CODAR
OCEAN SENSORS

SeaSonde Radial Site Release 6
SeaDisplaySetup Ver5 Application Guide
Apr 25, 2009 ©Copyright CODAR Ocean Sensors, Ltd.

SeaDisplaySetup Version 5 creates and edits geographical site maps for use with Release 6 SeaDisplay Version 6.

Features

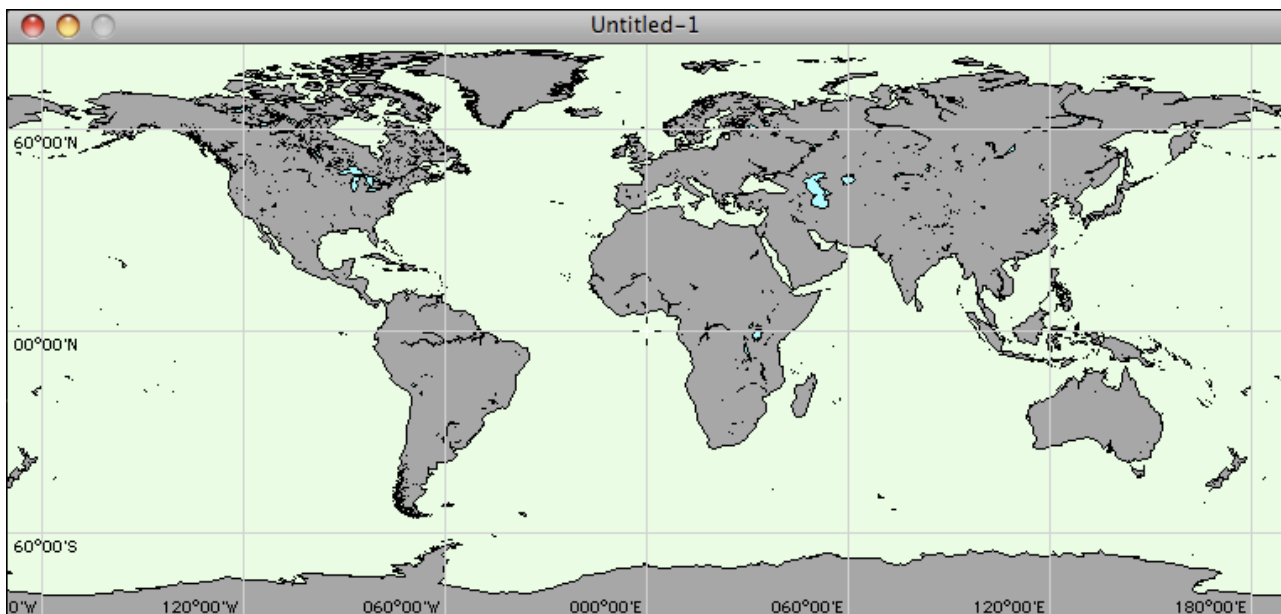Plot any coastline of the world.

Mark SeaSonde Site locations.

Mark other points of interest.

Show possible SeaSonde Site coverage.

Create a site map file for use with SeaDisplay.

New map starting point is a world map.

Update older SeaDisplay_Site_XXXX maps to new smap format.
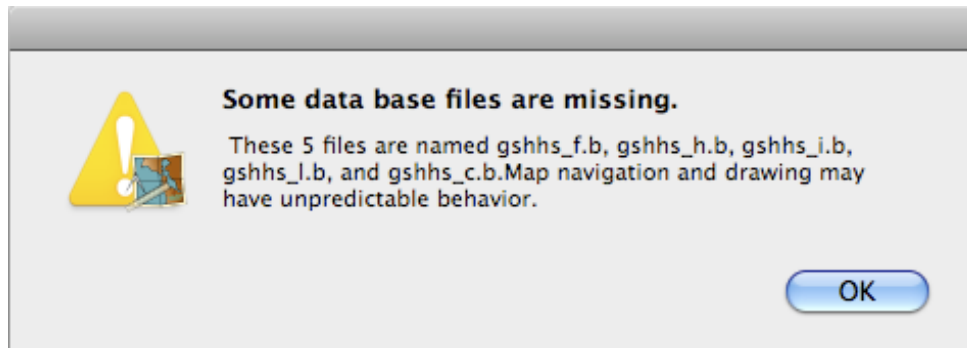
Starting up

Before you start, you should be ready with the site name and lat, lon locations of each of your site or sites.
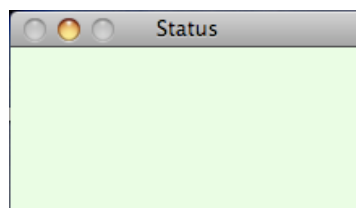
SeaDisplaySetup is located in /Codar/SeaSonde/Apps/Tools/ folder. Typically you will be able to find the icon installed in the Dock.

When SeaDisplaySetup is first opened, it searches for a MapDataBase folder located where SeaDisplaySetup is. If this folder or the files therein are not found, you will get a warning message.

Most likely, you will need to quit SeaDisplaySetup and run the SeaSonde Release 6 Suite "Install-MapDataBase". Then run SeaDisplaySetup again.

