

*Presented by Sherry McCampbell  
s/v Soggy Paws*



*Version 1.5 (Dec 2015, OpenCPN v4.0)  
With Thanks to Terry Sargent s/v Valhalla for v1.3*



# What is OpenCPN?

- An “open source” (**FREE**/ donationware) charting program
- OpenCPN = Open Chart Plotter Navigator
- Now runs on Windows XP-Win 10, Mac, Linux, and (recently) Android
- Regularly being updated with new features by cruisers for cruisers
- Download **FREE** from <http://opencpn.org>
  - Android Version on Google Play (\$9.99 for supported version with updates)

# SV Soggy Paws Florida to the Philippines

PACIFIC OCEAN

ASIA

NORTH AMERICA

2007

Philippines

F.S.M.

Palau 2014

Marshall Islands 2013

Tarawa

Samoas

Fiji 2012

Tonga

Hawai'i 2011

2011

French Polynesia

Pitcairn Islands

2008-09 Galapagos

2010

Easter Island

SOUTH AMERICA

AUSTRALIA



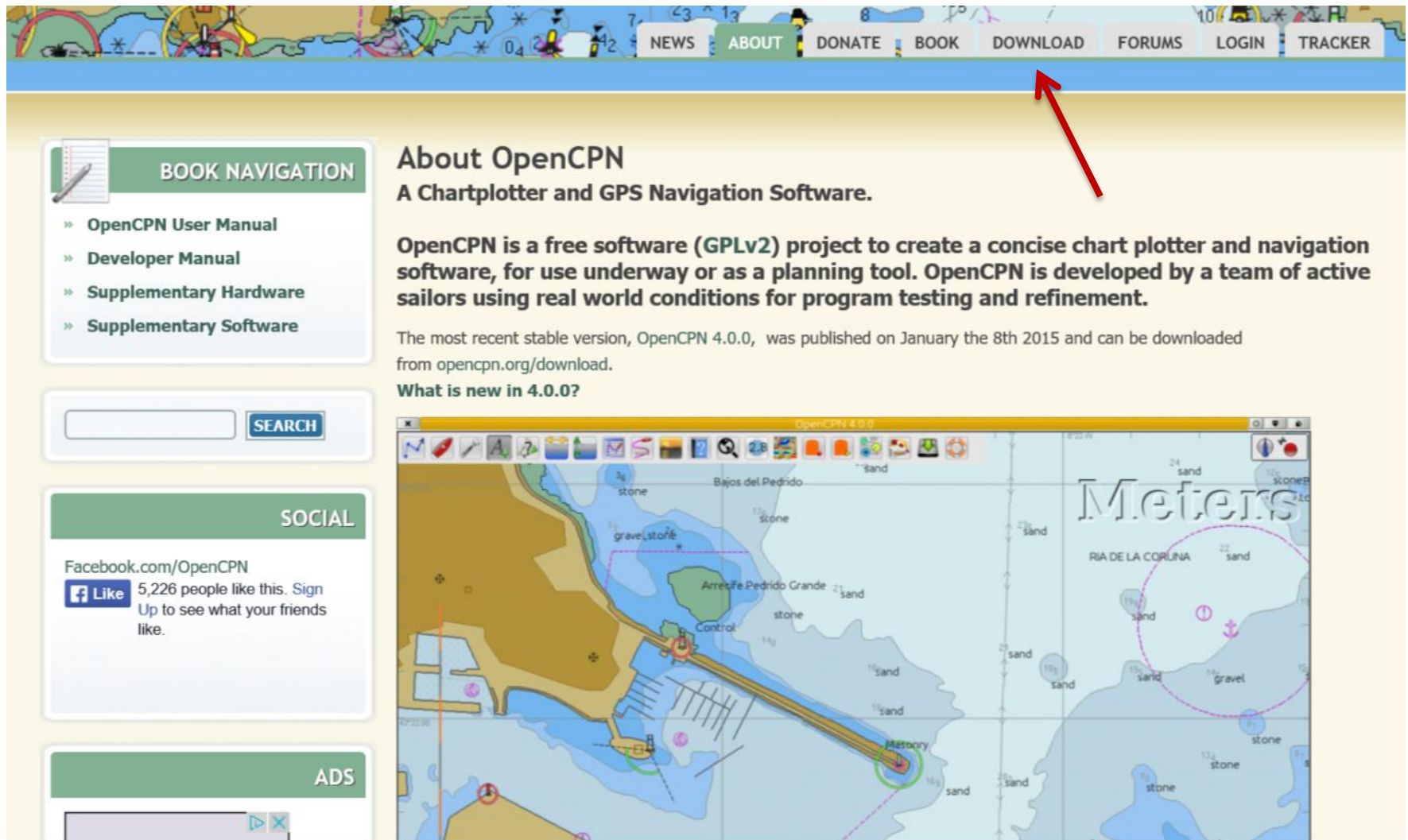
~30,000 nm

# Topics

- Find the manual
- Adding Charts
- Setting Up GPS and AIS
- Waypoints, Routes, Tracks, and Layers
- Add functionality with plugins
  - GRIB Files
  - Climatology (route planning / weather patterns)
  - Chart downloader
- A quick peek at the Android version



# Download OpenCPN for Free from OpenCPN.org



The screenshot shows the OpenCPN.org website. At the top, there is a navigation menu with links for NEWS, ABOUT, DONATE, BOOK, DOWNLOAD, FORUMS, LOGIN, and TRACKER. A red arrow points to the 'DOWNLOAD' link. Below the navigation menu, the main content area is titled 'About OpenCPN' and describes it as 'A Chartplotter and GPS Navigation Software.' The text states that OpenCPN is a free software (GPLv2) project for creating a concise chart plotter and navigation software. It also mentions that the most recent stable version, OpenCPN 4.0.0, was published on January 8th, 2015, and can be downloaded from [opencpn.org/download](http://opencpn.org/download). A section titled 'What is new in 4.0.0?' is also visible. On the left side, there is a 'BOOK NAVIGATION' section with links to the OpenCPN User Manual, Developer Manual, Supplementary Hardware, and Supplementary Software. Below this is a search bar and a 'SOCIAL' section for Facebook.com/OpenCPN, which has 5,226 likes. At the bottom left, there is an 'ADS' section. On the right side, there is a preview of the OpenCPN 4.0.0 software interface, showing a nautical chart with various depth soundings and labels like 'Bajos del Pedrido', 'Arrecife Pedrido Grande', and 'Control'.

Normal Windows Install—accept all the defaults

# Explore the Toolbar & Find the Manual

OpenCPN 4.0.0



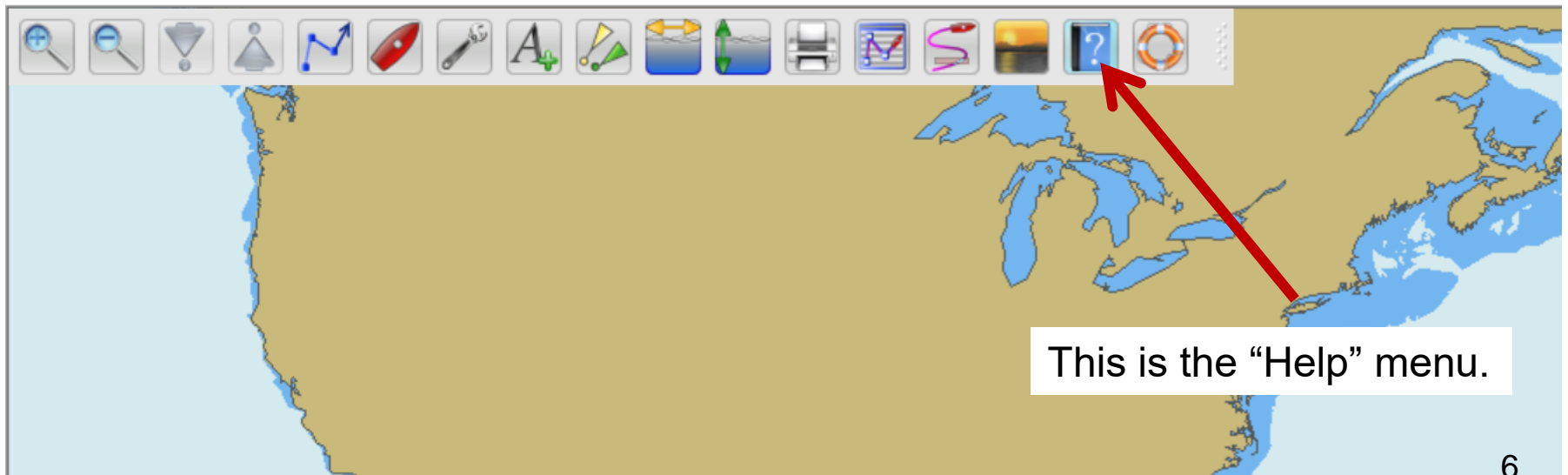
Hover your mouse over each icon, and you will see a “tool tip”



Help: Find the Book icon with the ?

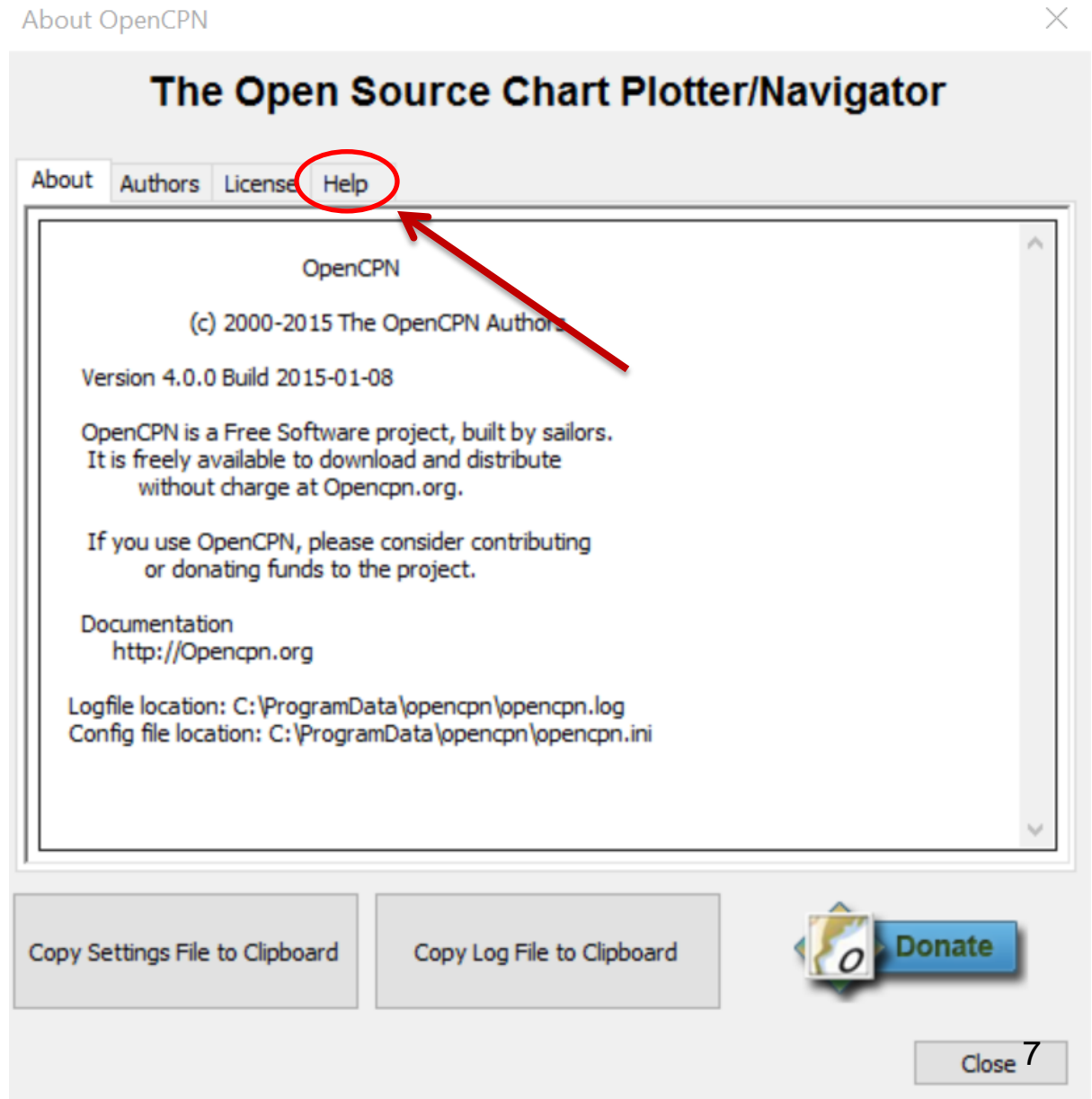


OpenCPN 4.0.0



# Find the manual

Click on the  
Help Tab



# Find the manual

- The User Manual is installed on your computer when the program installs
- Excellent reference manual
- Opens in your default browser (Firefox, Internet Explorer, etc)
- YOU DO NOT NEED TO BE ONLINE
- Can also be found online at [opencpn.org](http://opencpn.org)

## OpenCPN User Manual

### Table Of Contents

- [OpenCPN User Manual](#)
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    - [Installing OpenCPN](#)
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      - [Dedicated Marine OS](#)
    - [Using OpenCPN for the First Time](#)
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# Adding Charts

Click on 'Options' (the 'wrench')



in the Toolbar

Options

1

2

3

Display **Charts** Connections Ships User Interface Plugins

Chart Files Vector Chart Display Chart Groups Tides & Currents Chart Downloader

Directories

E:\Navigation\CM93.2010 Combined  
C:\Users\sherr\Documents\Charts\RNC\US\_REGION07

