



Getting Started with TrueVector RegionConnect™

What is RegionConnect?

RegionConnect is a simple application based on the Adobe Flash platform. RegionConnect allows the website designer to customize the look and feel of a map of the U.S. and capture user clicks as county abbreviations in a JavaScript function. The ability to respond to clicks with JavaScript allows RegionConnect to be integrated into existing websites quickly and easily, providing a compelling user experience.

RegionConnect can be customized by doing any combination of the following:

1. the splash screen *.jpg file can be replaced or customized,
2. the background image of the application can be replaced or customized,
3. font style of some of the elements of the map may be changed,
4. colors of the states may be changed,
5. the background color of the application may be changed,
6. states may be enabled or disabled,
7. mouse over and selection colors may be changed,
8. client side JavaScript capturing the output of the application may be used to add additional functionality.

Files Included

RegionConnect Directory Structure

Notes: The files in the xml directory need to be there for the flash movie to run. Most of the configurable aspects of the flash movie are there. The user may also edit the background files and the splash files. Resizing these images is not supported and may result in unintended consequences. The default "theme" is garnet.

Changing the Splash Screen

RegionConnect supports web standard JPEG images. The splash screen image should be 160 pixels wide by 80 pixels high. The placement of the splash screen is based on this size. Using a larger or smaller image will result in the splash screen being off-center.

Changing the Size of the Map

Although RegionConnect is designed to be displayed at 640 X 480 it can be displayed larger or smaller by editing the tags used to embed the Flash movie in the web page. The particulars of how to embed flash in an html page is beyond the scope of this document. More information on this topic may be found at the following address:

Editing the config.xml File

RegionConnect first looks for the file config.xml. The config.xml file is used to control several factors of the application. These are: bgcolor, rollovercolor, selectioncolor, selectionblendfactor, rolloverblendfactor, interfacefgcolor, interfacebgcolor, and interfacetextcolor. The first three attributes are fairly self explanatory. bgcolor is the background color of the map for Region Connect. This color appears behind the background image and in the inset maps of Alaska and Hawaii. The first three values should be hex values in the form of 0x000000. The selectionblendfactor and rolloverblendfactor are a bit more complicated. The rollover and selection features allow you to blend the rollovercolor and selectioncolor with the base color of the state in question. For example, if your polygon were red, and your mouse over color were blue, and your rolloverblendfactor were two, you could compute the results with the equation below.

Due to the way that the rollover and selectioncolor attributes are implemented, there is no way to have a pure color that is not influenced by the color beneath it. If a vibrant color is desired, using a bright color with a high blend number can help to achieve that.










0x0000FF		0xFF0000		Blend Factor		0x7f007f
	+		X	<div style="border: 1px solid black; padding: 2px 10px; display: inline-block;">1</div>) / 2 =	
0x0000FF		0xFF0000		Blend Factor		0xaa0055
	+		X	<div style="border: 1px solid black; padding: 2px 10px; display: inline-block;">2</div>) / 3 =	
0x0000FF		0xFF0000		Blend Factor		0xc0007f
	+		X	<div style="border: 1px solid black; padding: 2px 10px; display: inline-block;">3</div>) / 4 =	

Illustration 1: Mouse over and selection calculations.

The user interface of RegionConnect can be customized using the following three xml attributes: interfacebgcolor, interfacefgcolor, and interfacetextcolor. These are detailed in the diagram below:

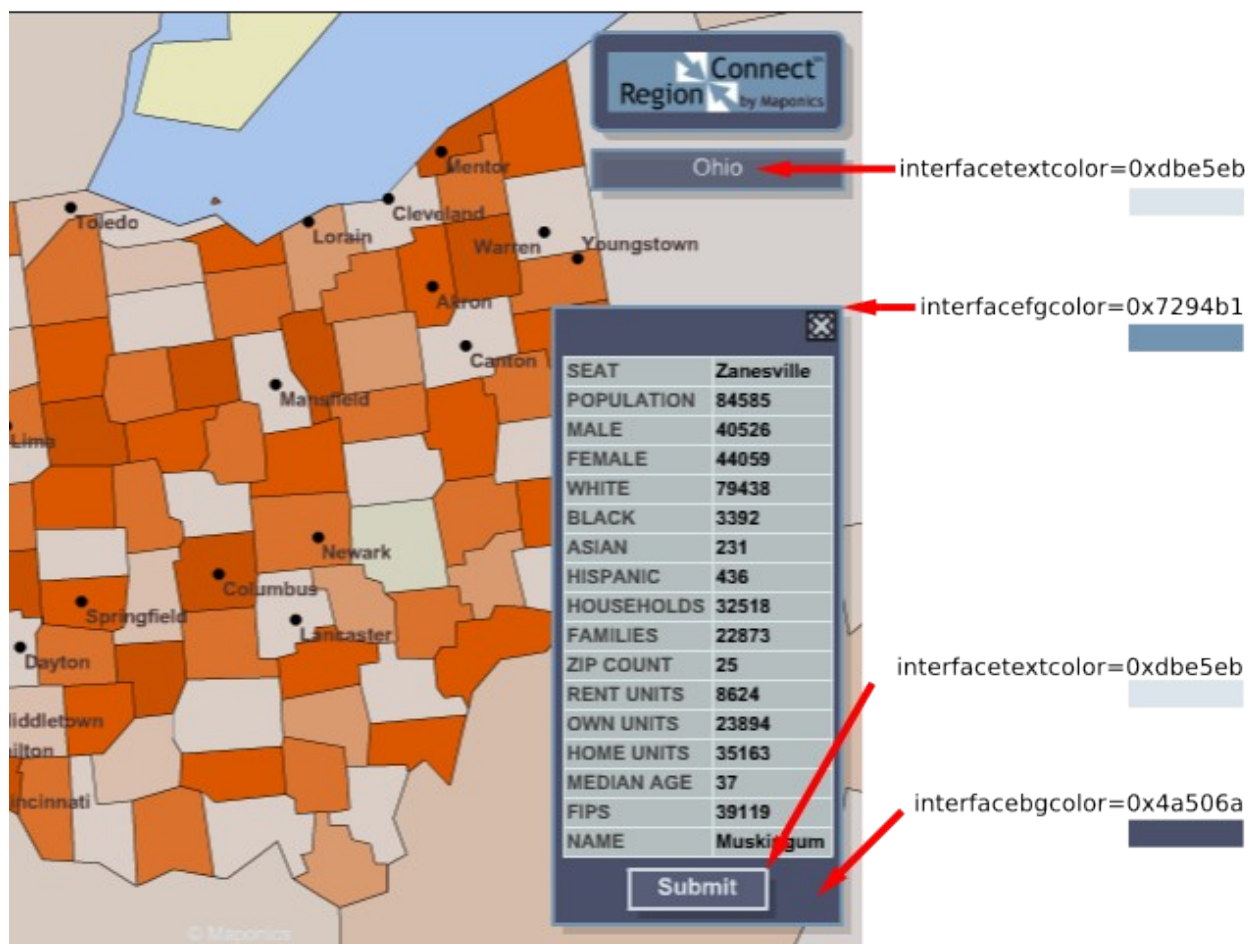


Illustration 2: Configuring the interface colors in the config.xml file.

Editing the map_000.xml File

The geographic information for RegionConnect as well as the annotation is contained in the map_000.xml file. This file should be relatively straight forward for someone who is already familiar with XML, but may be a little bit confusing for the novice. Below is a basic tree diagram of the map_000.xml file associated with the Olivine demo.

