
      content="width=device-width, initial-scale=1.0, user-scalable=no">
    <meta charset="UTF-8">
    <link rel="stylesheet" href="/application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script type="text/javascript" src="http://maps.googleapis.com/maps/api/js?sensor=false"></script>
    <script src="/gina-map-layers/gina-googlemaps3.js" type="text/javascript"></script>

    <script type="text/javascript">
      var map;
      function initialize() {
        map = new google.maps.Map(document.getElementById('map'), {
          center: new google.maps.LatLng(64.856, -147.849),
          zoom: 8,
          mapTypeId: google.maps.MapTypeId.ROADMAP,
          mapTypeControlOptions: {
            mapTypeIds: [google.maps.MapTypeId.ROADMAP]
          }
        });
      }
      google.maps.event.addDomListener(window, 'load', initialize);
    </script>
  </head>
  <body>
    <div id="page">
      <h1 id="google_maps_example">Google Maps Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```



**Step 1:**  
Add the library

# GOOGLE MAPS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <meta name="viewport"
      content="width=device-width, initial-scale=1.0, user-scalable=no">
    <meta charset="UTF-8">
    <link rel="stylesheet" href="/application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script type="text/javascript" src="http://maps.googleapis.com/maps/api/js?sensor=false"></script>
    <script src="/gina-map-layers/gina-googlemaps3.js" type="text/javascript"></script>

    <script type="text/javascript">
      var map;
      function initialize() {
        map = new google.maps.Map(document.getElementById('map'), {
          center: new google.maps.LatLng(64.856, -147.849),
          zoom: 8,
          mapTypeId: google.maps.MapTypeId.ROADMAP,
          mapTypeControlOptions: {
            mapTypeIds: [google.maps.MapTypeId.ROADMAP, 'TILE.EPSG:3857.BDL']
          }
        });
        Gina.Layers.inject(map, 'TILE.EPSG:3857.BDL');
      }
      google.maps.event.addDomListener(window, 'load', initialize);
    </script>
  </head>
  <body>
    <div id="page">
      <h1 id="google_maps_example">Google Maps Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```

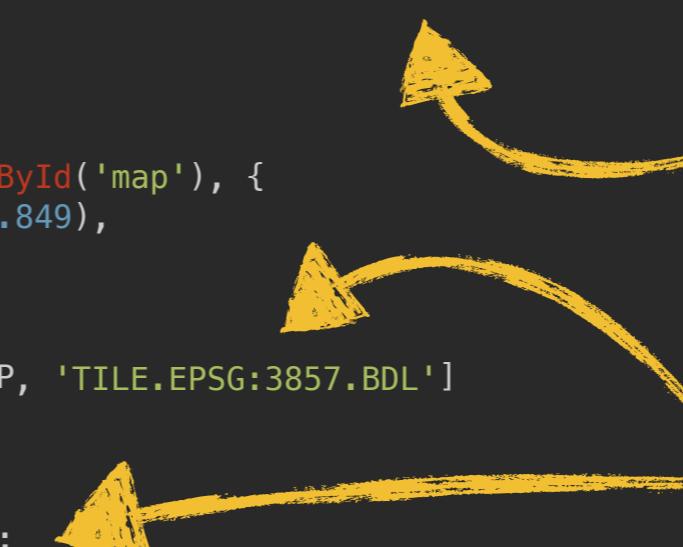
Step 1:  
Add the library

Step 2:  
Inject the layer(s)

# GOOGLE MAPS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS - 2013</title>
    <meta name="viewport"
      content="width=device-width, initial-scale=1.0, user-scalable=no">
    <meta charset="UTF-8">
    <link rel="stylesheet" href="/application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script type="text/javascript" src="http://maps.googleapis.com/maps/api/js?sensor=false"></script>
    <script src="/gina-map-layers/gina-googlemaps3.js" type="text/javascript"></script>