*Charts that are already installed*

Add Directory...  
Remove Selected

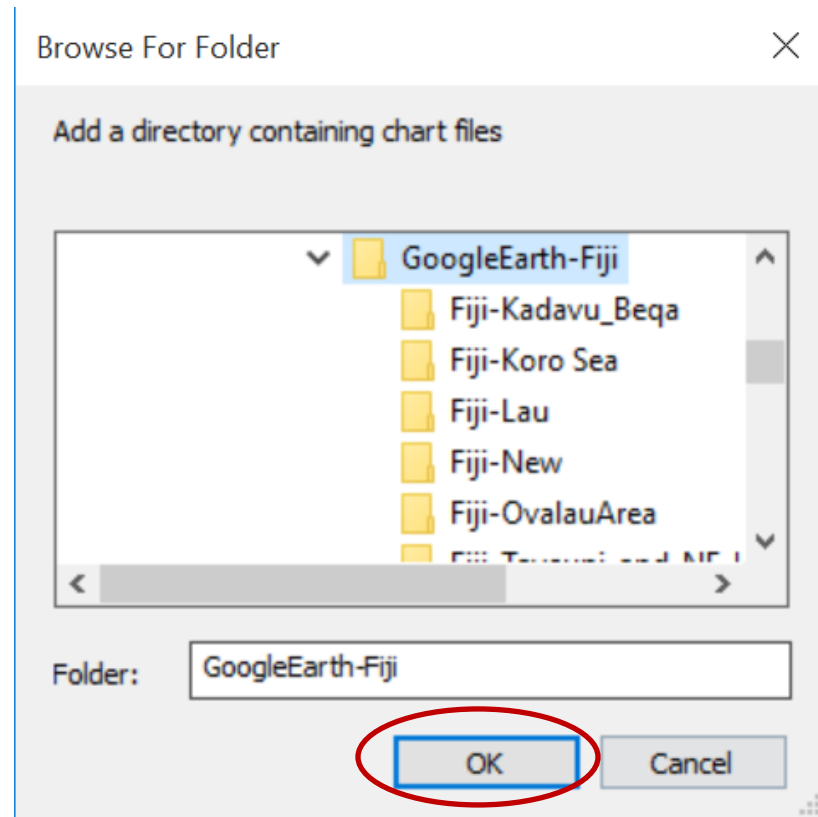
Update Control

Scan Charts and Update Database  
 Force Full Database Rebuild

OK Cancel Apply

# Adding Charts

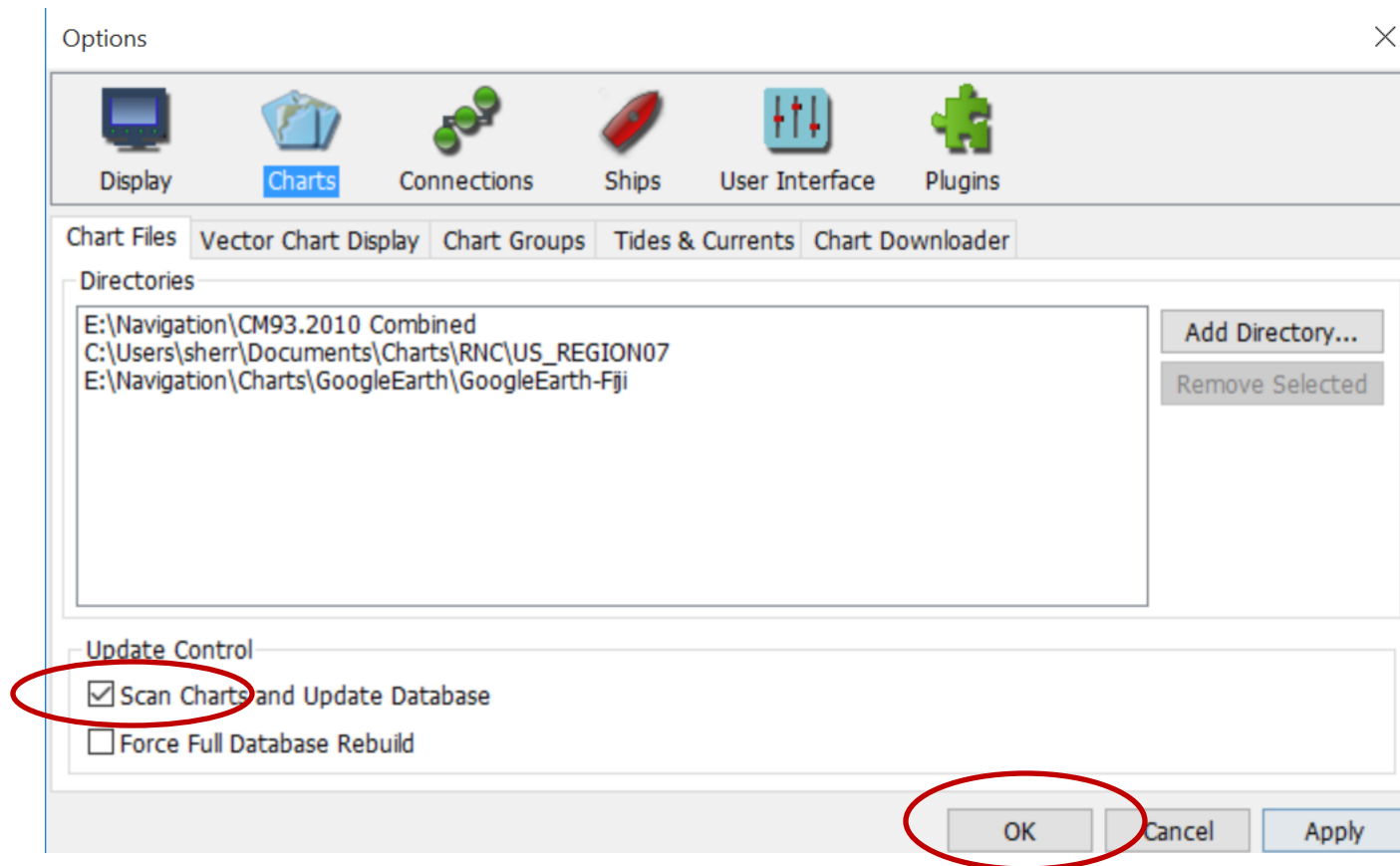
- Navigate to chart directory
- Select the charts you want to add
- Click OK
- Adds ALL charts in that folder, including subdirectories
- Repeat as necessary
- The more charts you load, the more resources OpenCPN takes on your system



Supported charts: kap, cap, S57 and S63, CM93v2. Google Earth (kap)  
Large section on chart sources and formats in the manual!!!

# Adding Charts

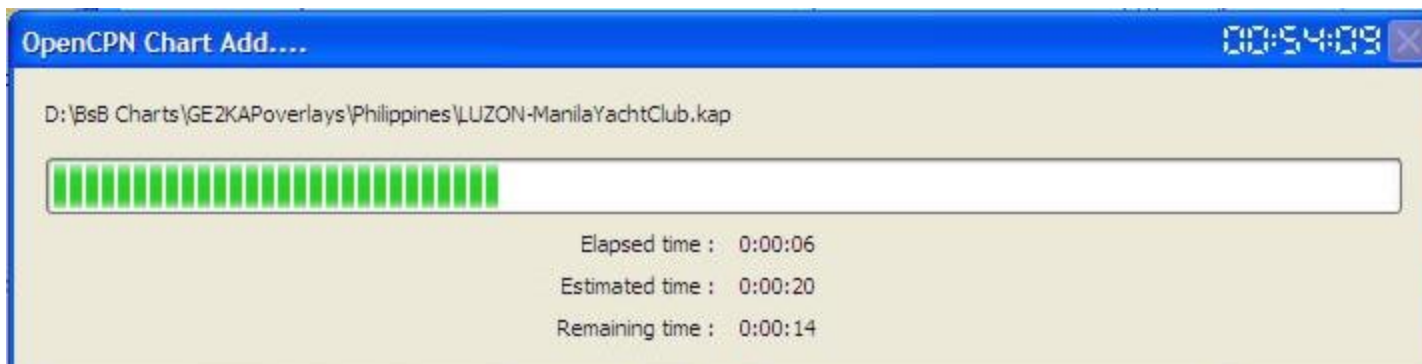
Rebuild your chart database





# Adding Charts

Wait while the chart database is updated



## Sources of Charts

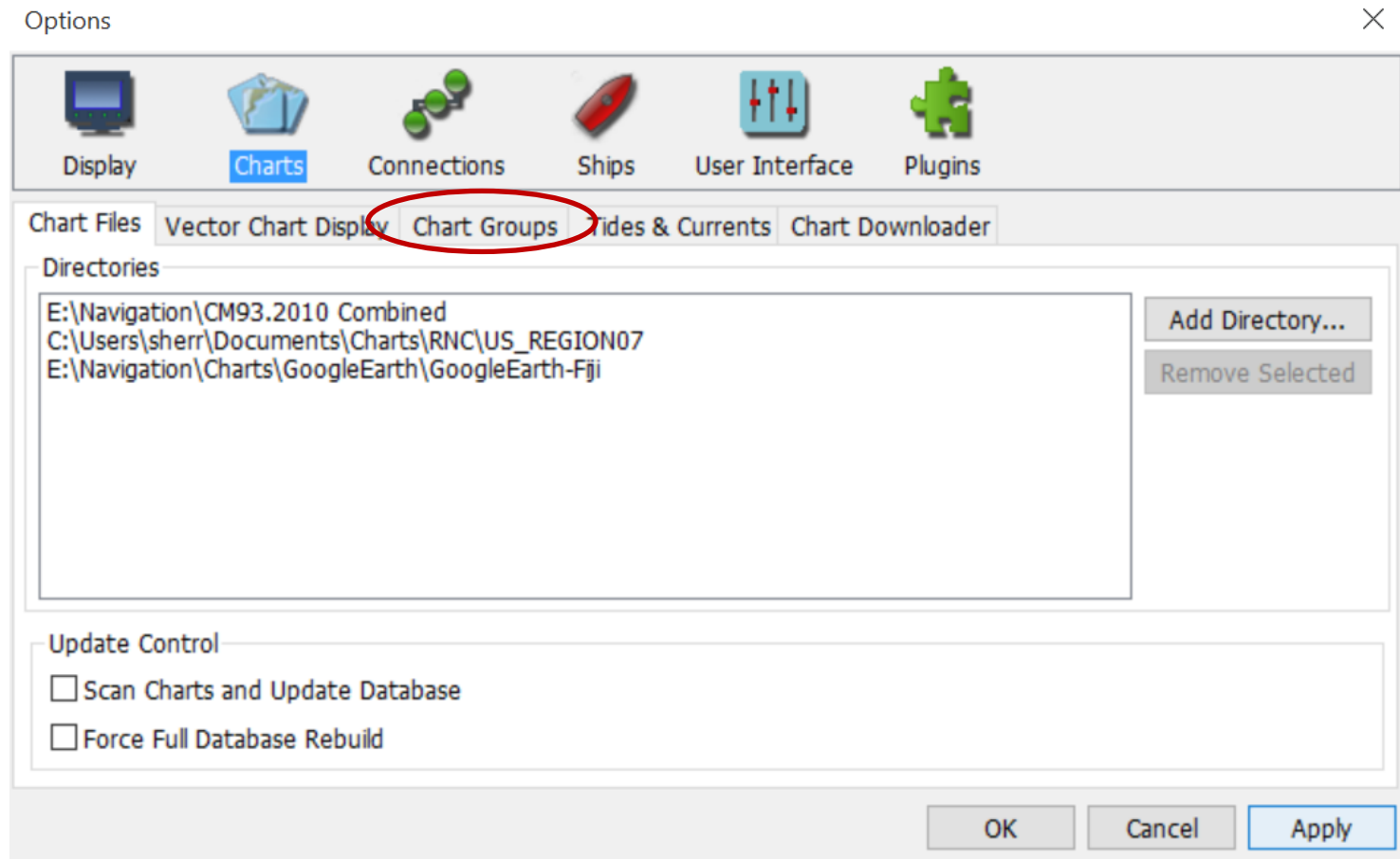
- See long list in Chart Sources section of manual
- Google Earth Charts <http://svsoggypaws.com/GECharts>
- Crowd-sourced charts <http://OpenSeaMap.org>
- Cruiser sharing (Legacy Raster and Vector Charts)
- Bottom line: Don't leave home without an external drive!

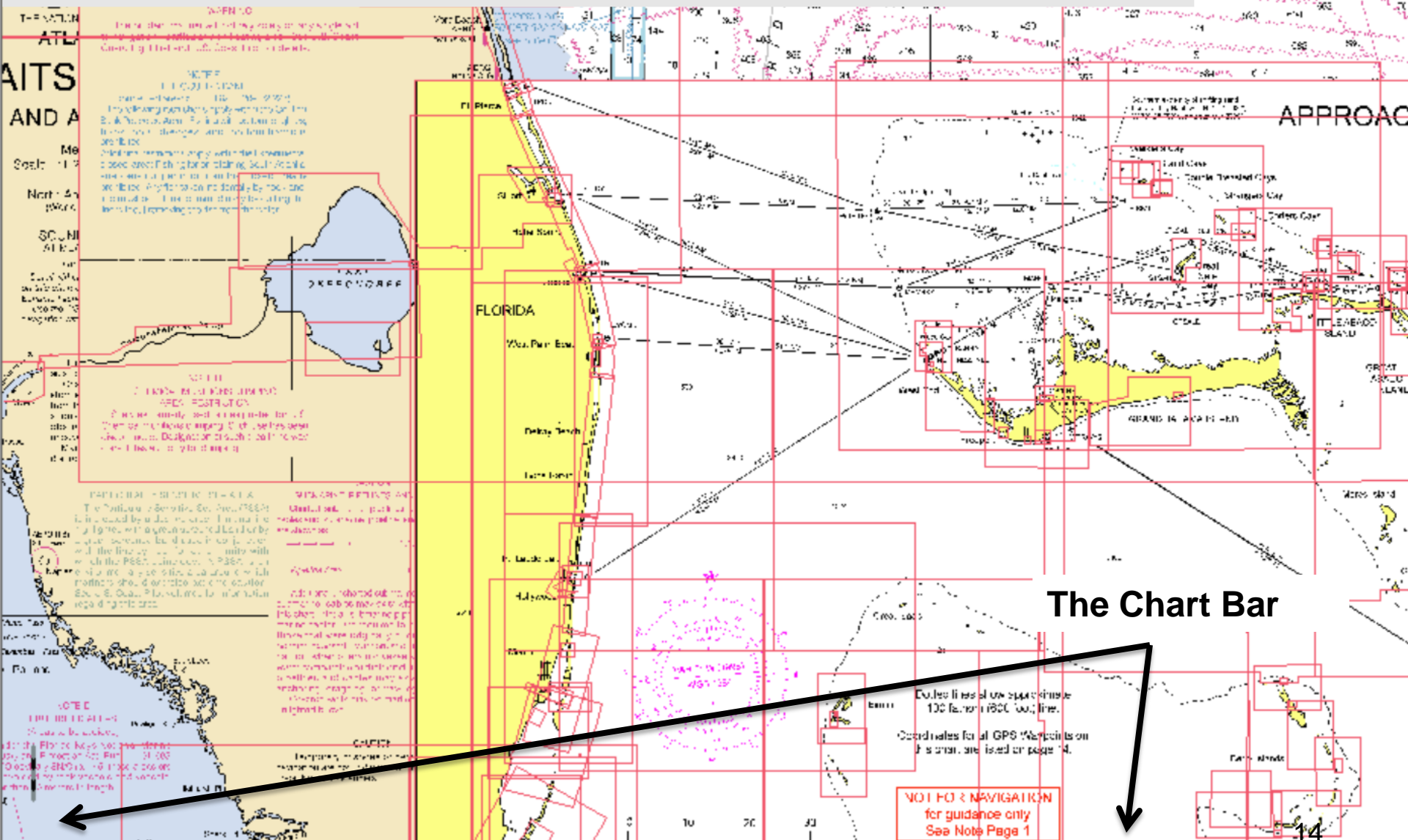
# Managing Charts

The more charts you load, the longer it takes

Overlapping charts from different sources get confusing (FL/Bahamas)

