

Overlay Editor Plug-in

US Naval Research Laboratory

Code 5773

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<https://simdis.nrl.navy.mil>

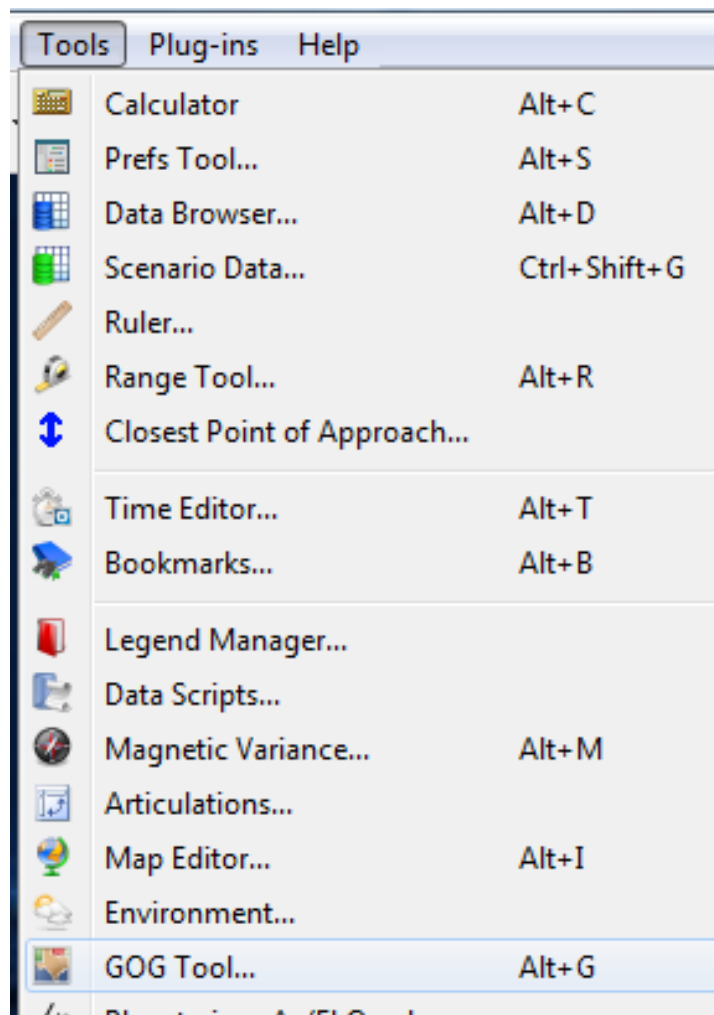
simdis@enews.nrl.navy.mil

Overview

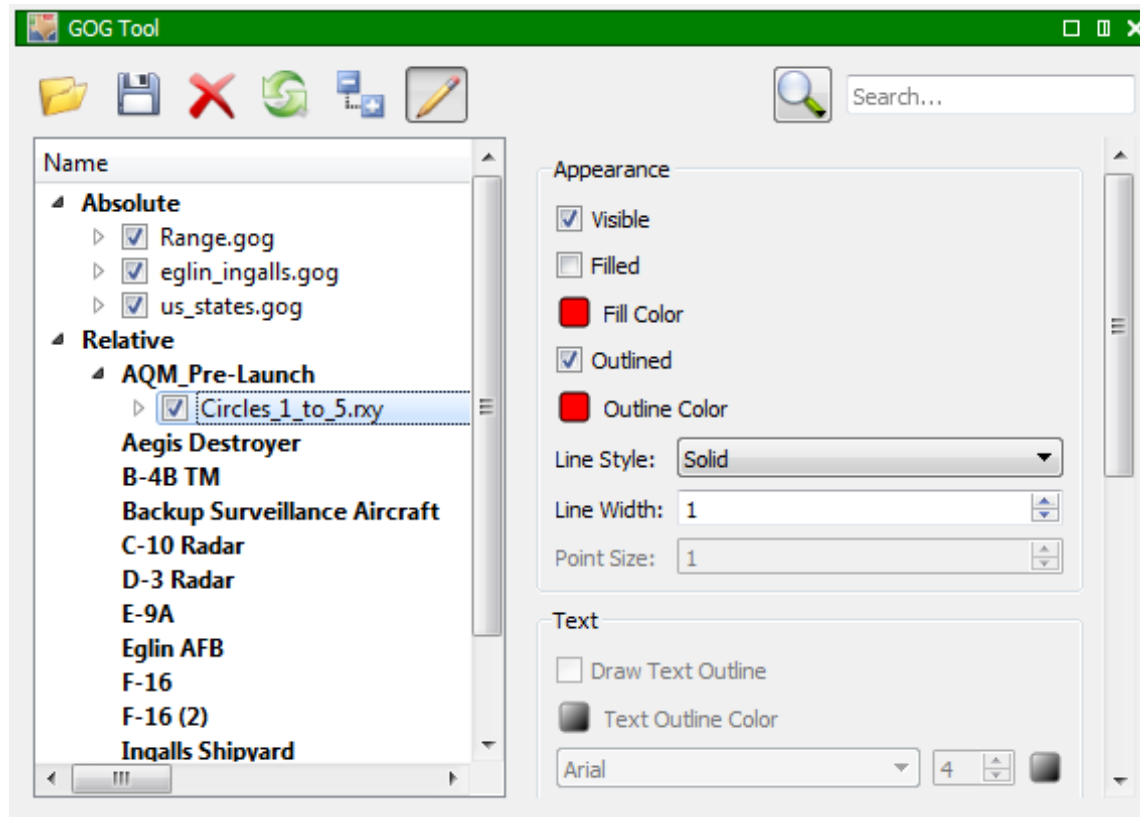
- Generalized Overlay Graphics (GOG) is a two dimensional shape format that was initially designed for display using the NTADS program.
- GOG has been "ported" over for use in **SIMDIS™**.
- The older files still work in both the original programs and in SIMDIS, however, newer GOG files that contain SIMDIS specific features will only work with SIMDIS.
- There is no particular extension used for GOG filenames, although use of “.gog” is recommended.

- GOG files are loaded into SIMDIS and Plot-XY through various means.
- These files contain vector graphics used to draw lines, shapes, and text.
- GOG files have many different common extensions such as **.gog, .ll, .lla, .xy, .xyz, .rxy and .rxyz.**
- The **.xy, .xyz, .rxy and .rxyz** files can be used to attach vector graphics to a platform in SIMDIS, while in Plot-XY they can be used as overlays for X vs. Y plots.

Accessing the GOG Tool Dialog

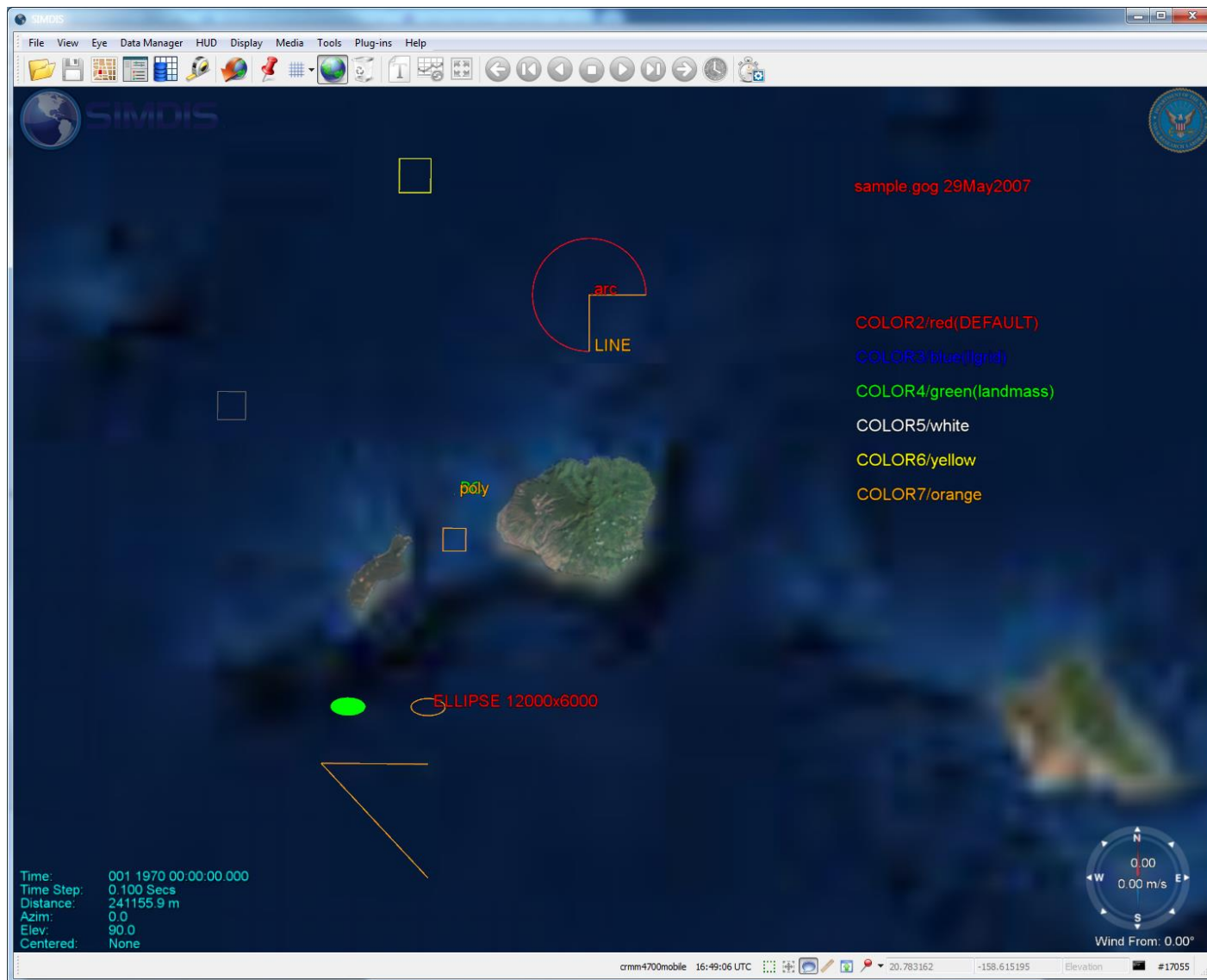


- To access the GOG Tool dialog use the SIMDIS toolbar **Tools->GOG Tool...** pull-down menu in SIMDIS.



- The GOG Tool is the main way to load, unload, and edit the display options of GOGs while running SIMDIS
- See Chapter 5.11 of the **SIMDIS User's Guide** for a complete description of this tool.

GOG Display Example



Graphics Overlay Editor

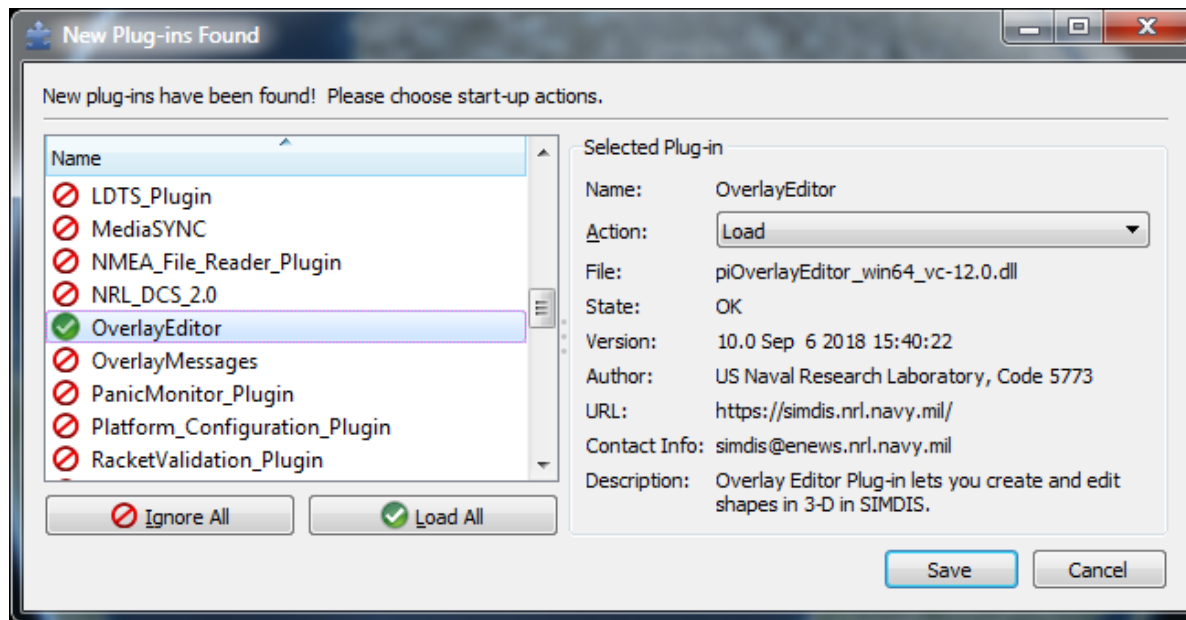
Purpose of Overlay Editor

- Simple editor to facilitate the rapid creation/modification of **SIMPLE** graphics overlays.
- Not currently ready for complex editing of large files.
- Includes a **subset** of the allowed GOG structure commands.
The shapes included are:
 1. Arc
 2. Circle
 3. Cylinder
 4. Sphere
 5. Line
 6. Text
 7. Polygon
 8. Ellipse
 9. Ellipsoid
 10. Hemisphere
 11. Free Draw (Line)
 12. Triangle (Polygon)
 13. Rectangle (Polygon)
 14. Wedge (Cylindrical Section)
- For a complete list of GOG type commands see Chapter 4 of the **SIMDIS User's Guide**.



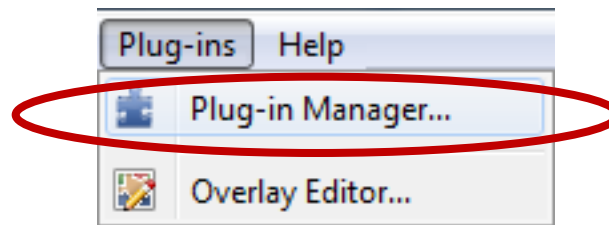
- Overlay Editor only works in SIMDIS. It is not part of either the standard or core SIMDIS install. It is found in the **Optional Plug-ins Distribution** and it will need to be manually loaded in order to access its functionality.
- Plug-ins may be loaded into SIMDIS in a number of ways:
 1. Through the application's Plug-in Manager
 2. The preferences file
 3. The command line
- When SIMDIS starts for the first time or when the application detects new plug-ins in the **\$SIMDIS_DIR/plugins** directory, the user is presented with the "New Plug-ins Found" dialog. Here a user can indicate whether to load or ignore individual plug-ins.

New Plug-ins Found Dialog



- On the left side of the window is a listing of all new plug-ins that SIMDIS has found, along with an indication of whether the plug-in will be loaded or ignored.
- You can double click the entry to change its status, or use the "Action" drop down menu on the right side of the window.
- Alternatively, clicking **Load All** or **Ignore All** will apply the selected action to all plug-ins in this window.

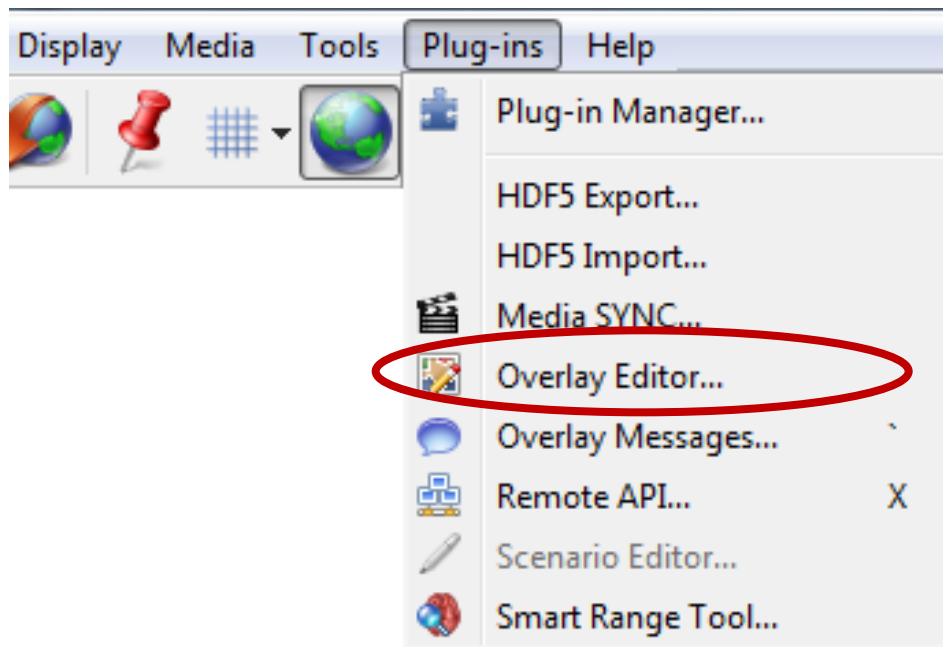
- Another method used to manage the loading and unloading plug-ins is to use the **Plug-in Manager**. To access the Plug-in Manager, select the Plug-in Manager menu item from the Plug-ins menu.



- The Plug-in Manager shows all plug-ins currently loaded in the application.
- There are two types of plug-ins that can be loaded. **Non-registered** plug-ins may be loaded and unloaded from any location. **Registered** plug-ins are installed to a specific directory based on the system settings, and are loaded automatically every time SIMDIS starts.

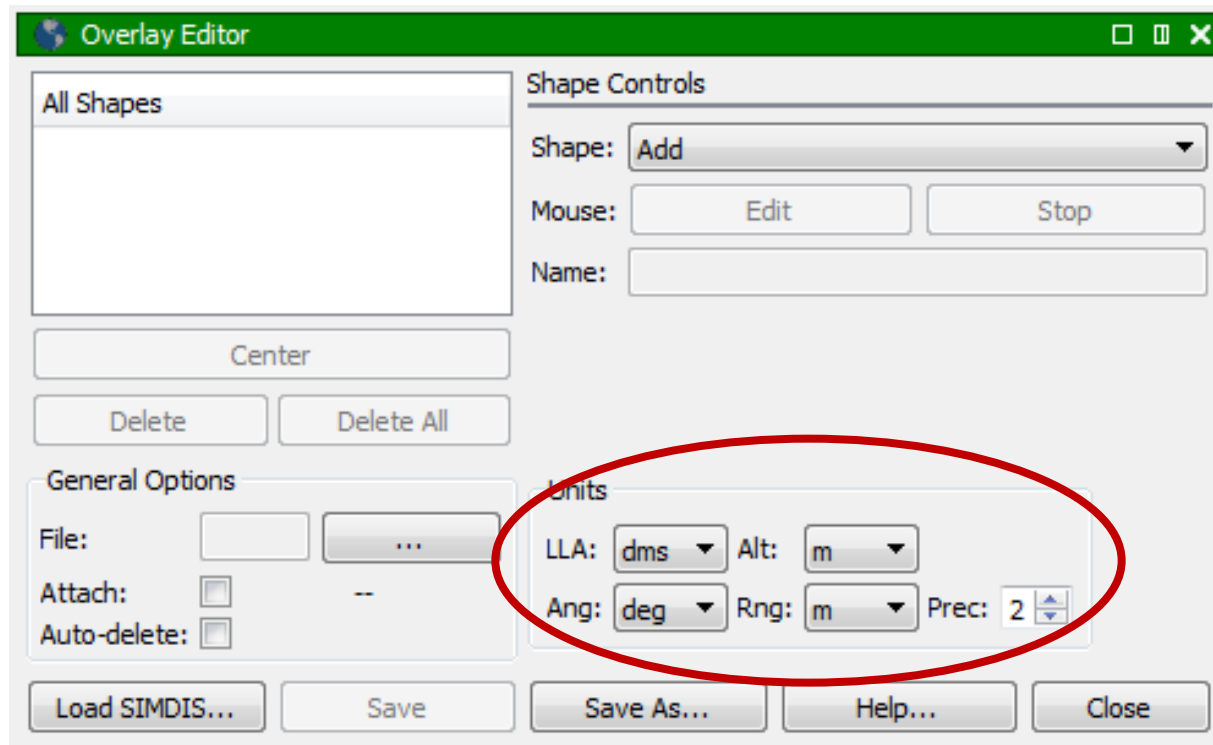
Overlay Editor Dialog

Overlay Editor from Toolbar



- Once the Overlay Editor plug-in has been loaded it will appear in the Plug-ins menu.

