Walkthrough 2: GeoServer Install and Editing

User-friendly Desktop Internet GIS

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GOALS

After completing this walkthrough, you will have:

- Installed GeoServer from the Windows installer.
- Learned how to edit geometries, and attributes using uDig

1) JAVA DEVELOPMENT KIT INSTALL:

1. Double-click the installer **j2sdk-1_4_2_08-windows-i586-p.exe** and accept the license agreement.

2. **Note:** You don't have to install either the Demos or Public Runtime Environment.
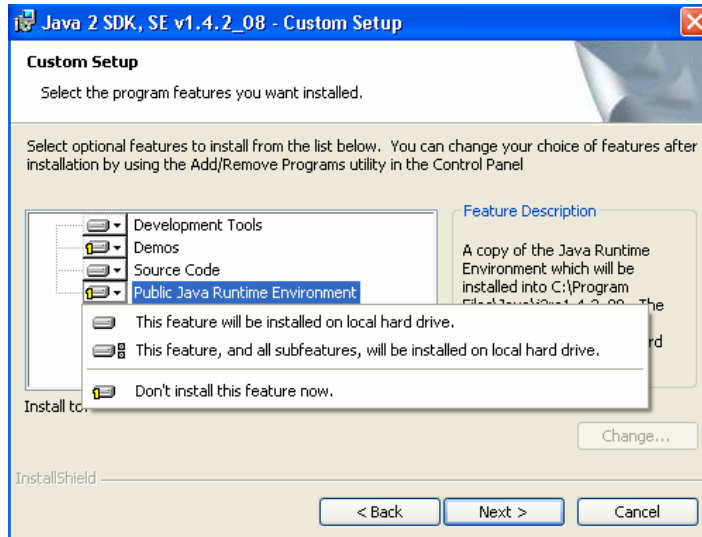
3. This will create the following directory:
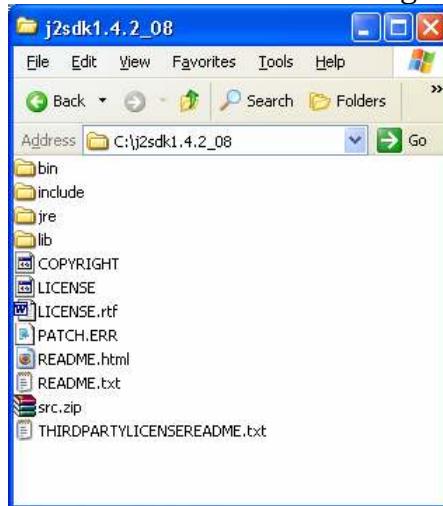
2) JAVA ADVANCED IMAGING INSTALL

1. Right click on the **My Computer** icon on your desktop and select **Properties** from the drop down menu. Under the **Advanced** tab click the **Environment Variables...** button.

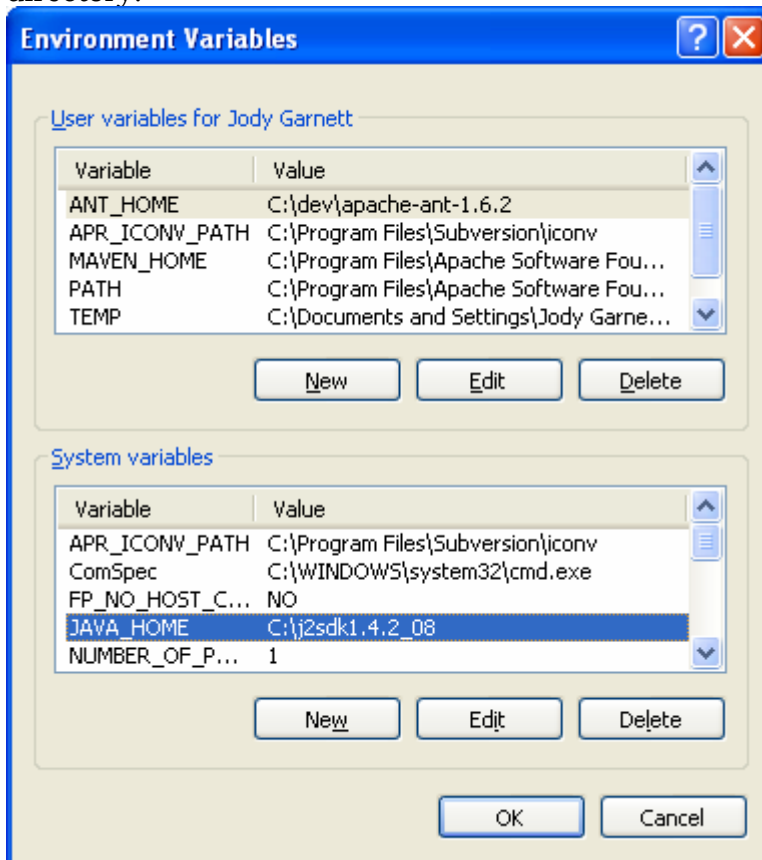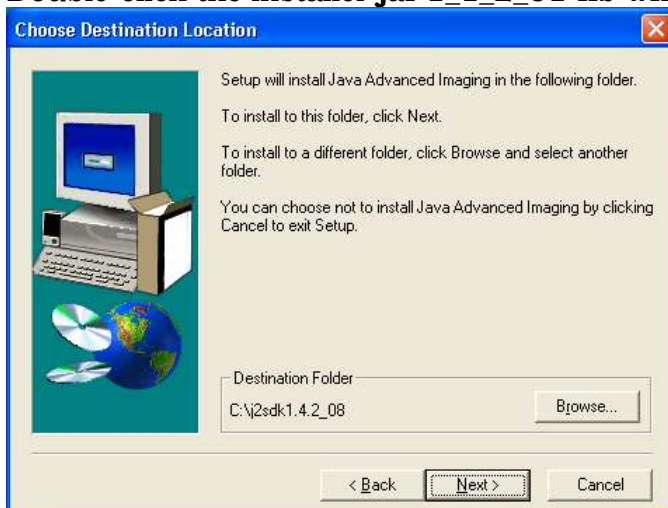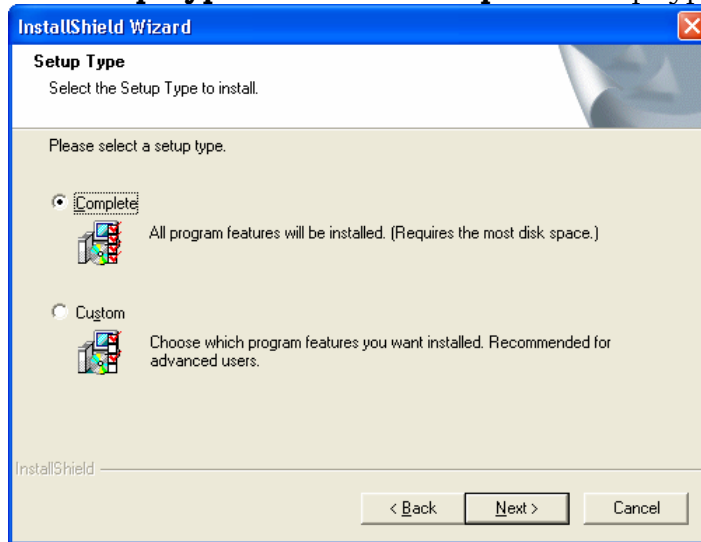2. Change your **JAVA_HOME** environment variable to point to your installation directory.