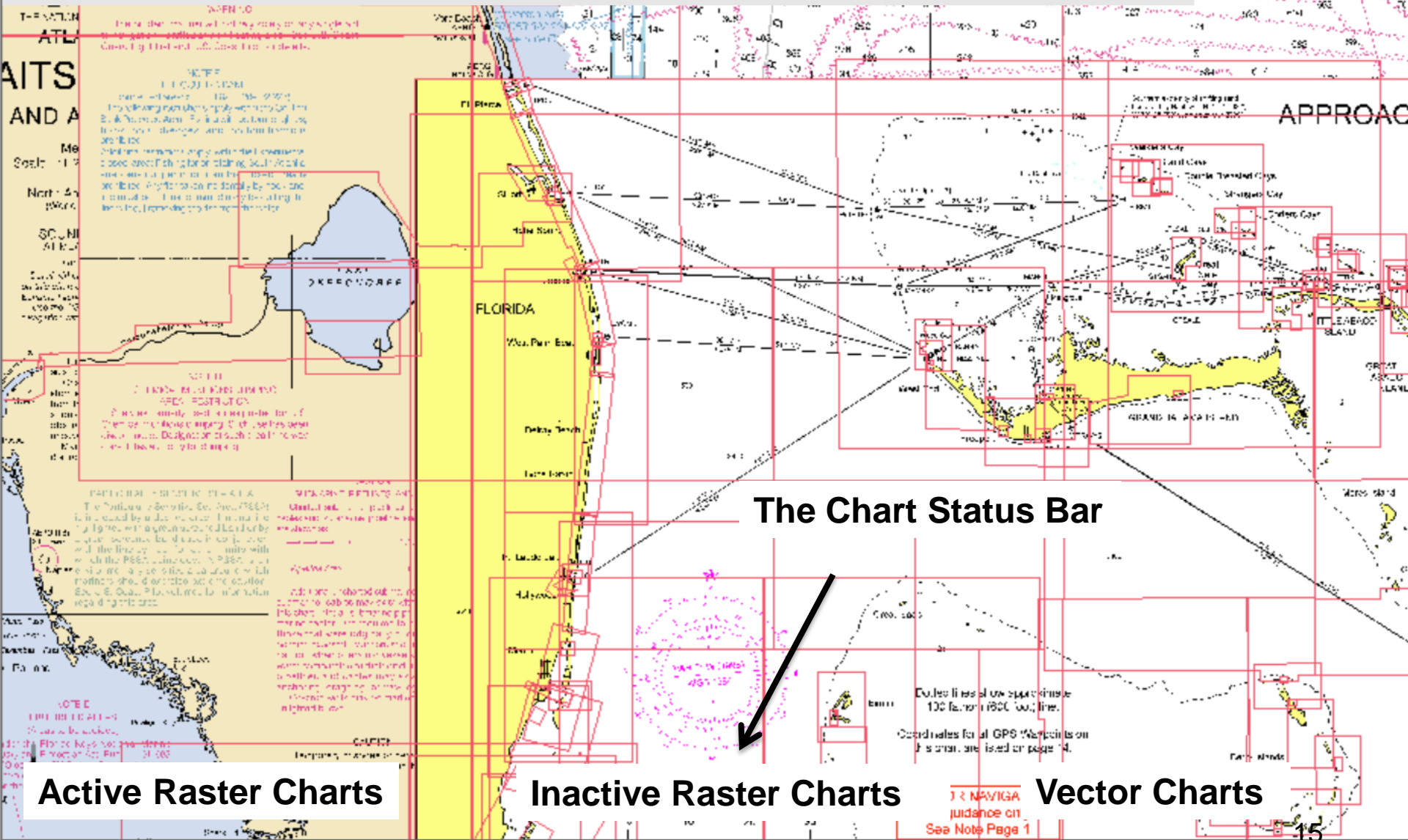
“Chart Groups” lets you manage groups of charts





The Chart Bar





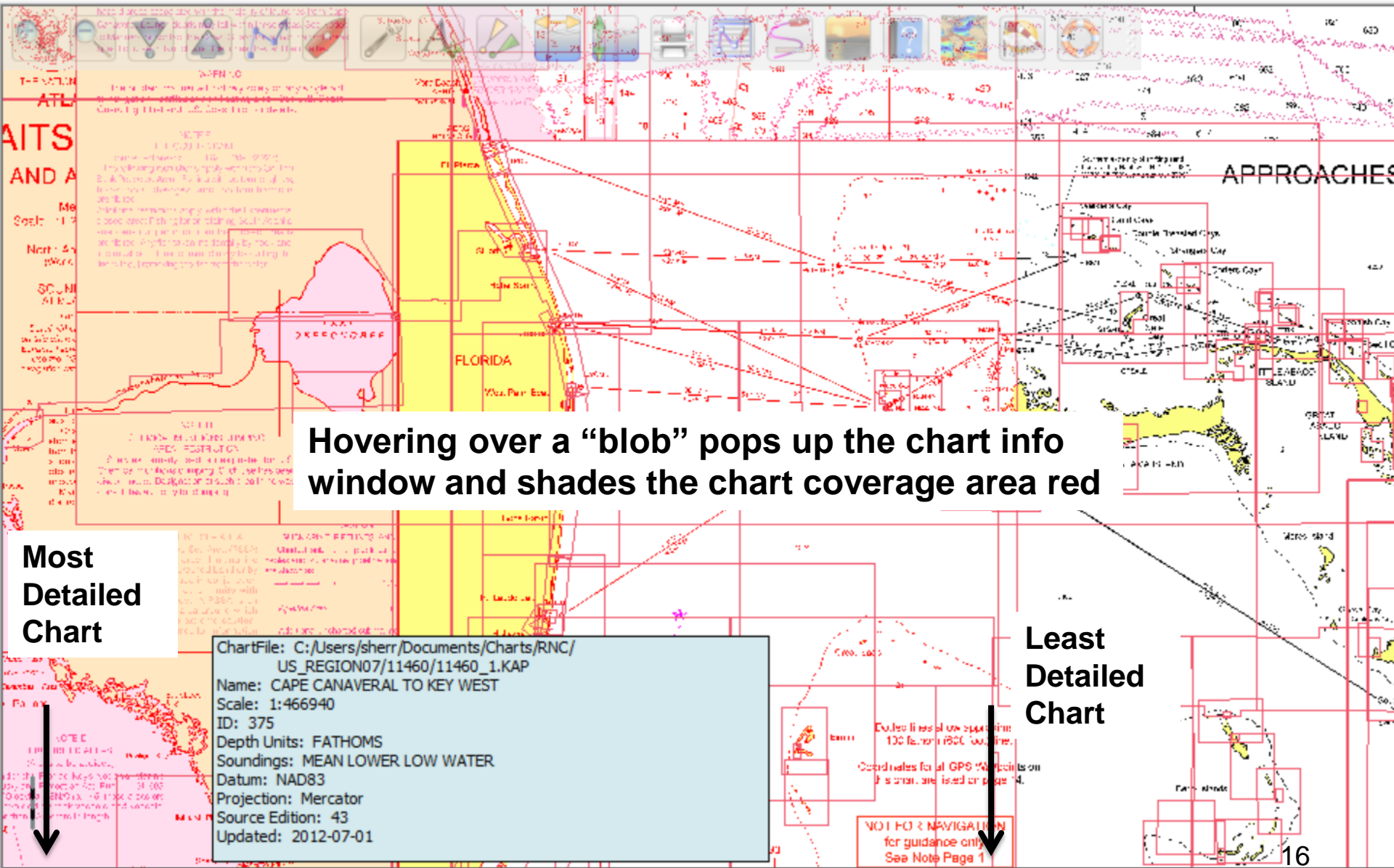
### The Chart Status Bar

Active Raster Charts

Inactive Raster Charts

Vector Charts

NAVIGATOR guidance on See Note Page 1



Hovering over a "blob" pops up the chart info window and shades the chart coverage area red