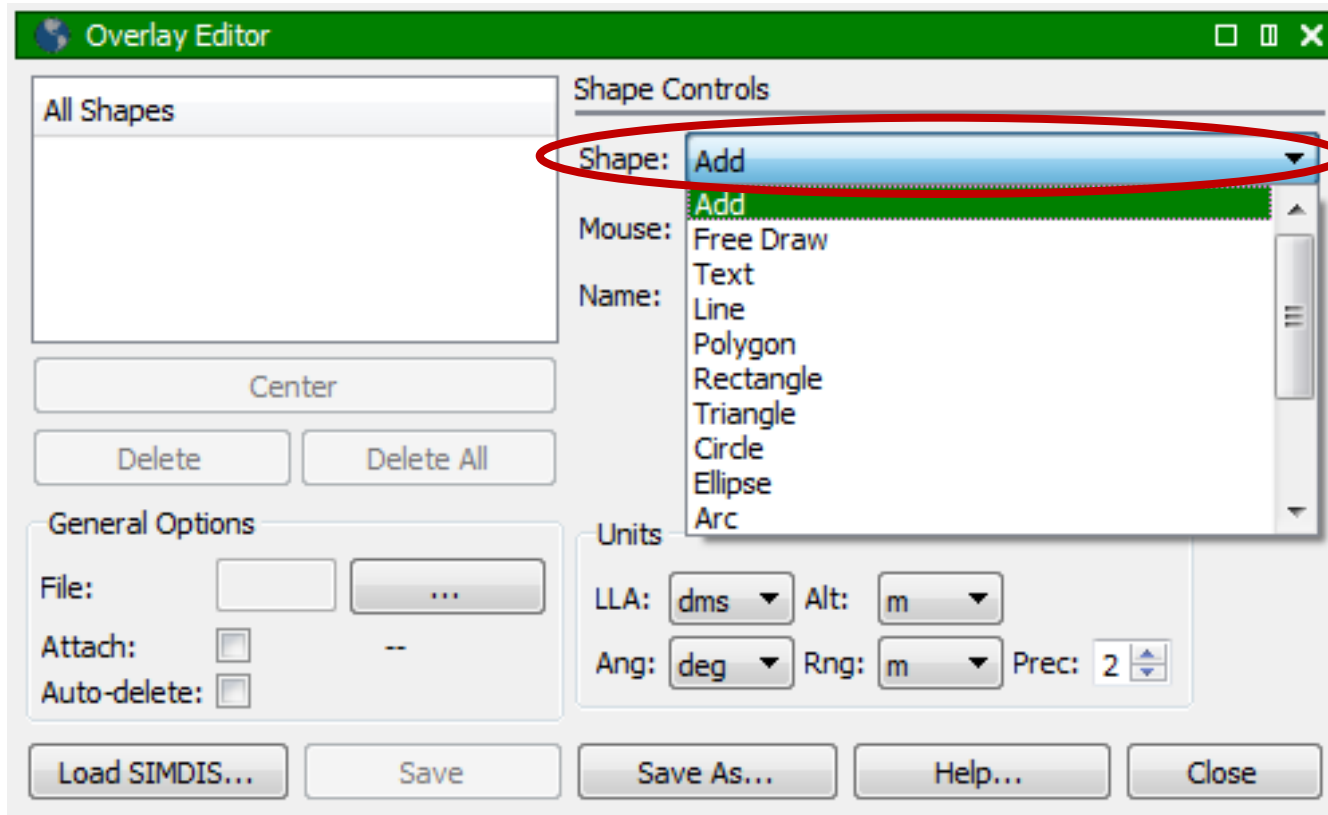
Overlay Editor Dialog



**Units to be used
when specifying
shape location and
dimensions.**

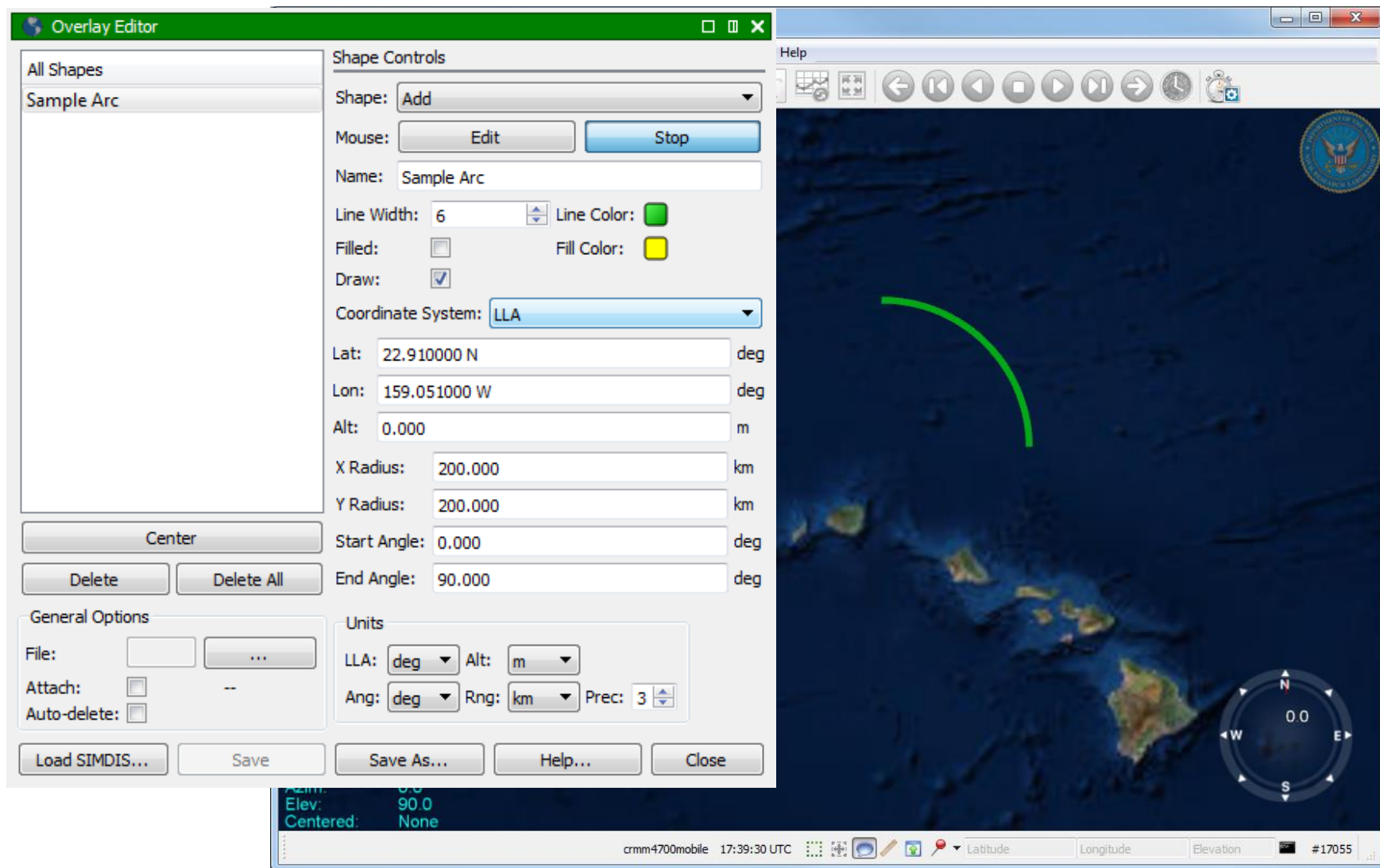
- The Overlay Editor Dialog may be used to create a new overlay or edit an existing overlay.
- Editing complex overlays is discouraged. Better to add a new overlay and display them together.

Editing a NEW Overlay



- **Select which GOG shape you wish to add to the overlay. See above for the list of available shapes.**

Adding an Arc to Overlay



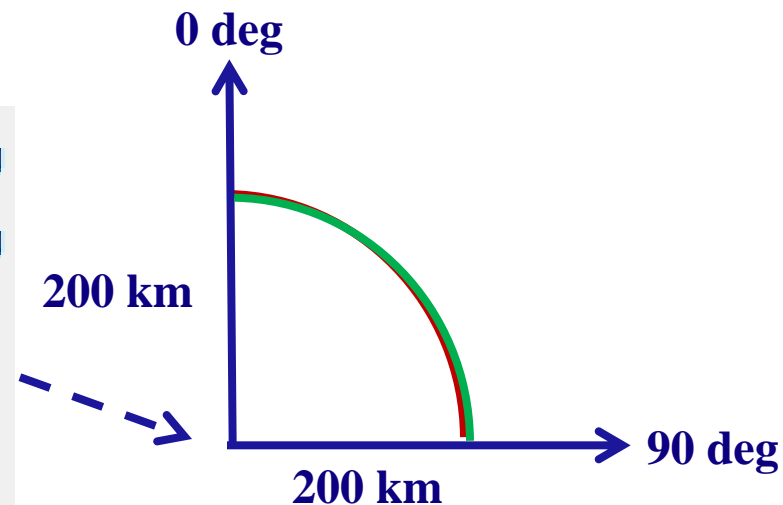
The screenshot shows the SIMDIS Overlay Editor window with the following configuration for a 'Sample Arc' overlay:

- Shape Controls:**
 - Shape: Add
 - Mouse: Edit (button), Stop (button)
 - Name: Sample Arc
 - Line Width: 6
 - Line Color: Green
 - Filled: ☐
 - Fill Color: Yellow
 - Draw: ☒
 - Coordinate System: LLA
 - Lat: 22.910000 N deg
 - Lon: 159.051000 W deg
 - Alt: 0.000 m
 - X Radius: 200.000 km
 - Y Radius: 200.000 km
 - Start Angle: 0.000 deg
 - End Angle: 90.000 deg
- General Options:**
 - File: [] ...
 - Attach: ☐ --
 - Auto-delete: ☐
- Buttons:** Center, Delete, Delete All, Load SIMDIS..., Save, Save As..., Help..., Close
- Units:**
 - LLA: deg Alt: m
 - Ang: deg Rng: km Prec: 3

The background map shows a satellite view of the Pacific Ocean with a green arc overlay. A status bar at the bottom displays: crmm4700mobile 17:39:30 UTC, Latitude, Longitude, Elevation, and #17055.

Arc Position, Size, Appearance

Lat:	22.910000 N	deg
Lon:	159.051000 W	deg
Alt:	0.000	m
X Radius:	200.000	km
Y Radius:	200.000	km
Start Angle:	0.000	deg
End Angle:	90.000	deg

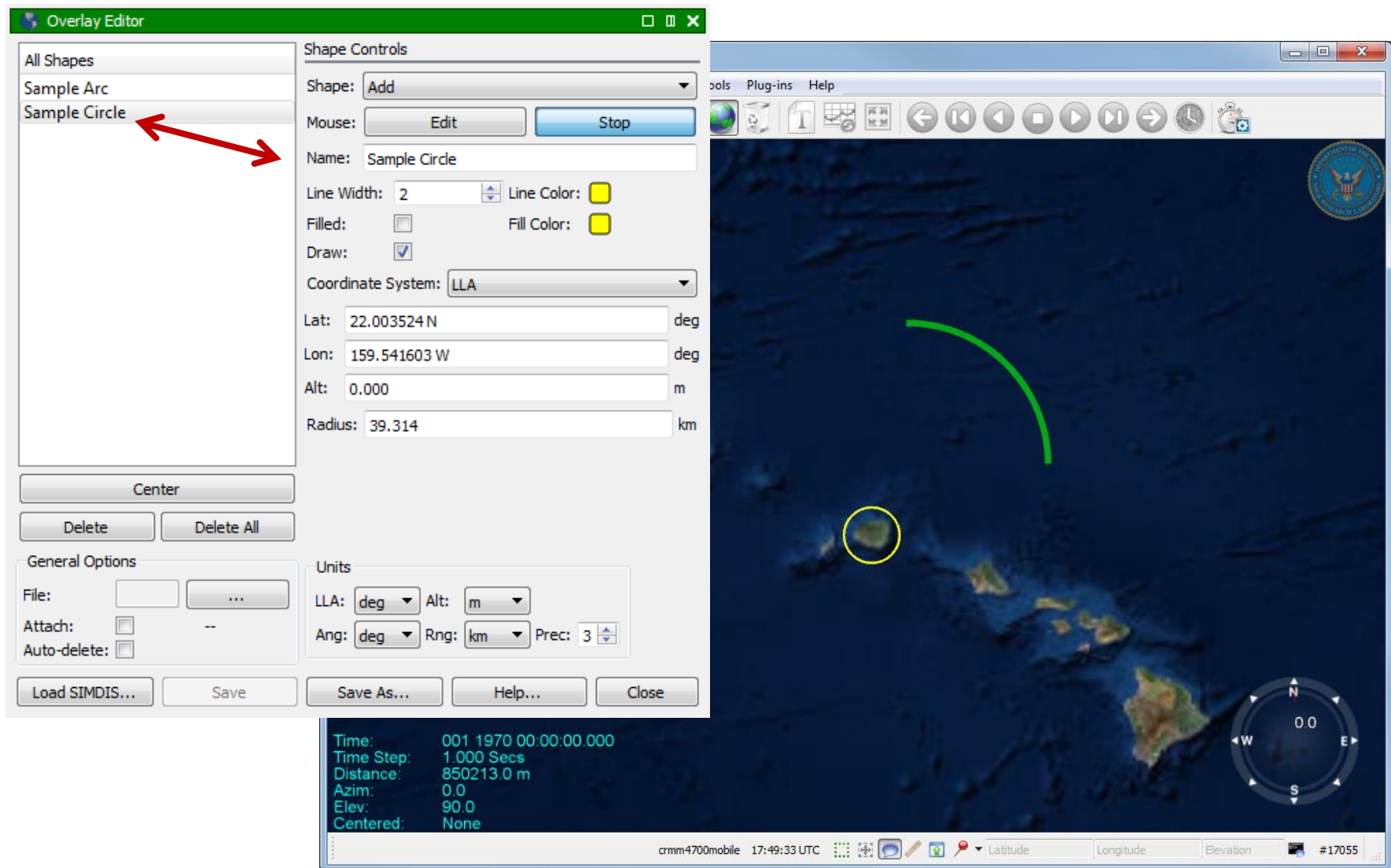


Units used in above values

Units			
LLA:	deg ▼	Alt:	m ▼
Ang:	deg ▼	Rng:	km ▼
Prec:	3 ▲▼		

Line Width:	6 ▲▼	Line Color:	
Filled:	<input type="checkbox"/>	Fill Color:	
Draw:	<input checked="" type="checkbox"/>		

Adding a Circle to Overlay



The screenshot displays the SIMDIS software interface, specifically the 'Overlay Editor' window and the main map view.

Overlay Editor Window:

- Shape Controls:**
 - Shape: Add
 - Mouse: Edit (disabled), Stop (active)
 - Name: Sample Circle
 - Line Width: 2
 - Line Color: Yellow
 - Filled: ☐
 - Fill Color: Yellow
 - Draw: ☒
 - Coordinate System: LLA
 - Lat: 22.003524 N
 - Lon: 159.541603 W
 - Alt: 0.000
 - Radius: 39.314
- General Options:**
 - File: []
 - Attach: ☐
 - Auto-delete: ☐
- Units:**
 - LLA: deg Alt: m
 - Ang: deg Rng: km Prec: 3
- Buttons:** Center, Delete, Delete All, Load SIMDIS..., Save, Save As..., Help..., Close

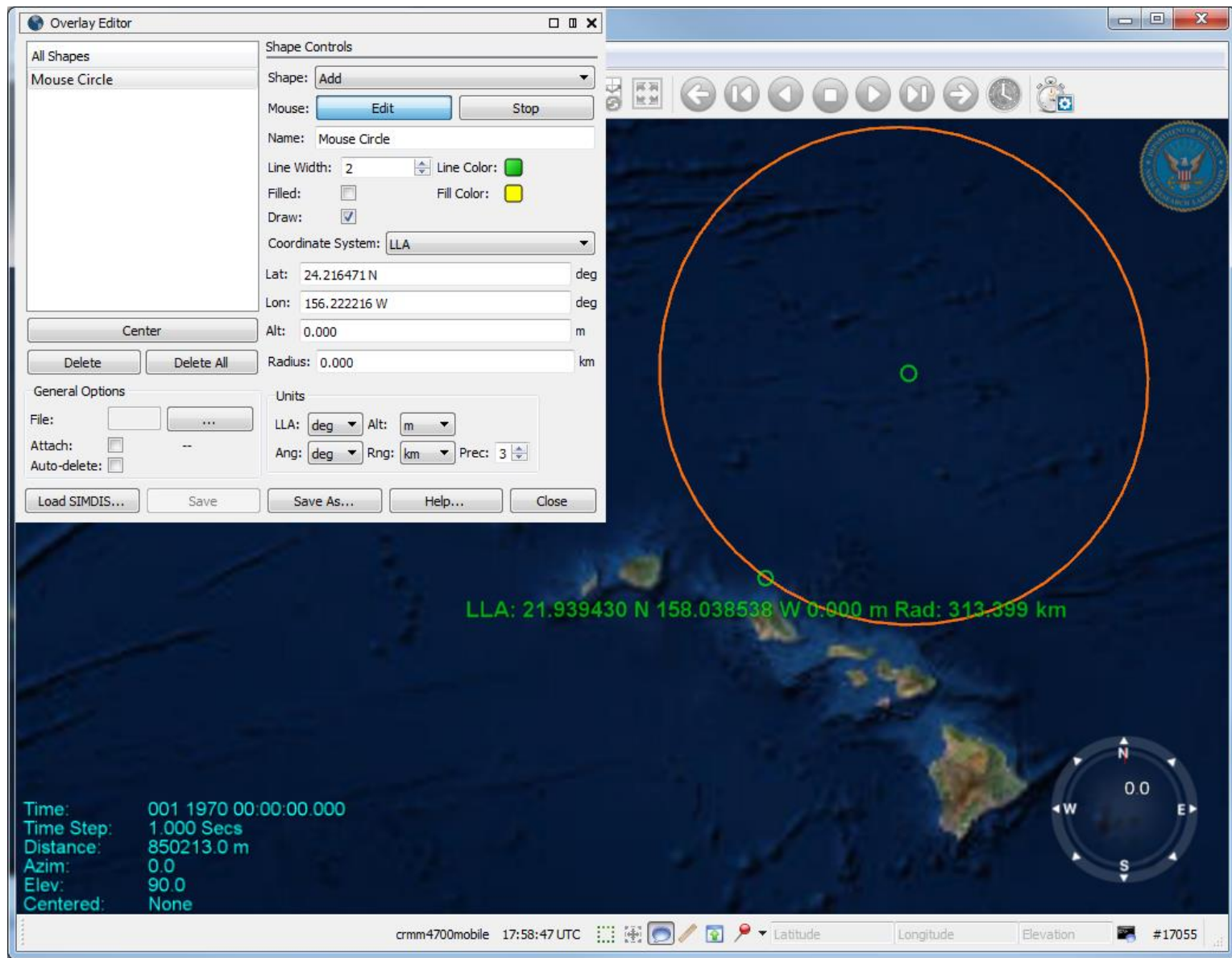
Main Map View:

- Shows a satellite map of the Pacific Ocean with a yellow circle overlay on a small island.
- A green arc is visible on the map, likely representing a distance or angle measurement.
- Navigation tools (compass, zoom, pan) are visible in the bottom right corner.
- Status bar at the bottom shows: crmm4700mobile 17:49:33 UTC, Latitude, Longitude, Elevation, and #17055.

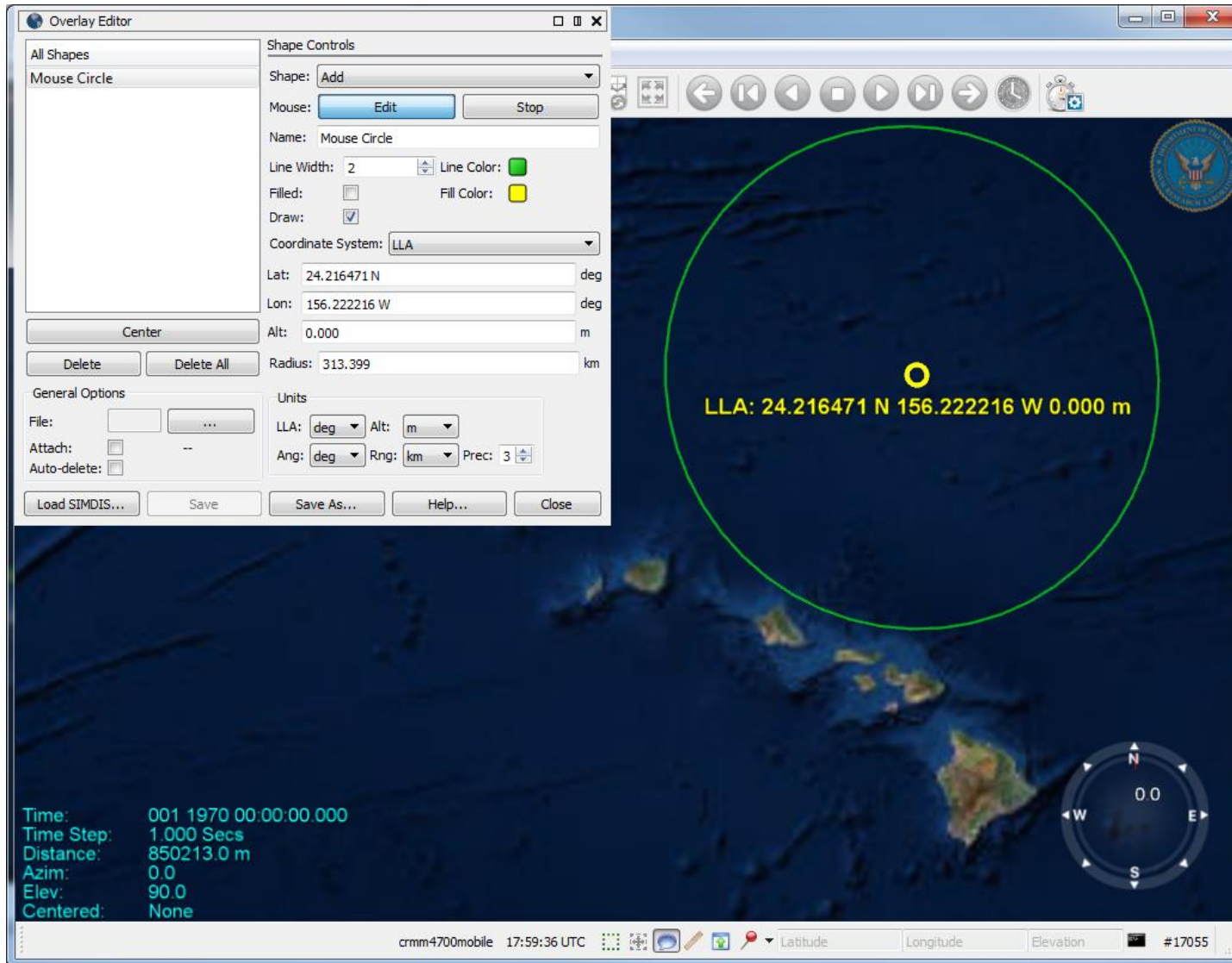
A red double-headed arrow points from the 'Sample Circle' option in the 'All Shapes' list to the 'Sample Circle' name field in the 'Shape Controls' section.

