GeoServer - Generate HTML Imagemap

Generating HTML Imagemaps with GeoServer

GeoServer can produce HTML imagemaps through the imagemap extension. An imagemap is an image with "live" areas. When the mouse interacts with those areas in various ways, something happens. The areas can have tooltips (the title attribute) that appear when the mouse hovers. Or they can have href attributes that open URLs when the mouse clicks. Or other behavior can be defined.

General tutorial on imagemaps

GeoServer documentation on generating HTML imagemaps.

They key to making the imagemap code is to use a style. Once the code is made, put it into a web page with your image. (the image can be a link to GeoServer to create the image).

Examples:

Coastguide GPS points with URLs to photos Clicking on a point will change the web page to the photo URL (note: some photos are missing at their URLs - if you get an error try clicking on another point).

MA town polys with tooltips Hovering over a town with the mouse will show two attributes concatenated with a colon.

Choose View/Source to see the HTML source code of these pages.

For the tooltips example you'll notice:

```html
<html>

<map name="GISDATA.TOWNS_POLYM">
  <area shape="poly" id="GISDATA.TOWNS_POLYM.6.0" coords="198,191 197,196 196,199 195,204 200,205 200,203 202,203 202,199 202,197 202,195 200,194 200,192 198,191" title="ALFORD: 399"/>
  ...
</map>
</html>
```

The img tag uses as it's source a GetMap request to GeoServer to produce a PNG. Alternatively you could use a static PNG. There's a usemap attribute which points to the map below. The map has many <area>. The title attribute of the area represents what is in the tooltip.

For the Coastguide points instead of title attributes there are href attributes.

```html
<area shape="circle" id="MORIS.COASTGUIDE_GPS_PT.65" coords="38,357,2" href="http://maps.massgis.state.ma.us/CZM_photos/100_0604.JPG"/>
```

The coords of each area are generated by GeoServer to match the shape of the polygon. For lines and points, LineSymbolizers stroke-width parameter is used to define a buffer along linestrings (defaults to 2px if not defined). PointSymbolizers Size is used to define circle radius for rendered points.

How to get GeoServer to generate the <map>...</map> piece to put into your HTML file?

Create a style to use, then request the map with that style. Currently the imagemap extension doesn't seem to work with external SLD. So, create a style and then give it to Aleda Freeman at MassGIS and she'll put the style into the MassGIS collection of styles.

The style named coastguide_gps_pt_href has this content:
The `<PropertyName>` attribute indicates that we want to use the value of the PHOTO attribute for layer for the href value in the imagemap. Once the style is in place use this request to generate the imagemap. The request is exactly the same as a request for an image - just change the format from `image/png` to `text/html`.


When you use the above URL the page will appear blank. Use View/Source to see the code behind. Copy all the code to your own web page.

For the MA Towns town name + population tooltip example the style `population2` has this content:

```xml
  <NamedLayer>  
    <Name>A Test Layer</Name>  
    <UserStyle>  
      <Title>Population in the United States</Title>  
      <FeatureTypeStyle>  
        <Rule>  
          <Name>Title</Name>  
          <TextSymbolizer>  
            <Label>  
              <PropertyName>TOWN</PropertyName>: <PropertyName>POP2000</PropertyName>
            </Label>  
          </TextSymbolizer>  
        </Rule>  
      </FeatureTypeStyle>  
    </UserStyle>  
  </NamedLayer>  
</StyleDescriptor>
```

As you can see, two attributes (TOWN and POP2000) were concatenated with a : and space.
You may have noticed that these imagemaps are working on static images - ones that cannot be zoomed and panned on. There is also a way to integrate imagemaps with OpenLayers.