Most Detailed Chart

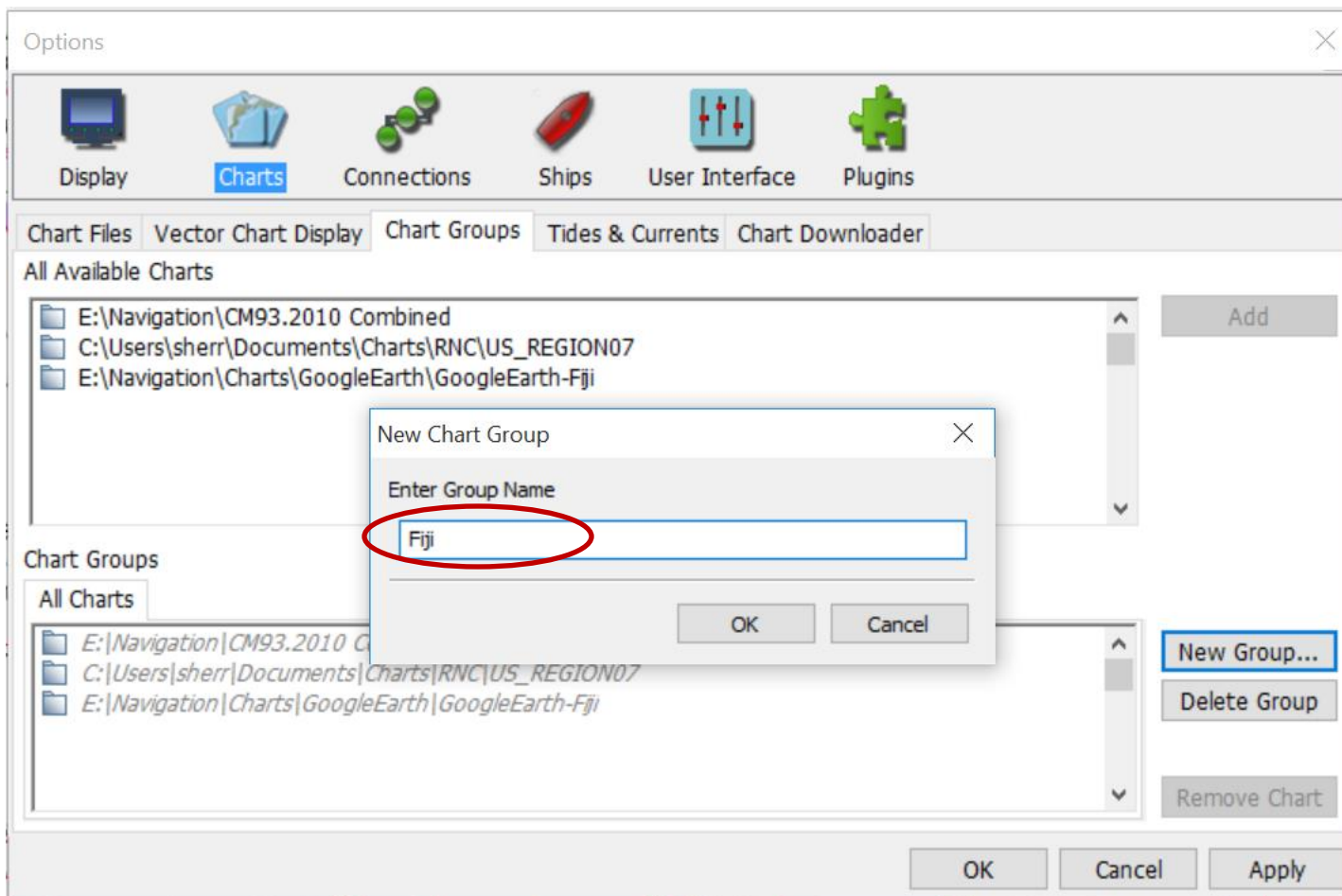
Least Detailed Chart





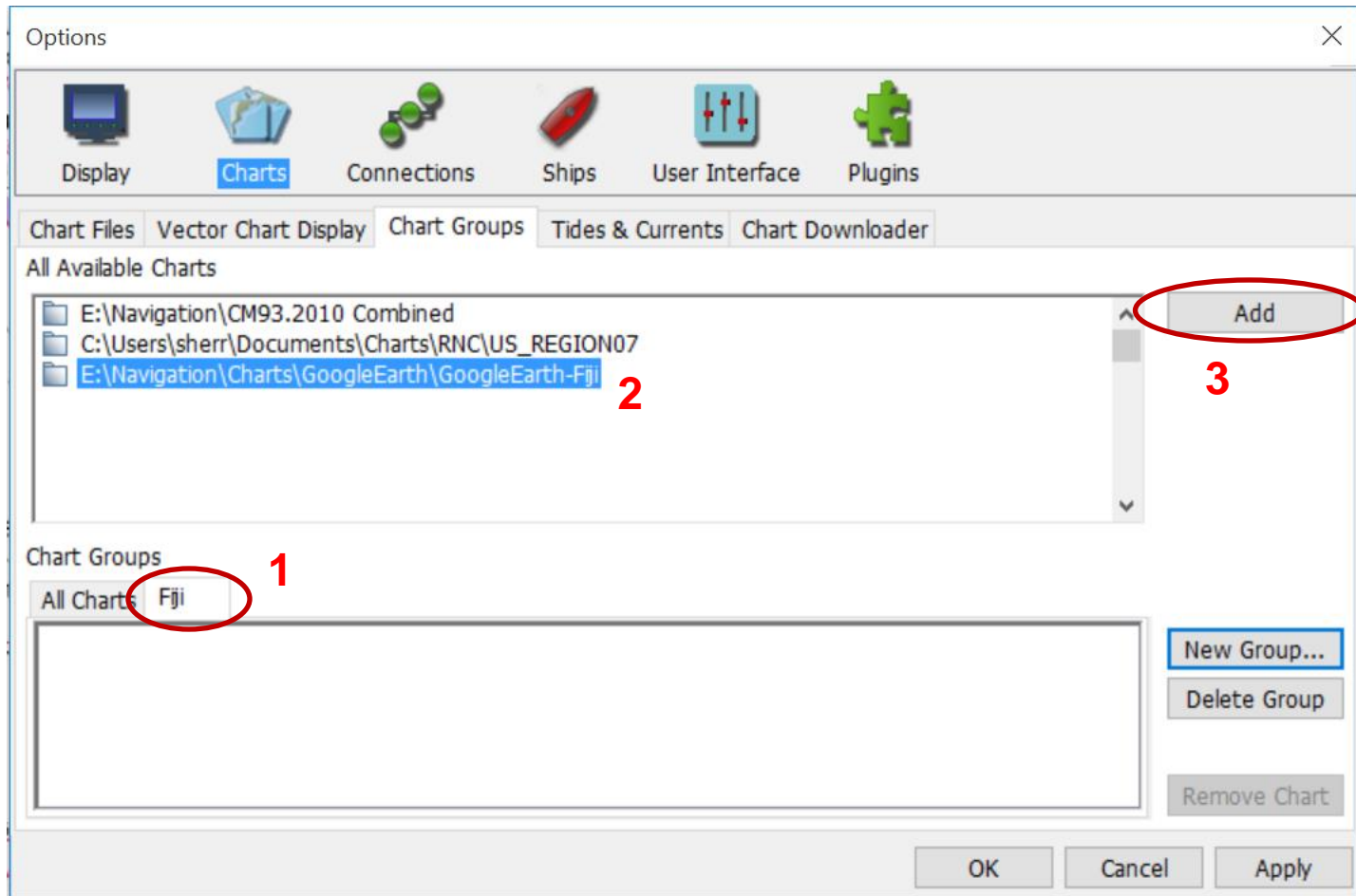
# Creating Chart Groups

Create a Chart Group



# Creating Chart Groups

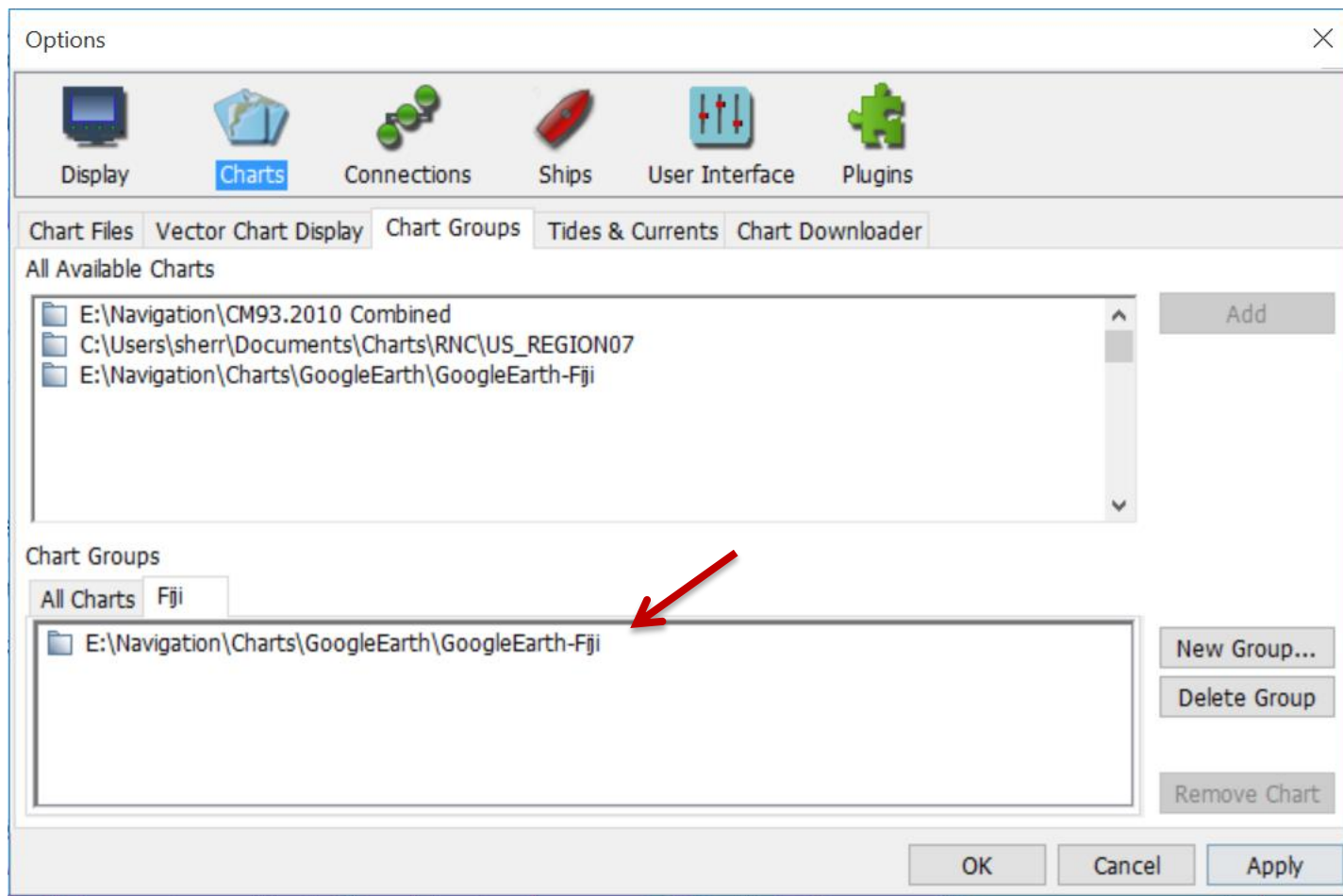
Create a Chart Group





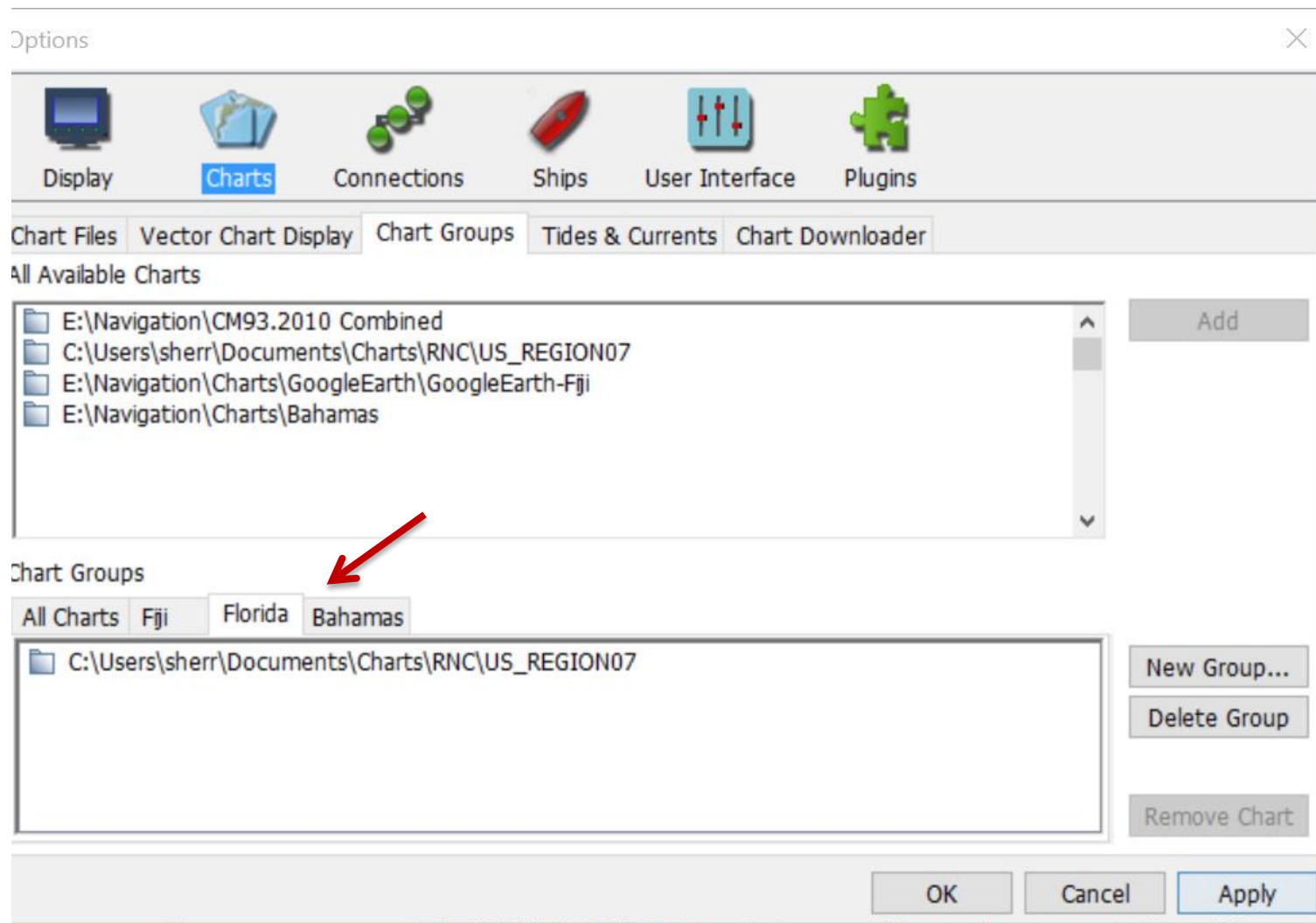
# Creating Chart Groups

Create a Chart Group



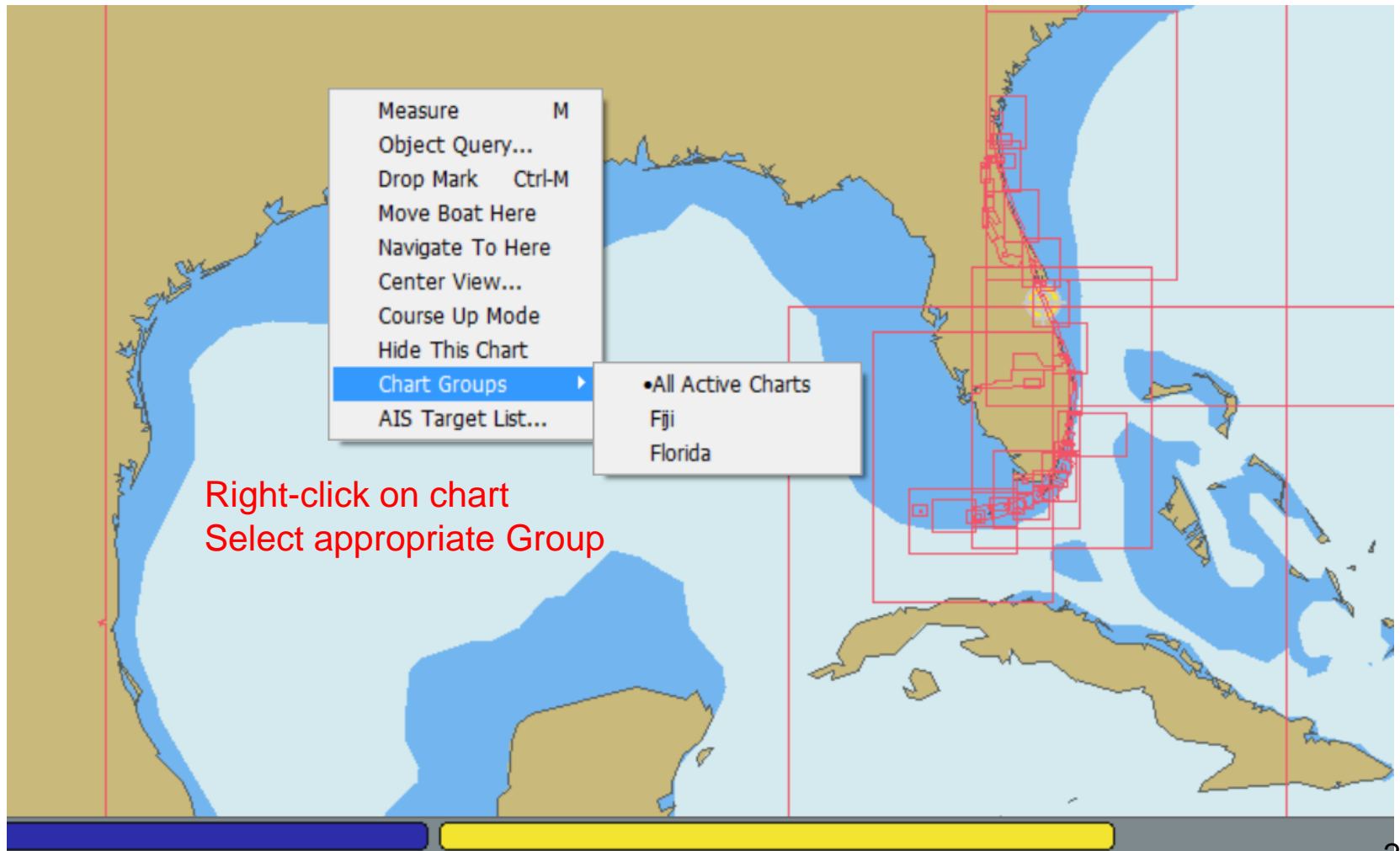
# Creating Chart Groups

## Create a Chart Group



# Chart Groups

## Using Chart Groups



# Setting Up a GPS

- Cheap and easy:
  - GlobalSat BU-353-S4 USB GPS Receiver (Amazon.com \$30)
- OpenCPN also “plays well” with Garmin devices
- Any NMEA standard devices



# Setting Up a GPS



Options ×

1

Display Charts **Connections** Ships User Interface Plugins

General

Filter NMEA Course and Speed data Filter period (sec)

Show NMEA Debug Window

Format uploads for Furuno GP3X

Use Garmin GRMN (Host) mode for uploads

Use magnetic bearings in output sentence ECAPB

Data Connections

Enable	Type	D.	Priority	Parameters	Connection	F..
--------	------	----	----------	------------	------------	-----

2

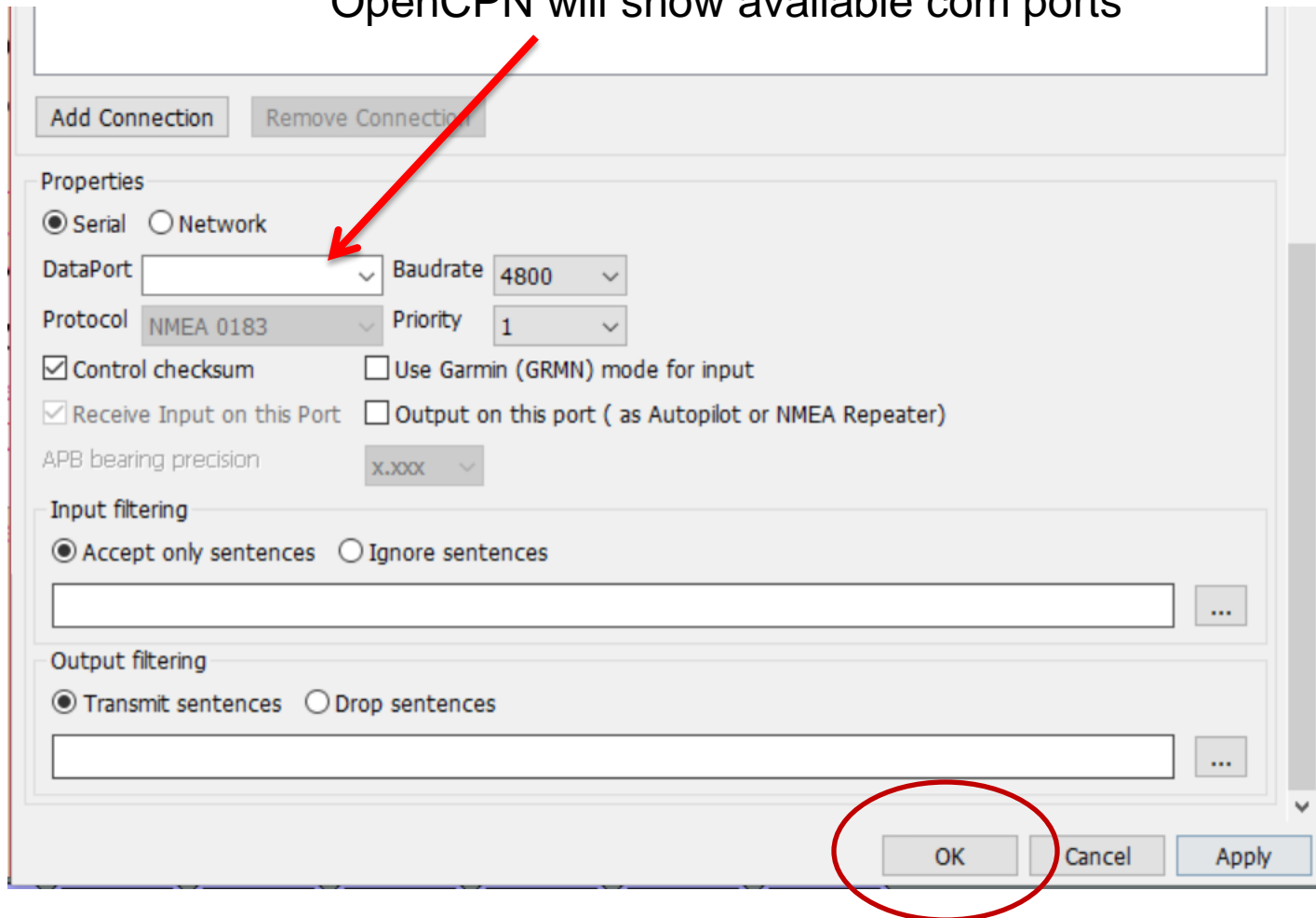
**Add Connection** Remove Connection

Add Connection button opens a panel in this area of the screen  
Need to scroll down to see it