- The Circle mouse tool provides a quick and simple mechanism to draw or edit Circle shapes.
- The mouse tool is on by default when a new Circle shape is created, and can be toggled on and off using the **Edit** and **Stop** buttons.
- When drawing a Circle initially, click to define the center point and drag to define the radius.
- The center point can be edited by hovering over the point, which will highlight yellow, then click and drag to move the highlighted point. Dragging the center point will relocate the circle.

Adding a Circle to Overlay (mouse)



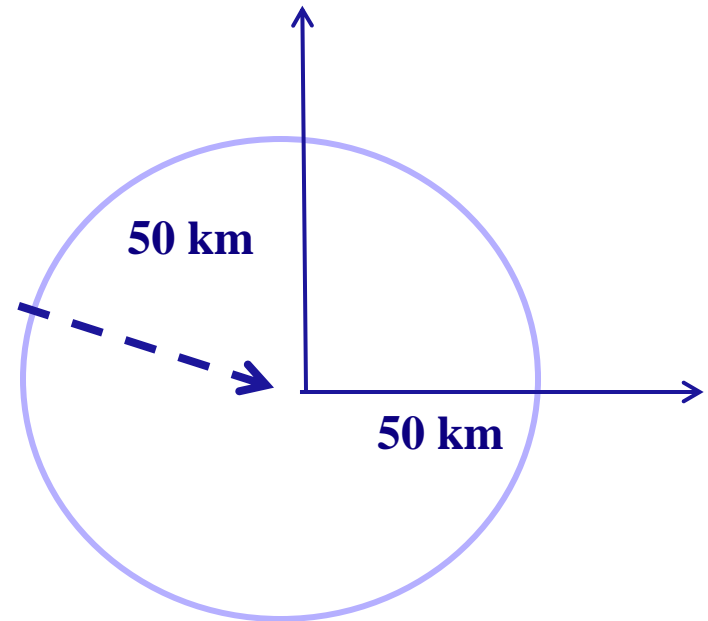
Edit Circle with mouse



Click and move the points to edit the circle with the mouse. **Shift + mouse wheel** allows adjusting the altitude of the circle



Circle Position, Size, Appearance

Lat:	24.216471 N	deg
Lon:	156.222216 W	deg
Alt:	0.000	m
Radius:	50.000	km

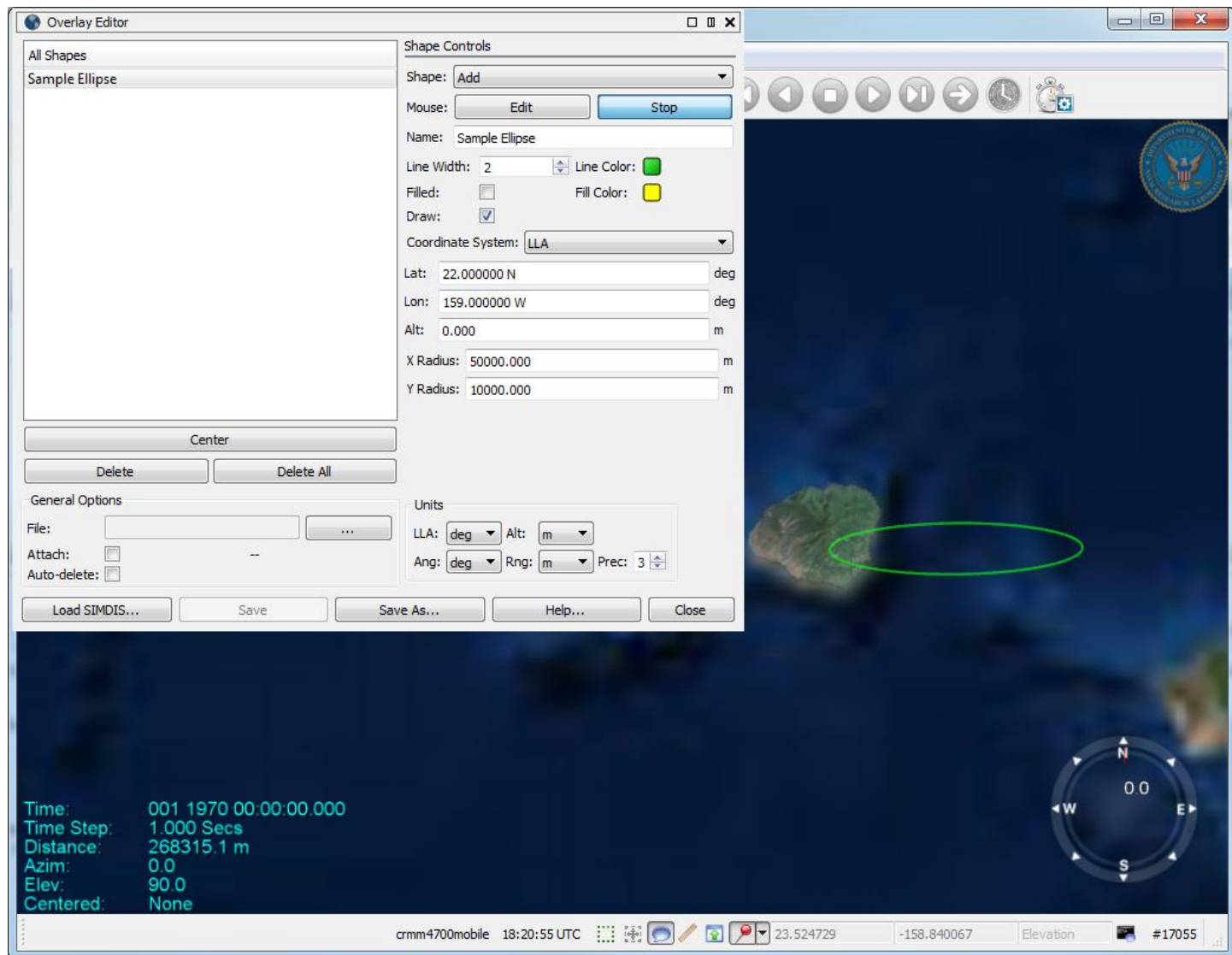


Units used in above values

Units			
LLA:	deg ▼	Alt:	m ▼
Ang:	deg ▼	Rng:	km ▼
Prec:	3		

Line Width:	2	Line Color:	
Filled:	<input type="checkbox"/>	Fill Color:	
Draw:	<input checked="" type="checkbox"/>		

Adding an Ellipse to Overlay



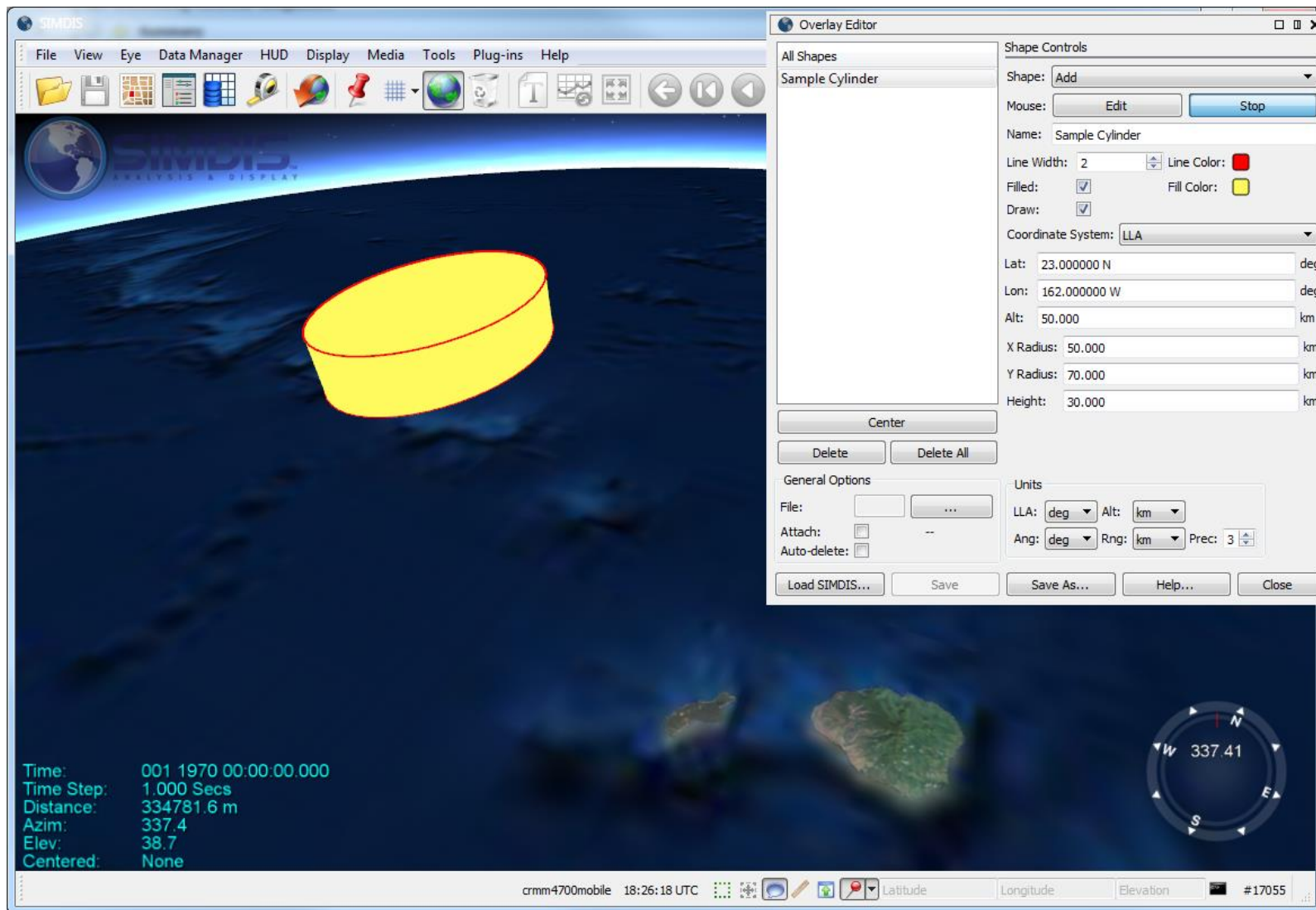
Ellipse Position and Size

Lat:	<input type="text" value="22.000000 N"/>	deg
Lon:	<input type="text" value="159.000000 W"/>	deg
Alt:	<input type="text" value="0.000"/>	m
X Radius:	<input type="text" value="50000.000"/>	m
Y Radius:	<input type="text" value="10000.000"/>	m

Define center

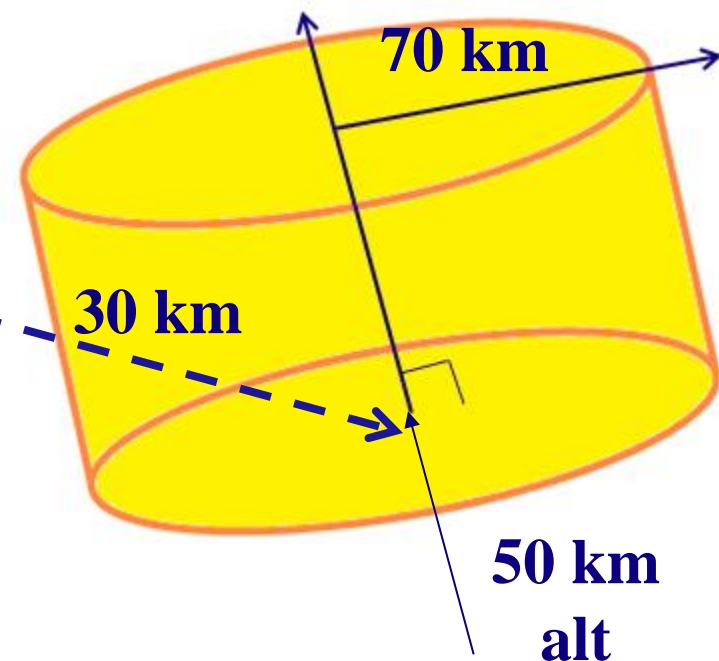
**Define
width/height**

Adding a Cylinder to Overlay



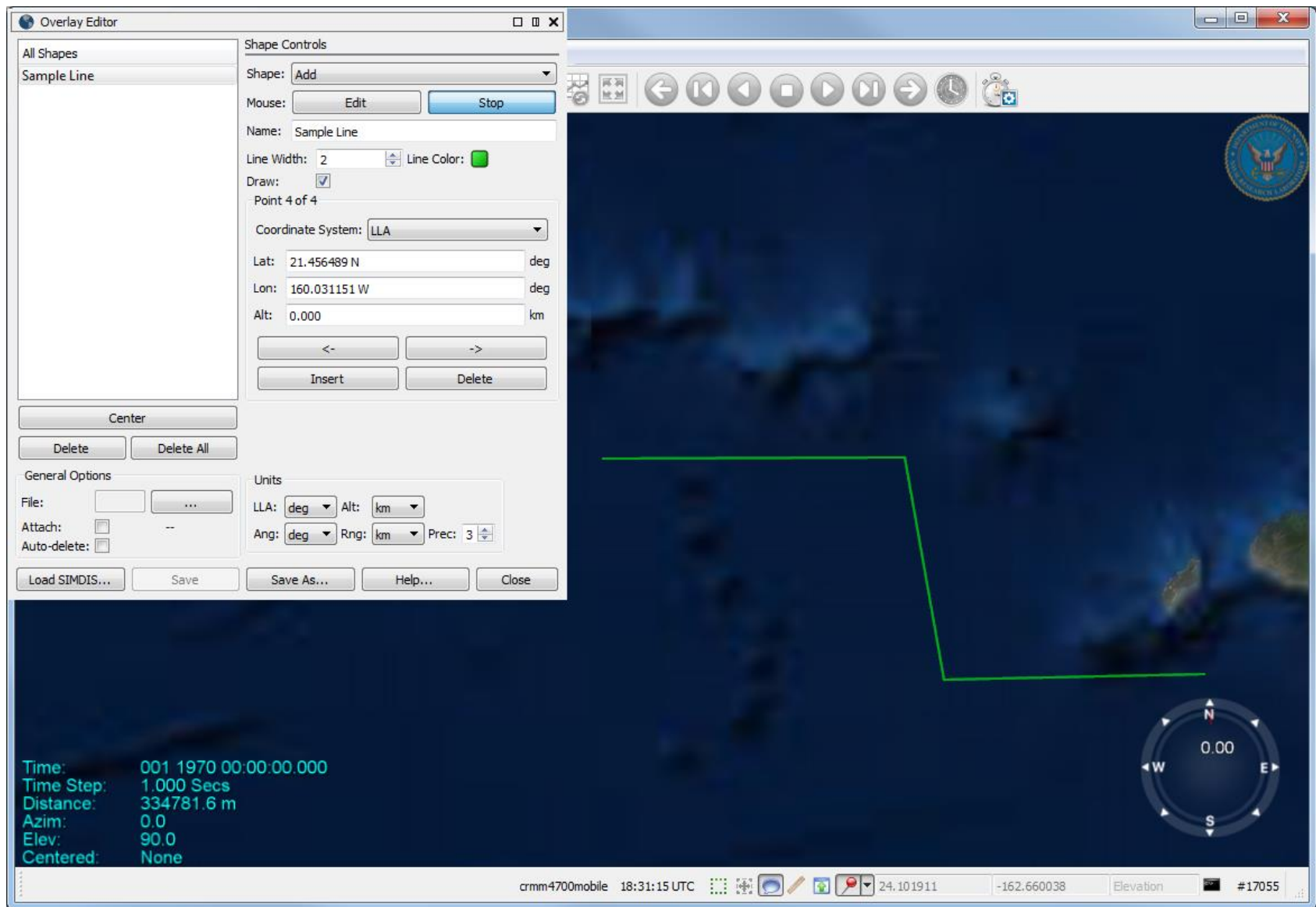
Cylinder Position, Size, Appearance

Lat:	<input type="text" value="23.000000 N"/>	deg
Lon:	<input type="text" value="162.000000 W"/>	deg
Alt:	<input type="text" value="50.000"/>	km
X Radius:	<input type="text" value="50.000"/>	km
Y Radius:	<input type="text" value="70.000"/>	km
Height:	<input type="text" value="30.000"/>	km



- To view this object you must use perspective.
- As specified, this is an ellipsoid cylinder which has an ellipse as its base (X radius is not required to equal Y radius). The cylinder will be perpendicular to the surface of the earth.

Adding a Line to Overlay



Overlay Editor

Shape Controls

Shape: **Add**

Mouse: **Edit** **Stop**

Name: **Sample Line**

Line Width: **2** Line Color: **Green**

Draw: ☒

Point 4 of 4

Coordinate System: **LLA**

Lat: **21.456489 N** deg

Lon: **160.031151 W** deg

Alt: **0.000** km

<- **->**

Insert **Delete**

Center

Delete **Delete All**

General Options

File: **...**

Attach: ☐ **--**

Auto-delete: ☐

Load SIMDIS... **Save** **Save As...** **Help...** **Close**

Units

LLA: **deg** Alt: **km**

Ang: **deg** Rng: **km** Prec: **3**

Time: 001 1970 00:00:00.000

Time Step: 1.000 Secs

Distance: 334781.6 m

Azim: 0.0

Elev: 90.0


Centered: None

crmm4700mobile **18:31:15 UTC** **24.10.1911** **-162.660038** **Elevation** **#17055**

Shape: Add

Mouse: **Edit** Stop

Name: Sample Line

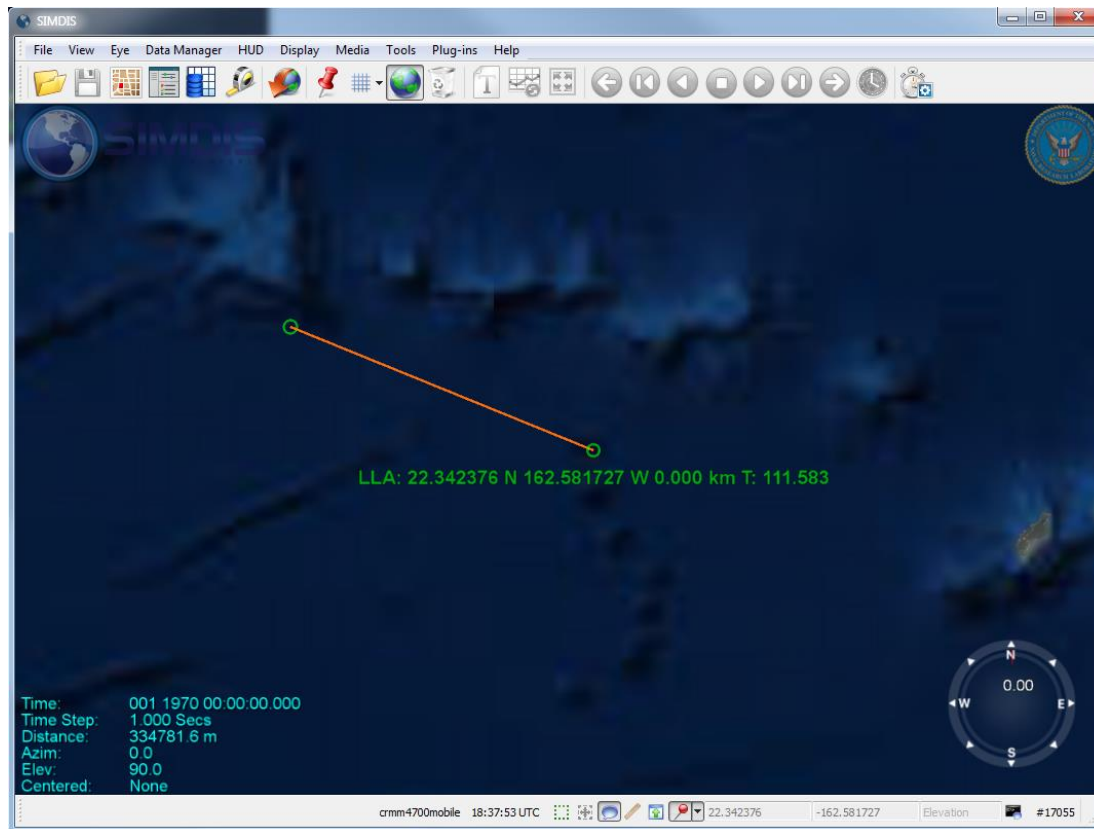
Line Width: 2 Line Color: 

Draw: ☒



- The mouse can be used to create a line. When **edit** is selected for the line, points may be added until **stop** or the **right-mouse button** is clicked.
- Click and drag to create each point.
- The heading (relative true north) and altitude are displayed next to the cursor as it is moved and a temporary segment line is drawn.
- After creating the 2nd point the 1st line segment is made **solid**.