Figure 1: Java Home

3. Double-click the installer **jai-1_1_2_01-lib-windows-i586-jdk.exe**
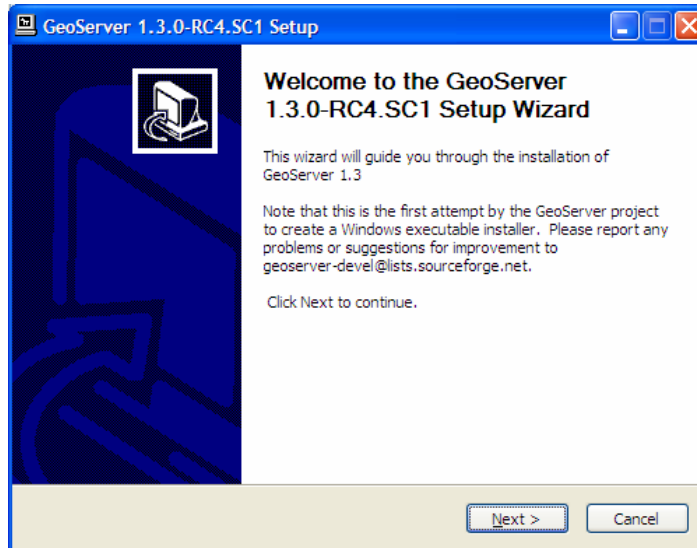
3) JAVA IMAGE IO INSTALL

1. Double-click the installer **jai_imageio-1_0_01-lib-windows-i586-jdk.exe**
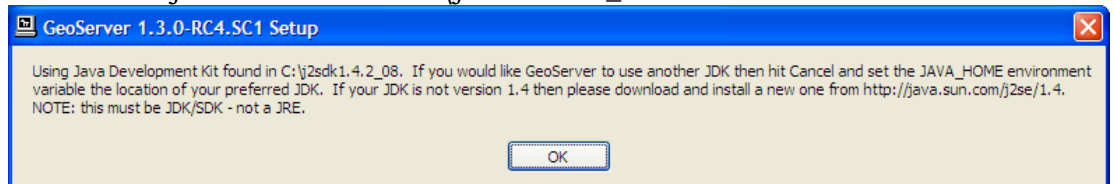   For **Setup Type** choose the **Complete** Setup type.

4) GEOSERVER INSTALL:

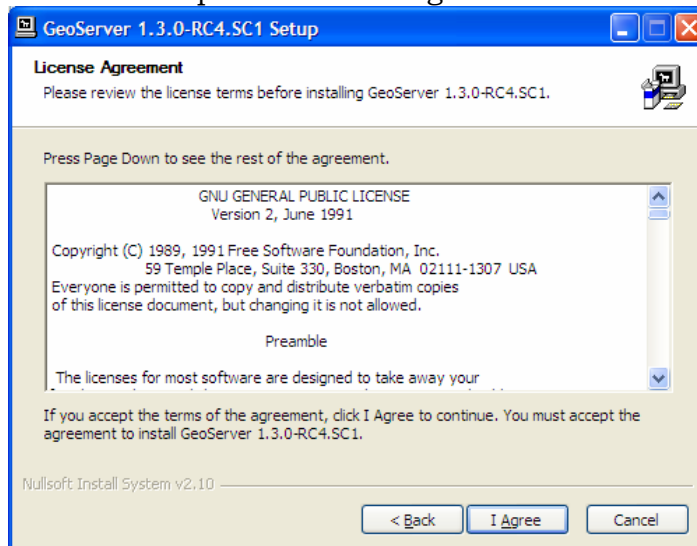1. Double-click the installer **geoserver-1.3.0-RC4.SC1.exe**. Make sure to confirm that GeoServer discovers the JDK installed in the previous step.