If you started SeaDisplaySetup by opening an existing smap then that site map will be shown for editing; otherwise, SeaDisplay starts up with just a blank status window showing.
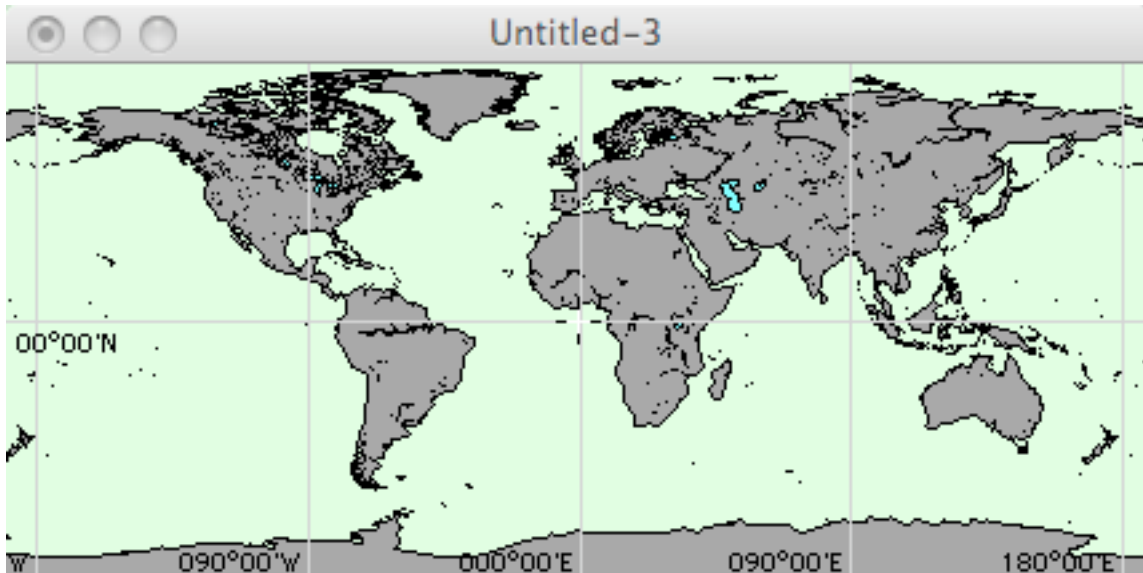

New SeaDisplay 6 will only work with a new site map (smap) format. To update an older SeaDisplay_Site_XXXX format, open it with SeaDisplaySetup, wait for the making polygons to finish, then menu File -> Save and click the Save button. The new map will be saved as SiteMap_XXXX.smap and original SeaDisplay_Site_XXXX will be moved to a "PreviousSites" folder in the "SiteDefinitions" folder.
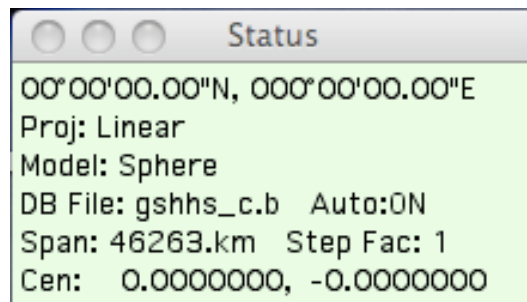
How to Make a Site Map

New Map

Go to menu File -> New to start a new site map. You will then see an "Untitled" window with a Linear projection of the Earth.

And the status window will be filled with information.

The top line of the status window shows the latitude and longitude location of the cursor within the map.

Proj is the type of map projection currently used. As you zoom in, this will automatically change to Lambert Conformal Conic.

Model is the earth model size in use. As you zoom in, this will automatically change to WGS84.

DB File is the coastline data base file in use. By default the world view uses a coarse database and as you zoom in, SeaDisplaySetup will automatically switch to a finer database.

Span shows the horizontal distance across the map.

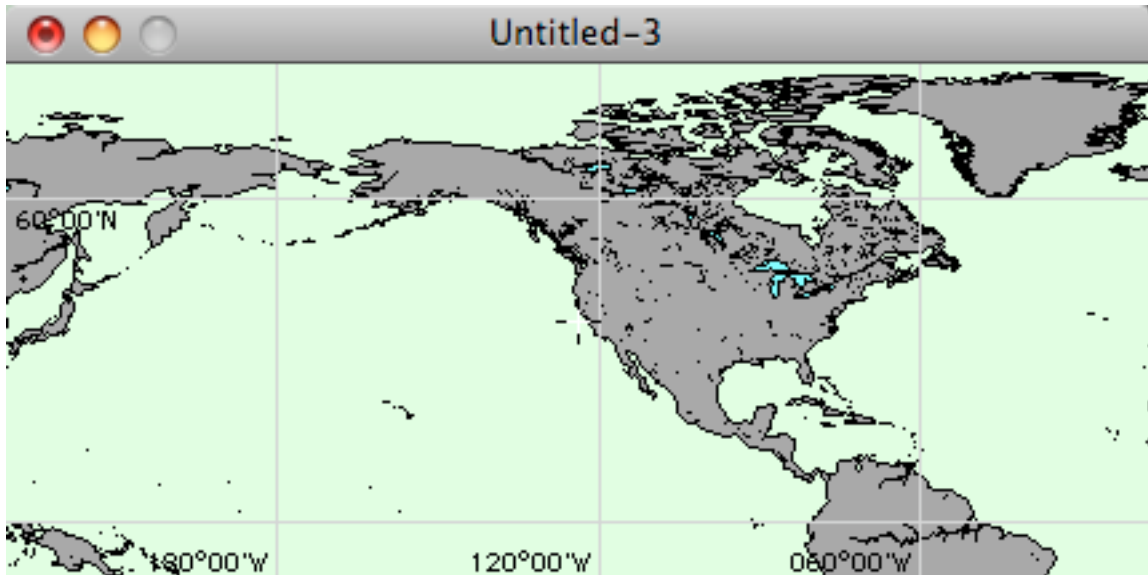**Step Fac** is a stepping factor tied to the arrow keys.