Point 1 of Segmented Line



Point 1 of 1

Coordinate System:

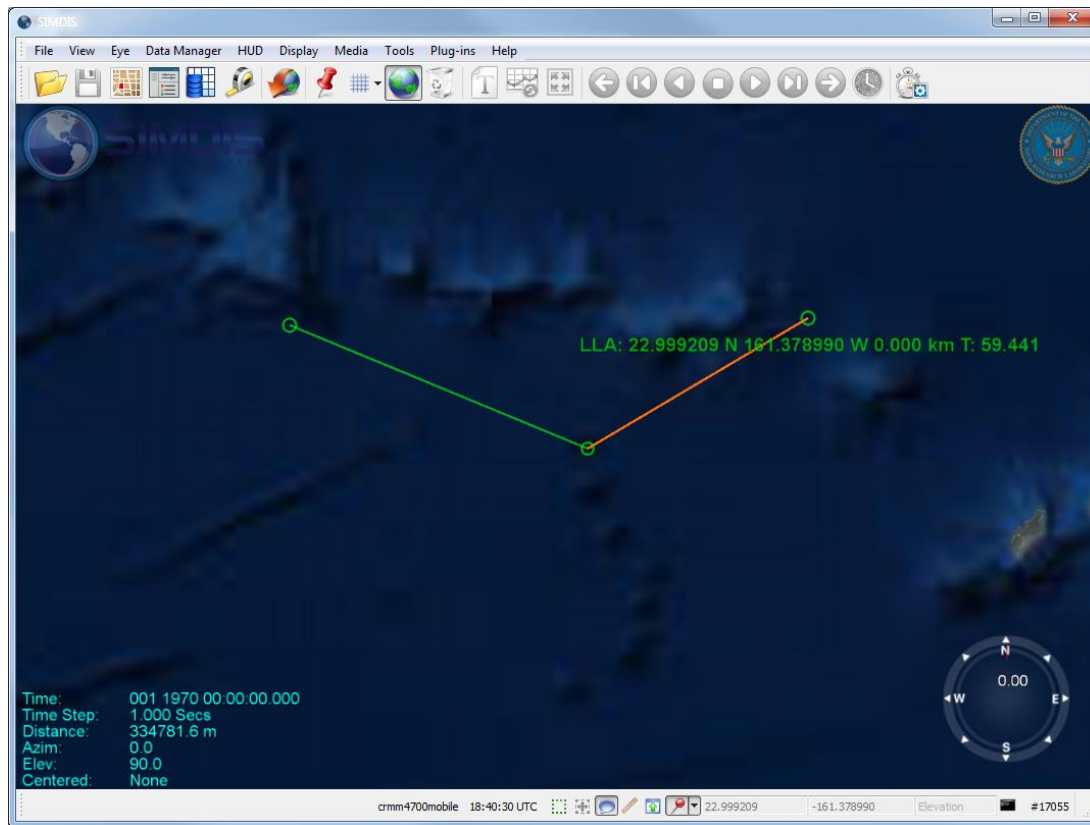
Lat: deg

Lon: deg

Alt: km

- The cursor position at the time you click will be inserted in the Latitude and Longitude fields. A default altitude of 0 meters will be used unless modified.

Point 2 of Segmented Line



Point 1 of 2

Coordinate System: LLA

Lat: 22.962219 N deg

Lon: 164.242589 W deg

Alt: 0.000 km

<- ->

Insert Delete

Point 1 of 2

Coordinate System: LLA

Lat: 22.962219 N deg

Lon: 164.242589 W deg

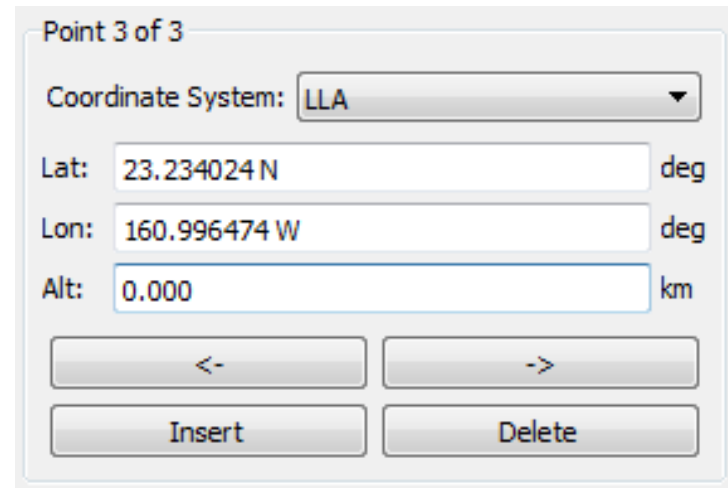
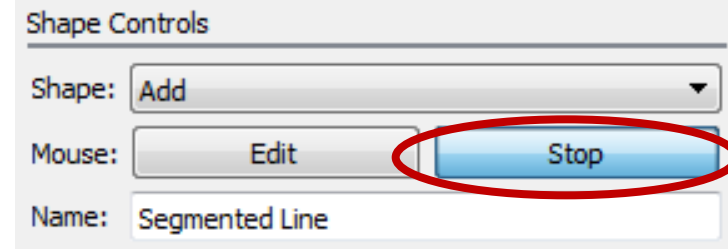
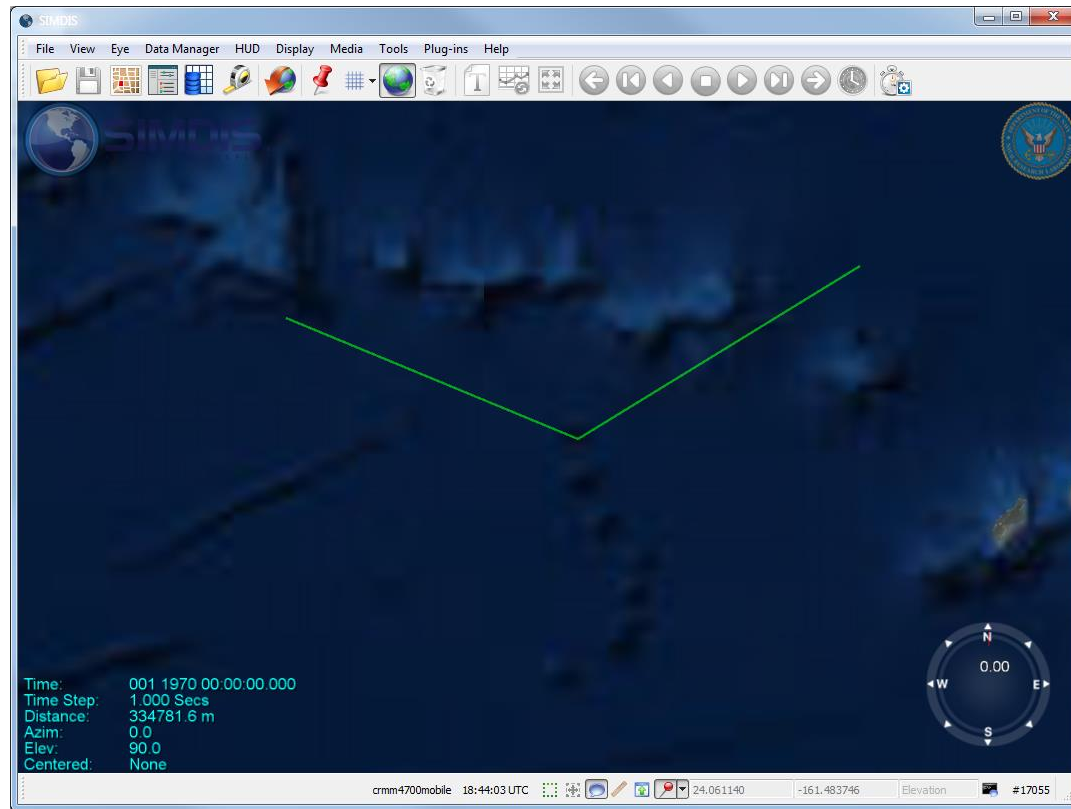
Alt: 0.000 km

<- ->

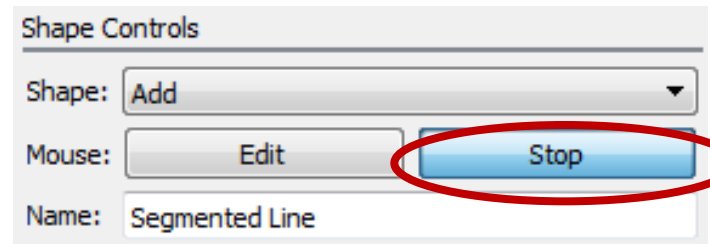
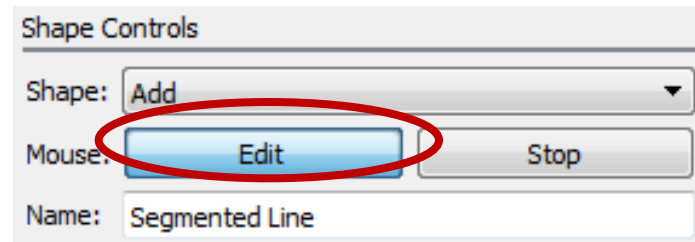
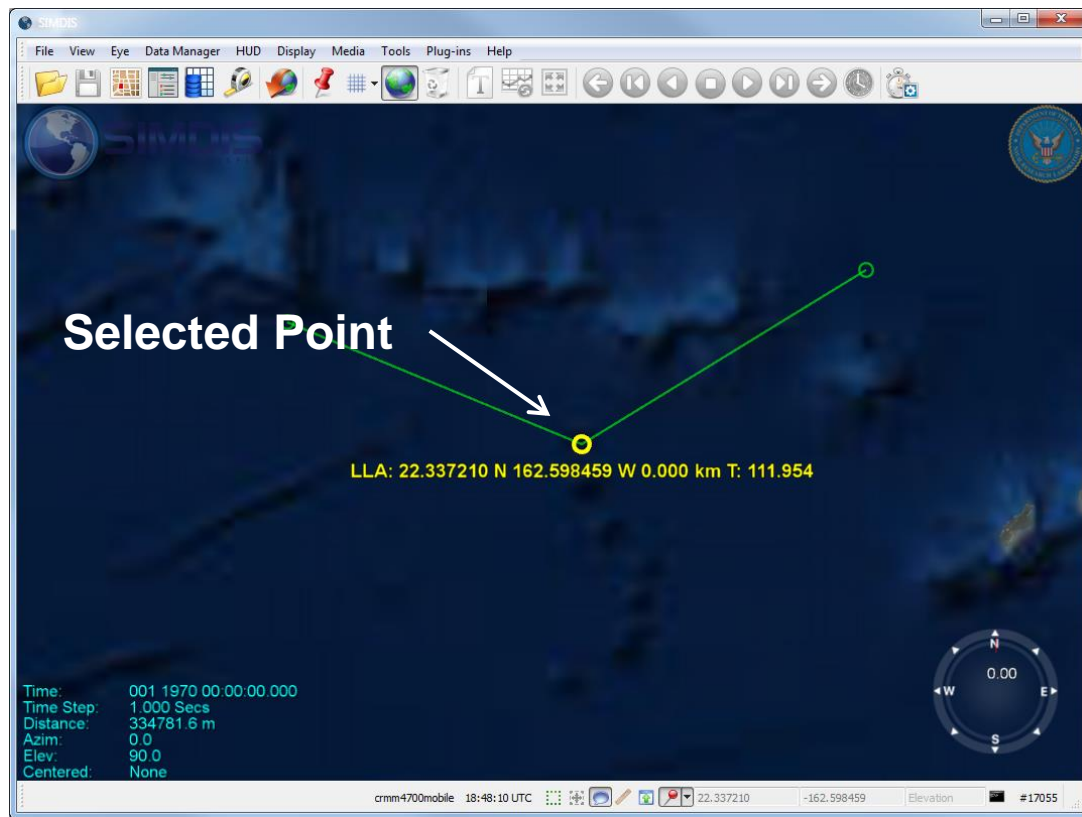
Insert Delete

- To move back and forth viewing each point use the arrow buttons below the altitude field.

Finish the Segmented Line



- Use the **Stop** button or **Right-Click** to discontinue editing using the mouse.
- Notice that the line is solid and heading is no longer displayed.



- Use the **Edit** button to move points in a selected line using the mouse.
- Click on the point and drag the point to its new position. Click the **Stop** button.



Inserting Points in a Line

Point 2 of 3

Coordinate System: LLA

Lat: 22.337210 N deg

Lon: 162.598459 W deg

Alt: 0.000 km

<- ->

Insert Delete



Point 2 of 4

Coordinate System: LLA

Lat: 22.337210 N deg

Lon: 162.598459 W deg

Alt: 0.000 km

<- ->

Insert Delete



Point 3 of 4

Coordinate System: LLA



Lat: 23.106143 N deg

Lon: 162.467892 W deg

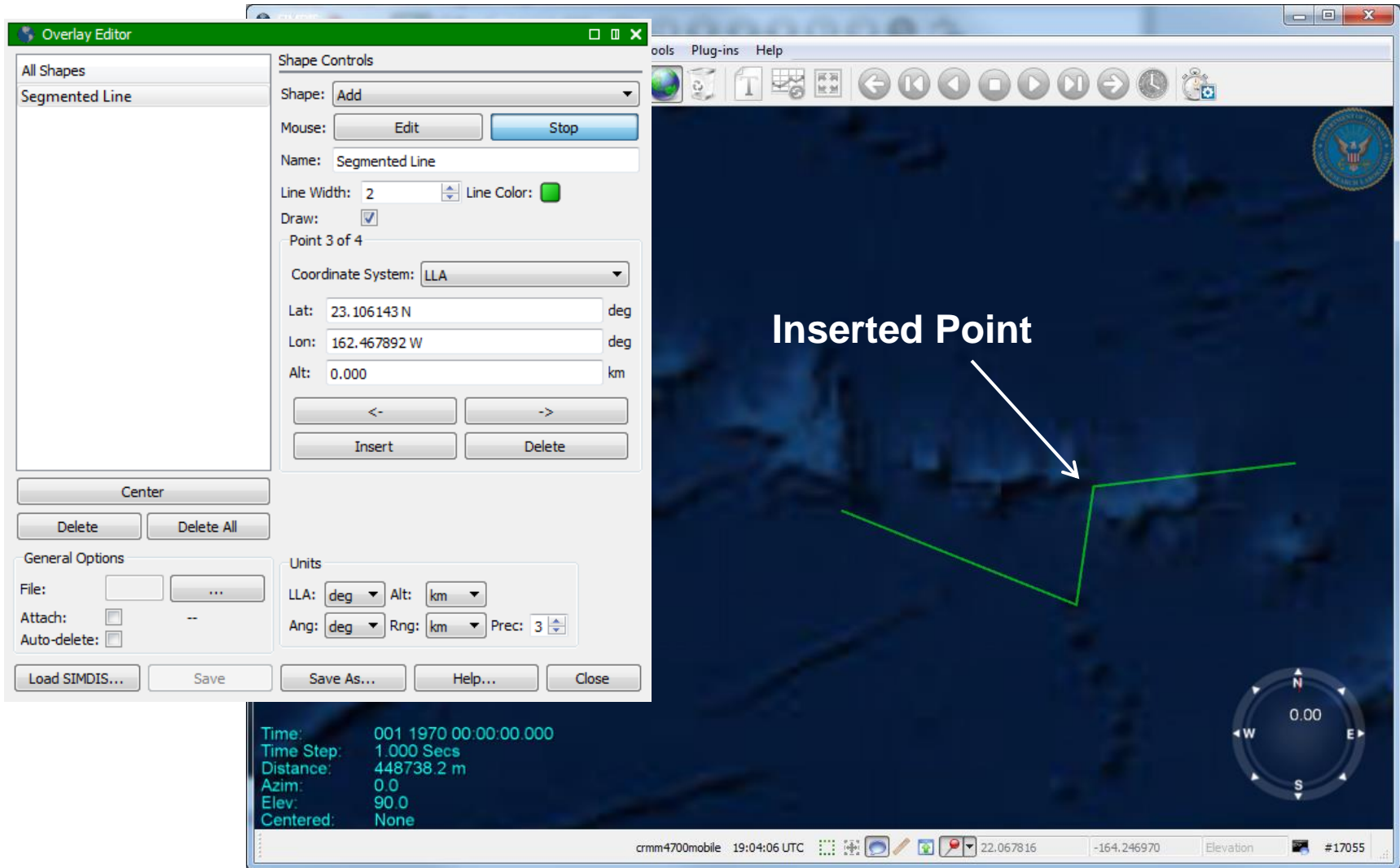
Alt: 0.000 km

<- ->

Insert Delete

- Use **arrow** buttons   below the altitude field to select the point after which you want to insert new point (point 2 in example).
- Press the **Insert** button. This will create a new point at the same position as the point selected (point 3).
- Use **right arrow** key to select the point just created (point 3).
- Enter new position for inserted point using the edit fields. (If you move just the latitude or longitude you can then use the mouse to position the new point as previously described).

Adding a Point to a Line in Overlay



The screenshot displays the SIMDIS Overlay Editor window and the main map interface. The Overlay Editor is in the foreground, showing the 'Shape Controls' for a 'Segmented Line'. The 'Name' is 'Segmented Line', 'Line Width' is 2, and 'Line Color' is green. The 'Point 3 of 4' section shows the 'Coordinate System' as LLA, with 'Lat' at 23.106143 N, 'Lon' at 162.467892 W, and 'Alt' at 0.000 km. The 'Insert' button is highlighted. The main map interface shows a satellite image of a coastal area. A green line is drawn on the map, and a white arrow points to a new point being added to the line, labeled 'Inserted Point'. The map includes a compass rose in the bottom right corner and a status bar at the bottom with various coordinates and time information.