2. GeoServer will tell you which JDK it is going to use, we want it to recognize the one we just installed in C:\j2sdk1.4.2_08

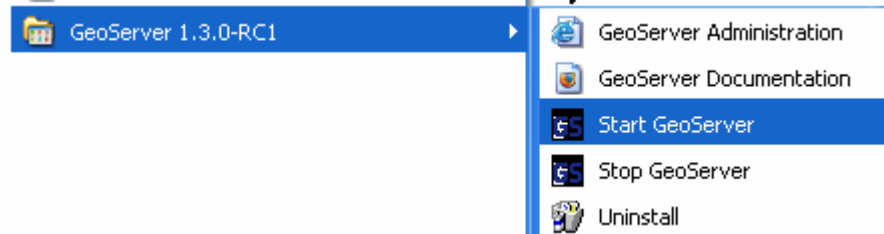3. You can accept the License Agreement – GeoServer is a GPL application.

4. Simply proceed with the rest of the wizard – the defaults will work fine.

5) STARTING UP GEOSERVER

In this section you will learn how to start GeoServer, and explore its editing abilities.

1) **Click Start->Programs->GeoServer 1.3.0-RC1->Start GeoServer**

2) Open up a web browser and enter the URL: http://localhost:8080/geoserver
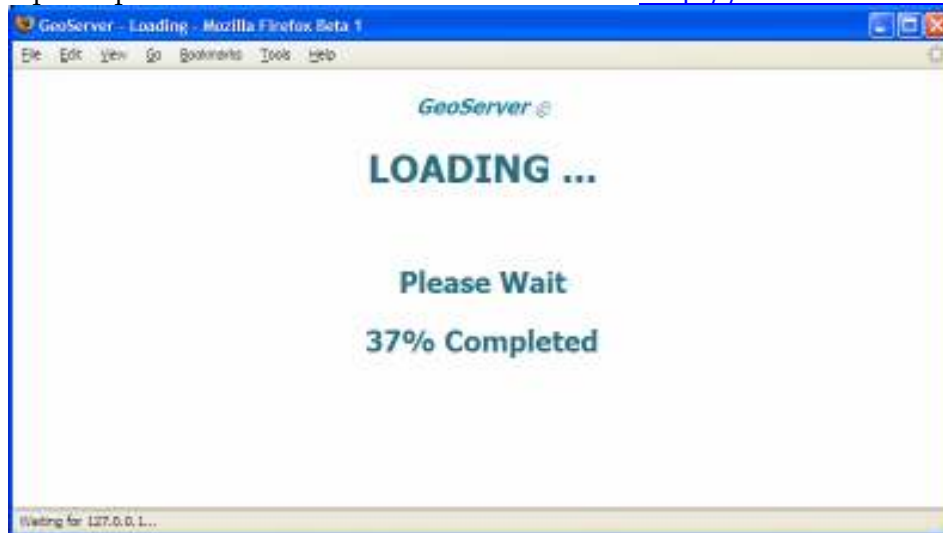
3) You can browse through the GeoServer administration configuration and have a look at how GeoServer is initially set up. GeoServer is both a Web Feature Server (WFS) and Web Map Server (WMS).

4) GeoServer includes a **MapBuilder** demo as part of it is web interface. Scroll down to the heading **Mapbuilder Demo**

Mapbuilder Demo

Mapbuilder is a java-script WFS-T client. You can use Mapbuilder to edit the data in this Geoserver install.

- Mapbuilder/Geoserver (Tasmania)
- Mapbuilder/Geoserver (CITE)

5) To start **MapBuilder** click on the link **Mapbuilder/Geoserver (Tasmania)**

This is the dataset we are going to be editing as part of this walkthrough.

6) EDITING GEOMETRY WITH A WEB FEATURE SERVER

In this section we will use uDig to display and then edit our local Web Feature Server.

Tip: *If you were unable to get GeoServer working please ask the instructor for help, we may be able to provide a URL to a demo machine*

1) Start **uDig**, under the **File** menu select **New-> New Map** to create a new map.

2) Navigate back to that GeoServer **Welcome** page, and find the section **My Feature Server**.