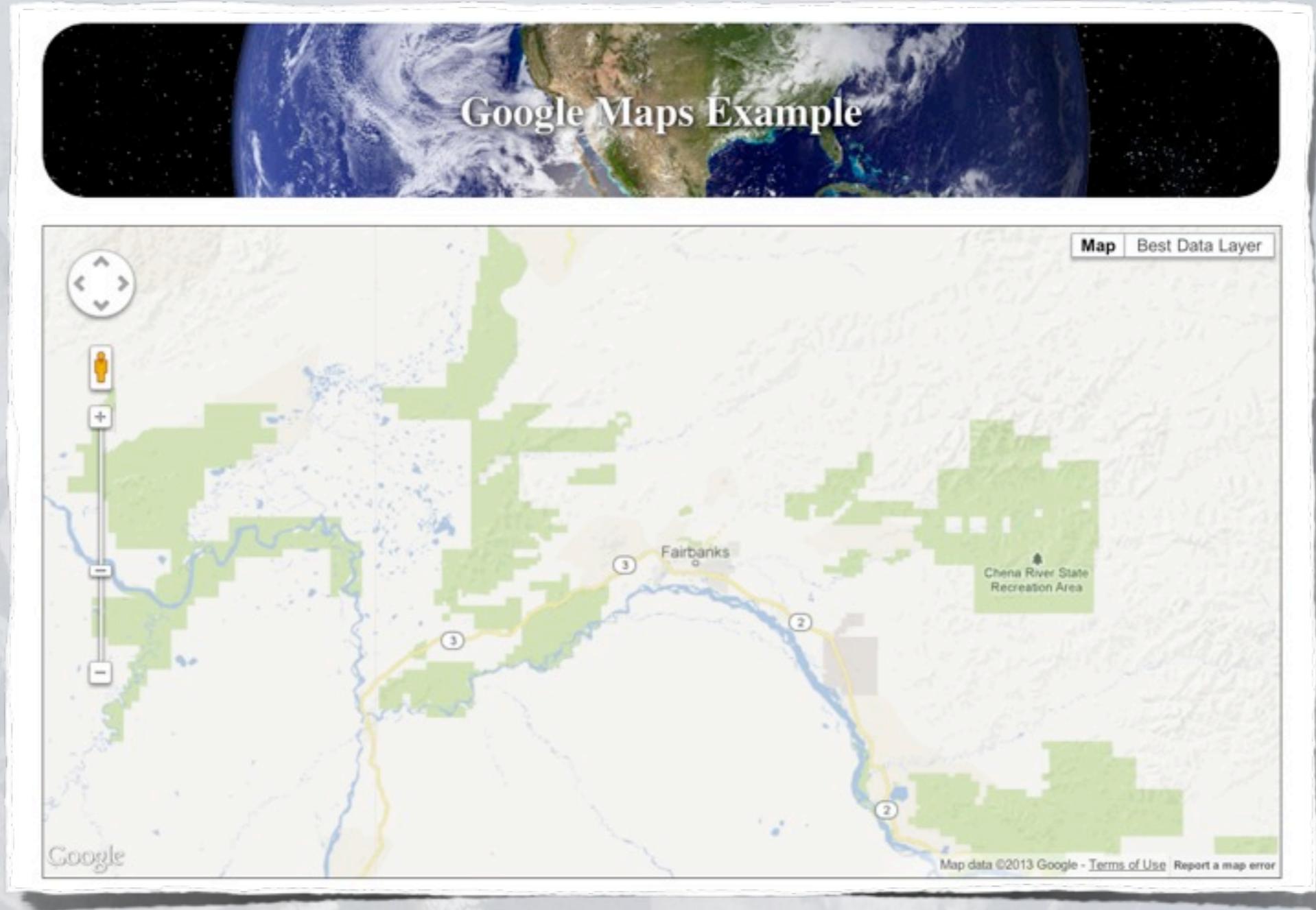
    <script type="text/javascript">
      var map;
      function initialize() {
        map = new google.maps.Map(document.getElementById('map'), {
          center: new google.maps.LatLng(64.856, -147.849),
          zoom: 8,
          mapTypeId: google.maps.MapTypeId.ROADMAP,
          mapTypeControlOptions: {
            mapTypeIds: [google.maps.MapTypeId.ROADMAP, 'TILE.EPSG:3857.BDL']
          }
        });
        Gina.Layers.inject(map, 'TILE.EPSG:3857.BDL');
      }
      google.maps.event.addDomListener(window, 'load', initialize);
    </script>
  </head>
  <body>
    <div id="page">
      <h1 id="google_maps_example">Google Maps Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```