OK Cancel Apply

# Setting Up a GPS

With your GPS on and plugged in, click this drop-down  
OpenCPN will show available com ports

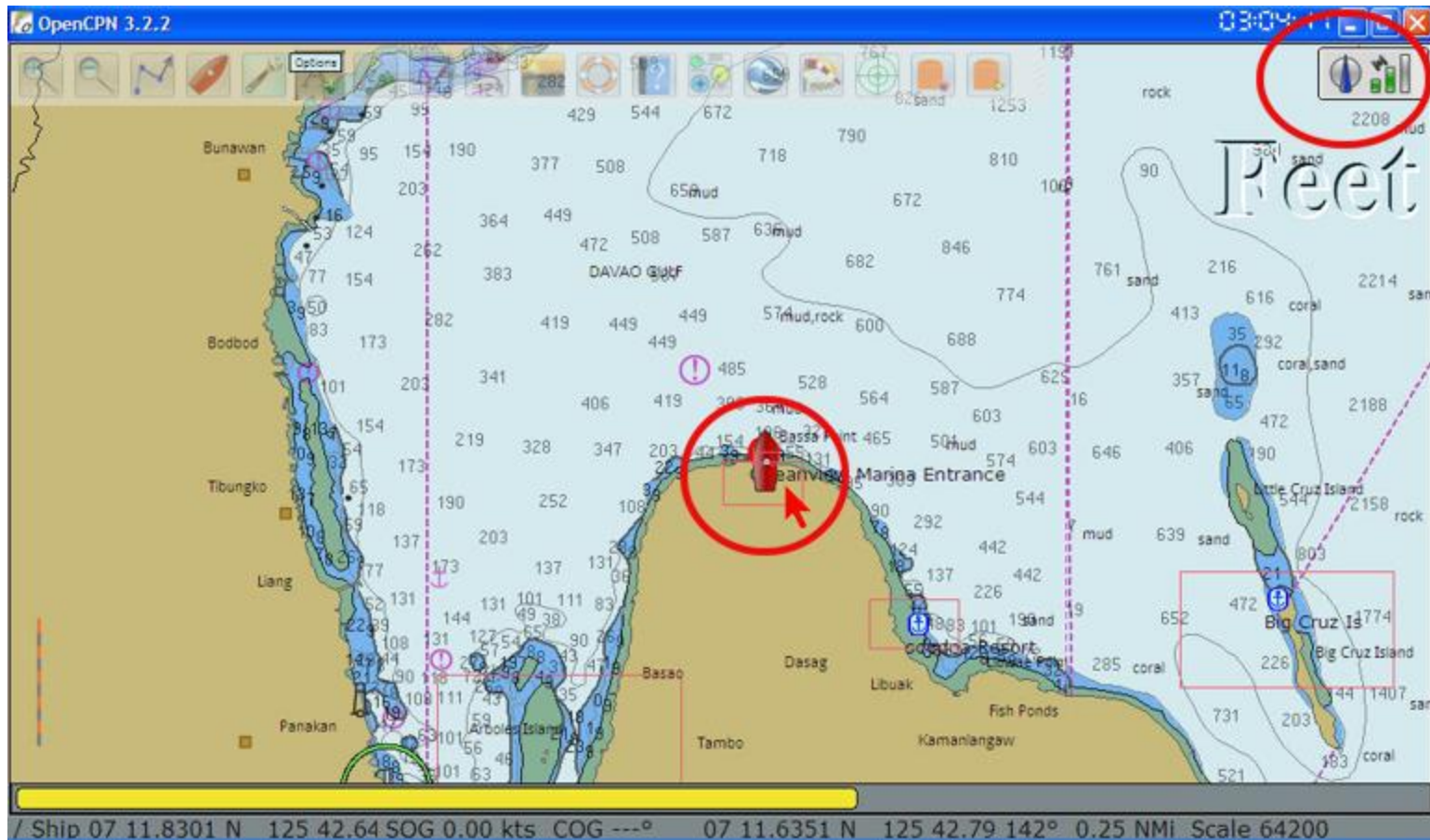


For a simple NMEA GPS for position input, that's all you need to do!

# Setting Up a GPS

Once GPS configured

- GPS Status Panel should show Green
- Boat Icon should show Red

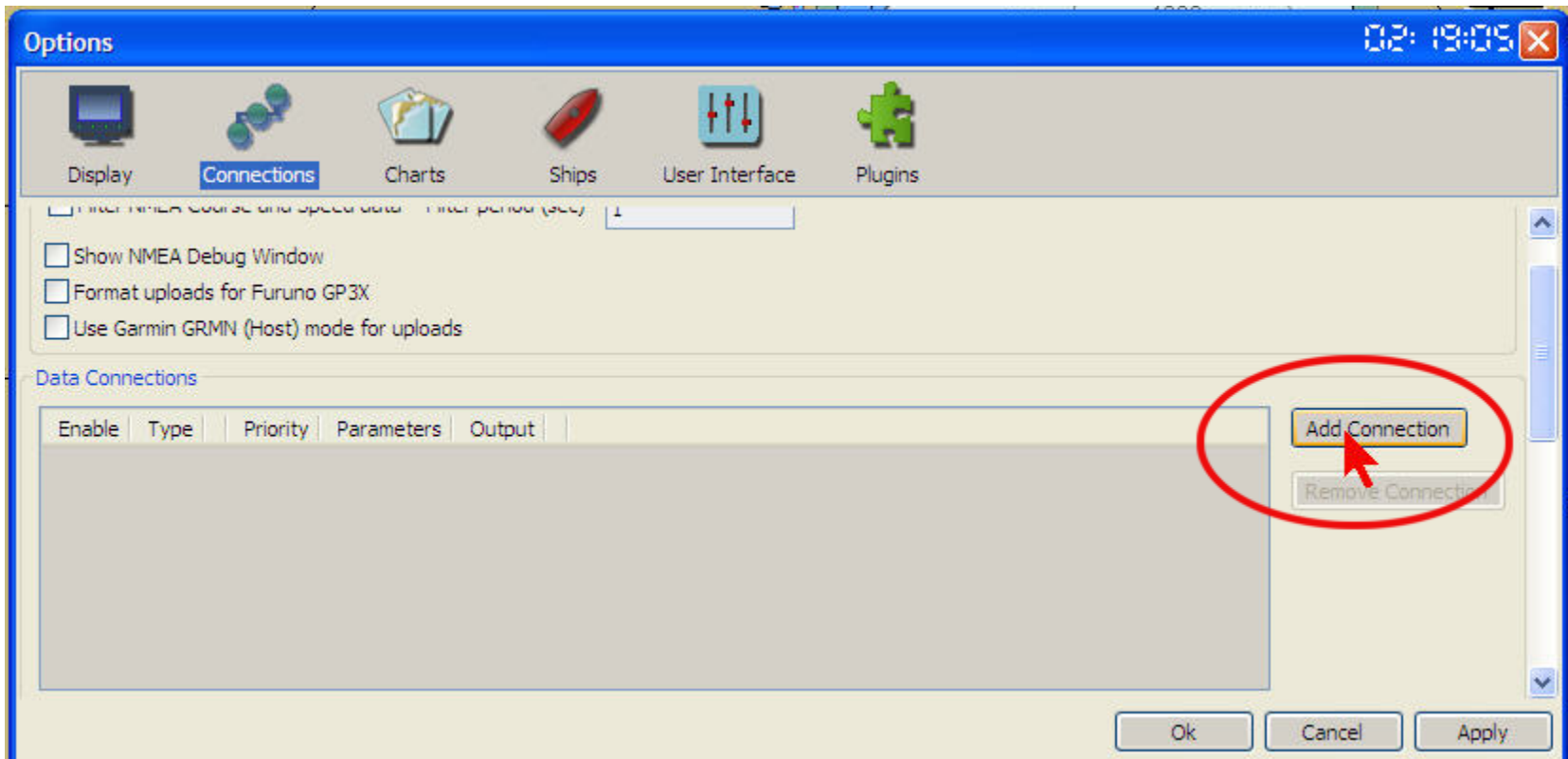




# Getting Your AIS on the Chart

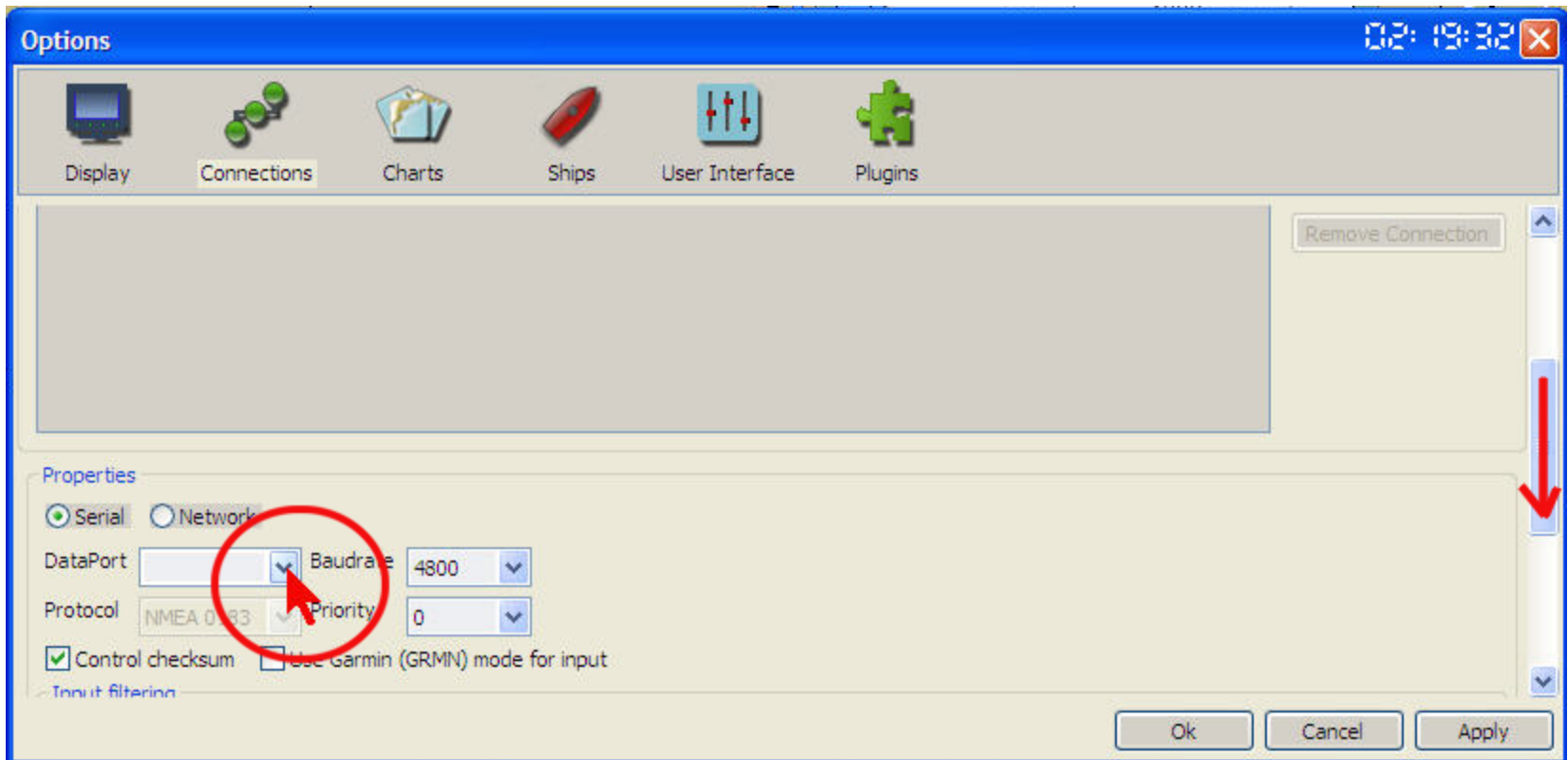


- Plug AIS into your computer
  - Usually a USB connection, using manufacturer-supplied cables and drivers
- Setup / Connections / Add Connection just like GPS