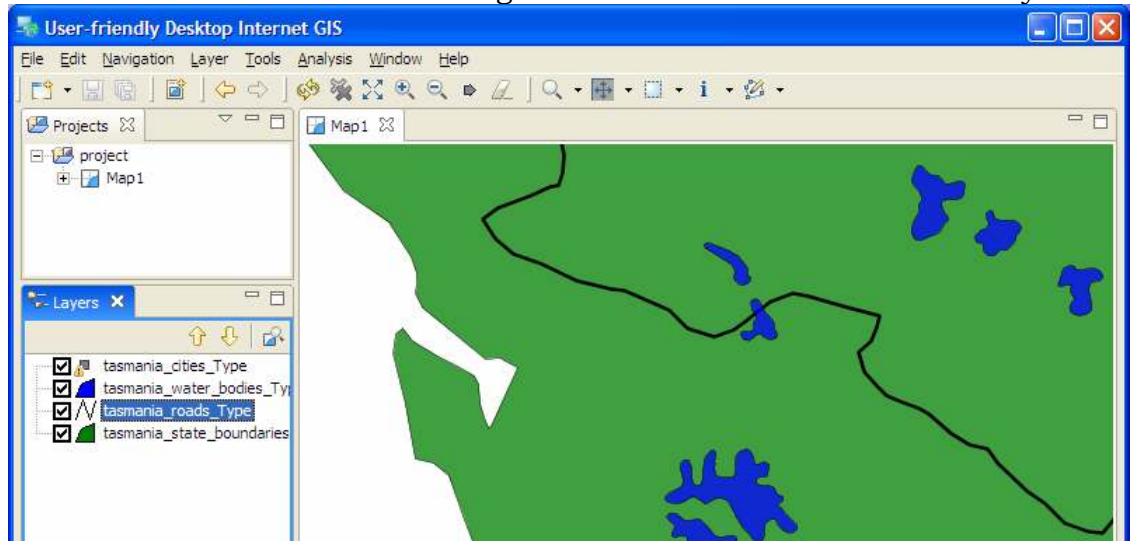3) **Drag and Drop** the **getCapabilities** link on to your Map.
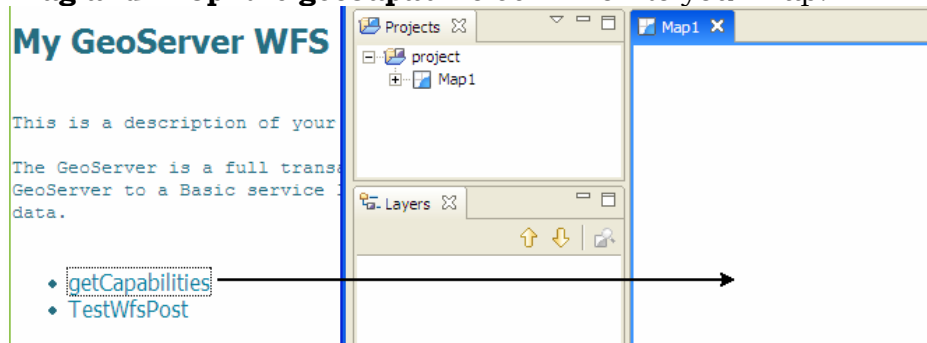
4) This will bring up a Dialog allowing you to choose which Layers you wish to see.
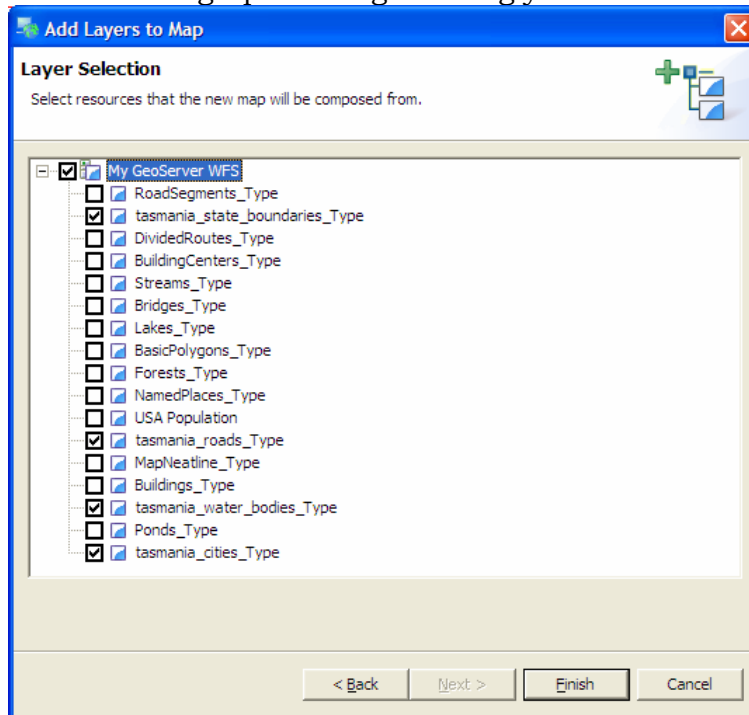
5) The resulting Map is based on the same information as scene in **MapBuilder**.

6) Zoom into the road that is crossing the lake in the center of the country

This data does not look too accurate – lets try and keep our friends across the pacific from getting their feet wet.