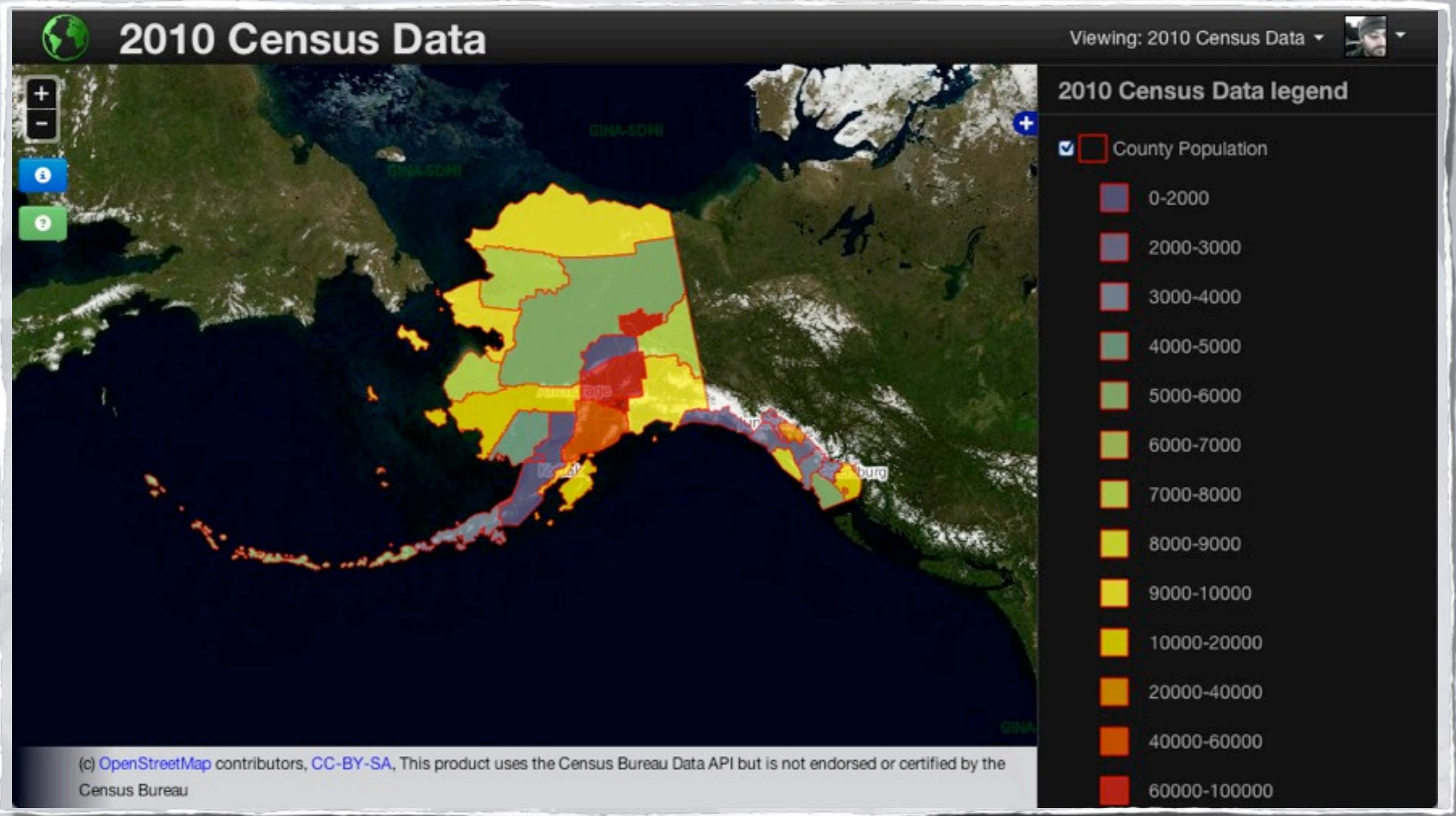
Step 1:  
Add the library

Step 2:  
Inject the layer(s)

