AlaskaMapped Web Map Service (WMS)
**Tutorial using the UAF GINA SwathViewer™**

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Produced by the Geographic Information Network of Alaska,   *www.gina.alaska.edu*

A quick note before starting this tutorial: Like all Internet Mapping Applications, some of the SwathViewer tools will take some time complete their process. Excessive mouse clicks before allowing the application to resolve previous requests may cause undesireable consequences.

1.   Launch your web browser (either Firefox or IE will do).

2.   Navigate to the SwathViewer Startup Page at
     http://sv.gina.alaska.edu

     Note: if your browser blocks pop-up windows, simply click the link "CLICK TO OPEN IN POPUP WINDOW" to launch the viewer in a new browser window (refer to the startup page example below).
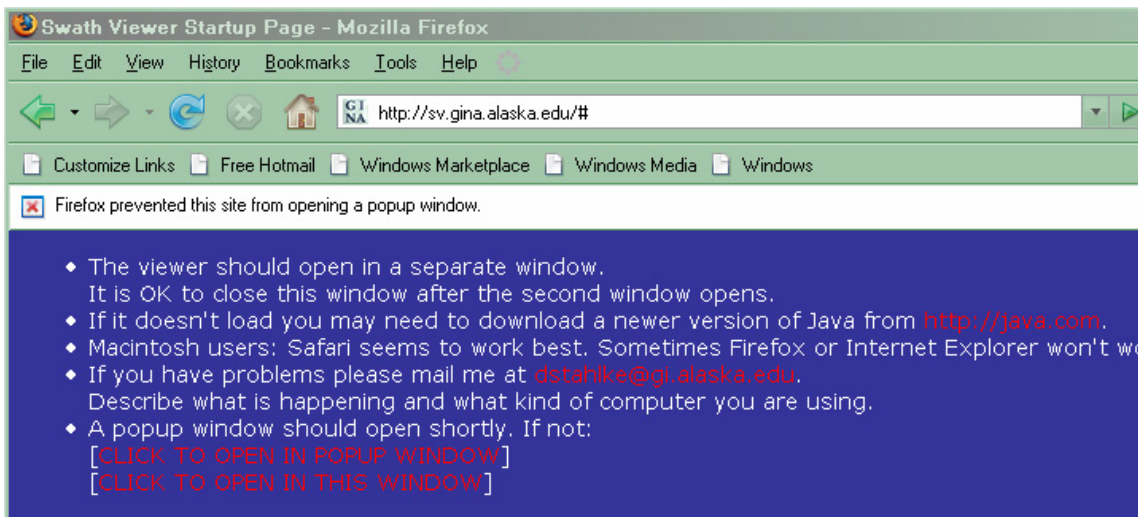

Some SwathViewer background:
Developed by Dan Stahlke at the University of Alaska Fairbanks, Geographic Information Network of Alaska (GINA), SwathViewer provides easy access and manipulation of global imagery and mapping data. Offering imagery in full map context with mouseovers and advanced querying capability, this lightweight Java applet (1.2MB) enables users to rapidly zoom, pan and layer multiple images and mapping data together without installing additional software.