7) Select the road layer in the Layers View

8) Use the **Select Tool** from the toolbar

Tip: *You can use the keyboard short-cut 's' to choose the select tool*

9) Drag a box around the road where it is in the water.
You should notice the road turn a different color to indicate selection.
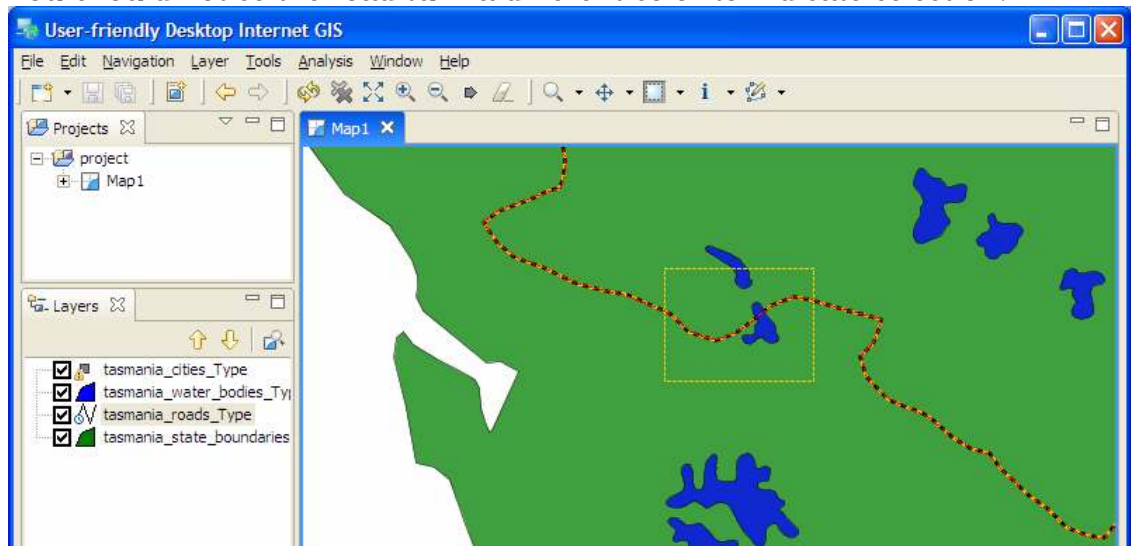
10) You may want to use the **scroll-wheel** to zoom in a bit closer to the lake.

11) Change to the **Edit Tool** from the toolbar.
You should notice the road turn red, and develop "vertex handles" for editing.
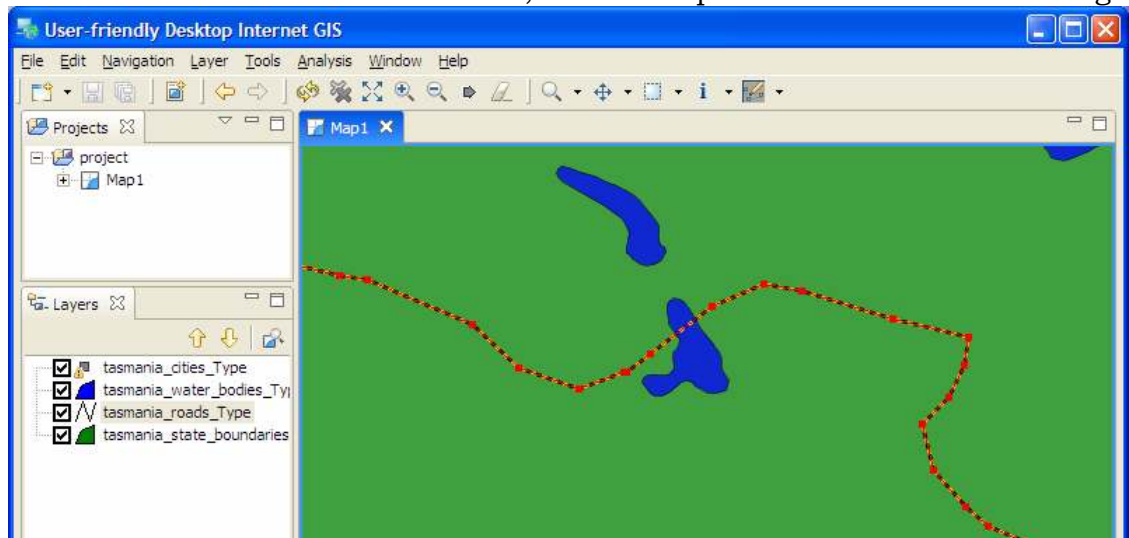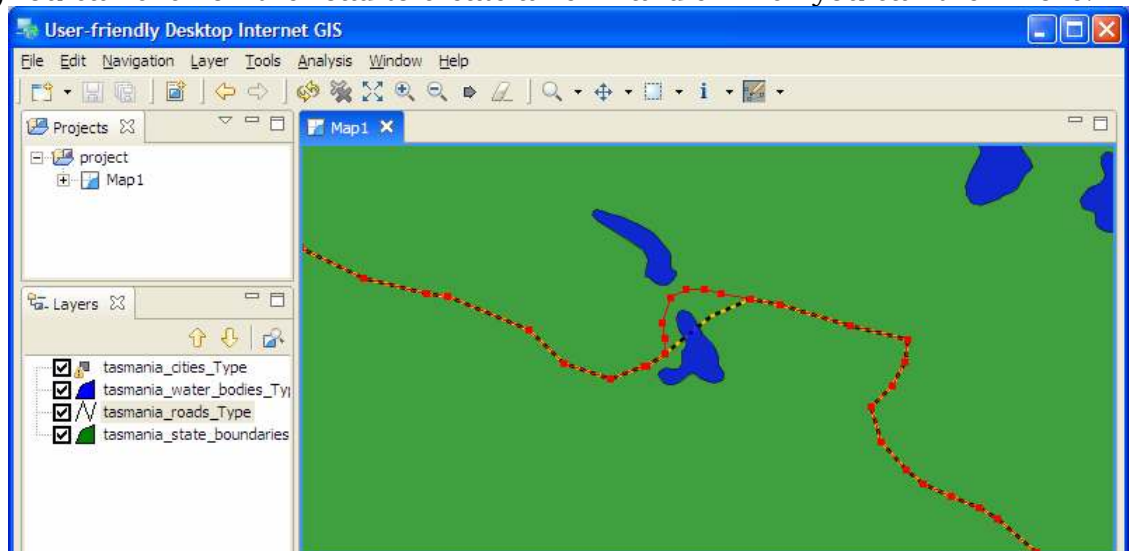