List of available layers at  
<https://github.com/gina-alaska/gina-map-layers/>



## STEP 3: PROFIT!



# OPEN LAYERS

# OPENLAYERS



examples/openlayers.html



# OPENLAYERS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <link rel="stylesheet" href="../application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script src="/OpenLayers-2.11/OpenLayers.js" type="text/javascript" charset="utf-8"></script>

    <script type="text/javascript" charset="utf-8">
      var map;
      function initialize() {
        map = new OpenLayers.Map("map");

        map.addControl(new OpenLayers.Control.LayerSwitcher());
        map.zoomToMaxExtent();
      }
    </script>
  </head>
  <body onLoad="initialize()">
    <div id="page">
      <h1 id="openlayers_example">OpenLayers Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```

examples/openlayers.html



# OPENLAYERS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <link rel="stylesheet" href="../application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script src="/OpenLayers-2.11/OpenLayers.js" type="text/javascript" charset="utf-8"></script>
    <script src="/gina-map-layers/gina-openlayers.js" type="text/javascript"></script>

    <script type="text/javascript" charset="utf-8">
      var map;
      function initialize() {
        map = new OpenLayers.Map("map");

        map.addControl(new OpenLayers.Control.LayerSwitcher());
        map.zoomToMaxExtent();
      }
    </script>
  </head>
  <body onLoad="initialize()">
    <div id="page">
      <h1 id="openlayers_example">OpenLayers Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```

Step 1:  
Add the library

examples/openlayers.html



# OPENLAYERS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <link rel="stylesheet" href="../application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script src="/OpenLayers-2.11/OpenLayers.js" type="text/javascript" charset="utf-8"></script>
    <script src="/gina-map-layers/gina-openlayers.js" type="text/javascript"></script>

    <script type="text/javascript" charset="utf-8">
      var map;
      function initialize() {
        map = new OpenLayers.Map("map");
        Gina.Layers.inject(map, 'TILE.EPSG:3857.BDL');

        map.addControl(new OpenLayers.Control.LayerSwitcher());
        map.zoomToMaxExtent();
      }
    </script>
  </head>
  <body onLoad="initialize()">
    <div id="page">
      <h1 id="openlayers_example">OpenLayers Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```



Step 1:  
Add the library

Step 2:  
Inject the layer(s)