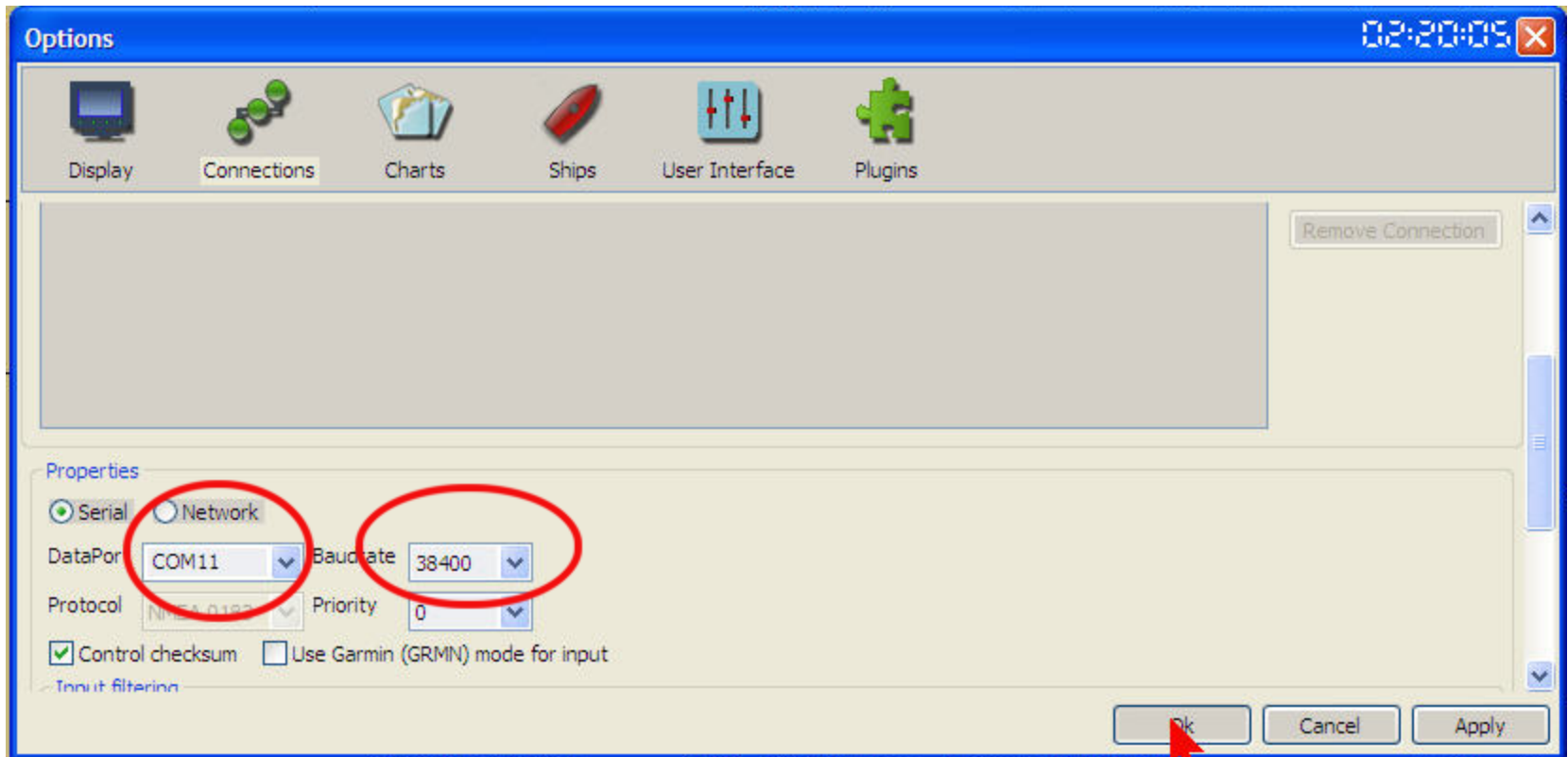
# Getting Your AIS on the Chart

Just like GPS Setup, Click the Add Connection button



# Getting Your AIS on the Chart

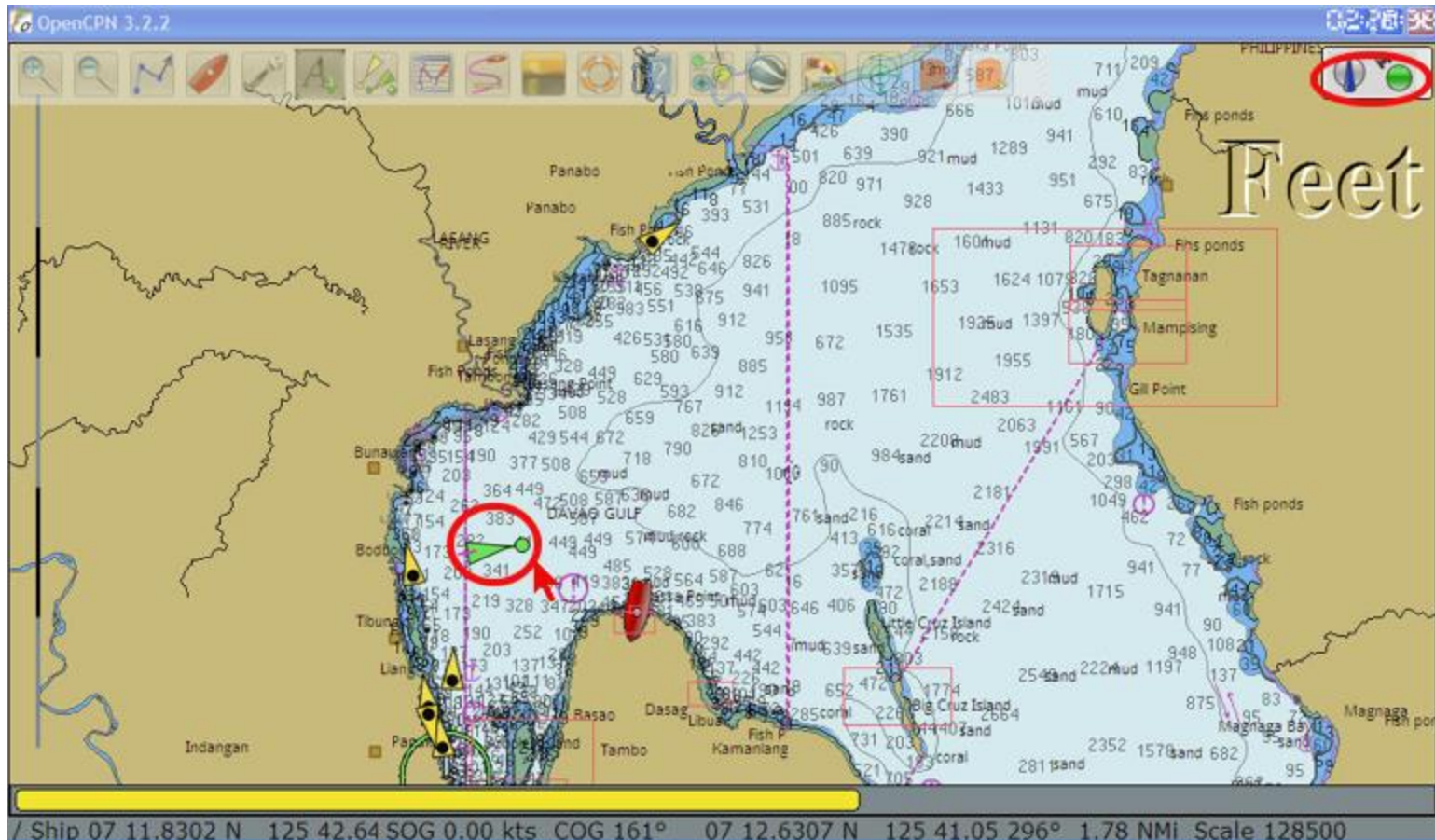
- Select the appropriate Com port
- Set Baud Rate to 38400 (usual default rate for AIS)



# Getting Your AIS on the Chart

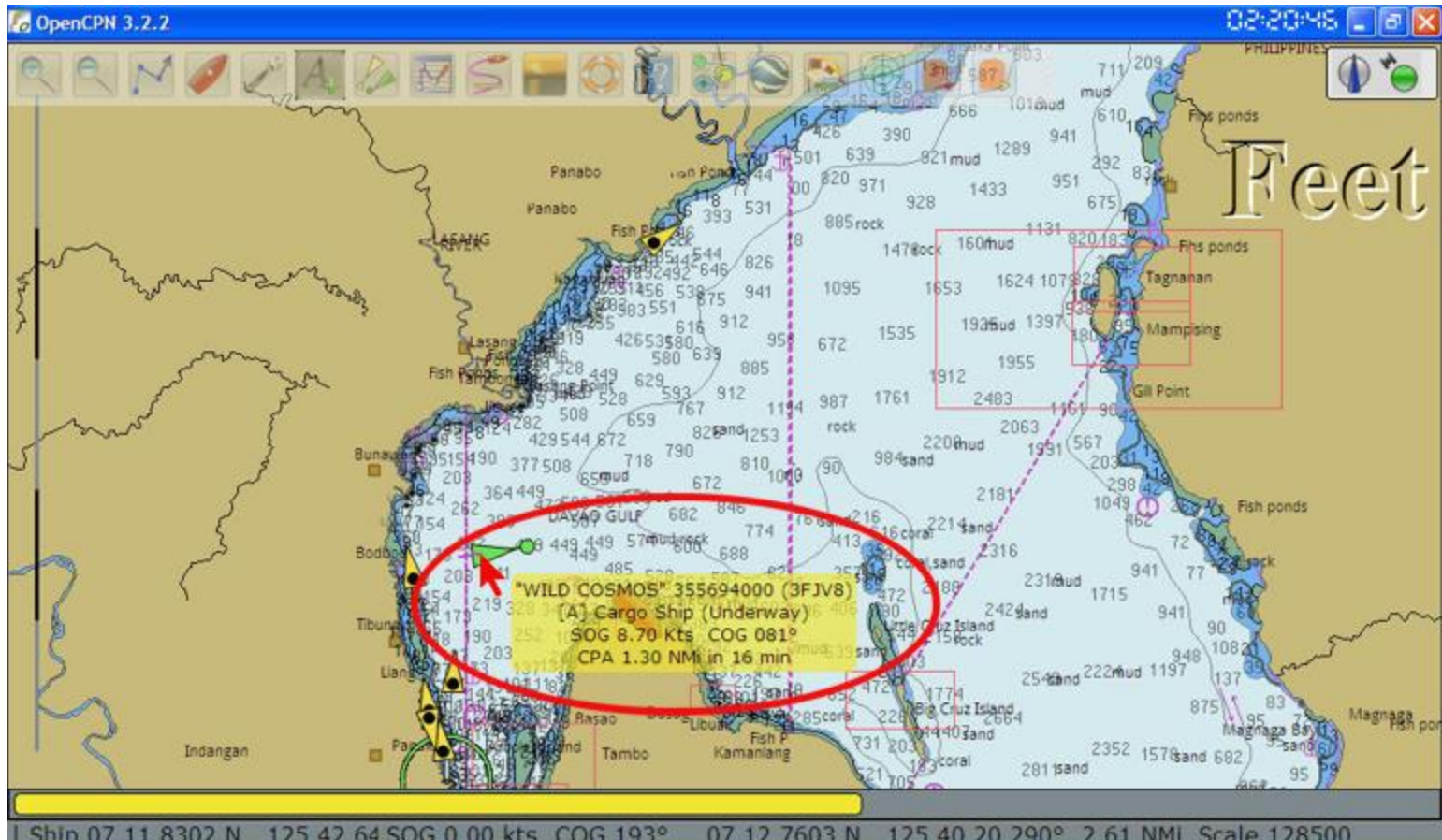
Once installed and configured – Ships with AIS on your chart!

- Ships at anchor – Yellow with black dot
- Ships underway – Green
- GPS Status Indicator Green Ball



# Getting Your AIS on the Chart

Placing your cursor on a ship gives a pop-up information box

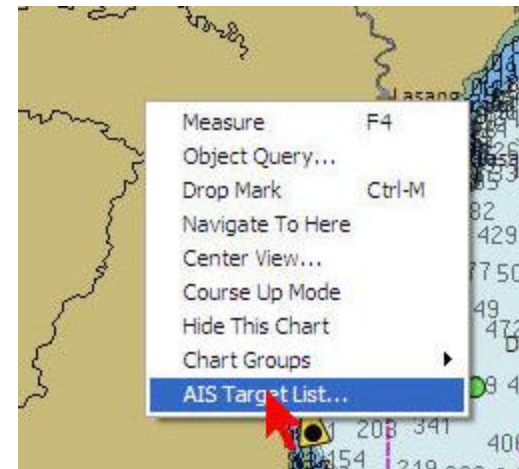






# Getting Your AIS on the Chart

- Right-click anywhere on chart to pop up the AIS Target List
- Note details of ships in the list



AIS target list										02:28:19	
Name	Call	MMSI ▲	Class	Type	Nav Status	Brg	Range	CoG	SoG	Target info	Center View
CALA PIANA	PJBW	306338000	A	Unknown	Undefined	-	-	-	-		
Unknown		308462000	A	Unknown	Moored	002	5.73	226	0.0		
AUTUMN WAVE	C6LF9	308668000	A	Unknown	Undefined	-	-	-	-		
SASANQUA	3FFV3	352256000	A	Cargo Ship	Undefined	-	-	-	-		
WILD COSMOS	3FJV8	355694000	A	Cargo Ship	Underway	291	2.57	081	8.8		
Unknown		357094000	A	Unknown	At Anchor	250	3.05	112	0.0		
Unknown		357322000	A	Unknown	Moored	279	3.52	254	0.1		
QING HE	VRCD2	477296500	A	Cargo Ship	Undefined	-	-	-	-		
Unknown		477866500	A	Unknown	Moored	235	3.68	211	0.0		
Unknown		574240000	A	Unknown	Moored	246	3.56	286	0.0		
Unknown		574400000	A	Unknown	Moored	244	3.60	000	0.0		

Limit range: NM  
40  
Target Count  
11



# Getting Your AIS on the Chart



Optional AIS Radar View Plugin



# Getting Your AIS on the Chart

Options

03:19:39

Display Connections Charts **Ships** User Interface Plugins

Own Ship **AIS Targets**

CPA Calculation

- No CPA Calculation if target range is greater than (NMI) 15.0
- Warn if CPA less than (NMI) 0.3
- ...and TCPA is less than (min) 3

Lost Targets

- Mark targets as lost after (min) 8
- Remove lost targets after (min) 10

Display

- Show target COG predictor arrow, length (min) 5
- Show target tracks, length (min) 20
- Hide anchored/moored targets, speed max (kn) 0.2
- Show area notices (from AIS binary messages)
- Show AIS targets real size

Rollover

\*Ship Name\* MMSI (Call Sign)

- [Class] Type (Status)
- SOG COG
- CPA TCPA

CPA/TCPA Alerts

- Show CPA/TCPA Alert Dialog

Select Alert Sound

Ok Cancel Apply

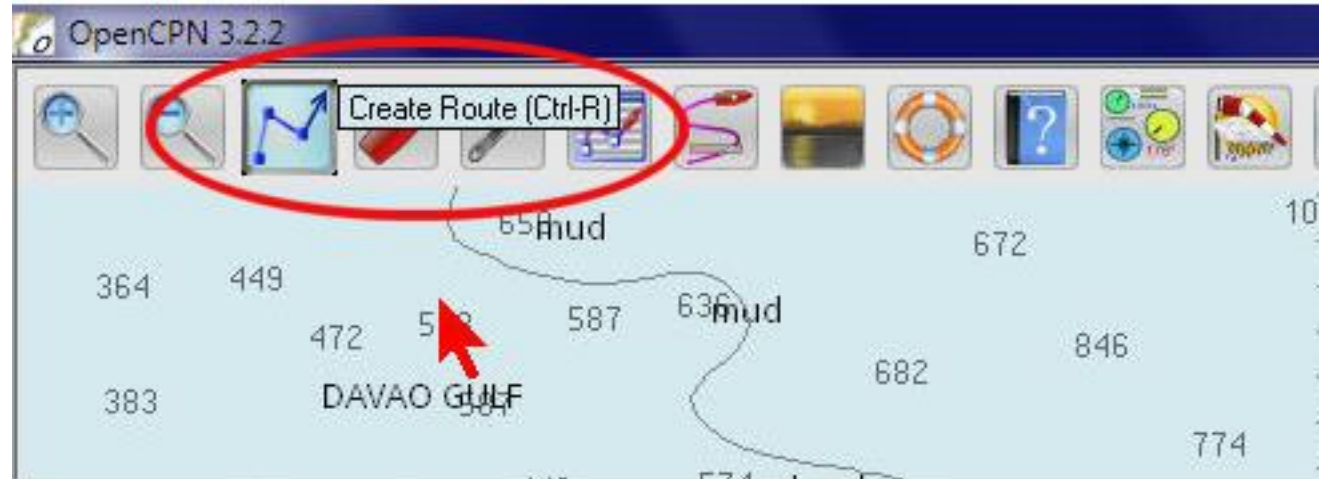
Options/Ships/AIS Targets  
To display optional settings  
For AIS

For more help, see the  
OpenCPN manual!