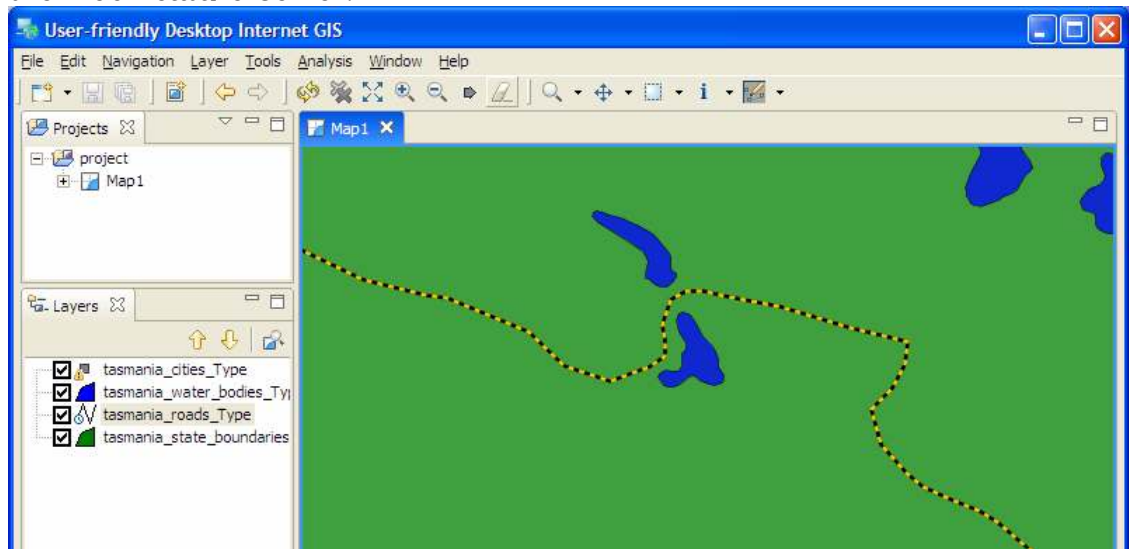*Tip:* *You can use the keyboard short-cut 'e' to choose the edit tool*

12) Move the vertex handles so the road does not enter the water .
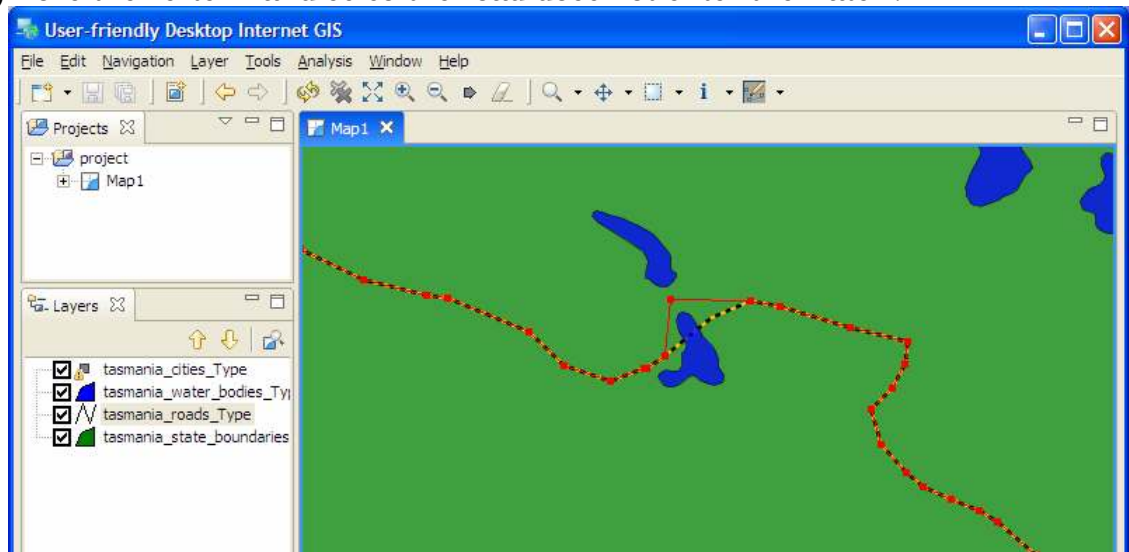
13) You can click on the road to create a new handle which you can then move.

14) Press the **Commit Changes** button(➡ in the toolbar)to send your changes off to the Web Feature Server.