Overlay Editor Shape Controls:

- Shape: Add
- Mouse: Edit, Stop
- Name: Segmented Line
- Line Width: 2
- Line Color: Green
- Draw: ☒
- Point 3 of 4
- Coordinate System: LLA
- Lat: 23.106143 N deg
- Lon: 162.467892 W deg
- Alt: 0.000 km
- Buttons: <-, >, Insert, Delete

General Options:

- File: [] [...]
- Attach: ☐ --
- Auto-delete: ☐
- Buttons: Load SIMDIS..., Save, Save As..., Help..., Close

Units:

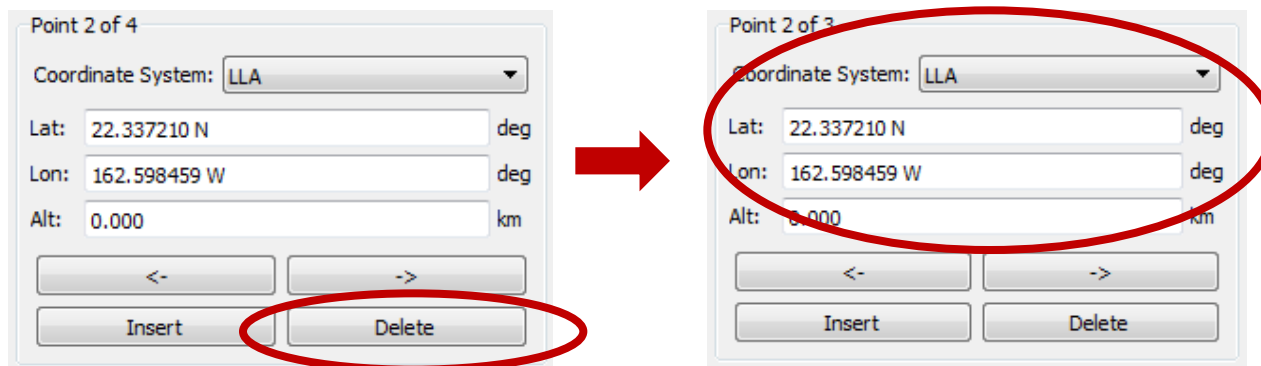
- LLA: deg Alt: km
- Ang: deg Rng: km Prec: 3

Main Map Interface:

- Tools: Plug-ins Help
- Map: Satellite image of a coastal area
- Inserted Point: A new point being added to a green line on the map
- Compass: Shows North (N), South (S), East (E), West (W) with a reading of 0.00
- Status Bar: crmm4700mobile 19:04:06 UTC 22.067816 -164.246970 Elevation #17055

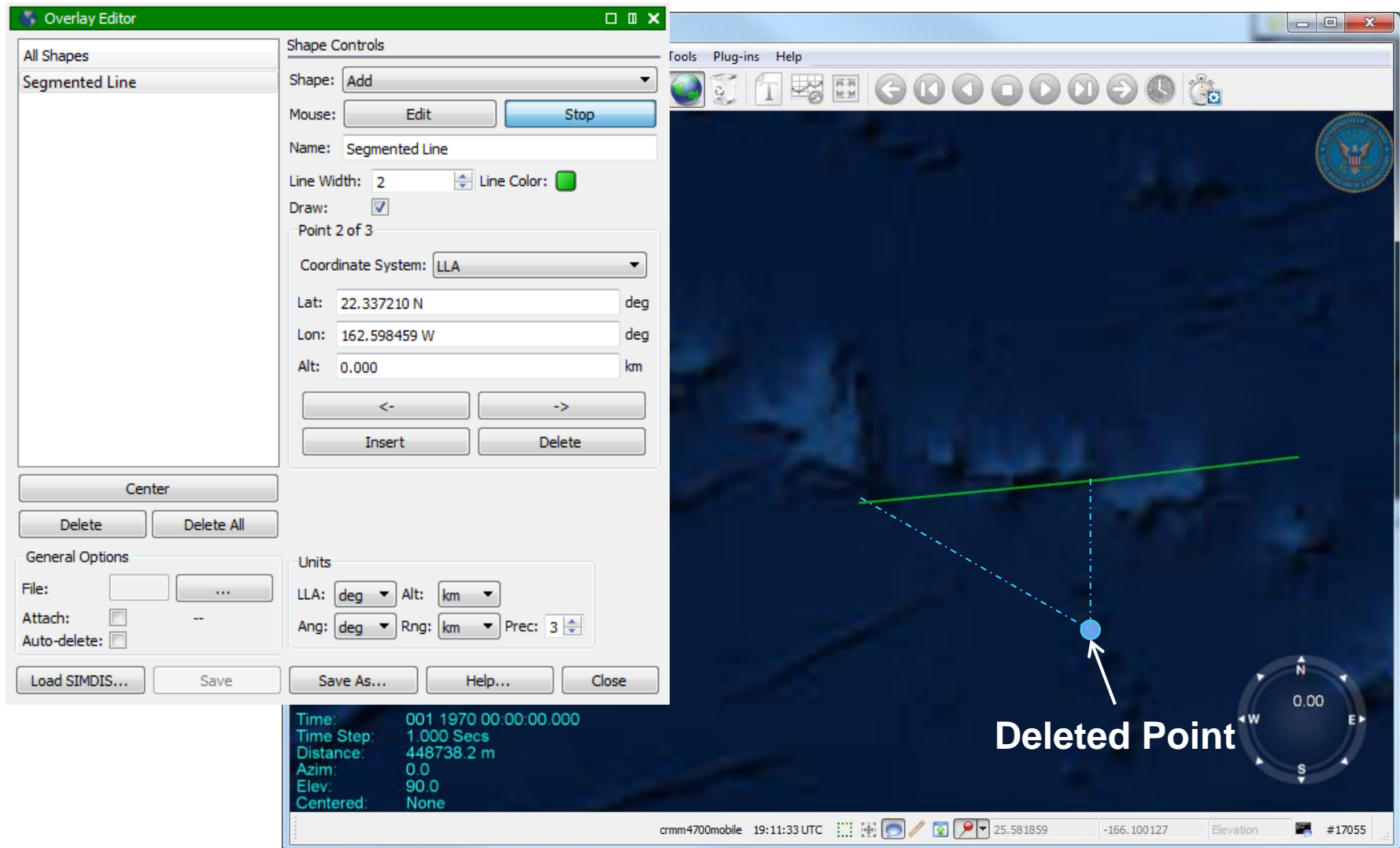


Deleting Points in a Line



- Use arrow keys below the altitude field to select the point you want to delete a point (point 2 in example).
- Press the **Delete** button. The point is removed and the remaining points reconnected in the proper order.

Deleting a Point in a Overlay Line



The screenshot displays the SIMDIS software interface, specifically the Overlay Editor and the Main Map window.

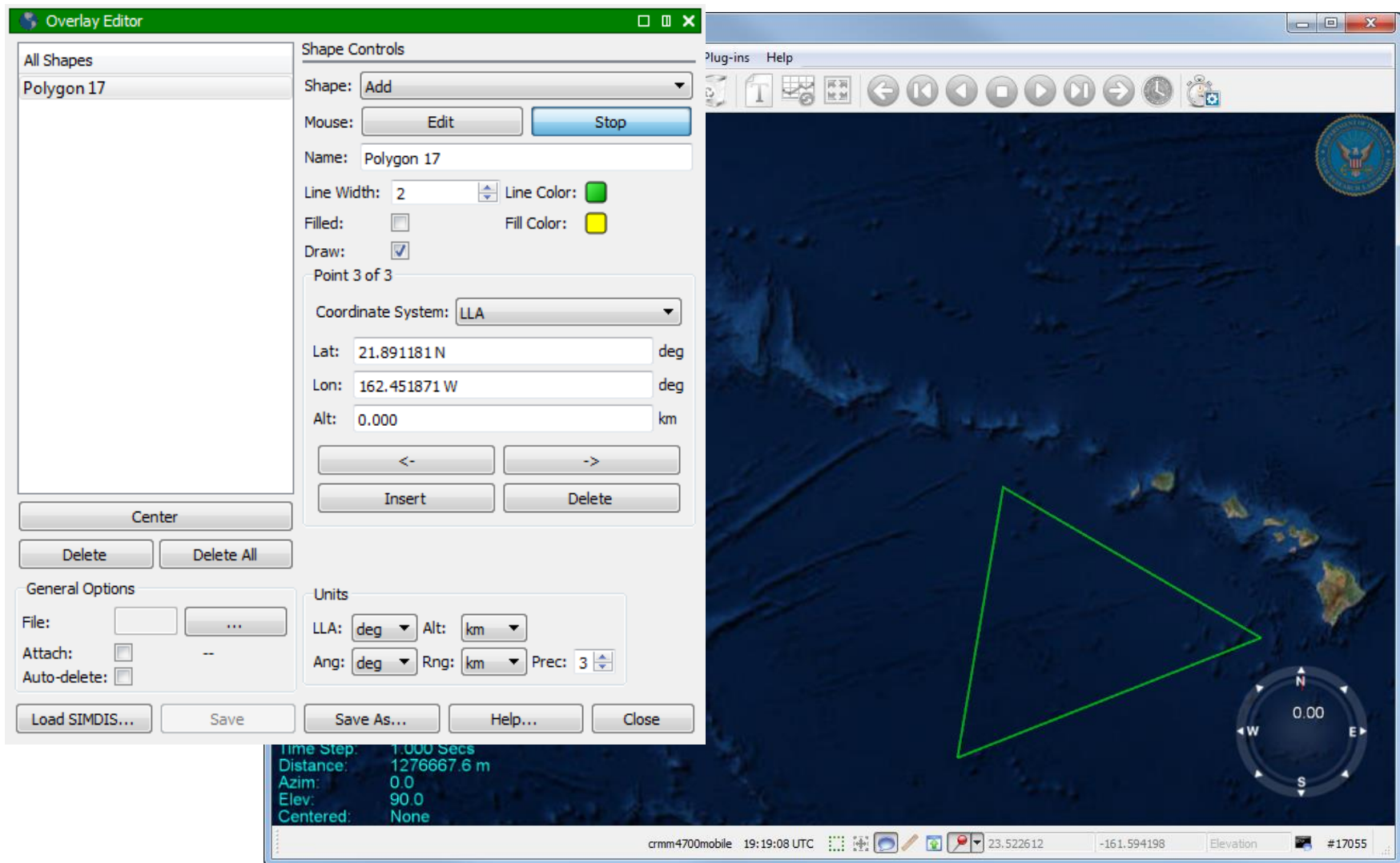
Overlay Editor (Left Panel):

- Shape Controls:**
 - Shape: Add
 - Mouse: Edit (selected), Stop
 - Name: Segmented Line
 - Line Width: 2
 - Line Color: Green
 - Draw: ☒
 - Point 2 of 3
 - Coordinate System: LLA
 - Lat: 22.337210 N
 - Lon: 162.598459 W
 - Alt: 0.000 km
 - Buttons: <- (Previous), -> (Next), Insert, Delete
- General Options:**
 - File: [Empty]
 - Attach: ☐
 - Auto-delete: ☐
 - Buttons: Center, Delete, Delete All
- Units:**
 - LLA: deg, Alt: km
 - Ang: deg, Rng: km, Prec: 3
 - Buttons: Load SIMDIS..., Save, Save As..., Help..., Close
- Status Bar (Bottom Left):**
 - Time: 001 1970 00:00:00.000
 - Time Step: 1.000 Secs
 - Distance: 448738.2 m
 - Azim: 0.0
 - Elev: 90.0
 - Centered: None

Main Map Window (Right):

- Tools: Plug-ins, Help
- Map: A satellite image of a coastal area with a green line overlay.
- Deleted Point: A blue dot on the green line, indicated by a white arrow and the text "Deleted Point".
- Compass: Shows North (N), South (S), East (E), and West (W) with a scale of 0.00.
- Bottom Status Bar:
 - crmm4700mobile
 - 19:11:33 UTC
 - 25.581859
 - 166.100127
 - Elevation
 - #17055

Adding a Polygon to an Overlay



The screenshot displays the SIMDIS Overlay Editor window and the main map interface. The Overlay Editor is on the left, and the main map is on the right.

Overlay Editor - Shape Controls:

- Shape: Add
- Mouse: Edit (disabled), Stop (active)
- Name: Polygon 17
- Line Width: 2
- Line Color: Green
- Filled: ☐
- Fill Color: Yellow
- Draw: ☒
- Point 3 of 3
- Coordinate System: LLA
- Lat: 21.891181 N
- Lon: 162.451871 W
- Alt: 0.000
- Buttons: <- (disabled), -> (disabled), Insert, Delete

Overlay Editor - General Options:

- File: [] [...]
- Attach: ☐ --
- Auto-delete: ☐
- Buttons: Load SIMDIS..., Save, Save As..., Help..., Close

Units:

- LLA: deg
- Alt: km
- Ang: deg
- Rng: km
- Prec: 3

Main Map Interface:

- Map: Satellite view of the Pacific Ocean with a green triangle polygon overlaid.
- Compass: Shows North (N), South (S), East (E), and West (W). Scale: 0.00.
- Status Bar: crmm4700mobile 19:19:08 UTC 23.522612 -161.594198 Elevation #17055

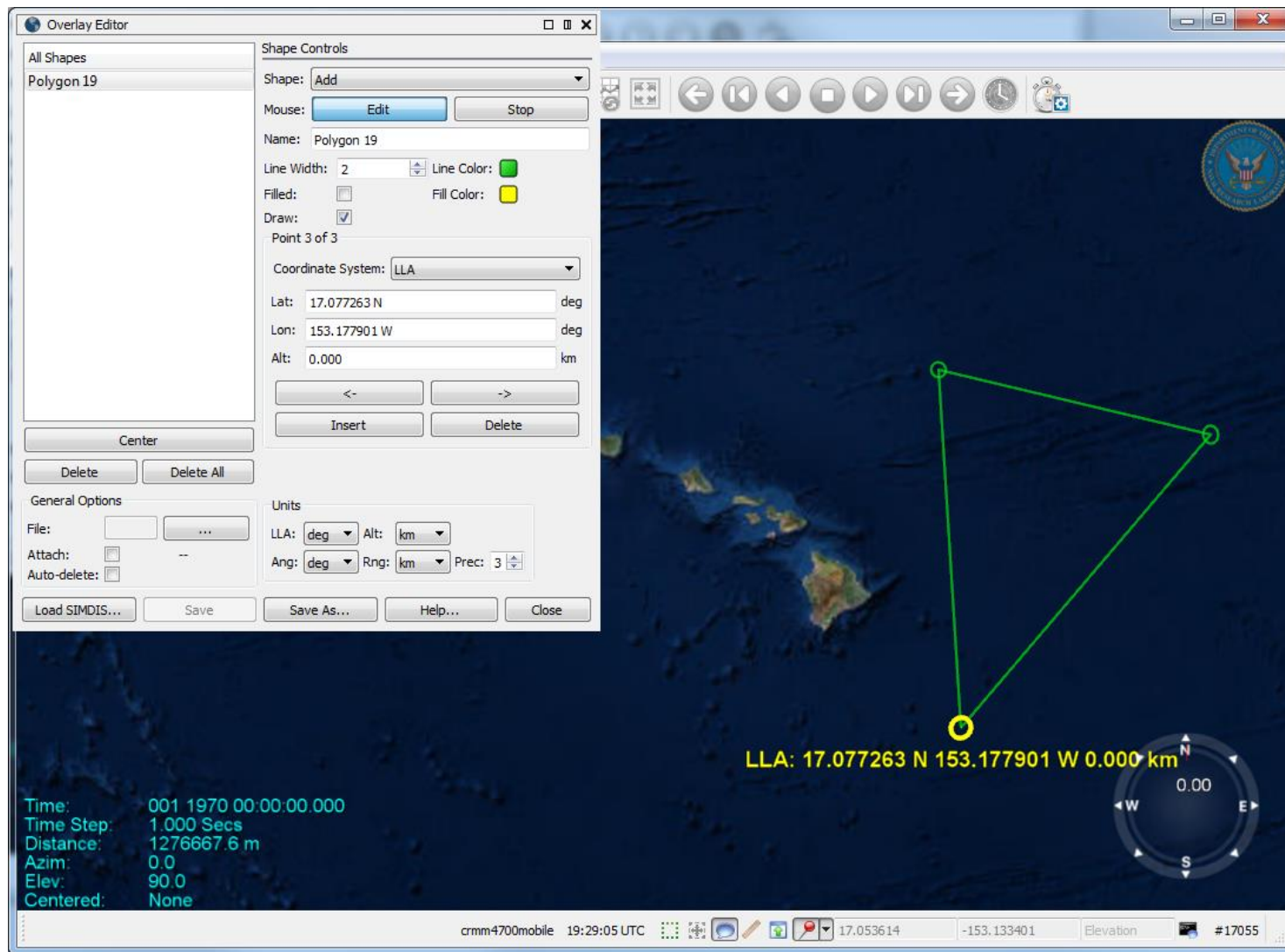
- The Polygon mouse tool provides a quick and simple mechanism to draw or edit Polygon shapes.
- The mouse tool is on by default when a new Polygon shape is created, and can be toggled on and off using the **Edit** and **Stop** buttons.
- When drawing a Polygon, each left click and drag will create a new vertex point.
- At least 3 points are required to create a polygon. Until the 3 initial points are defined, temporary lines will draw representing the current shape
- Each new point is connected to the first vertex and the last vertex created
- Existing points can be edited by hovering over the point, which will highlight yellow, then click and drag to move the highlighted point.



The screenshot displays the SIMDIS Overlay Editor window, which is used for managing overlays on a map. The interface is divided into several sections:

- Shape Controls:** This section allows users to define the properties of a new shape. It includes a dropdown menu for 'Shape' (set to 'Add'), buttons for 'Edit' and 'Stop', and a text field for 'Name' (set to 'Polygon 19'). Below these are controls for 'Line Width' (set to 2), 'Line Color' (a green color swatch), 'Filled' (an unchecked checkbox), and 'Fill Color' (a yellow color swatch). A 'Draw' checkbox is checked. The 'Point 2 of 2' label indicates the current step in creating the polygon. The 'Coordinate System' is set to 'LLA'. Latitude is set to '21.972922 N' and longitude to '147.835734 W'. The 'Alt' is set to '0.000 km'. There are also buttons for '<-', '->', 'Insert', and 'Delete'.
- General Options:** This section includes a 'File' field, an 'Attach' checkbox, and an 'Auto-delete' checkbox.
- Units:** This section allows users to select units for 'LLA' (set to 'deg'), 'Alt' (set to 'km'), 'Ang' (set to 'deg'), 'Rng' (set to 'km'), and 'Prec' (set to 3).
- Buttons:** At the bottom of the editor are buttons for 'Load SIMDIS...', 'Save', 'Save As...', 'Help...', and 'Close'.
- Map View:** The main area of the window shows a satellite map of a coastal region. A green triangle is drawn on the map, representing the polygon being added. The vertices of the triangle are marked with green circles. A text label 'LLA: 17.077263 N 153.177901 W 0.000 km' is displayed near the triangle.
- Compass:** A circular compass is located in the bottom right corner of the map view, showing cardinal directions (N, S, E, W) and a scale from 0.00 to 1.00.
- Status Bar:** The bottom of the window features a status bar with the text 'crrm4700mobile 19:28:16 UTC' and a series of icons. To the right of the icons are fields for '17.077263', '-153.177901', 'Elevation', and '#17055'.

Edit Polygon with mouse

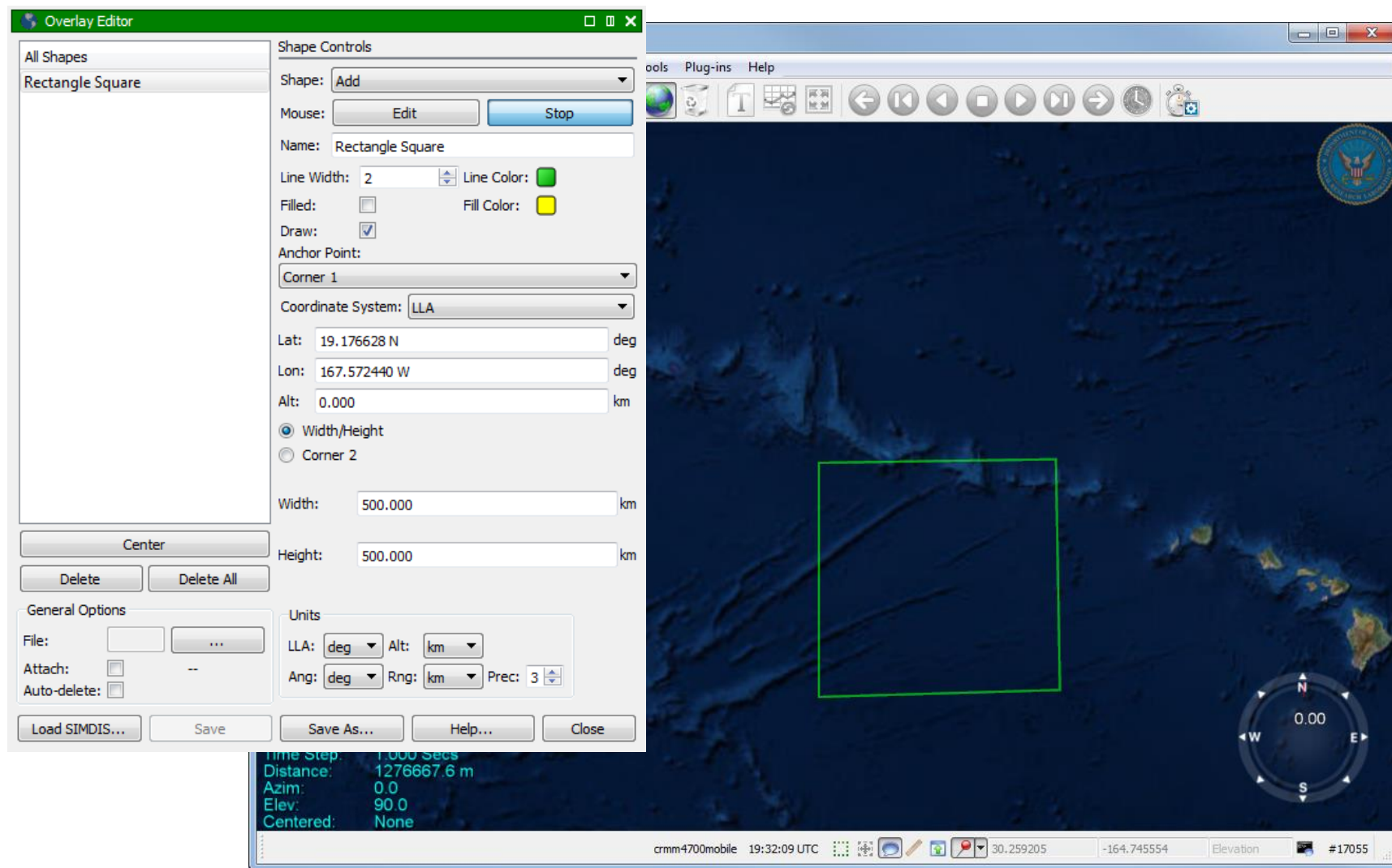


Click and move the vertex to edit the polygon with the mouse. Shift + mouse wheel allows adjusting the altitude of the selected vertex



- All vertices of the Polygon can be added manually via Lat-Lon-Alt value fields.
- Use the Insert button to add a new point.
- Once three points are entered a minimal polygon (triangle) will be displayed.
- Additional vertices may be inserted or added increasing the number of sides. The display will be adjusted accordingly.
- *Why does the polygon disappear when I delete a point?*
The number of points has been reduced to ≤ 2 points.