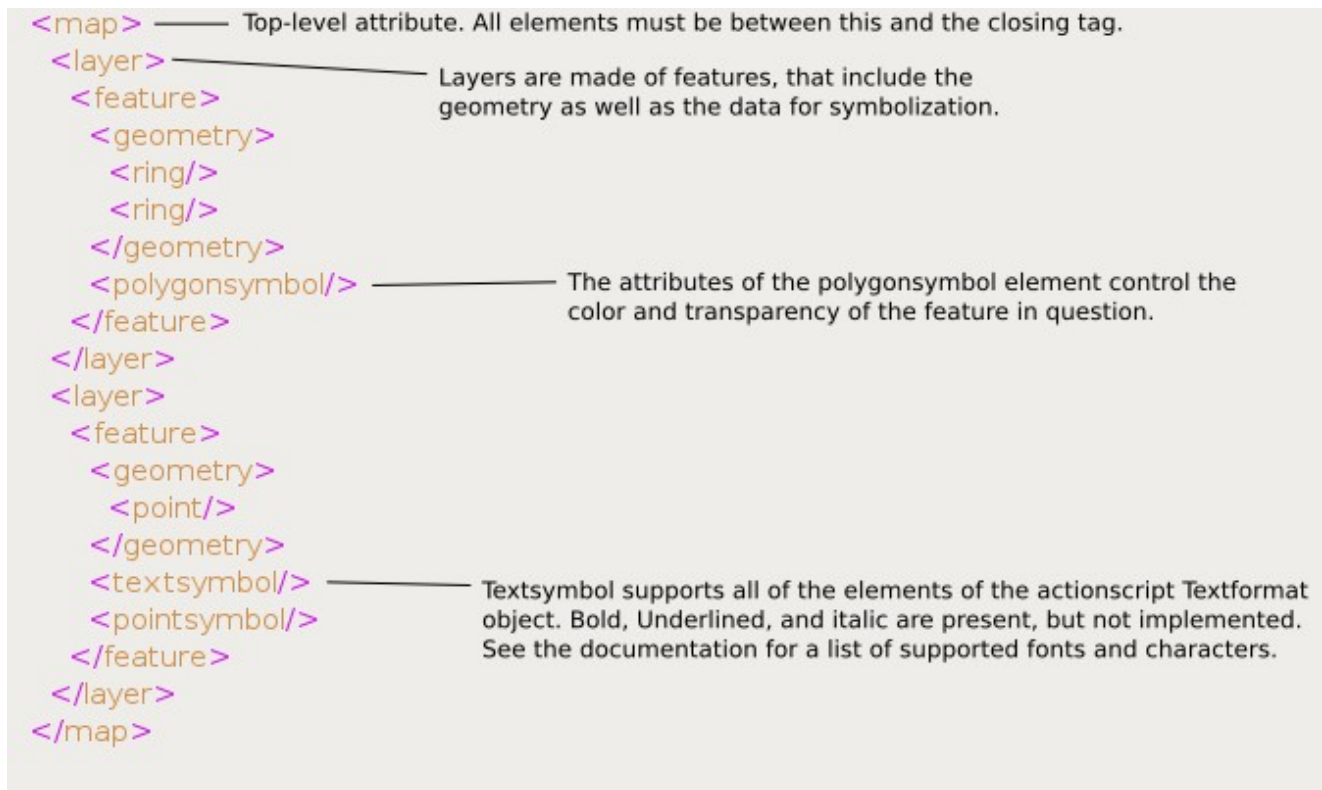


Illustration 3: XML Tree Structure.

Editing Other XML Files

In addition to the map_000.xml file, the files for the geography below the national level can be edited as well. Because there are more than 3000 counties in the U.S., customizing the state-level view can be done using advanced text editing techniques such as regular expressions, or iterative batch processing.

Specific XML Elements

XML Symbol Elements

```

<pointsymbol
  fillalpha="0"
  fillcolor="0x000000"
  linewidth="0"
  rotation="0"
  linealpha="0"
  symboltype="circle"
  symbolsize="1"
  id="label"
  linecolor="0x000000" />

```

fillalpha: 0 – 100 with 100 representing total opacity.

fillcolor: color of the symbol in hex.

linewidth: Width of the line used to draw the symbol in points.

rotation: Rotation of the symbol in degrees. May be positive or negative.

linealpha: 0 – 100 with 100 representing total opacity.

symboltype: Type of symbol used. Legal values are square, circle, triangle, or star.

symbolsize: In pixels.

id: Not used.

linecolor: Color of the line used to draw the symbol in hex.

All symbol elements used in RegionConnect are implemented in a fairly consistent way and should be relatively straightforward to use.

Layer Elements

```
<layer
  geometrytype="polygon"
  layertype="selection"
  selectable="false"
  id="1" >
</layer>
```

geometrytype: Legal values are point and polygon.

layertype: Legal values are display and selection. Display layers are intert.

selectable: All layers should have the value false.

id: This value needs to be unique.

When removing or repositioning layers, everything between the opening and closing layer tags must be included. The first layer in the file is the first layer drawn. Point layers are always drawn on top of polygon layers.

Polygon Feature Element

```
<feature
  min_x="42"
  min_y="368"
  max_x="157"
  max_y="472"
  inset="TRUE"
  embed_x="105"
  embed_y="410"
  embed_label="AK"
  tooltip="Alaska"
  label="AK"
  enabled="t" >
```

min_x;min_y;max_x;max_y: These four coordinates represent the bounding box of the inset map for Alaska and Hawaii. These are only active if inset="TRUE".

embed_x; embed_y: These determine where the state label appears.

tooltip: Text that is displayed when the mouse rolls over the state.

label: The state label.

enabled: Setting this value to "f" would result in a state that does not respond to mouse movement or clicks. This might come in handy for a regional web site.

Many of the attributes in the map_000.xml file are not active in this application. Other TrueVector applications do make use of them. Editing attributes that are not included in this document may have unpredictable results. It would be wise to back up the map_000.xml file often while you are working so that if something does break, the changes can be rolled back easily.

JavaScript Integration

RegionConnect calls a JavaScript function called FlashMap_DoFSCommand(command, args). The two arguments are *command* and *args*. RegionConnect Basic fire an event when a county is clicked or selected from a list. RegionConnect Pro fires two simultaneous events, one that passes a comma separated list of ZIP codes with the argument command 'zips' and another that passes the FIPS code and county name with a command value of 'fips'.

```
// Function that recieves the command from the flash movie
function FlashMap_DoFSCommand(command, args) {
    if (command == 'county') {
        var dbugWin = document.getElementById('debugdump');
        var curText = dbugWin.value;
        curText += '\n' + args;
        dbugWin.value=curText;
    }
    else if (command == 'zips')...
```

RegionConnect Demos

Three different customizations of the RegionConnect application are included in this download. Each of these examples was done with a text editor, a image editor, and a vector based drawing program. Specifically, JEdit, The GIMP, and Inkscape. All of these programs are cross platform and freely available for download on the Internet (or on the Resources page at www.interactivemapping.com).

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