Cen is the latitude and longitude location of the center of the map.

Center (Shift-Click)

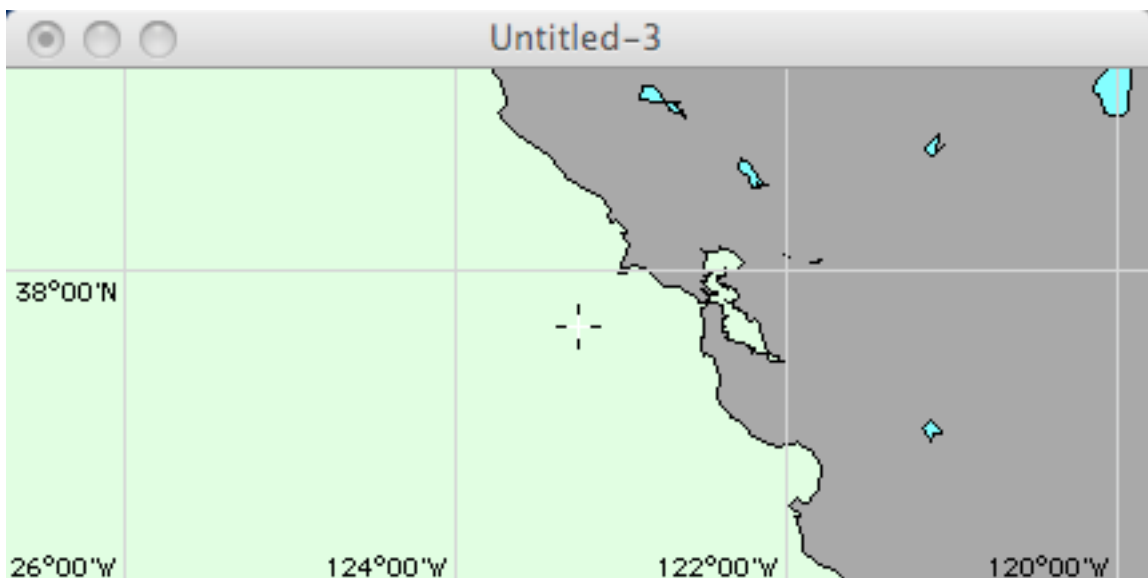Move the cursor to roughly the center of the area of your interest. Then hold the shift key and click the mouse.
(If the top line of the status line does not update with the cursor's location, you'll need to first click on the map window so that it is the frontmost window.)

The map will be centered and automatically zoomed-in to maintain the aspect ratio.
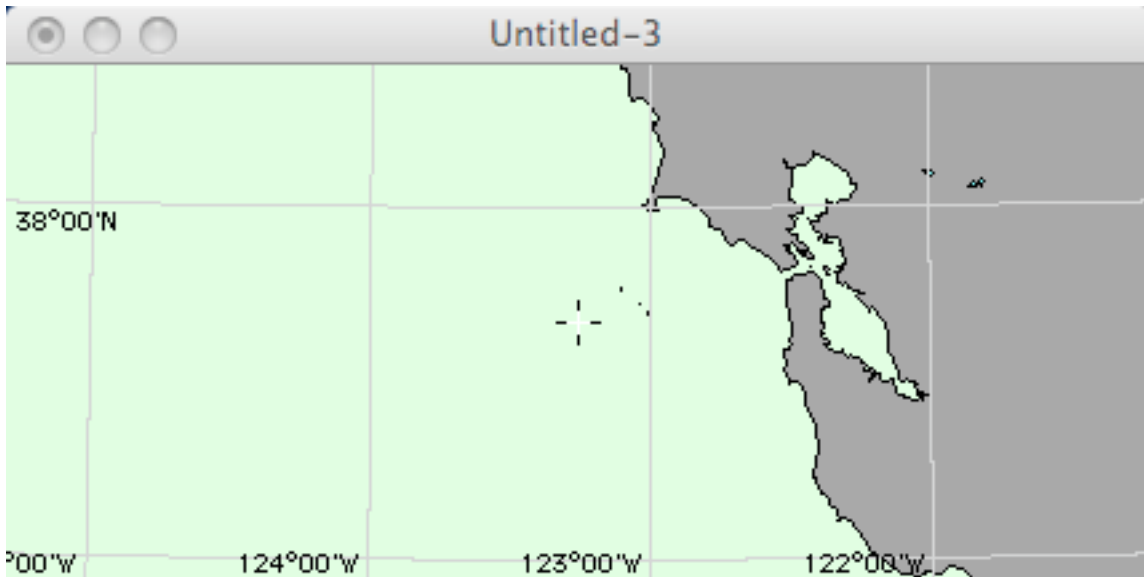

Zoom (option-arrow)