examples/openlayers.html



## OpenLayers Example



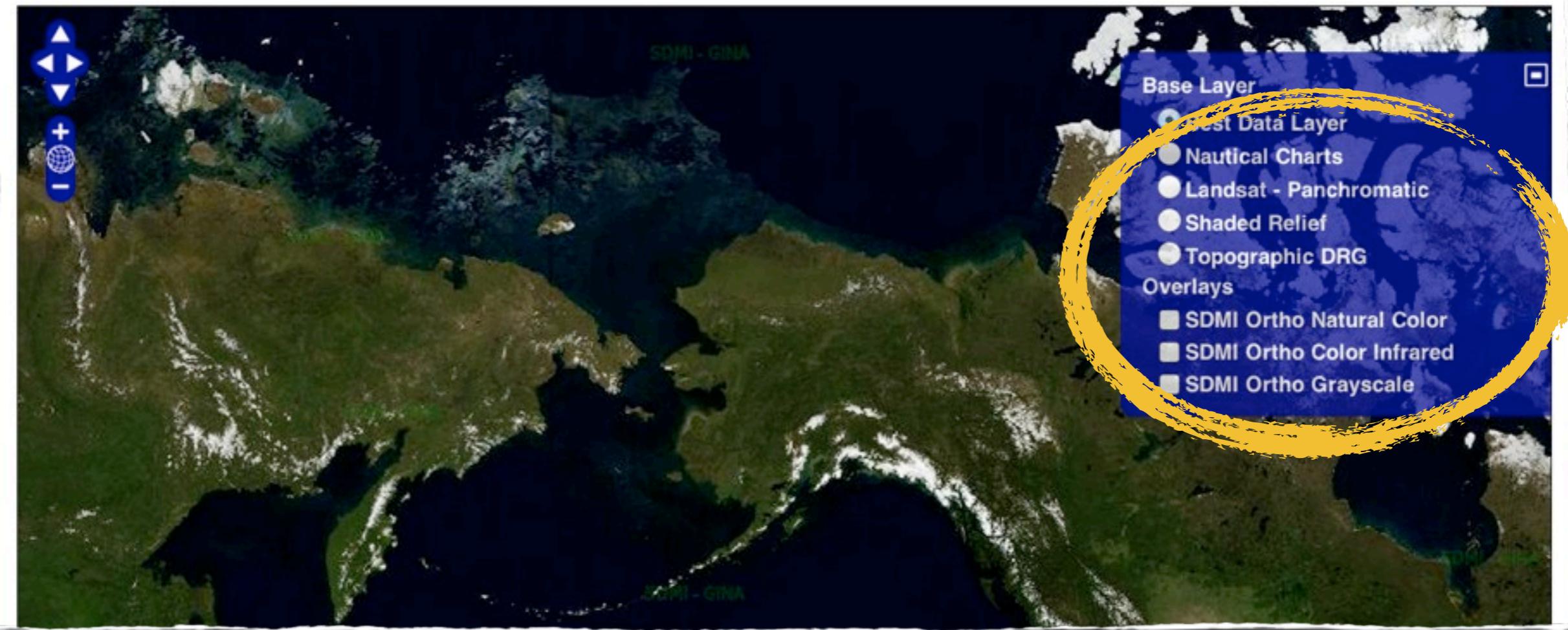
# STEP 3: PROFIT!

## OpenLayers Example



# ADDING MORE LAYERS

## OpenLayers Example



# ADDING MORE LAYERS

# WHAT IS A LAYER

gina-map-layers/layers/bdl.js

- ▶ Used to create layer objects for supported map libraries
- ▶ Redefine a layer to override options
- ▶ Built in support for url templates

# WHAT IS A LAYER

```
/** Google Projection **/  
Gina.Layers.define('TILE_EPSG:3857.BDL', {  
});
```

gina-map-layers/layers/bdl.js

- ▶ Used to create layer objects for supported map libraries
- ▶ Redefine a layer to override options
- ▶ Built in support for url templates

# WHAT IS A LAYER

```
/** Google Projection */
Gina.Layers.define('TILE_EPSG:3857.BDL', {
  name: 'Best Data Layer',
});
```

gina-map-layers/layers/bdl.js

- ▶ Used to create layer objects for supported map libraries
- ▶ Redefine a layer to override options
- ▶ Built in support for url templates

# WHAT IS A LAYER

```
/** Google Projection */
Gina.Layers.define('TILE_EPSG:3857.BDL', {
  name: 'Best Data Layer',
  type: Gina.Layers.Types.TILE,
});
```

gina-map-layers/layers/bdl.js

- ▶ Used to create layer objects for supported map libraries
- ▶ Redefine a layer to override options
- ▶ Built in support for url templates

# WHAT IS A LAYER

```
/** Google Projection */
Gina.Layers.define('TILE.EPSG:3857.BDL', {
  name: 'Best Data Layer',
  type: Gina.Layers.Types.TILE,
  url: 'http://tiles.gina.alaska.edu/tilesrv/bdl/tile/${x}/${y}/${z}',
  layerOptions: {
    type: 'jpeg',
    transitionEffect: 'resize',
    wrapDateLine: true,
    visibility: true,
    isBaseLayer: true,
    sphericalMercator: true,
    wmsId: 'WMS.BDL'
  }
});
```

gina-map-layers/layers/bdl.js

- ▶ Used to create layer objects for supported map libraries
- ▶ Redefine a layer to override options
- ▶ Built in support for url templates