Adding a Rectangle to an Overlay



Adding a Rectangle to Overlay

- SIMDIS uses one of four methods to define a rectangle:

- | | |
|------------------------|----------------------------|
| 1. Center Point Coord. | + Width & Height values |
| 2. Center Point Coord. | + Corner Point Coord. |
| 3. Corner 1 Coord. | + Corner 2 Coord. * |
| 4. Corner 1 Coord. | + Width & Height values ** |

Anchor Point: Corner 1 **1**

Coordinate System: LLA

Lat: 0.000000 N deg

Lon: 0.000000 E deg

Alt: 0.000 km

☒ Width/Height

☐ Corner 2

Width: 0.000 km

Height: 0.000 km

Anchor Point: Corner 1 **2**

Coordinate System: LLA

Lat: 0.000000 N deg

Lon: 0.000000 E deg

Alt: 0.000 km

☐ Width/Height

☒ Corner 2

Coordinate System: LLA

Lat: 0.000000 N deg

Lon: 0.000000 E deg

Alt: 0.000 km

Anchor Point: Center **3**

Coordinate System: LLA

Lat: 0.000000 N deg

Lon: 0.000000 E deg

Alt: 0.000 km

☒ Width/Height

☐ Corner Point

Width: 0.000 km

Height: 0.001 km

Anchor Point: Center **4**

Coordinate System: LLA

Lat: 0.000000 N deg

Lon: 0.000000 E deg

Alt: 0.000 km

☐ Width/Height

☒ Corner Point

Coordinate System: LLA

Lat: 0.000005 N deg

Lon: 0.000000 E deg

Alt: 0.000 km

* Any opposite corners will work

** Any corner will work



- The Rectangle mouse tool provides a quick and simple mechanism to draw or edit Rectangle shapes.
- The mouse tool is on by default when a new Rectangle shape is created, and can be toggled on and off using the **Edit** and **Stop** buttons.
- When drawing a new Rectangle, click and drag will define the first point at the start of the drag and the second point at the end.
- Once both Corner 1 and Corner 2 have been defined, the mouse tool allows moving the two corners around using left click and drag.
- Corner altitude can also be adjusted using **shift + mouse wheel**.
- The alternate two corners have their altitude calculated as the average of the two defined corner altitudes



Adding a Rectangle to an Overlay (mouse)

Overlay Editor

All Shapes
Rectangle 23

Shape Controls

Shape: Add

Mouse: Edit Stop

Name: Rectangle 23

Line Width: 2 Line Color: ■

Filled: ☐ Fill Color: ■

Draw: ☒

Anchor Point: Corner 1

Coordinate System: LLA

Lat: 24.478965 N deg

Lon: 163.577454 W deg

Alt: 0.000 km

☐ Width/Height

☒ Corner 2

Coordinate System: LLA

Lat: 21.789300 N deg

Lon: 164.969856 W deg

Alt: 0.000 km

Center

Delete Delete All

General Options

File: ...

Attach: ☐ --

Auto-delete: ☐

Load SIMDIS... Save Save As... Help... Close

Units

LLA: deg Alt: km

Ang: deg Rng: km Prec: 3

Time: 001 1970 00:00:00.000

Time Step: 1.000 Secs

Distance: 1276667.6 m

Azim: 0.0

Elev: 90.0

Centered: None

LLA: 17.630550 N 158.007689 W 0.000 km

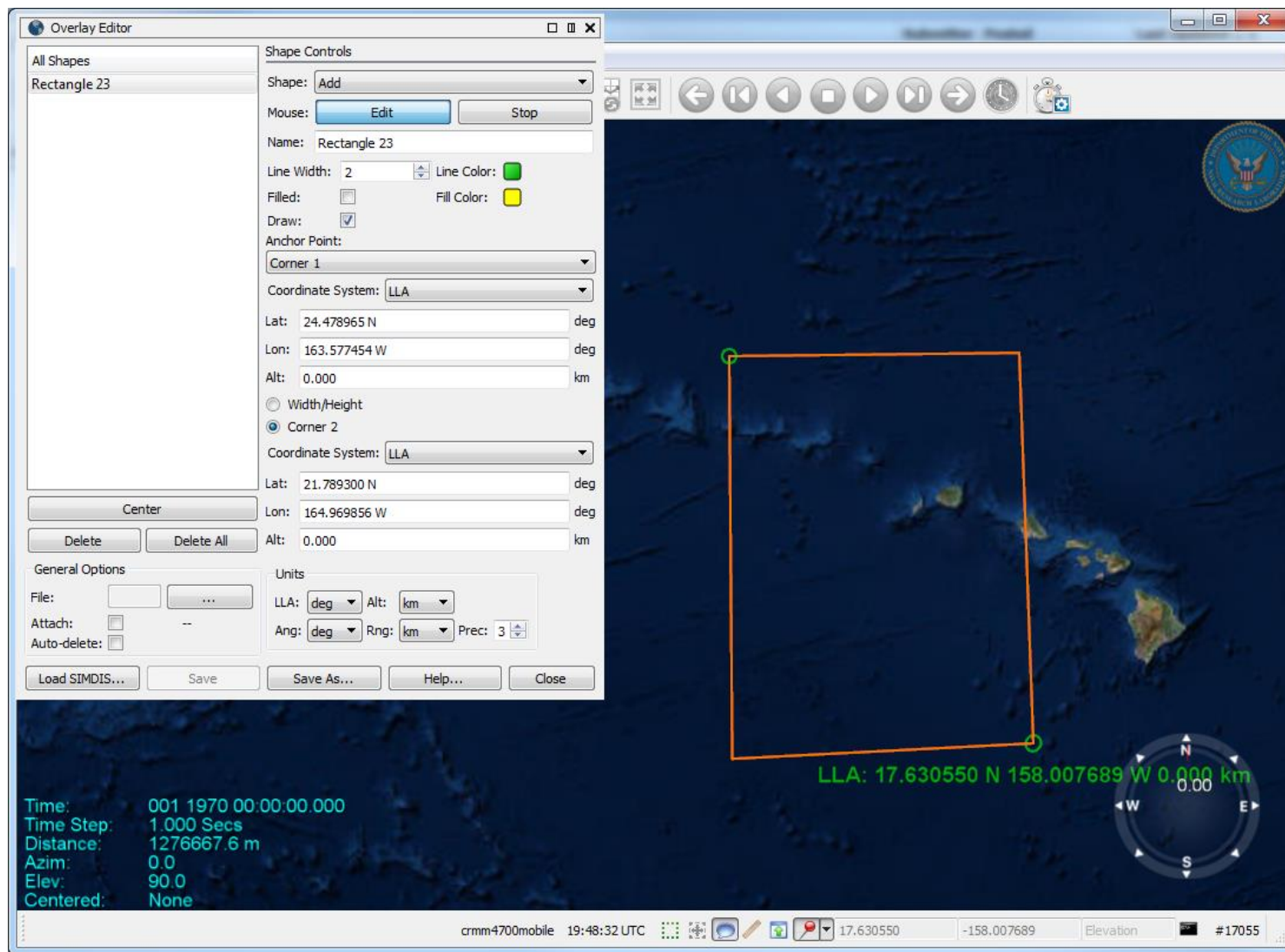
0.00

N
W E
S

crrm4700mobile 19:48:32 UTC 17.630550 -158.007689 Elevation #17055

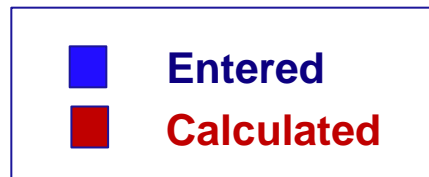
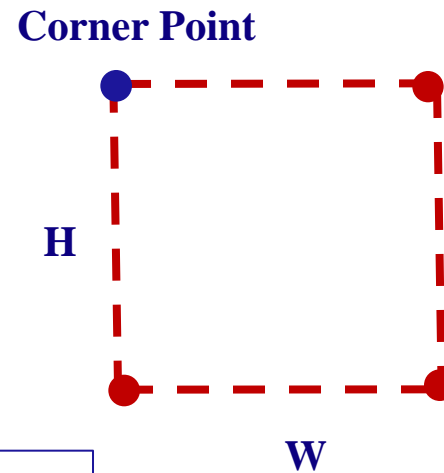
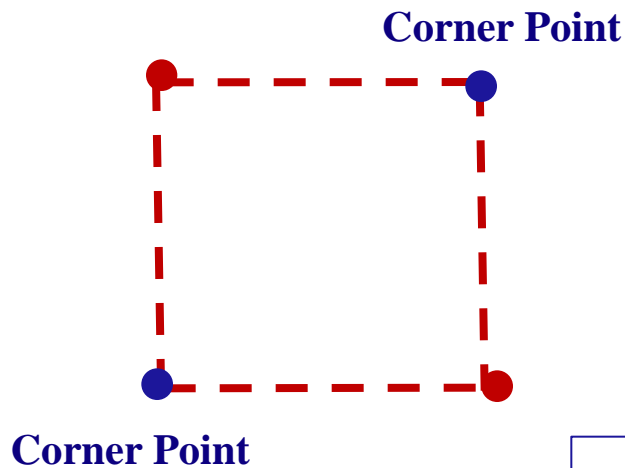
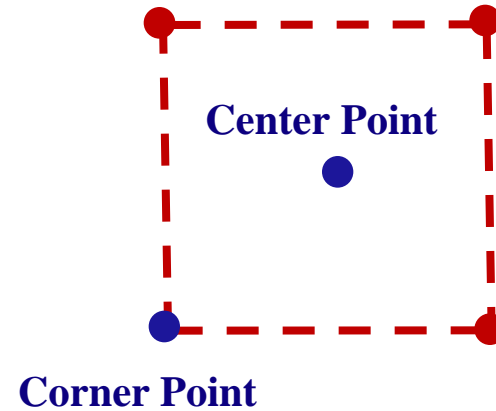
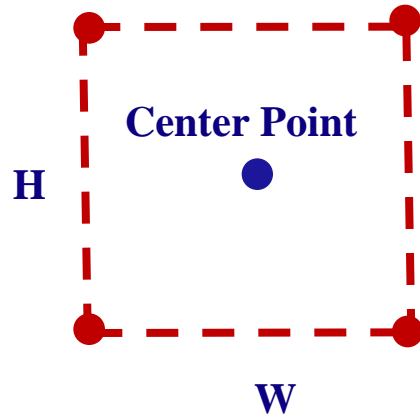


Edit Rectangle with mouse

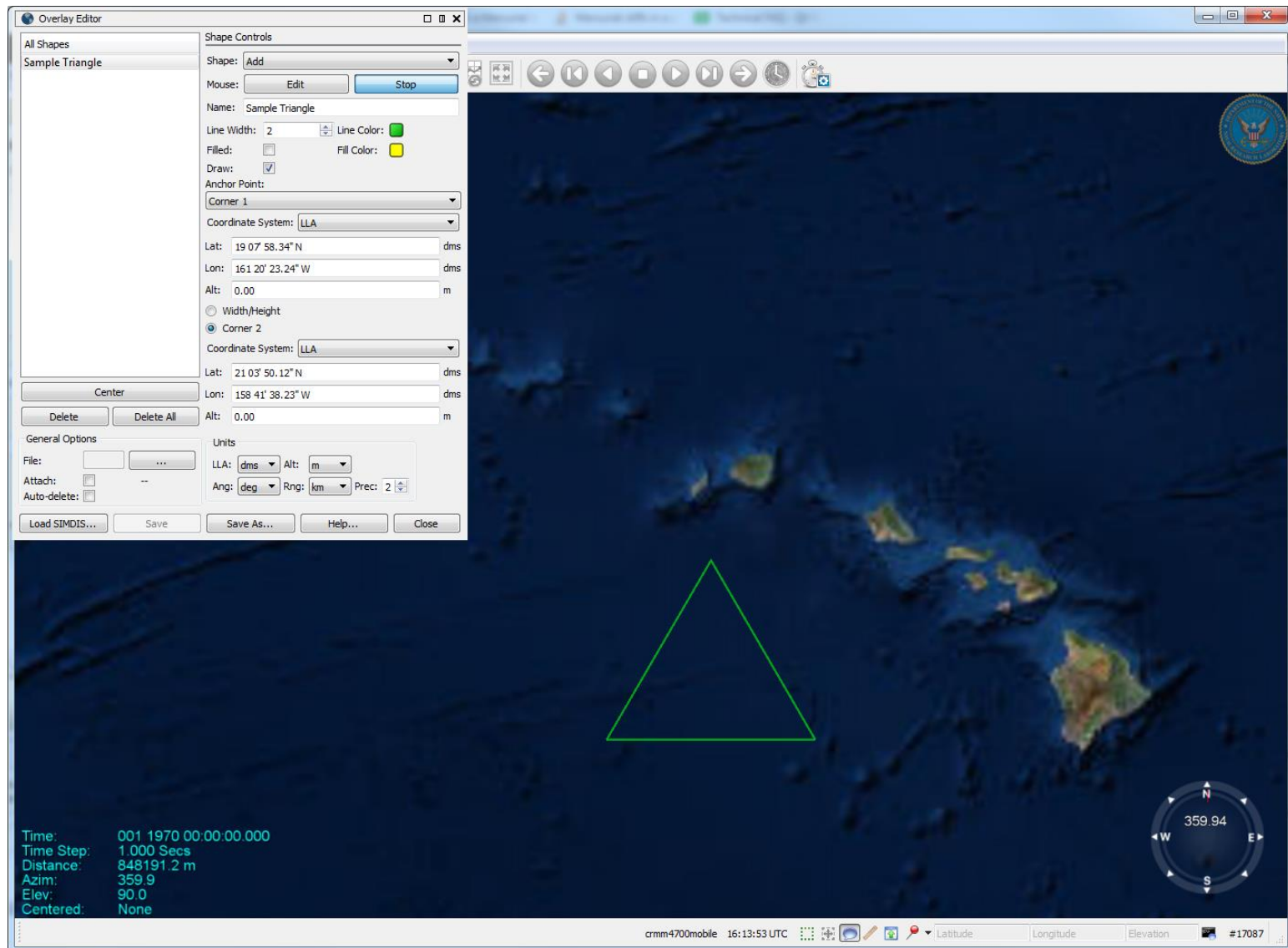


Click and drag vertex to change the size/location of the rectangle. Shift + mouse wheel allows adjusting the altitude of the highlighted corner

Graphic Representation of Rectangle



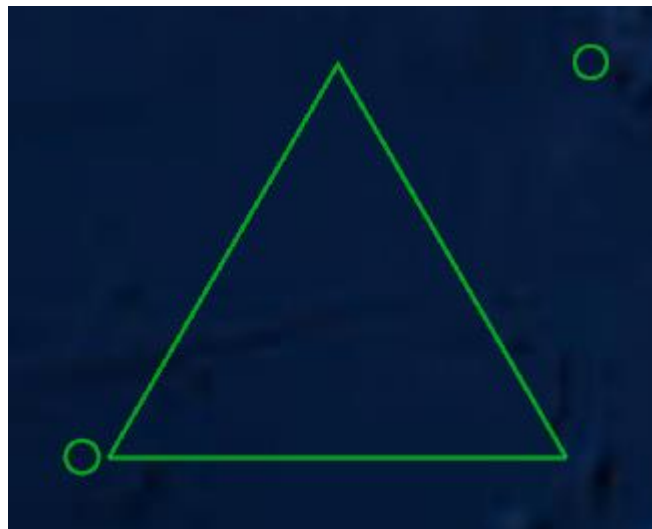
Adding a Triangle to an Overlay



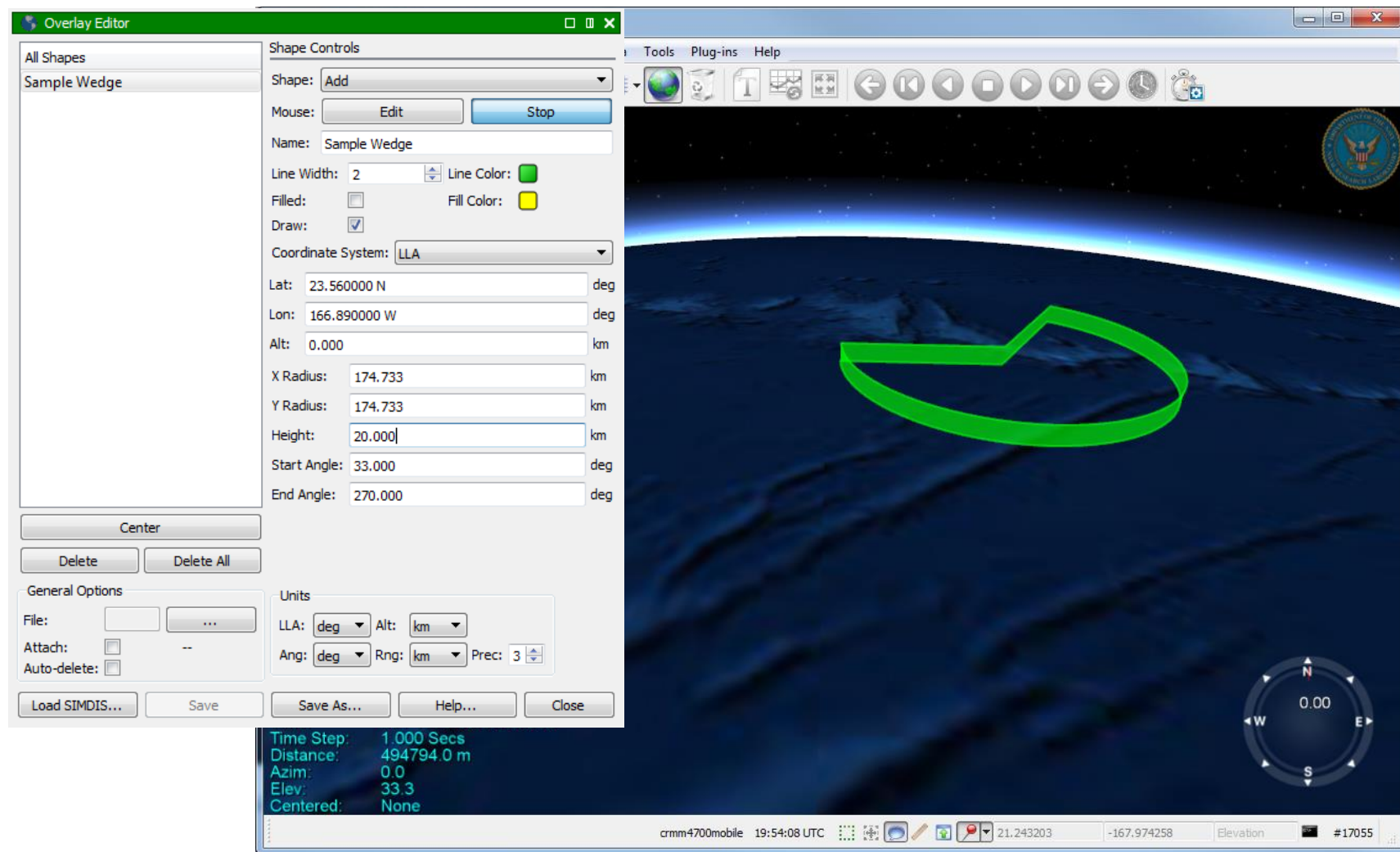


Adding a Triangle to an Overlay

- Triangles are drawn and edited using the same controls as rectangles.
- Instead of drawing the resulting rectangle, the triangle shape will use the rectangle as a bounding box. The resulting shape will be the largest possible equilateral triangle that will fit centered inside the bounding box.