Use option-key with up-arrow-key several times to zoom in. If you go too far, use option-key with down-arrow-key to zoom out.
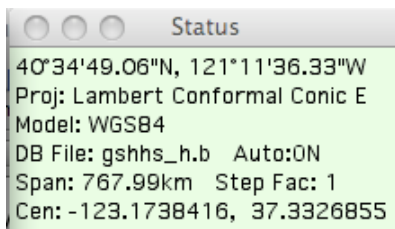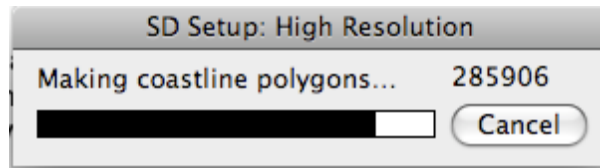
Pan/Center (arrow keys)

As you get closer to your area of interest, you will need to re-center the map (shift-click). This can also be done by panning West, East, North or South using the arrows keys.
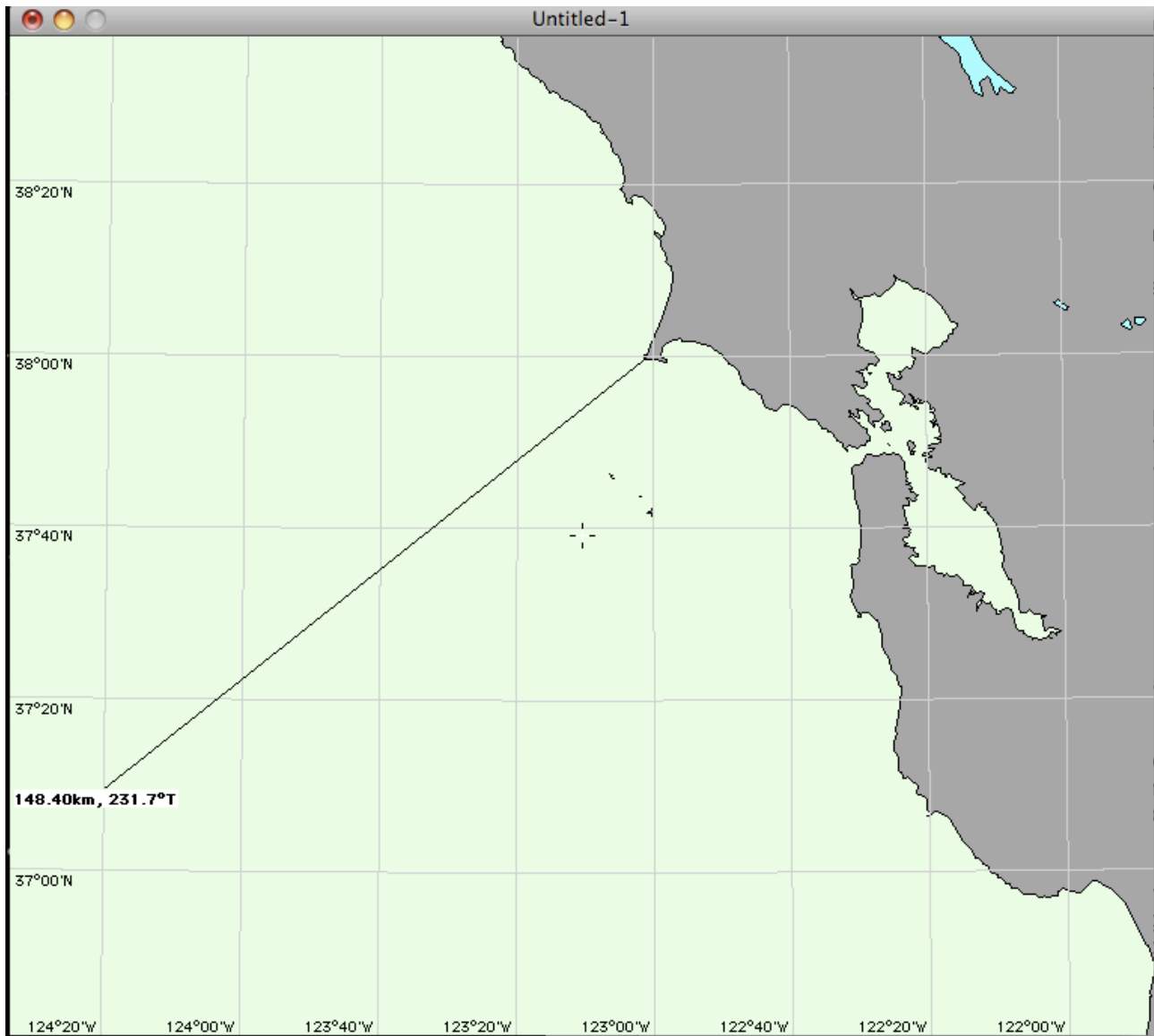

Repeat Zoom and Pan/Center

Keep repeating the zoom and re-center. After a certain point of zooming in, the database will automatically switch to a higher resolution; you will get a window which shows "Making polygons". Do not Cancel. After the window goes away, you can continue zooming in.

Expand (shift-arrow) and **Resize** (control-arrow)

When you finally have zoomed in far enough to the area you are interested in, use the shift key with the arrow keys to expand the map. Shift - right arrow expands west and east boundaries, while shift - left arrow contracts them. Shift - down expands the window north and south boundaries while shift - up contracts them. You can also use the control key with arrow keys here to resize the map window without changing the Geo-boundaries.

Re-center the map so that you get more ocean than land. Click the mouse on the general location of a site and drag the mouse over the water. You will see a line with distance and bearing. The distance is useful to show if your map has too little or too much coverage for the area you are interested in. If not, you can use the option arrow keys to zoom in or out to fit.