# WHAT IS A LAYER

```
/** Google Projection */
Gina.Layers.define('TILE.EPSG:3857.BDL', {
  name: 'Best Data Layer',
  type: Gina.Layers.Types.TILE,
  url: 'http://tiles.gina.alaska.edu/tilesrv/bdl/tile/${x}/${y}/${z}',
  layerOptions: {
    type: 'jpeg',
    transitionEffect: 'resize',
    wrapDateLine: true,
    visibility: true,
    isBaseLayer: true,
    sphericalMercator: true,
    wmsId: 'WMS.BDL'
  }
});
```

gina-map-layers/layers/bdl.js

```
/** Name: TILE.EPSG:3338.OSM_OVERLAY */
Gina.Layers.define('TILE.EPSG:3338.OSM_OVERLAY', {
  name: 'OpenStreetMap – Roads & Cities',
  type: Gina.Layers.Types.TILE,
  url: 'http://tiles.gina.alaska.edu/tilesrv/osm-google-ol/...',
  layerOptions: {
    type: 'jpeg',
    transitionEffect: 'resize',
    wrapDateLine: false,
    visibility: true,
    isBaseLayer: false,
    attribution: '(c) <a href="http://www.openstreetmap.org">...</a>'
  }
});
```

gina-map-layers/layers/osm.js

- ▶ Used to create layer objects for supported map libraries
- ▶ Redefine a layer to override options
- ▶ Built in support for url templates

# ADDING MORE LAYERS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <link rel="stylesheet" href="../application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script src="/OpenLayers-2.11/OpenLayers.js" type="text/javascript" charset="utf-8"></script>
    <script src="/gina-map-layers/gina-openlayers.js" type="text/javascript"></script>
    <script type="text/javascript" charset="utf-8">
      var map;
      function initialize() {
        map = new OpenLayers.Map("map");
        Gina.Layers.inject(map, 'TITLE.EPSG:3857.BDL');

        map.addControl(new OpenLayers.Control.LayerSwitcher());
        map.zoomToMaxExtent();
      }
    </script>
  </head>
  <body onLoad="initialize()">
    <div id="page">
      <h1 id="openlayers_example">OpenLayers Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```

examples/openlayers.html



# ADDING MORE LAYERS

```
<script type="text/javascript" charset="utf-8">
  var map;
  function initialize() {
    map = new OpenLayers.Map("map");

    Gina.Layers.inject(map, 'TILE.EPSG:3857.BDL'
      );

    map.addControl(new OpenLayers.Control.LayerSwitcher());
    map.zoomToMaxExtent();
  }
</script>
```



# ADDING MORE LAYERS

```
<script type="text/javascript" charset="utf-8">
  var map;
  function initialize() {
    map = new OpenLayers.Map("map");

    Gina.Layers.inject(map,
                      );
    map.addControl(new OpenLayers.Control.LayerSwitcher());
    map.zoomToMaxExtent();
  }
</script>
```



# ADDING MORE LAYERS

```
<script type="text/javascript" charset="utf-8">
  var map;
  function initialize() {
    map = new OpenLayers.Map("map");

    Gina.Layers.inject(map, ['TILE.EPSG:3857.BDL', 'TILE.EPSG:3857.TOPO', 'TILE.EPSG:3857.SHADED_RELIEF',
      'TILE.EPSG:3857.OSM', 'TILE.EPSG:3857.LANDSAT_PAN', ... ]);

    map.addControl(new OpenLayers.Control.LayerSwitcher());
    map.zoomToMaxExtent();
  }
</script>
```



List of available layers at  
[https://github.com/gina-alaska/  
gina-map-layers/](https://github.com/gina-alaska/gina-map-layers/)



# ADDING MORE LAYERS

```
<script type="text/javascript" charset="utf-8">
  var map;
  function initialize() {
    map = new OpenLayers.Map("map");

    Gina.Layers.inject(map, 'TILE.EPSG:3857.*');

    map.addControl(new OpenLayers.Control.LayerSwitcher());
    map.zoomToMaxExtent();
  }
</script>
```



Special wildcard to load all available layers for the given projection.