# Routes

## Create a Route

BEGIN BY  
SELECTING THE  
'Create Route'  
TOOL ON THE  
TOOLBAR



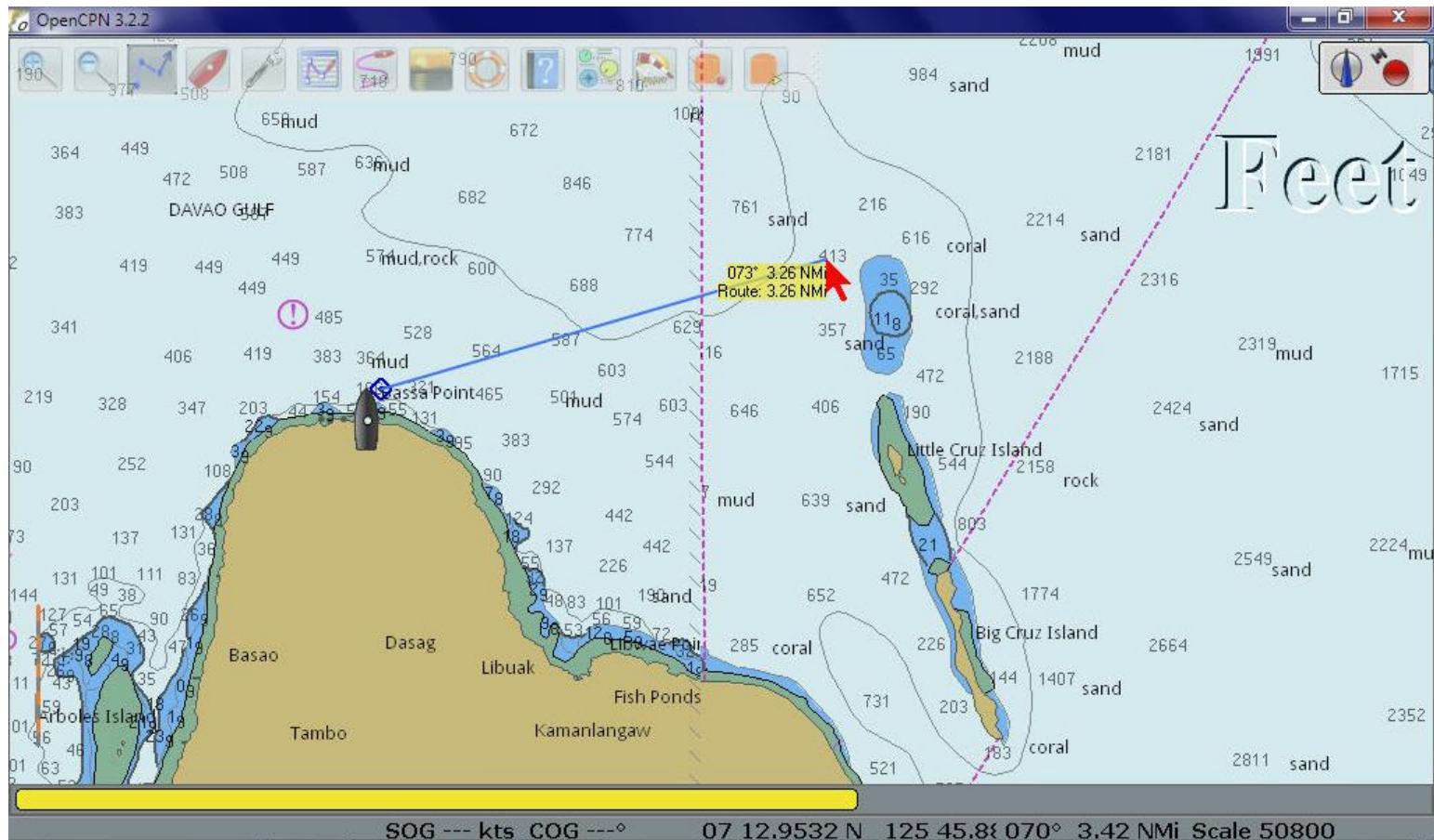
THE CURSOR TURNS TO A  
'PENCIL' SHAPE



# Routes

## Create a Route

Click the pencil pointer at the desired location to describe a route

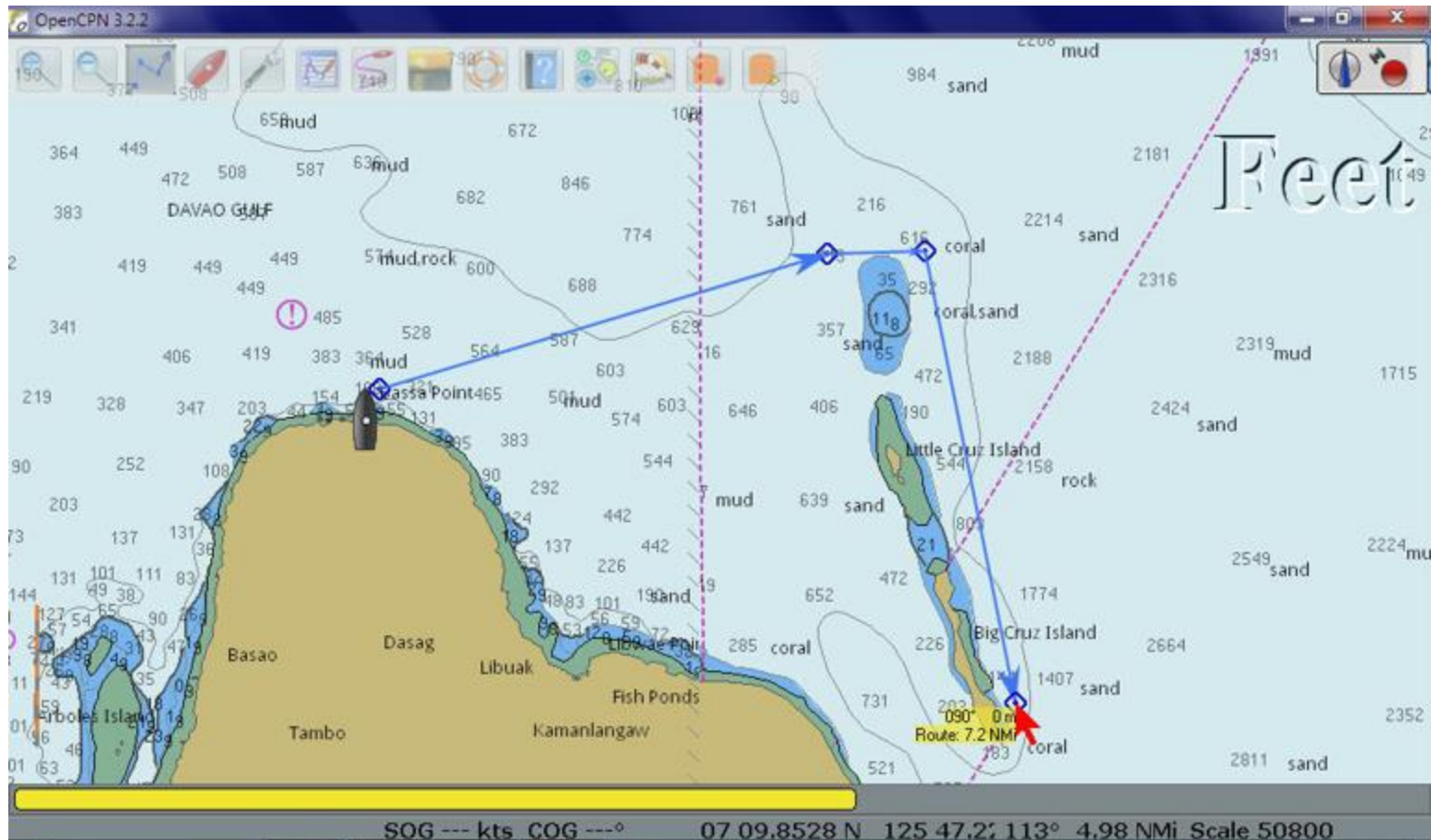




# Routes

## Create a Route

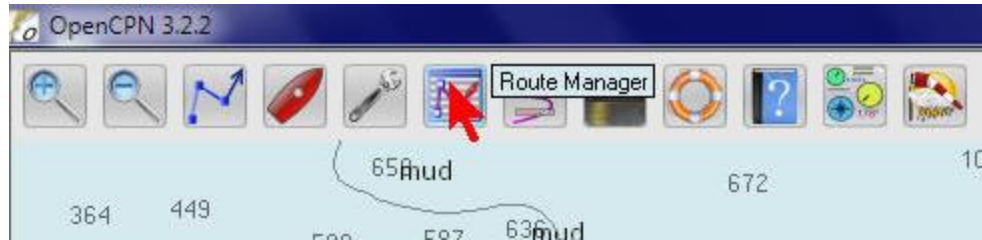
- Continue dropping waypoints (with a click) until you are finished.
- Press the ESC key to stop



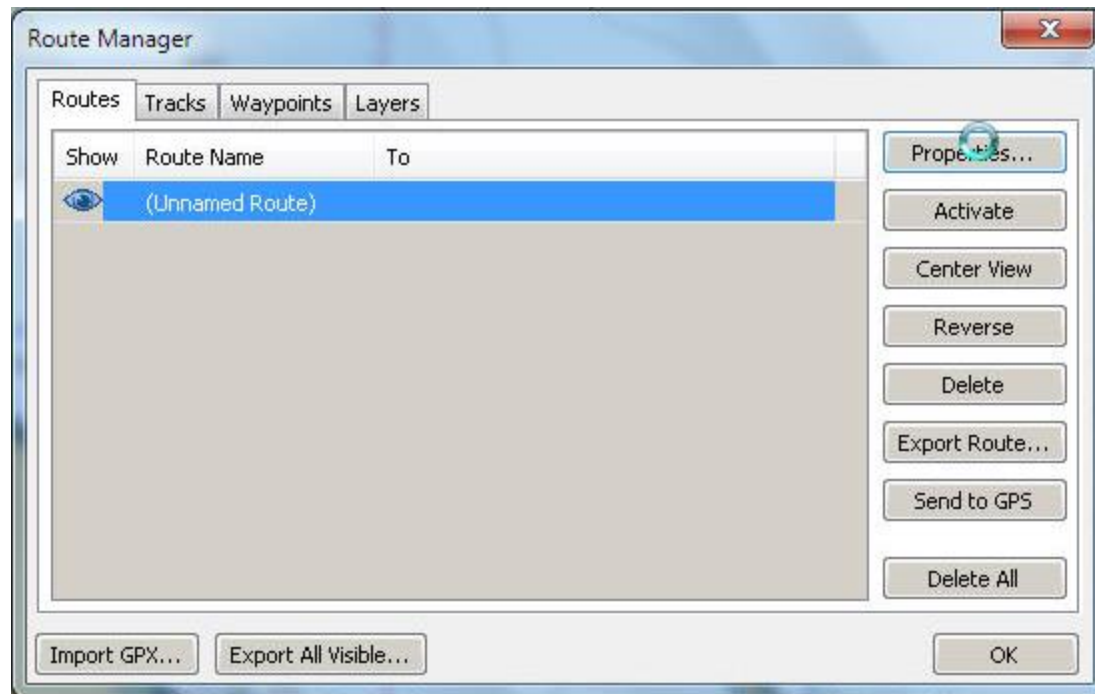
# Routes

## Editing/Viewing a Route

Open the Route Manager from the toolbar



On the Routes tab, select the new route and click Properties





# Routes

## Editing/Viewing a Route

- Name the route (for future reference)
- Check distances and estimate ETA's

Route Properties

Properties

Name: **SAMPLE ROUTE**

Depart From: \_\_\_\_\_ Destination: \_\_\_\_\_

Total Distance: **7.20** Plan speed (Kts): 5.00 Time Enroute: 01 Hours 26 Minutes Departure Time (m/d/y h:m): \_\_\_\_\_

Times shown as:  UTC  Local @ PC  LMT @ Location Color: Default color Style: Default Width: Default

Waypoints

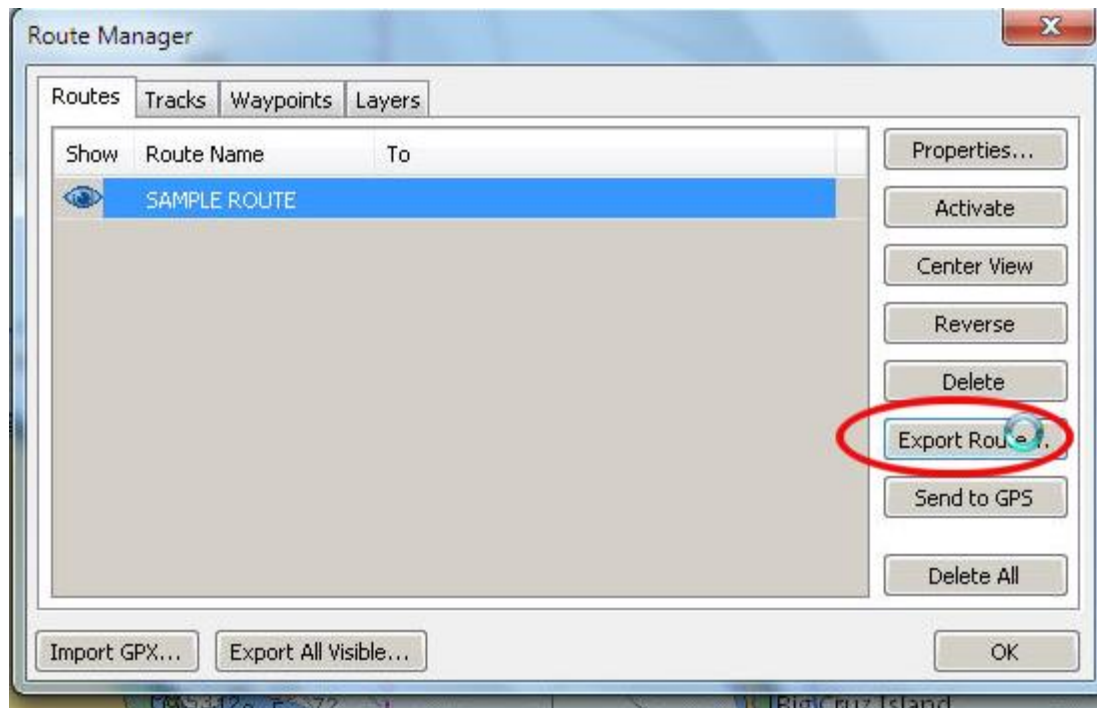
Leg	To Waypoint	Distance	Bearing	Latitude	Longitude	ETE	Speed (Kts)	Next tide event	De
---	001	0.24 NM	025 Deg. T	07 12.0 N	125 42.7 E	Start	5.00		
1	002	3.29 NM	073 Deg. T	07 13.0 N	125 45.9 E	00 H 39 M	5.00		
2	003	0.69 NM	088 Deg. T	07 13.0 N	125 46.6 E	00 H 47 M	5.00		
3	004	3.22 NM	169 Deg. T	07 09.9 N	125 47.2 E	01 H 26 M	5.00		