Add Sites

Select menu Map -> Sites.

Click OK on the Notes dialog to dismiss it, then in the Site Definition window, click the Add button to add one new site.

Enter in "Name" the site code for your site.
Then enter the Longitude and Latitude location of your site.

Shortcut:
If you are exploring where you'd like the site to be, you can click on the site map sure it's the frontmost window then double click where you want the site to be. This will automatically enter the double-clicked location into the Site Definitions window.
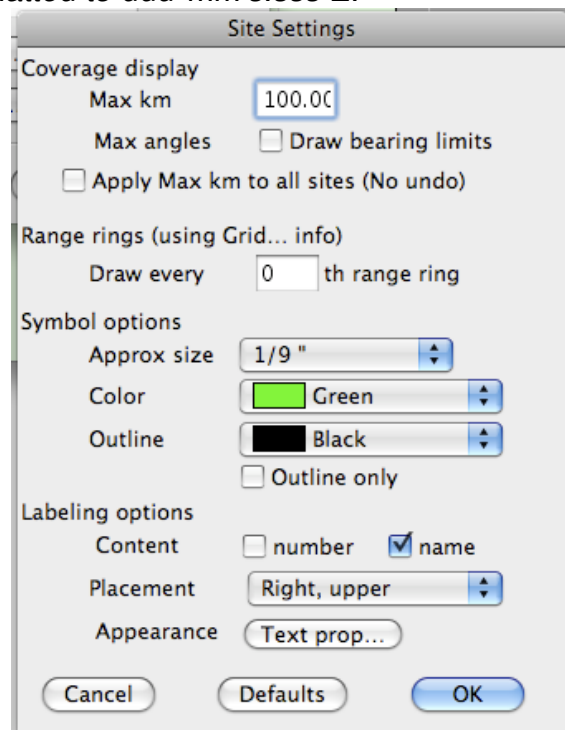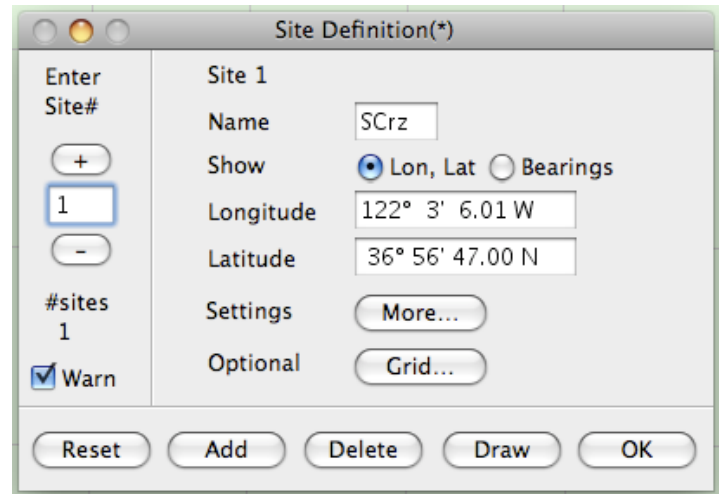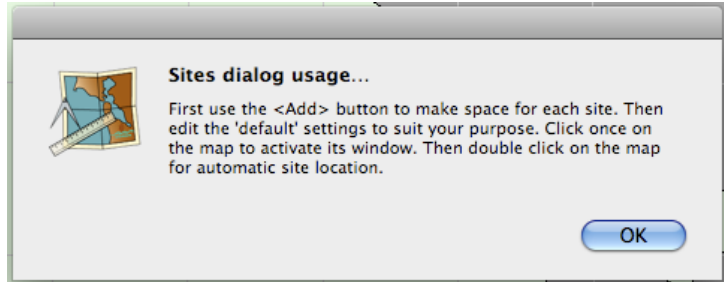
Note:
Cut and paste does NOT work for the edit text boxes. You can fractional degrees entry as long as it is followed with 'N', "S', 'W' or 'E'. In general all of these formats will work: ddd.ddddddd°E, ddd°mm.mmmmm' E, and ddd°mm'ss.sss"E. A space may be used for the ° degree character. A space can also be use for the ' minute character and the " second character. When you click on another edit box the current Longitude or Latitude entry will be reformatted to ddd°mm's.sss E.

In the Site Definition window, click on the More button.

A Site Settings window allows more options. Uncheck "number" and check mark "name", then set the Placement so that the site name will be drawn back overland. You can select a different color for each site symbol if you like. Then click the OK button.