## OpenLayers Example



# SWITCHING PROJECTIONS

## Alaskan Albers Projection Example



# SWITCHING PROJECTIONS

## Alaska-Centric Polar Projection Example



# SWITCHING PROJECTIONS

# SUPPORTED PROJECTIONS

## ► Tile Layers

- ▶ EPSG:3857 - Web Mercator
  - ▶ Usable in OpenLayers, Google Maps, Bing, ArcGIS
- ▶ EPSG:3338 - Alaskan Albers
  - ▶ Usable in OpenLayers
- ▶ EPSG:3572 - Alaska Centric Polar
  - ▶ Usable in OpenLayers

## ► WMS Layers

- ▶ Many projections available, use a desktop client like QGIS or ArcMap to see the available projections.
- ▶ Usable in OpenLayers



# SWITCHING PROJECTIONS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <link rel="stylesheet" href="../application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script src="/0penLayers-2.11/0penLayers.js" type="text/javascript" charset="utf-8"></script>

    <script type="text/javascript" charset="utf-8">
      var map;
      function initialize() {

        map = new OpenLayers.Map("map");
        Gina.Layers.inject(map, 'TILE.EPSG:3857.*');

        map.addControl(new OpenLayers.Control.LayerSwitcher());
        map.zoomToMaxExtent();
      }
    </script>
  </head>
  <body onLoad="initialize()">
    <div id="page">
      <h1 id="openlayers_example">OpenLayers Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```

examples/openlayers\_alaskan\_albers.html



# SWITCHING PROJECTIONS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <link rel="stylesheet" href="../application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script src="/OpenLayers-2.11/OpenLayers.js" type="text/javascript" charset="utf-8"></script>
    <script src="/gina-map-layers/gina-openlayers.js" type="text/javascript"></script>
    <script src="/gina-map-layers/projections/epsg_3338.js" type="text/javascript"></script>
    <script type="text/javascript" charset="utf-8">
      var map;
      function initialize() {
        map = new OpenLayers.Map("map");
        Gina.Layers.inject(map, 'TILE.EPSG:3857.*');
        map.addControl(new OpenLayers.Control.LayerSwitcher());
        map.zoomToMaxExtent();
      }
    </script>
  </head>
  <body onLoad="initialize()">
    <div id="page">
      <h1 id="openlayers_example">OpenLayers Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```



Include the projection settings

examples/openlayers\_alaskan\_albers.html



# SWITCHING PROJECTIONS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <link rel="stylesheet" href="../application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script src="/OpenLayers-2.11/OpenLayers.js" type="text/javascript" charset="utf-8"></script>
    <script src="/gina-map-layers/gina-openlayers.js" type="text/javascript"></script>
    <script src="/gina-map-layers/projections/epsg_3338.js" type="text/javascript"></script>
    <script type="text/javascript" charset="utf-8">
      var map;
      function initialize() {
        map = new OpenLayers.Map("map");
        Gina.Layers.inject(map, 'TILE.EPSG:3857.*');
        map.addControl(new OpenLayers.Control.LayerSwitcher());
        map.zoomToMaxExtent();
      }
    </script>
  </head>
  <body onLoad="initialize()">
    <div id="page">
      <h1 id="openlayers_example">OpenLayers Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```

examples/openlayers\_alaskan\_albers.html

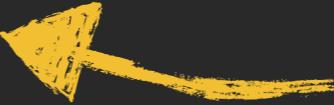


# SWITCHING PROJECTIONS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <link rel="stylesheet" href="../application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script src="/OpenLayers-2.11/OpenLayers.js" type="text/javascript" charset="utf-8"></script>
    <script src="/gina-map-layers/gina-openlayers.js" type="text/javascript"></script>
    <script src="/gina-map-layers/projections/epsg_3338.js" type="text/javascript"></script>