(You probably have to hit refresh to see that your commit was successful)

15) You can now update your **MapBuilder** by refreshing the web page to see the changes that have been made.
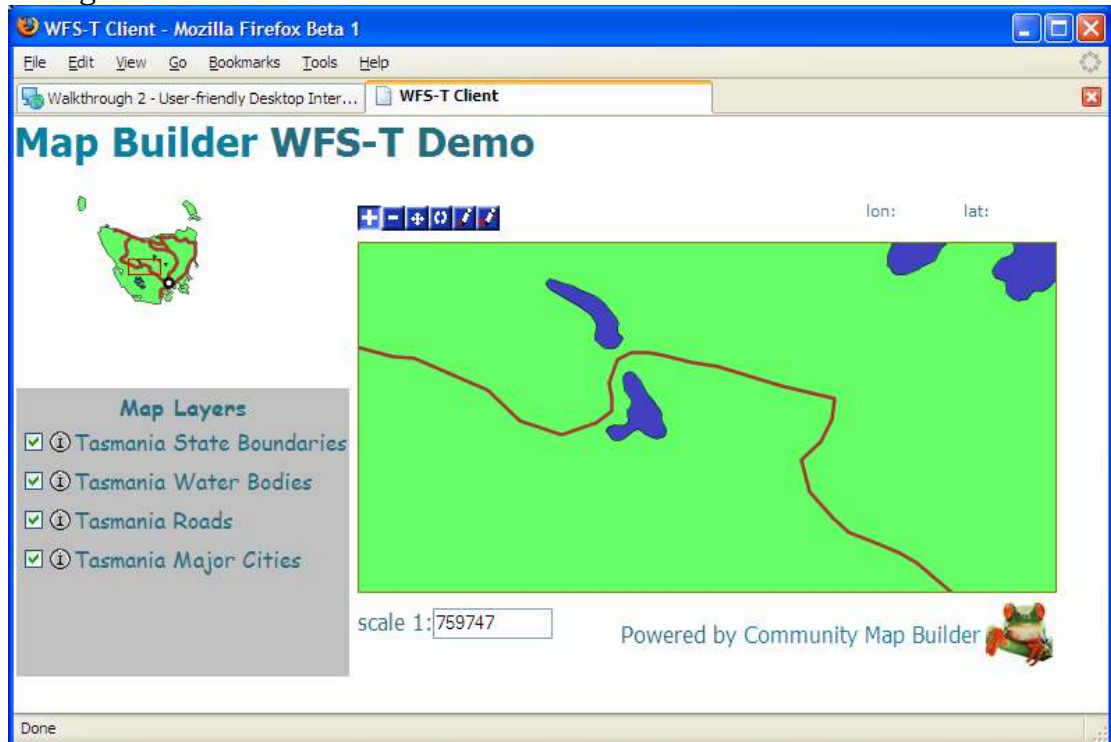
You can edit many Features at once, from different layers, or from different sources of data. Pressing **Commit Changes** will send off all the changes made in the current map.

You may also press **Revert** (📝 in the toolbar) to rollback any changes you have made.

7) EDITING AN ATTRIBUTE
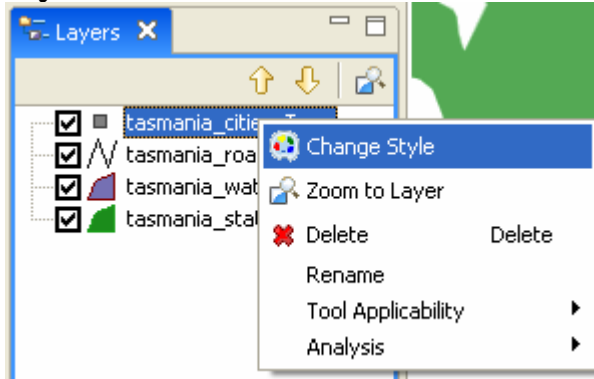
In this section you will learn how to edit an Attribute, along the way we will explore the use of styling.

To start out with lets figure out the name of that city:

Note: *If the map and layers from section 4 are not currently loaded, follow steps 1-4 from section 4.*

1) Right click on **Tasmania_cities_Type** in the **Layers** view, and click on **Change Style**.

2) The style view should now appear at the bottom of the uDig window.
   Check the **Label** checkbox and then select **CITY_NAME** from the drop down list that appears as the label for this layer.

3) After making changes, hit the apply button (green checkmark at the top-right of the view).
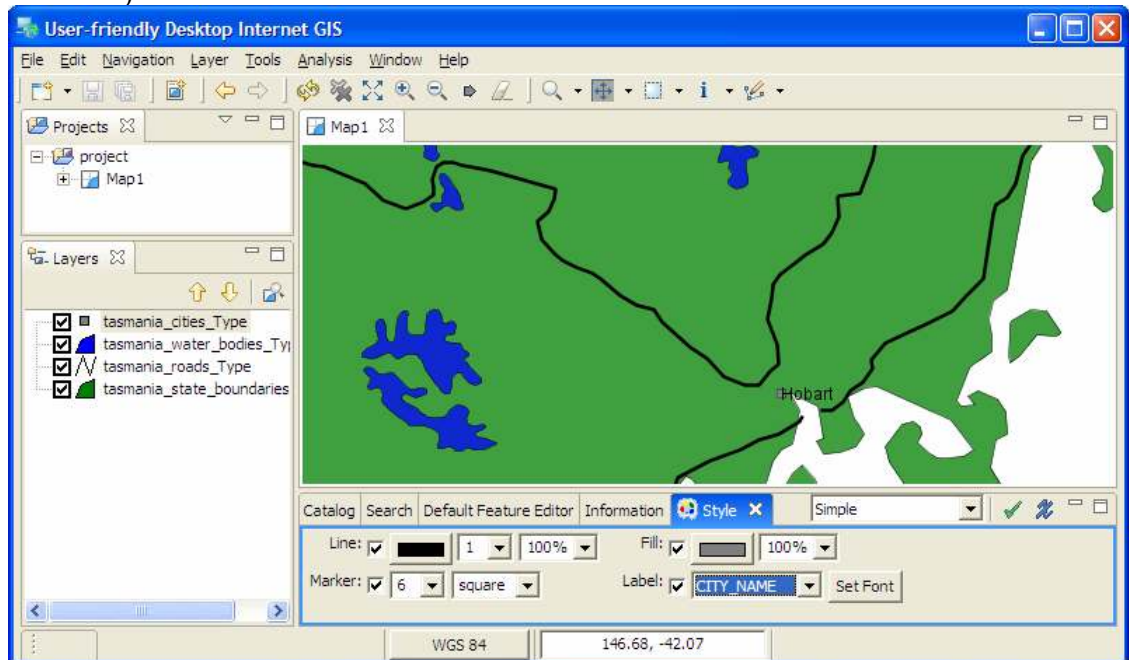
4) Select a different layer from the Layers View and the Style View should change to reflect the currently selected layer.