3. SwathViewer will launch displaying the NASA Blue Marble satellite mosaic centered on Alaska.
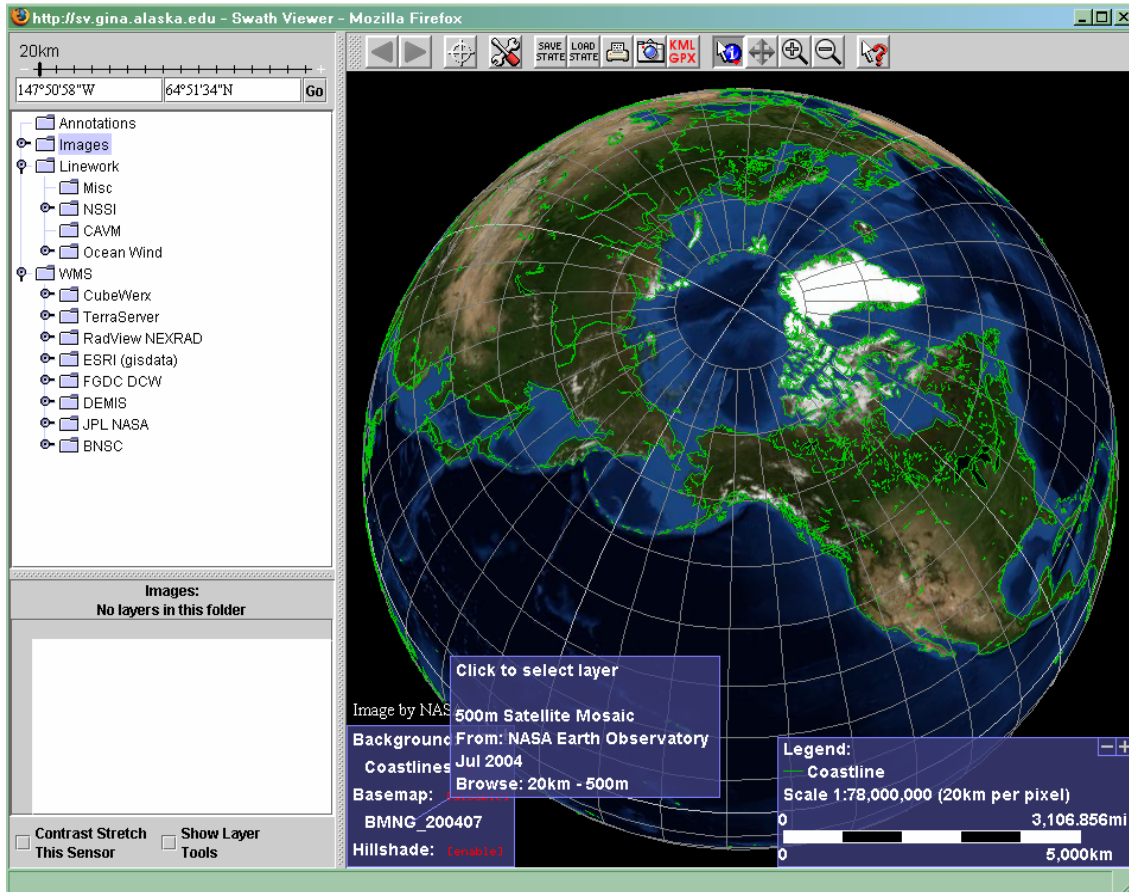
4. Use the ZoomIn tool 🔍 to click and drag a zoom box around just the state of Alaska.