    <script type="text/javascript" charset="utf-8">
      var map;
      function initialize() {
        var config = Gina.Projections.get('EPSG:3338');

        map = new OpenLayers.Map("map", config);
        Gina.Layers.inject(map, 'TILE.EPSG:3857.*' );
        map.addControl(new OpenLayers.Control.LayerSwitcher());
        map.zoomToMaxExtent();
      }
    </script>
  </head>
  <body onLoad="initialize()">
    <div id="page">
      <h1 id="openlayers_example">OpenLayers Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```



Create the map with the projection settings

examples/openlayers\_alaskan\_albers.html



# SWITCHING PROJECTIONS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <link rel="stylesheet" href="../application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script src="/OpenLayers-2.11/OpenLayers.js" type="text/javascript" charset="utf-8"></script>
    <script src="/gina-map-layers/gina-openlayers.js" type="text/javascript"></script>
    <script src="/gina-map-layers/projections/epsg_3338.js" type="text/javascript"></script>

    <script type="text/javascript" charset="utf-8">
      var map;
      function initialize() {
        var config = Gina.Projections.get('EPSG:3338');

        map = new OpenLayers.Map("map", config);

        Gina.Layers.inject(map,
                           );
        map.addControl(new OpenLayers.Control.LayerSwitcher());
        map.zoomToMaxExtent();
      }
    </script>
  </head>
  <body onLoad="initialize()">
    <div id="page">
      <h1 id="openlayers_example">OpenLayers Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```

examples/openlayers\_alaskan\_albers.html



# SWITCHING PROJECTIONS

```
<!DOCTYPE html>
<html>
  <head>
    <title>AKMSS – 2013</title>
    <link rel="stylesheet" href="../application.css" type="text/css" media="screen" title="no title" charset="utf-8">
    <script src="/OpenLayers-2.11/OpenLayers.js" type="text/javascript" charset="utf-8"></script>
    <script src="/gina-map-layers/gina-openlayers.js" type="text/javascript"></script>
    <script src="/gina-map-layers/projections/epsg_3338.js" type="text/javascript"></script>

    <script type="text/javascript" charset="utf-8">
      var map;
      function initialize() {
        var config = Gina.Projections.get('EPSG:3338');

        map = new OpenLayers.Map("map", config);
        Gina.Layers.inject(map, 'TILE.EPSG:3338.*' );
        map.addControl(new OpenLayers.Control.LayerSwitcher());
        map.zoomToMaxExtent();
      }
    </script>
  </head>
  <body onLoad="initialize()">
    <div id="page">
      <h1 id="openlayers_example">OpenLayers Example</h1>
      <div id="map"></div>
    </div>
  </body>
</html>
```



Update layers to use the  
correct projection

examples/openlayers\_alaskan\_albers.html



## Alaskan Albers Projection Example



# EPSG:3338 - ALASKAN ALBERS

# USEFUL LINKS

GINA Website

<http://www.gina.alaska.edu>

GINA Map Layers Library

<https://github.com/gina-alaska/gina-map-layers>

GINA Web Services Documentation

<http://docs.gina.alaska.edu/>

Presentation Examples

<http://tinyurl.com/akmss-examples>

Additional Examples

<http://mashup.gina.alaska.edu>



# QUESTIONS?

Will Fisher

[will@gina.alaska.edu](mailto:will@gina.alaska.edu)

Geographic Information Network of Alaska

<http://www.gina.alaska.edu>





**ALASKA MAPPER**

Show Available Data

Refresh Options

View

Powered By GINA

Alaska Experimental Program to Stimulate C...

Projects: 1937 Data: 237 Results: 2729

Filters

No filters

Renewable Energy Atlas of Alaska

map.akenergyinventory.org

Biomass

Geothermal

- Potential Geothermal Resources
  - Potential Geothermal Resources
  - Wells and Springs
    - 55-100 F°
    - 100-200 F°
    - 200-300 F°
    - > 300 F°
- Volcanoes
  - Volcano

Hydroelectric

Ocean and River Hydrokinetic

Wind Power

Renewable Energy Fund Projects

GINA-SDHI

(c) OpenStreetMap contributors, CC-BY-SA

Realtime Data Contact

Lat: Lon: Go Center: (63.559,-152.482) Mouse: (69.677,-172.140)