Okay now we can move on to editing:

1) Select the **Tasmania_cities_Type** layer in the **Layers** view; we'll edit an attribute from it.

2) With the **Select** tool draw a small box around the city Hobart.

3) Right click on the **Hobart** and select **Edit** from the drop down menu.

4) The Default Feature Edit view should now appear at the bottom of the uDig window with the selected features' attributes showing up in it. You may make changes to these attributes – by clicking on the attribute table cell. Note: some attributes are not editable.
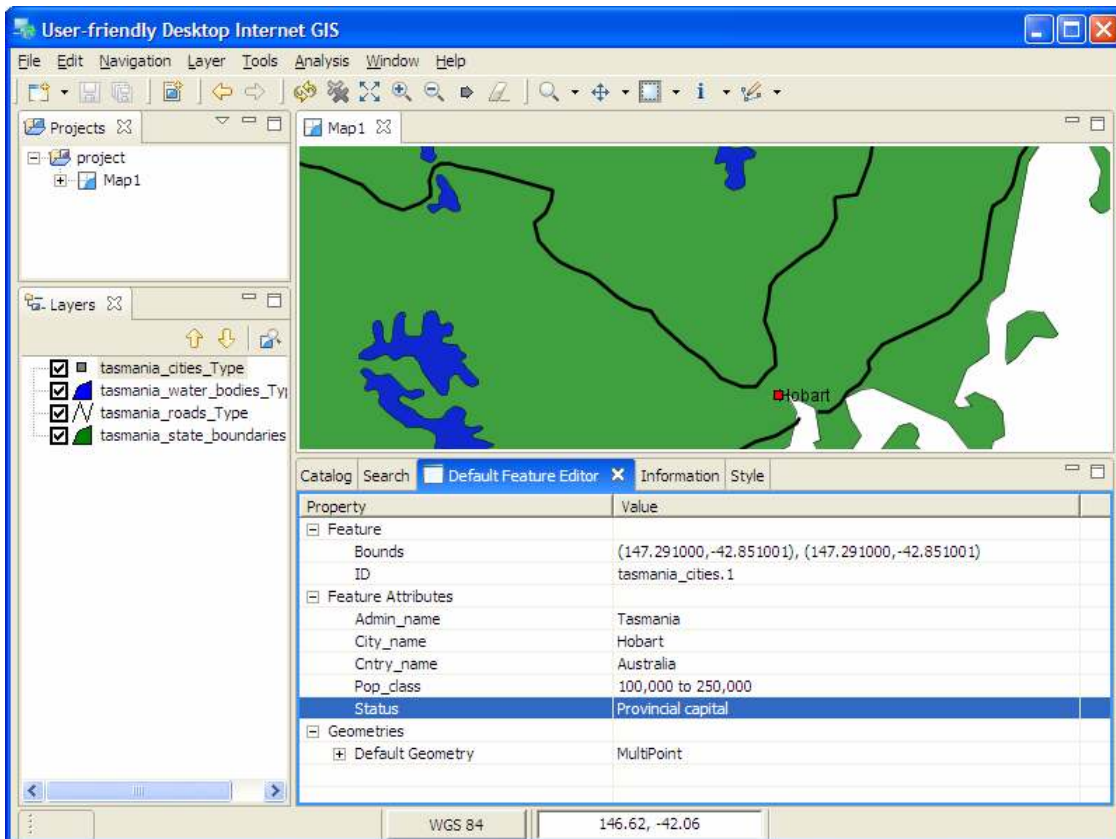
Go ahead and name the city after yourself.

5) Press the **Commit Changes** button, in the toolbar, to send your changes off to the Web Feature Server.

8) FINISHED ALREADY?

Here are some challenges to keep you busy.

- The MapBuilder demo also includes the ability to edit, see if you can edit something with MapBuilder and get the change to show up in uDig.

- GeoServer configuration is easy – change the configuration of your GeoServer to be your name (rather then the default "My GeoServer")?

- After you make that change – can you figure out how to let uDig know?

- GeoServer can connect to the same source of data as uDig -– see if you can point it to the same Postgis Database as we used yesterday.

- Advanced: GeoServer includes a validation engine, see if you can set up a rule to prevent roads from being drawn across lakes in the future.

What ideas do these exercises give you? How can you use GeoServer in your organization?