www.alaskamapped.org
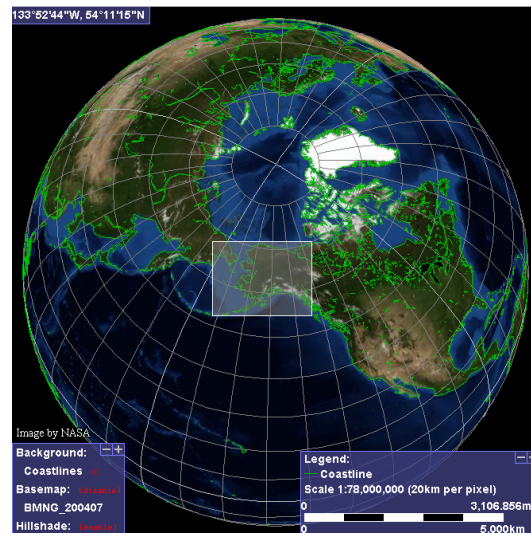
Rather than using the Zoom In tool to repeatedly zoom in until you are centered on the city of Fairbanks, simply click the Seek to Target button ⊕ and choose Fairbanks from the list of location options. The result of performing this task is shown below.
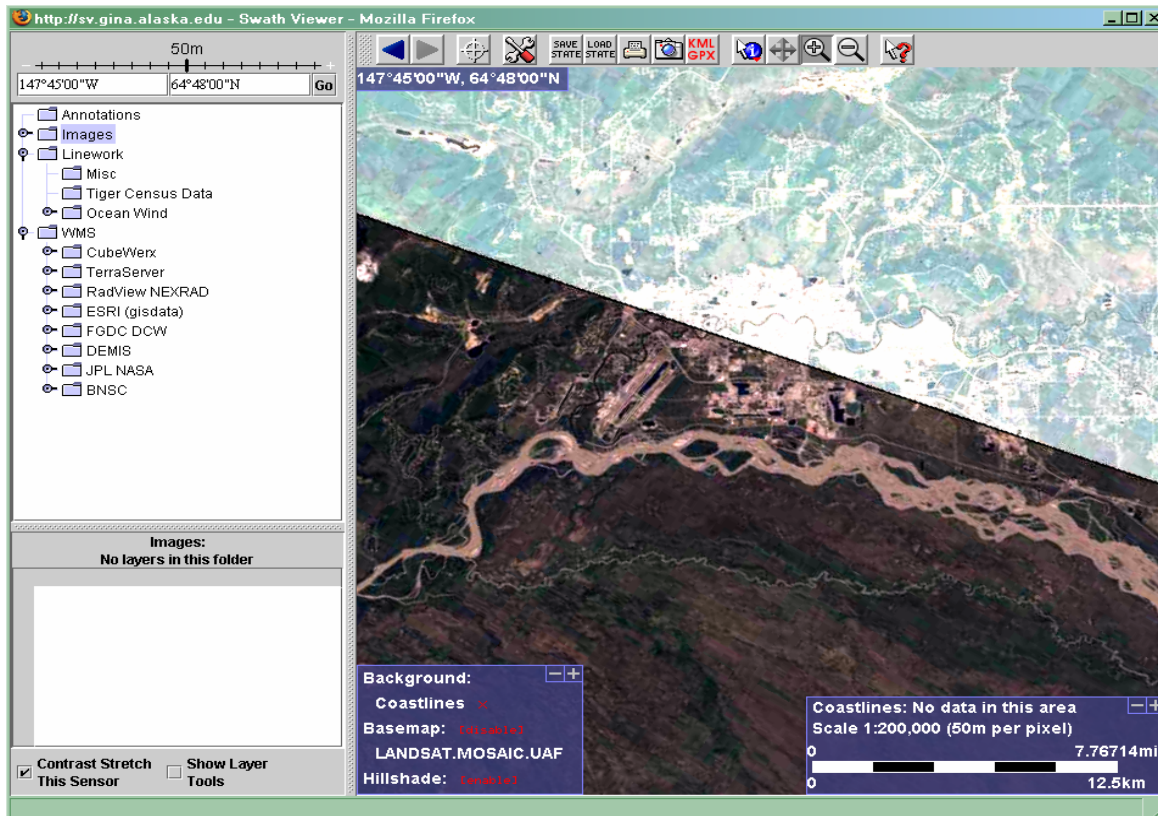
Note that you can also perform this task by entering a center point Longitude and Latitude in DMS into the upper left corner of the interface, then dragging the slider bar to the desired pixel spatial resolution.

Notice that as scale becomes larger, higher resolution datasets are displayed (a LandSat-7 mosaic should be currently displayed at around a scale of 1:200,000). The next few steps will walk through the process of adding external geospatial data, the alaskamapped.org web map services in this case, to the SwathViewer interface.