Click on Site Definition window Add button to add more sites if you got them.
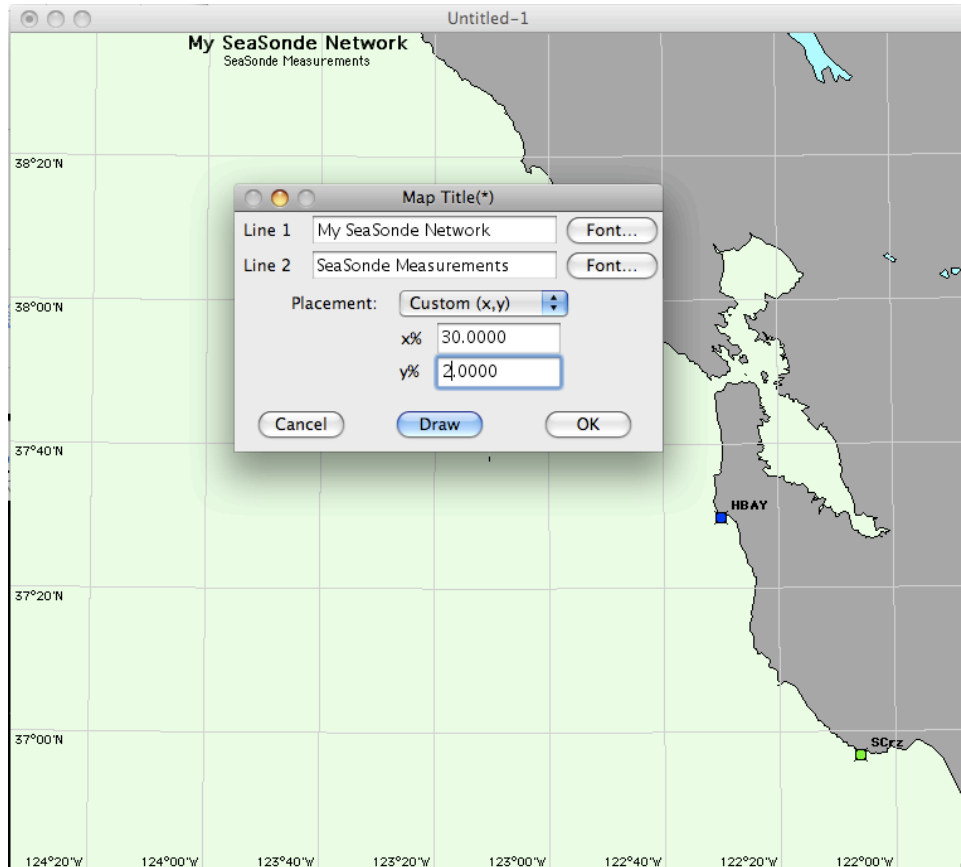
Click on Site Definition window OK button to dismiss the window.

Customize

Select menu Map -> Title

Type your desired title and set the placement. If the standard placements are not good enough use the custom placement and set location as percentages across the map.
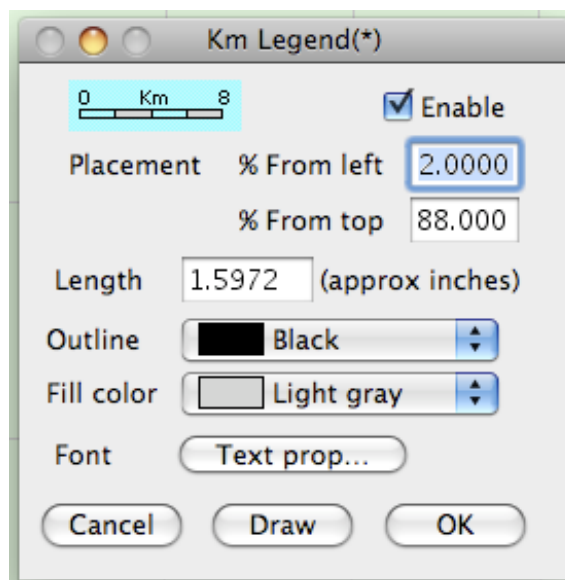

Click on Map Title window OK button to dismiss the window.

Select menu Map -> Km Legend.

Enable and set the location of legend. Then uncheck enable and click the OK button. *(SeaDisplay v6.2.4 will draw the legend whether enabled or not.)*
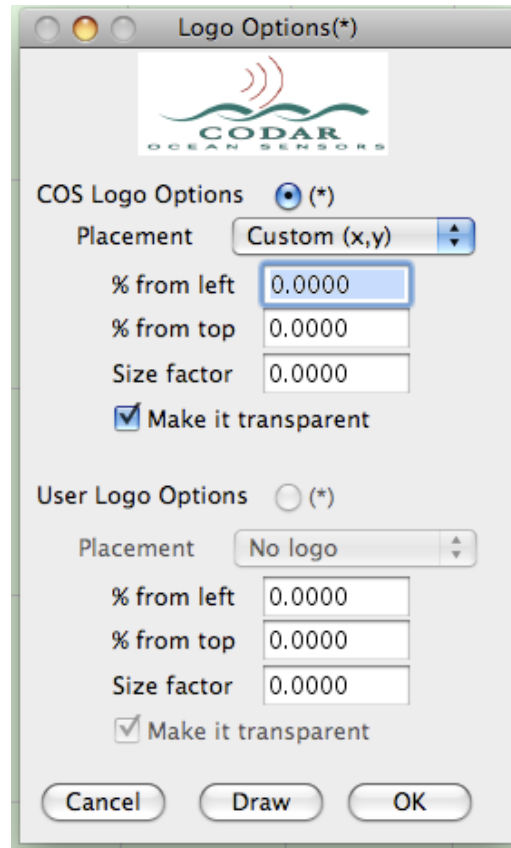
Hint: Any control window with (*) in the title, lets you double click the map to set the placement.
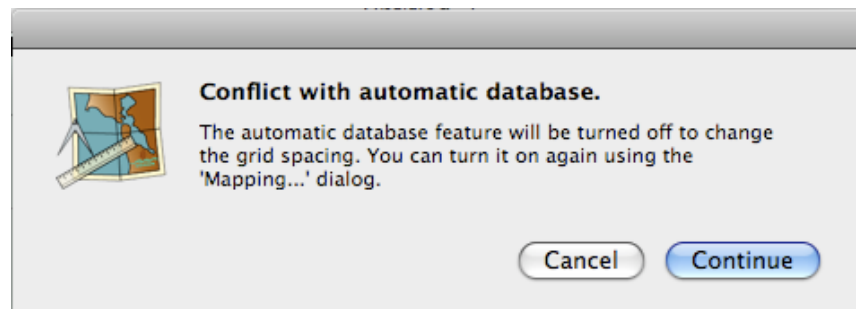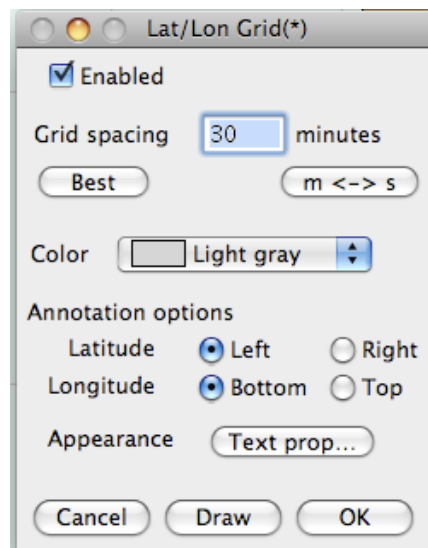
Select menu Map -> Logo