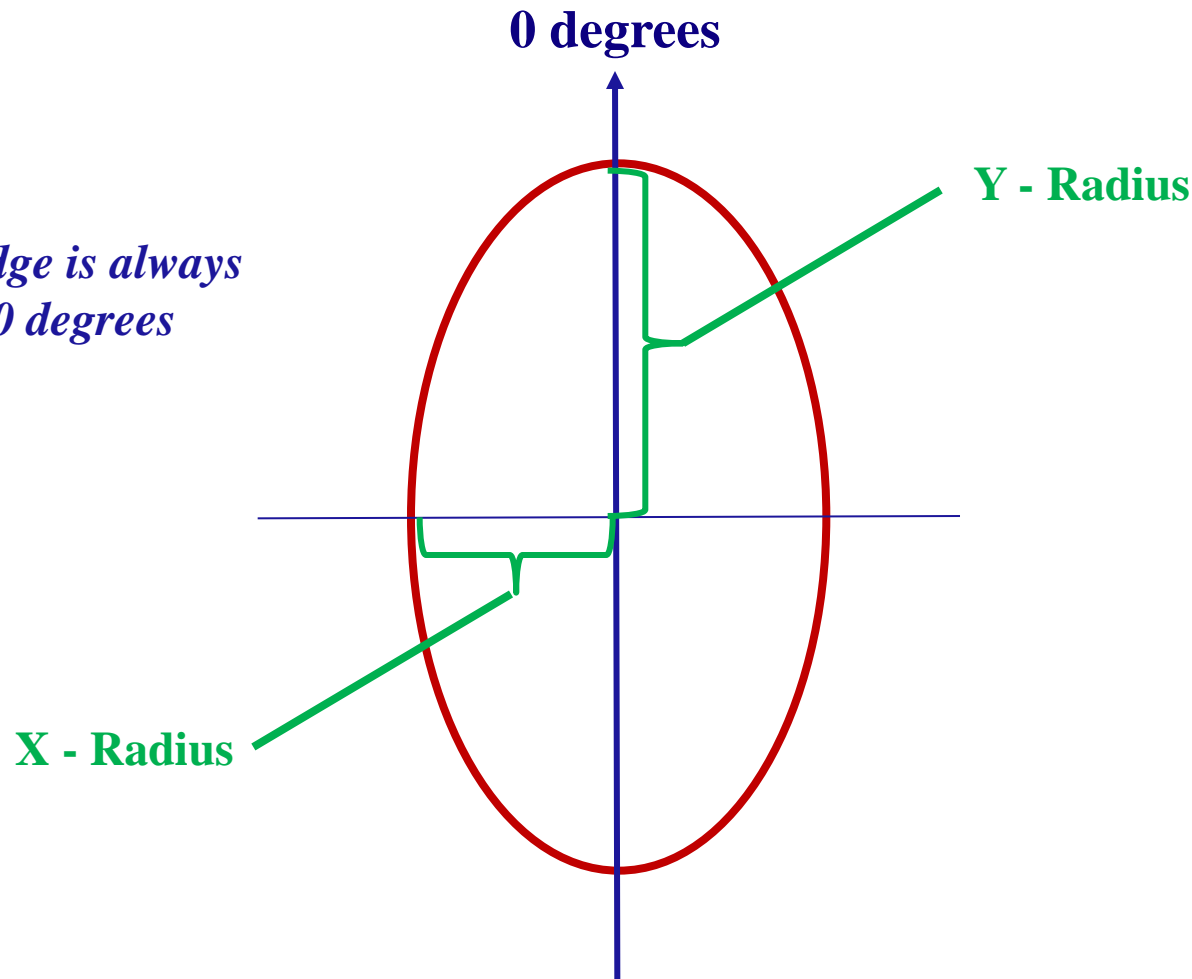


Adding a Wedge to an Overlay



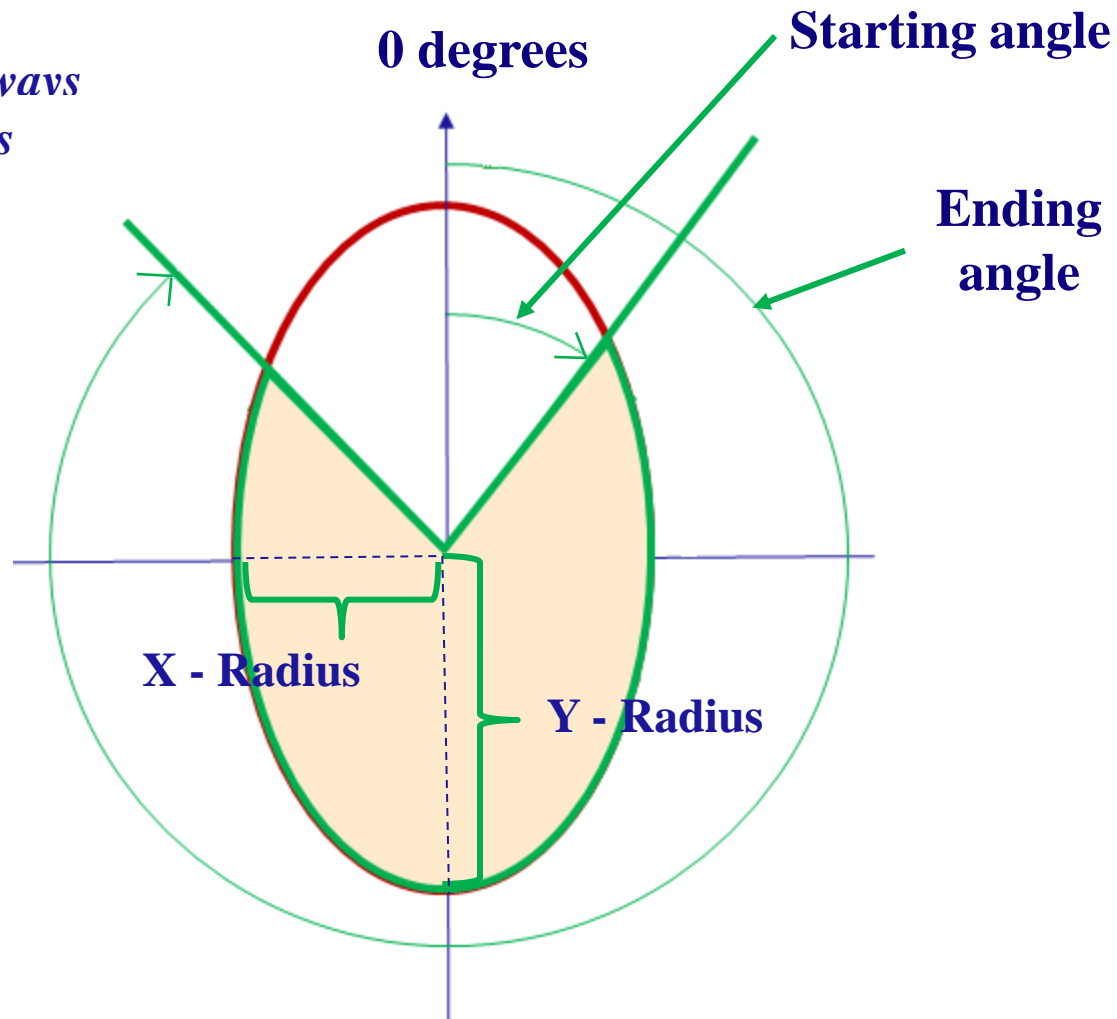
- Definition of a wedge starts by using the definition of an ellipse - a point's coordinate and the value of the x radius and y radius.

NOTE: Wedge is always oriented to 0 degrees True North



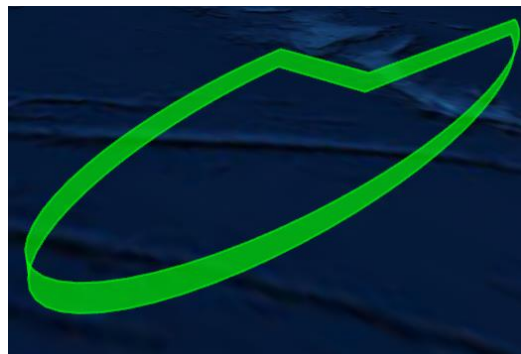
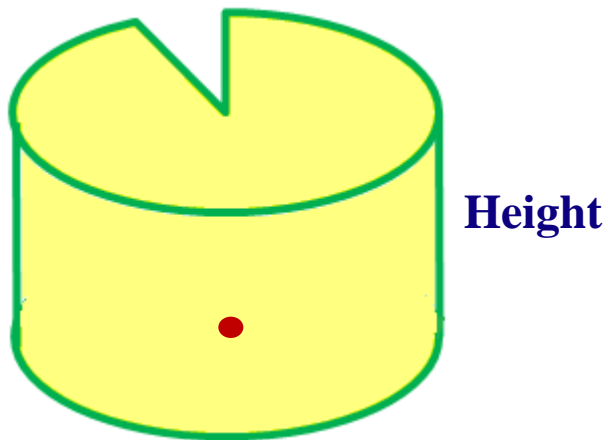
- Next define a segment of the ellipse using a starting angle and an ending angle.

NOTE: Wedge is always oriented to 0 degrees True North



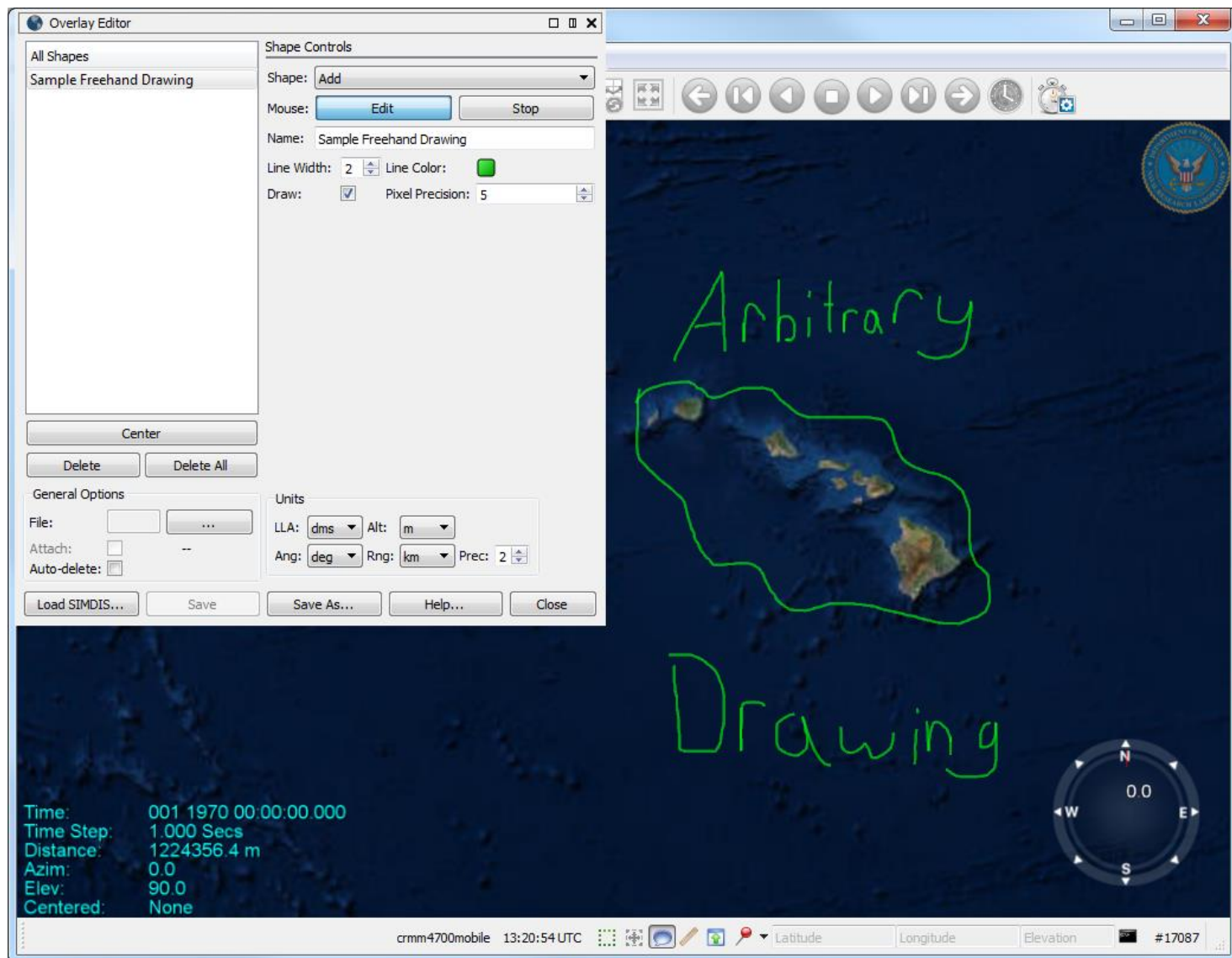
Cylindrical Ellipsoid Segment

- Last, add a third dimension to the object by defining a height for the cylindrical ellipsoid segment.



Shape Controls	
Shape:	Add
Mouse:	<input type="button" value="Edit"/> <input type="button" value="Stop"/>
Name:	Sample Wedge
Line Width:	2
Line Color:	<input type="color" value="#00FF00"/>
Filled:	<input type="checkbox"/>
Fill Color:	<input type="color" value="#FFFF00"/>
Draw:	<input checked="" type="checkbox"/>
Coordinate System:	LLA
Lat:	23.560000 N deg
Lon:	166.890000 W deg
Alt:	0.000 km
X Radius:	100.000 km
Y Radius:	400.000 km
Height:	20.000 km
Start Angle:	33.000 deg
End Angle:	270.000 deg

Adding a Free Draw Shape



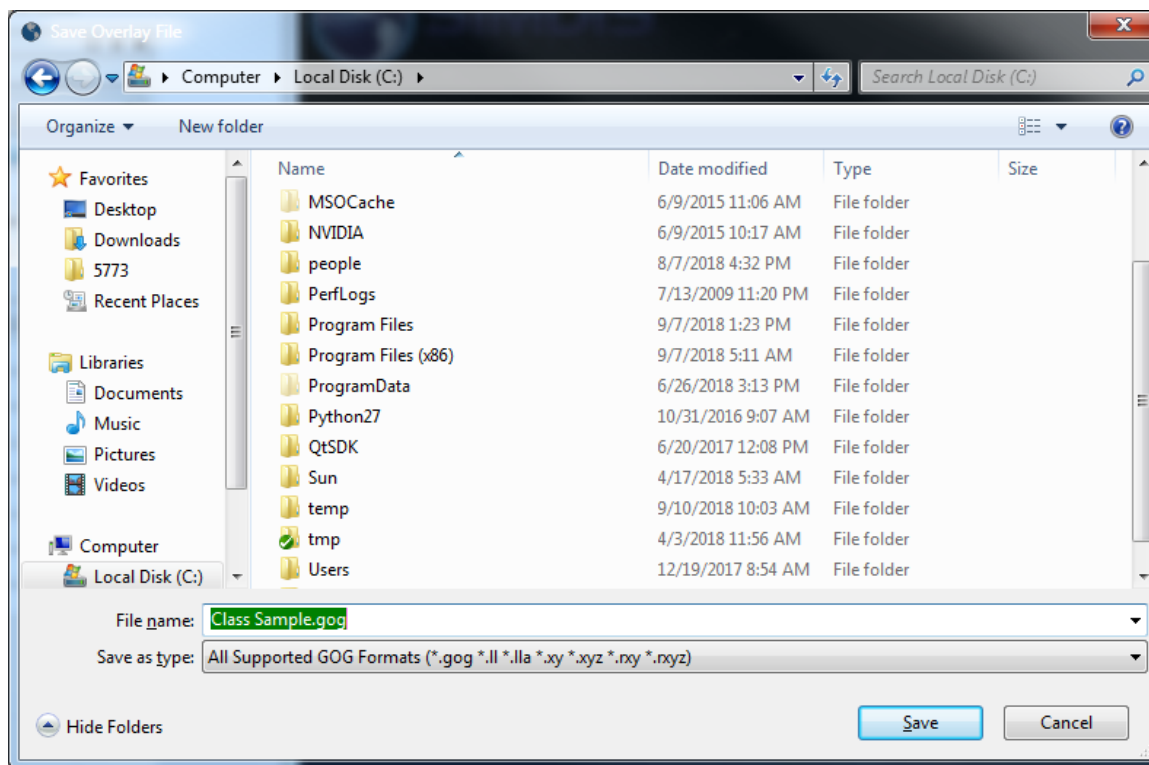


- The free draw mouse tool provides a quick and simple mechanism to add arbitrary shapes to the overlay.
- The mouse tool is on by default when a new Free Draw shape is created, and can be toggled on and off using the **Edit** and **Stop** buttons.
- When drawing a free draw shape, click to begin drawing a new segment, drag to draw the path traced by the mouse, and release to finish the segment.
- There is no limit to the number of segments Overlay Editor will allow in a single free draw shape.
- Unlike other shapes, portions of free draw shapes that have already been defined cannot be edited either with the mouse or with the Overlay Editor dialog.

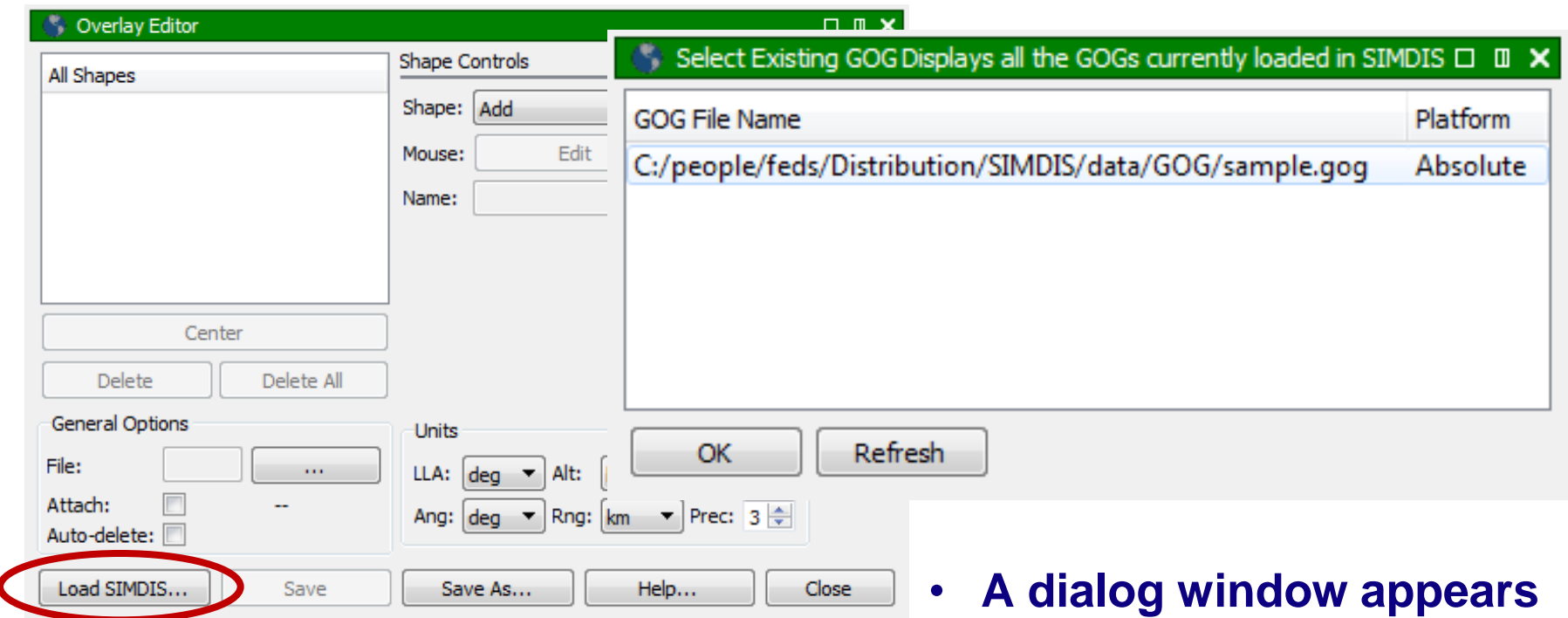


Saving Edited Overlay

- The edited overlay may be saved to a file using the buttons along the bottom of the dialog, **Save** and **Save As**.
- Write permission to the directory selected is required.
- A **Save Overlay File** dialog window pop's up to store the file.