5. Click the Configuration tool and choose the Import WMS option from the drop-down list of options. Type the URL to the AlaskaMapped Best Data Layer (BDL) in the text box on the WMS Import dialog, then click Open to load the bdl wms into the SwathViewer TOC, as is shown in the example below.
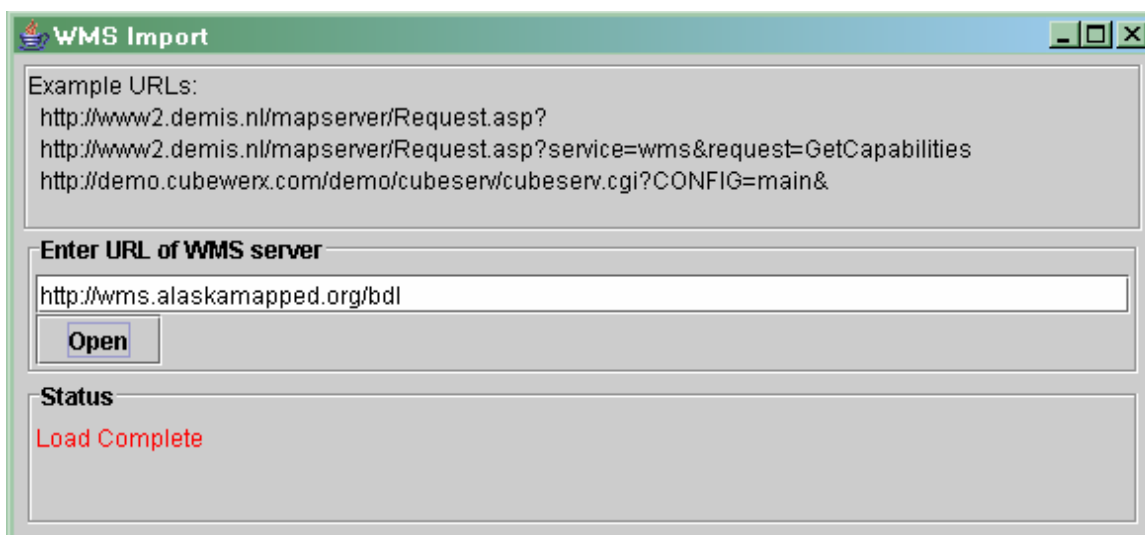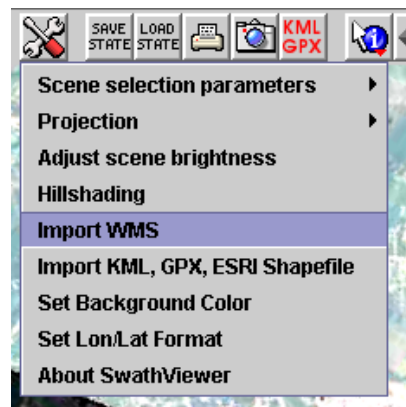

Click Open to add the BDL WMS to your SwathViewer session.

Some background about the BDL WMS:
The BDL (Best Data Layer) is the repository for the Alaska Statewide Digital Mapping Initiative (SDMI). More information about SDMI can be found at http://www.alaskamapped.org. The goal of this WMS is to provide open access to the most current publicly available ortho-rectified imagery across the entire state of Alaska. WMS is an open source protocol defined by the Open Geospatial Consortium (OGC, http://www.opengeospatial.org) and can be implemented in a variety of mapping software platforms.

6. Click on the toggle switch icon to the left of the bdl_high_res entry, then highlight the High Resolution Natural Color (0.25-9m) (Detailed) listing in the TOC. A check-box that controls the visibility of the highlighted layer will be made available in the window directly under the TOC. You may have to use the horizontal scroll bar or click and drag the TOC window to the right in order to be able to read the full layer name.

7. Check the box to turn on the visibility of the selected layer. When the display refreshes, you will be viewing a mosaic of DigitalGlobe QuickBird satellite images courtesy of the Faribanks DNR Division of Forestry.
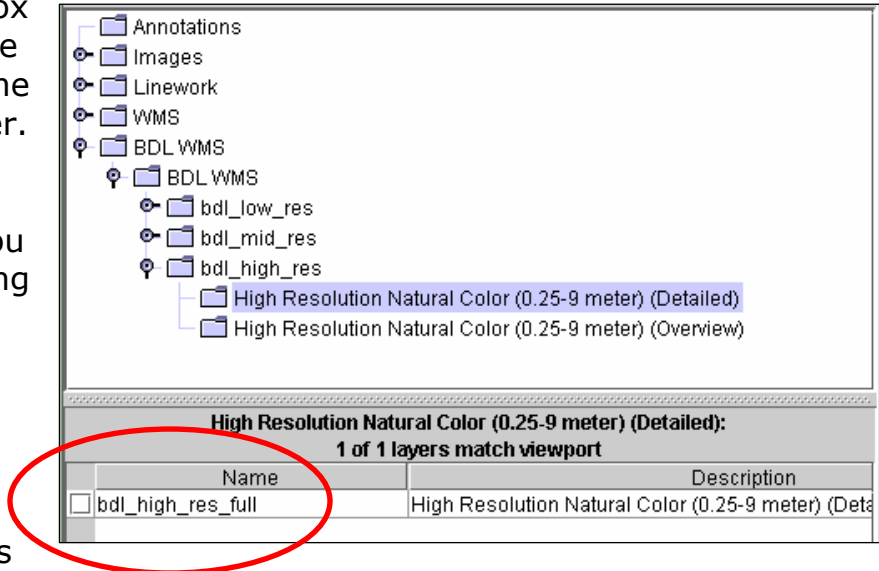
8. Enter the following coordinates in the upper left hand corner navigation control of the interface 147°48'52"W, 64°50'16"N, then click the Go button. After the display completes its refresh, click and drag the spatial resolution slider to 1m then release. Coordinates can also be entered as 147.48.52W 64.50.16N or 147d48m52W 64d50m16N.