Set the logo % location to where you would like it to be and click the Draw button to see where it shows up in the map. When you've got the logo were you want it, click the OK button to dismiss the window.

Logo Options(*)

COS Logo Options ⦿ (*)
  Placement   Custom (x,y) ⏶⏷
    % from left   0.0000
    % from top   0.0000
    Size factor   0.0000
    ☑ Make it transparent

User Logo Options ◯ (*)
  Placement   No logo ⏶⏷
    % from left   0.0000
    % from top   0.0000
    Size factor   0.0000
    ☑ Make it transparent

(Cancel) (Draw) (OK)

Select menu Map -> Lat/Lon grid...

If you like the auto lat/lon grid then skip this; otherwise set the grid that you like and click the OK button to dismiss the window.
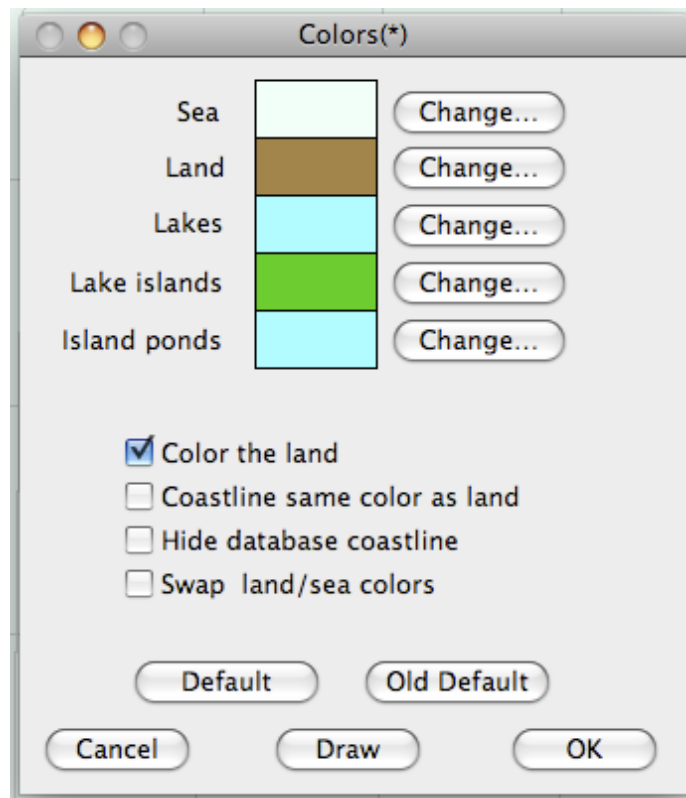
Changing the spacing may result in a message to turn off the automatic database selection.

Lat/Lon Grid(*)

☑ Enabled

Grid spacing   30   minutes
(Best)   (m <-> s)

Color [ ] Light gray ⏶⏷

Annotation options
  Latitude   ⦿ Left   ◯ Right
  Longitude   ⦿ Bottom ◯ Top
  Appearance (Text prop...)

(Cancel) (Draw) (OK)

Conflict with automatic database.

The automatic database feature will be turned off to change the grid spacing. You can turn it on again using the 'Mapping...' dialog.
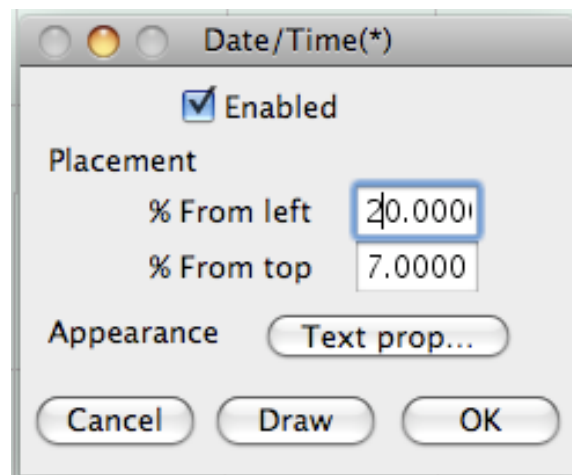
(Cancel) (Continue)