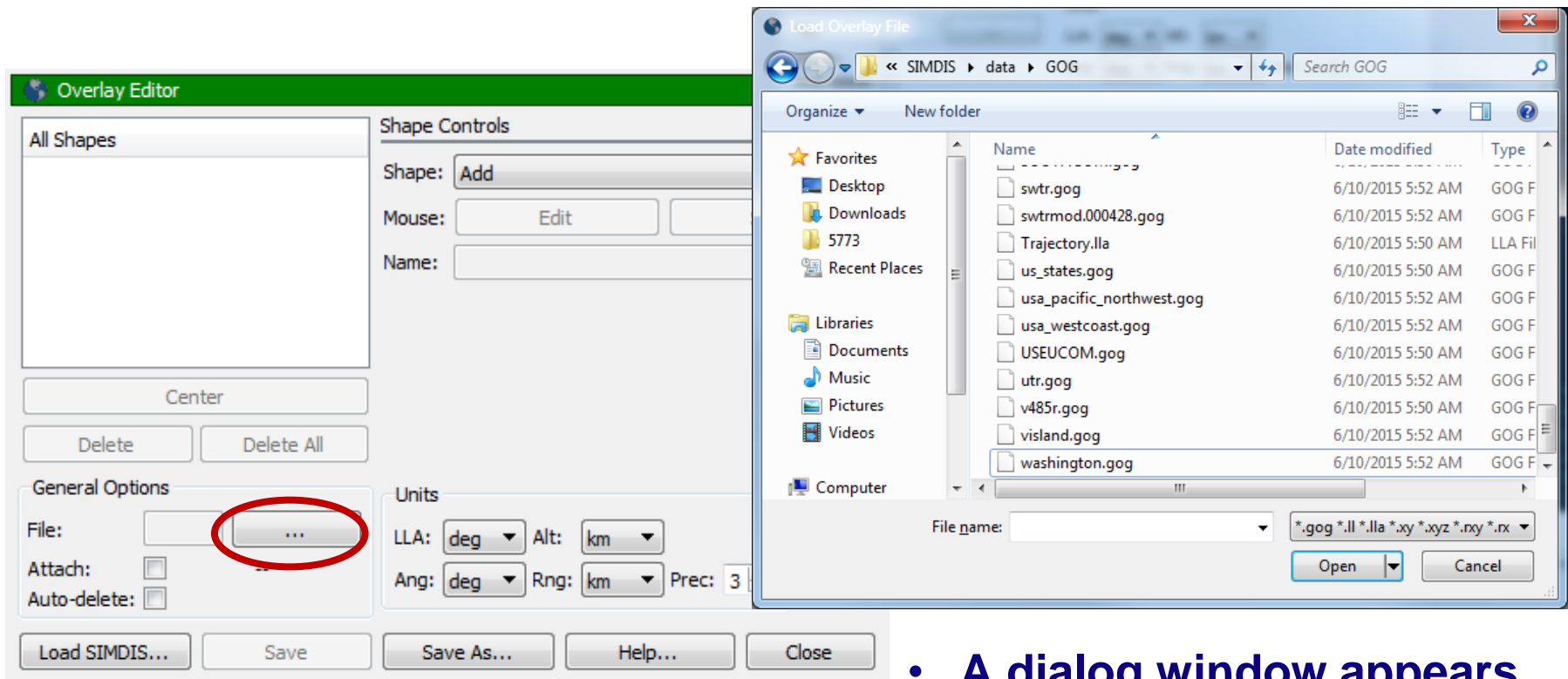
- To select an overlay currently being displayed in SIMDIS for editing in the Overlay Editor use the **Load SIMDIS...** button at the bottom of the Overlay Editor dialog window.



- A dialog window appears to allow selection of the overlay file to be edited.

Editing Overlay On Disk

- To select an overlay stored on disk for editing in the Overlay Editor use the ... button to the right of the File name display at the bottom of the Overlay Editor dialog window.

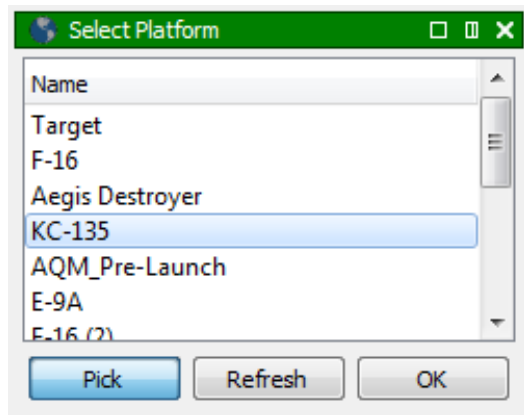


- A dialog window appears to allow selection of the overlay file to be edited.

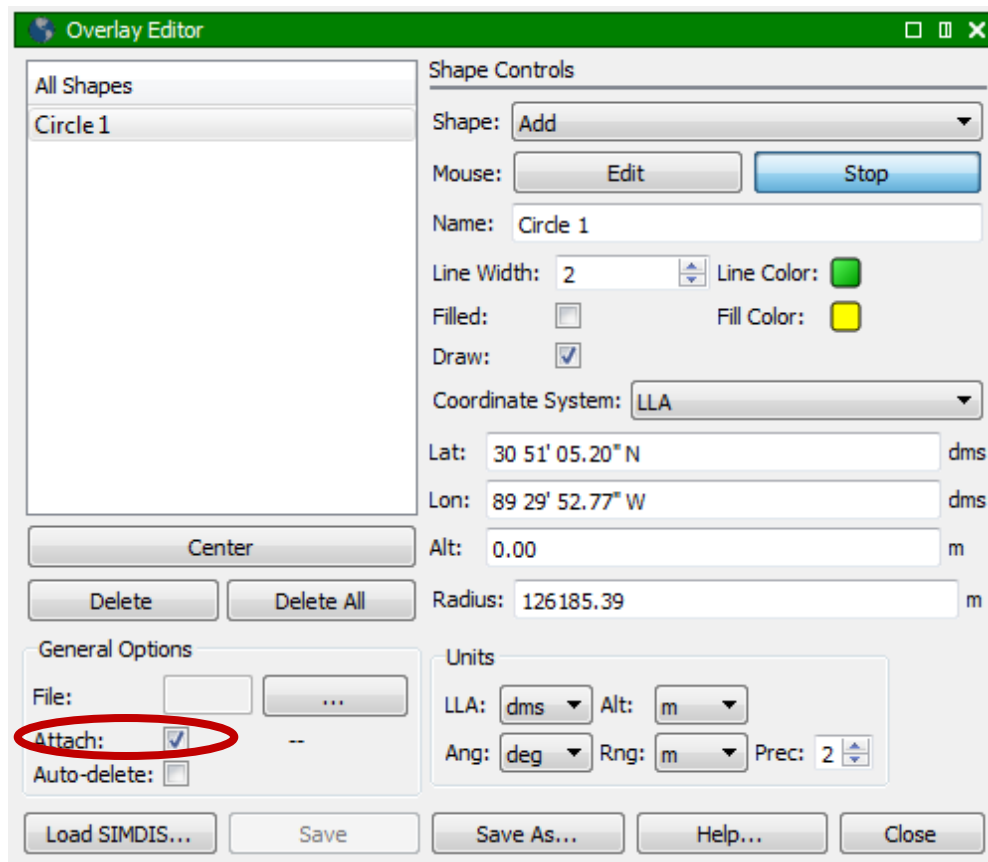


Attaching an Overlay to a Platform

- Use the attach field to indicate that you wish to attach the current overlay to a SIMDIS platform. In the example below a circle overlay is used.

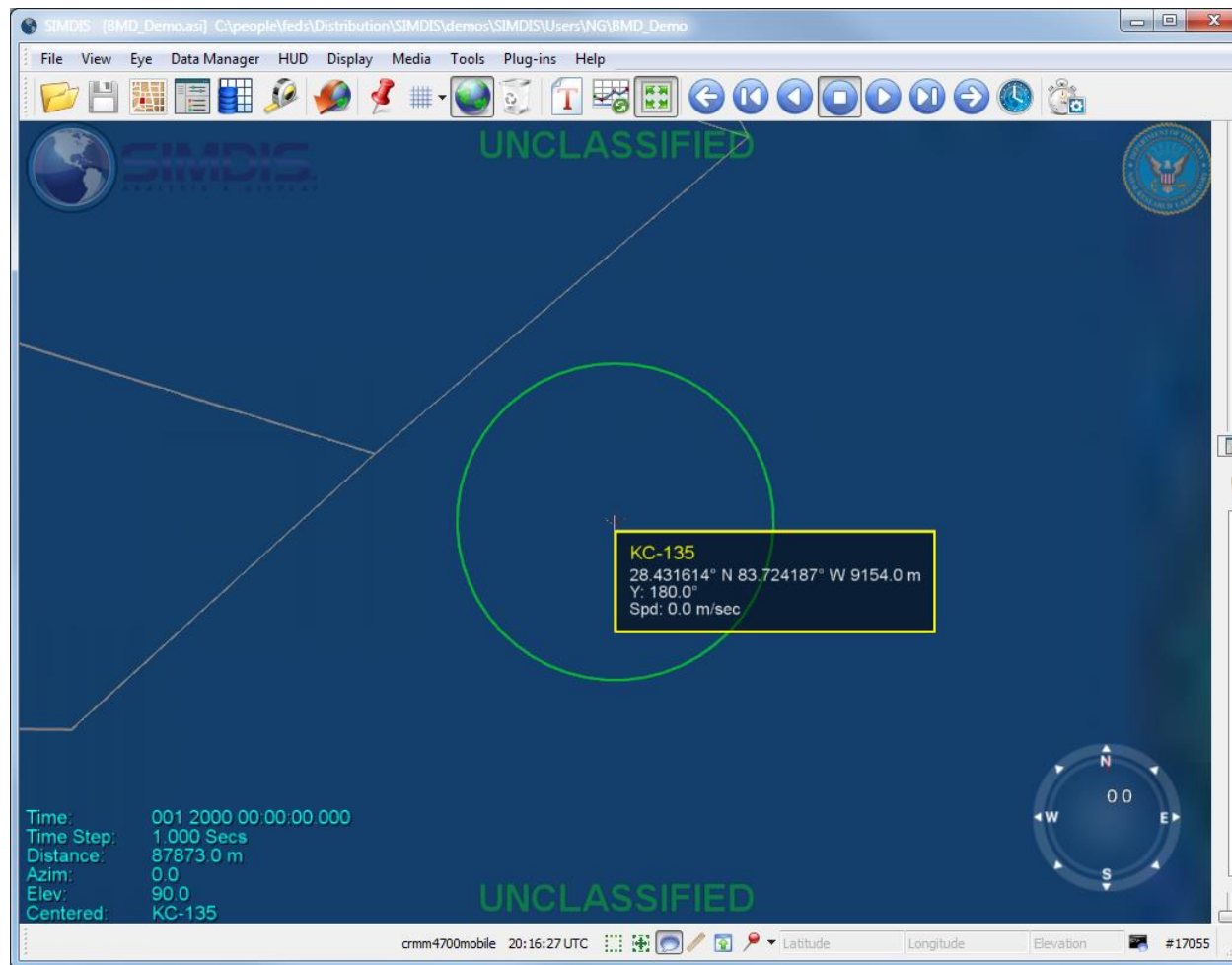


- Select Platform Dialog** opens to display a list of platforms in SIMDIS to choose from.
- Highlight and select using **OK** button.



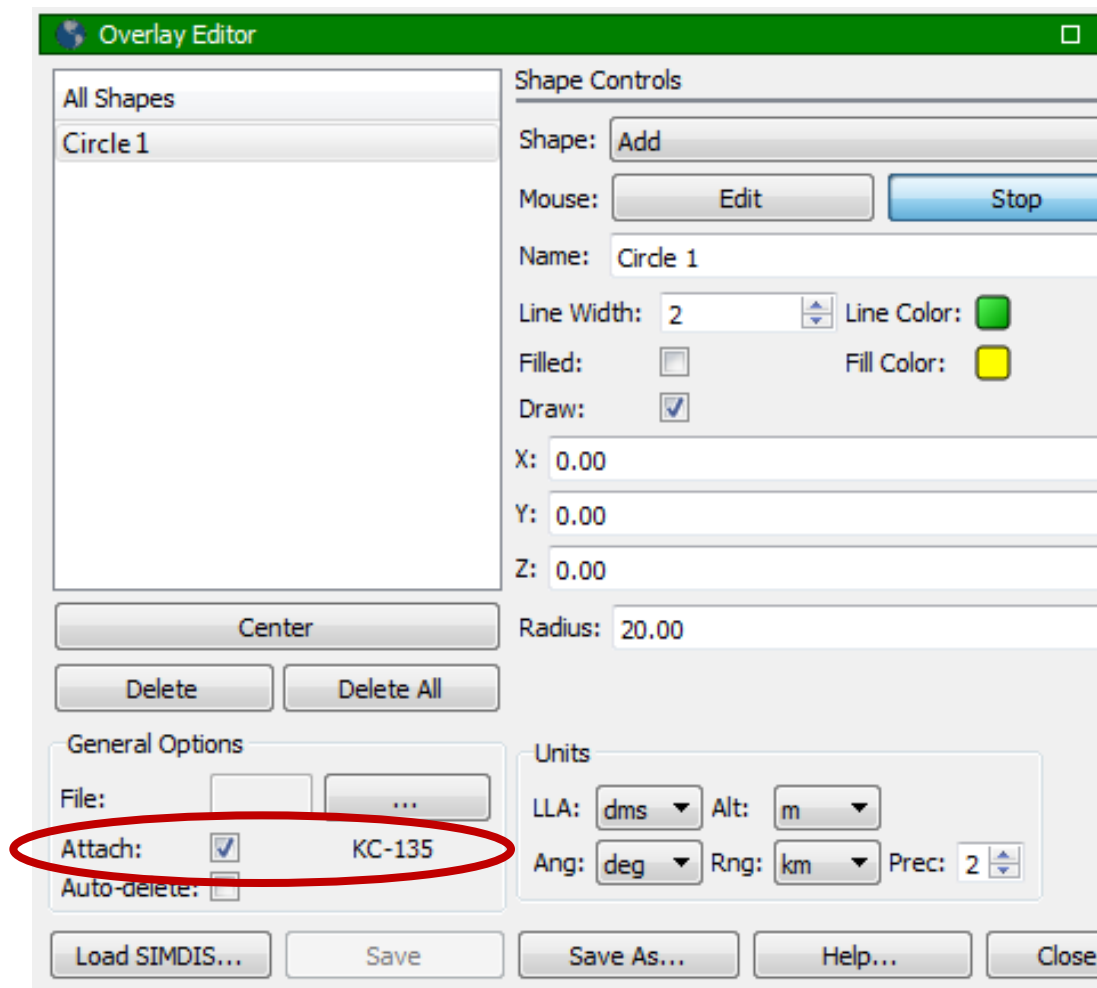
Example – Attached Overlay

- Notice that the KC-135 selected in the demo has a green circle 20 km in diameter



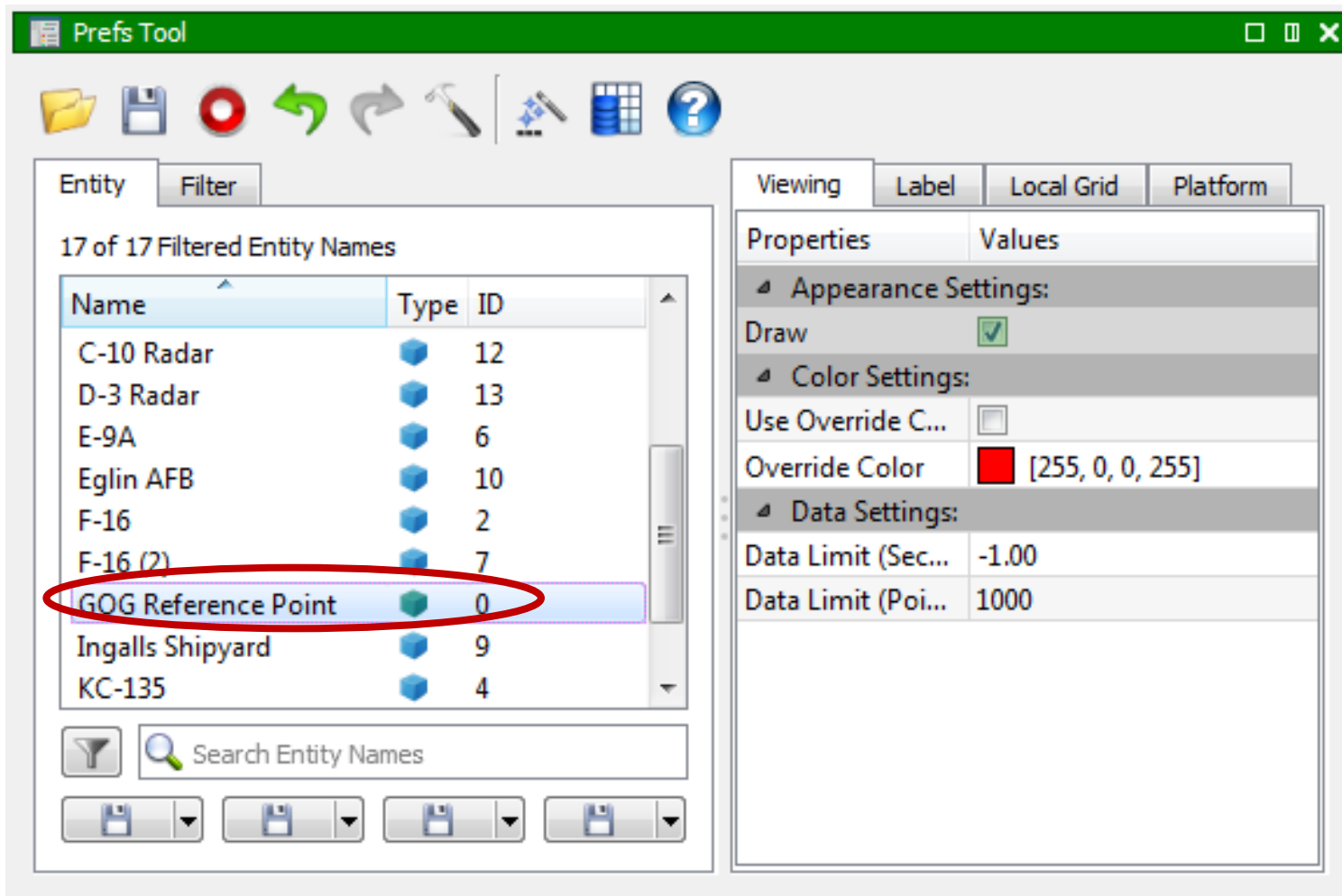
Example – Attached Overlay

- The name of the selected platform which the overlay is attached to is displayed in the Overlay Editor.



Example – Attached Overlay

- The GOG Overlay attach point appears as a platform in the SIMDIS Super Form.



- To streamline the process of creating simple overlays, Overlay Editor is distributed with a custom Quick Draw toolbar.
- This toolbar supports creating, saving, and removing six simple shape types, drawing with eight predefined colors, and attaching to platforms.



- The quick draw toolbar is installed by default at **\$SIMDIS_DIR/config/SIMDIS/CustomToolbarQuickDraw.xml**
- Using the Quick Draw Toolbar requires the Custom Toolbar Plugin, which is distributed with SIMDIS, in addition to the Overlay Editor plugin.
- You can configure the Custom Toolbar Plugin to use the Quick Draw Toolbar using the console command “**simdis10 --Custom_Toolbar_Plugin:configFile \$SIMDIS_DIR/config/SIMDIS/CustomToolbarQuickDraw.xml**”

Drawing Quick Shapes



- The shapes supported by the Quick Draw Toolbar are **free draw, circle, line, polygon, square, and triangle**.
- To start a new shape, press the button for the desired shape type. A new shape will be created and the mouse tool will activate.
- Mouse drawing works the same when drawing through the Quick Draw Toolbar as it does through the Overlay Editor dialog with the exception that edit points are not shown and shapes cannot be edited.
- To exit drawing mode, right click or begin a new shape.

Quick Shape Color



- Shape color can be changed between eight predefined options using the color select buttons.
- The available colors are **red, blue, yellow, green, orange, magenta, white, black**.
- When a new color is selected, finished shapes will not change color. The new color will apply to any shapes currently being drawn and any shape started afterwards.

Attaching Quick Shapes

- Quick shapes can be attached to platforms using **the Attach Quick Shape** and **Pick Attach Platform** buttons.
- The **Pick Attach Platform** button allows you to select which platform shapes will attach to by left clicking them.



- The **Attach Quick Shape** button enables and disables attaching shapes.



- While attaching shapes is enabled, text will be shown on screen saying which platform new shapes will attach to.

Attach To: 1 p-3c_orion_nrl

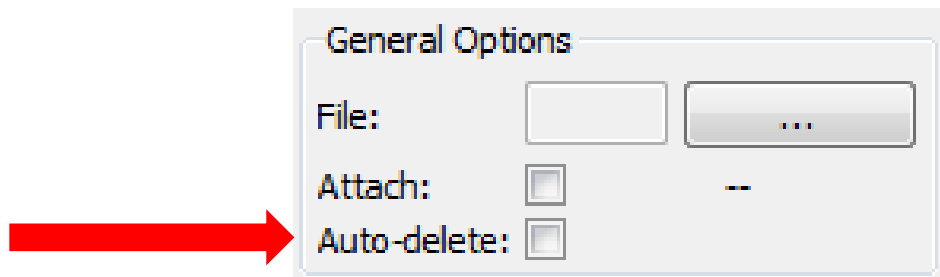
- Changing attach settings will not affect shapes that are already completed.



- Shapes drawn using the Quick Draw Toolbar are automatically saved as GOG files when the shape is finished.
- By default, the GOGs are saved to **\$SIMDIS_HOME/gog**. The save location can be changed with the **Set Quick Shape Directory** button.



- By default, the created GOG files persist after SIMDIS exits. If Auto-Delete is enabled in the Overlay Editor dialog, the files will be deleted if the shapes are removed or when SIMDIS exits.



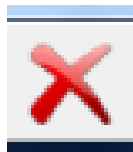


Removing Quick Shapes

- The previously created quick shape can be removed using the **Remove Last Quick Shape** button. This will remove the shape from SIMDIS as well as deleting the associated GOG file.



- All quick shapes can be removed using the **Remove All Quick Shapes** button. This will not delete the associated GOG files unless **Auto-Delete** is enabled through the Overlay Editor dialog.



The End