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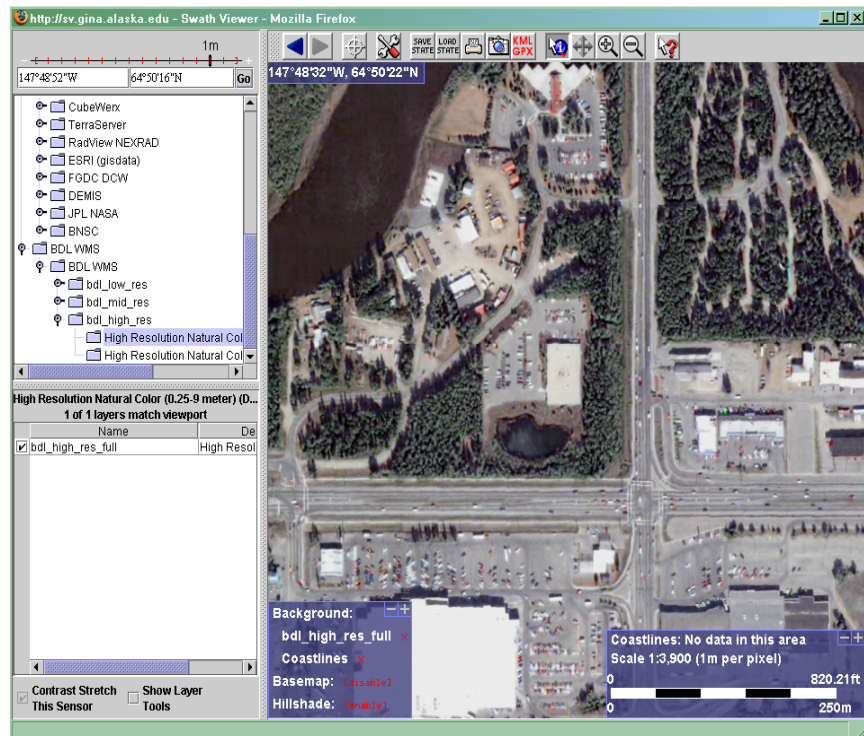
The display will refresh at a scale of 1:3,900 centered on the AK DNR Forestry Building across Airport Way opposite the old Fred Meyers building in Fairbanks, AK.

9. If you click the Save State button ▣ and navigate to directory of your choice, name the .sv file and click Save, the next time you use SwathViewer, you may load the state file (*.sv) and return to this same view, provided you still have access to the data used in your SwathViewer session.

Parting Thoughts:

If you haven't done so, it is worth taking a moment to scroll through the list of available data already available in SwathViewer using the table of contents on the far right side of the display.

You can incorporate your vector data into SwathViewer using the KML/GPX tool (this includes the shapefile format as well). Please keep in mind that any vector data added to the SwathViewer must be correctly referenced to Geographic Coordinates in WGS84 to be displayed correctly.

*Currently, there are three additional WMS available through AlaskaMapped; one named **Extras** containing a variety of raster datasets that are in frequent demand among end-users of geospatial information (i.e. USGS Digital Raster Graphics, USGS National Elevation Dataset Shaded Relief, etc…), and two containing the full listing of NOAA Nautical Charts for the State of Alaska (not suitable for navigation; charts contains each chart as a layer and each layer has been processed to crop the map collar while layers in charts_nc have not been cropped) named **Charts** and **Charts_nc**. These are at the following URLs:*

Extras: http://wms.alaskamapped.org/extras
Charts: http://wms.alaskamapped.org/charts and
  http://wms.alaskamapped.org/charts_nc (nc = not cropped)

Each of these WMS can be added to SwathViewer using the method presented in this tutorial. Please contact GINA with any questions or comments you may have via email at wms@alaskamapped.org

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