Select menu Map -> Colors

Click on the change buttons to set colors that you like. The Sea color should be a very light color that doesn't interfere with the colorized vectors plotted in SeaDisplay. Click the OK button to dismiss the window.
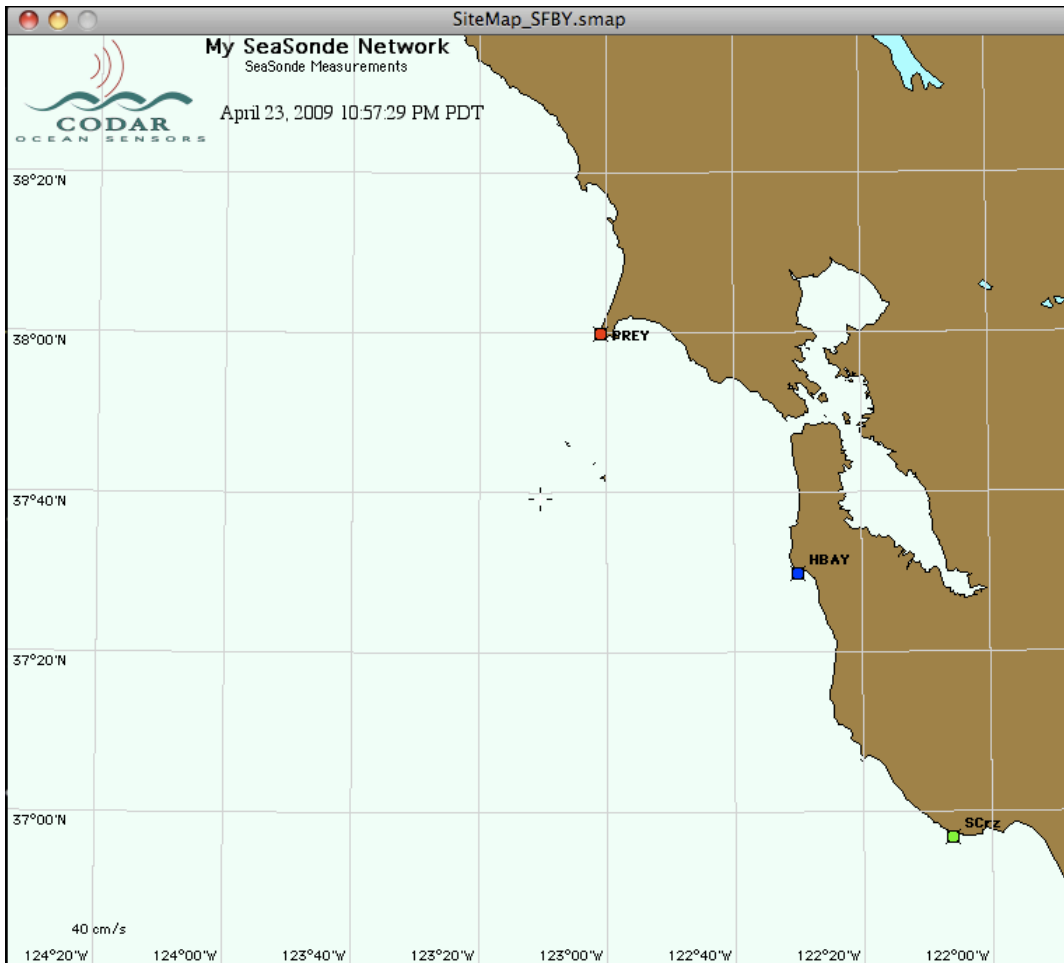
(Note. Check 'Coastline same color as land' if the black outline of the coastline interferes with annotation of sites, etc. along the coastline.)

Select menu Map -> Date/Time

This is where the date / time of the vector file being plotted is shown. Enable and set a location that's visible and is not going to be overlaid with the plotted vectors later. Click the OK button to dismiss the window.
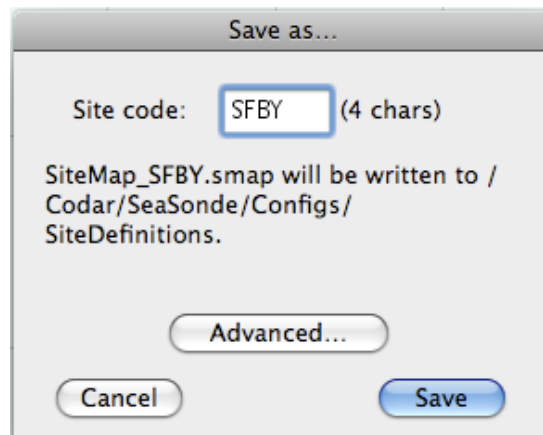
Save

Select menu File -> Save

Enter a site code for the map. For a Radial Site this should be the Radial Site Code. For a Combine Site, this should the total vector site code.

Type the 'x' key to turn off the reference cross in the center of the map.

Click the Save button.

The site map will be saved into /Codar/SeaSonde/Configs/SiteDefinitions/ folder as SiteMap_XXXX.smap where XXXX is the site code. You can copy this map to other Radial site and rename XXXX to match the site.

Run SeaDisplay to view the site map. If you have more than one site map you might need to manually drag the site map onto SeaDisplay. The SeaSonde Suite installer, will install an example site smap SiteMap_SFCA.smap; you should move this file to the PreviousSite folder. If needed, you can, reopen the site map in SeaDisplaySetup for further editing.