Print Route Extend Route Split Route Cancel

# Routes

## Save/Export a Route

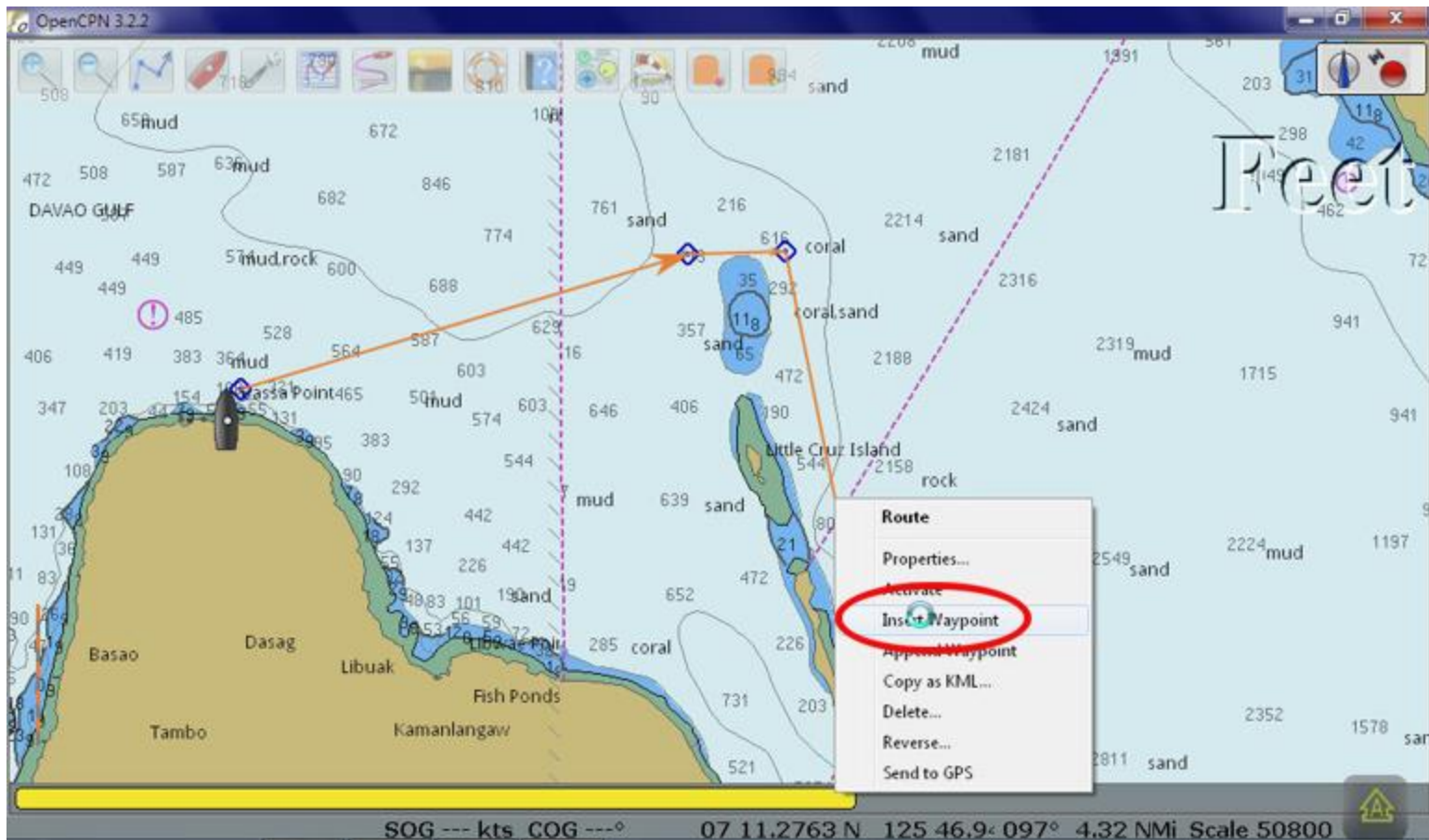
- To save a route outside of OpenCPN (for backup, to share with others)
  - Highlight route
  - Click export
  - Save as a file



# Routes

## Change a Route

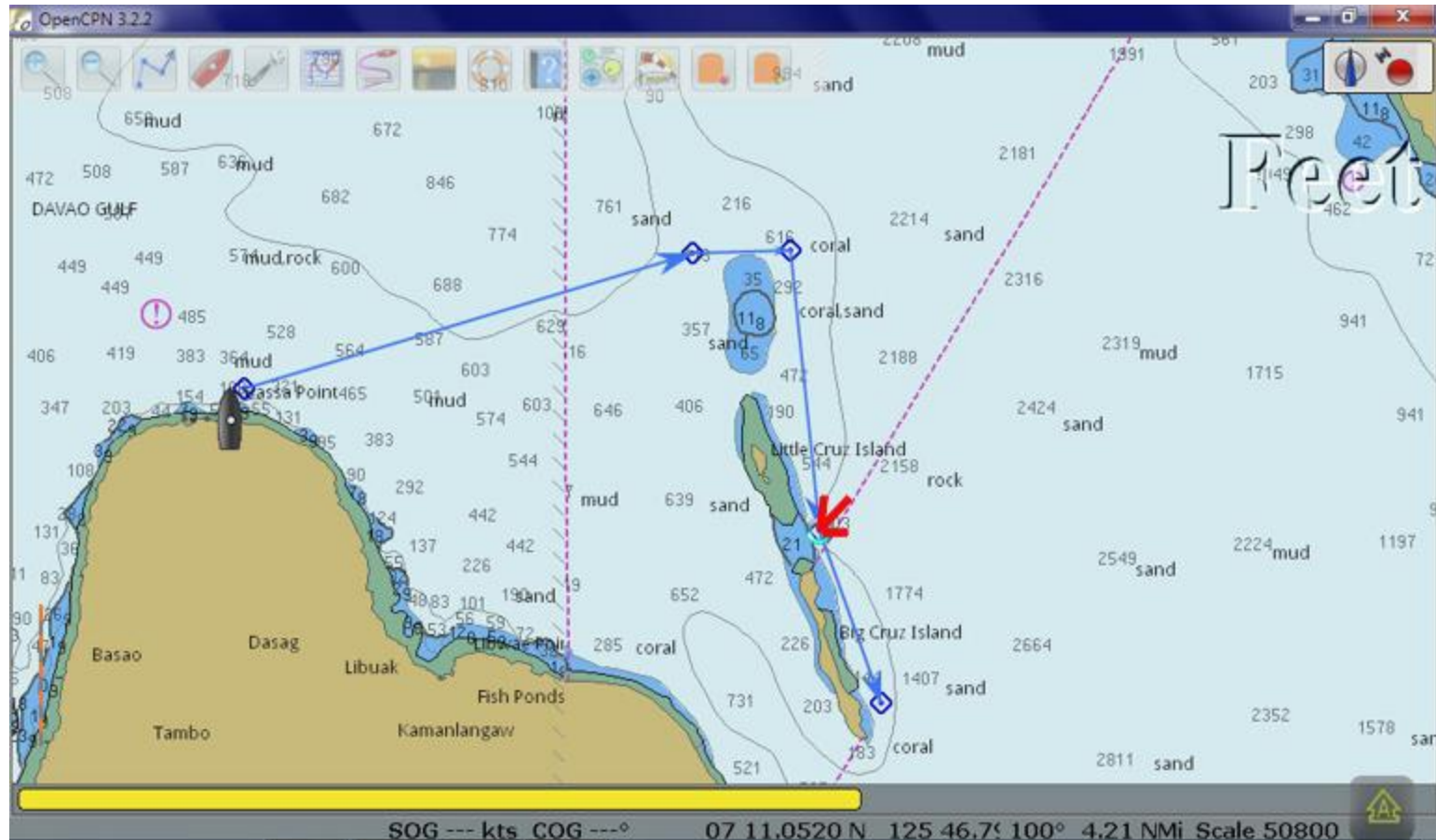
- To change a route
  - Right click on a point on the route
  - Select “Insert Waypoint”



# Routes

## Change a Route

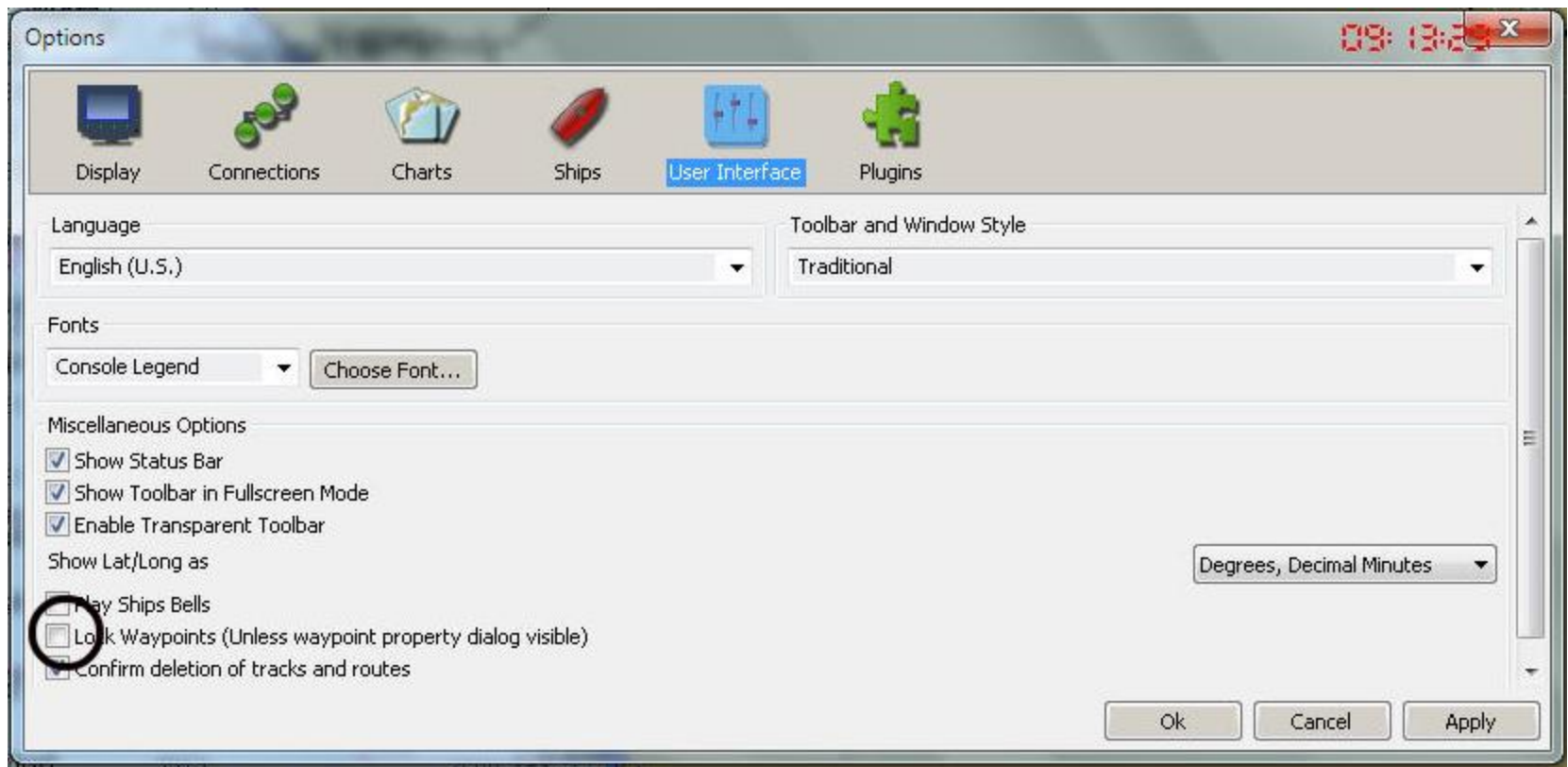
Place cursor on new waypoint, and drag it where it should be



# Routes

## Change a Route

If you can't drag a waypoint, check settings

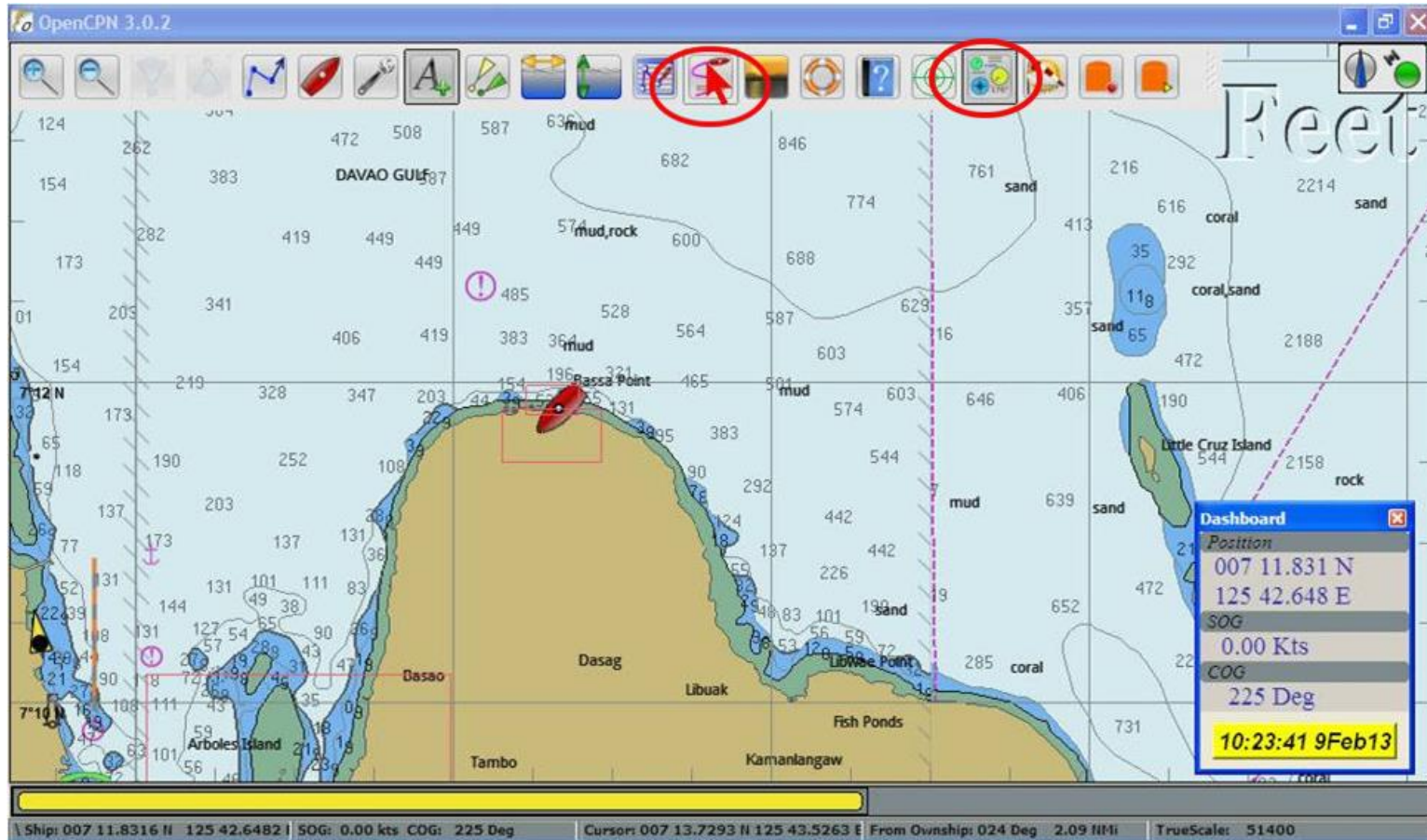




# Tracks

## Creating a Track

Click on the Toggle Tracking Icon to activate tracking

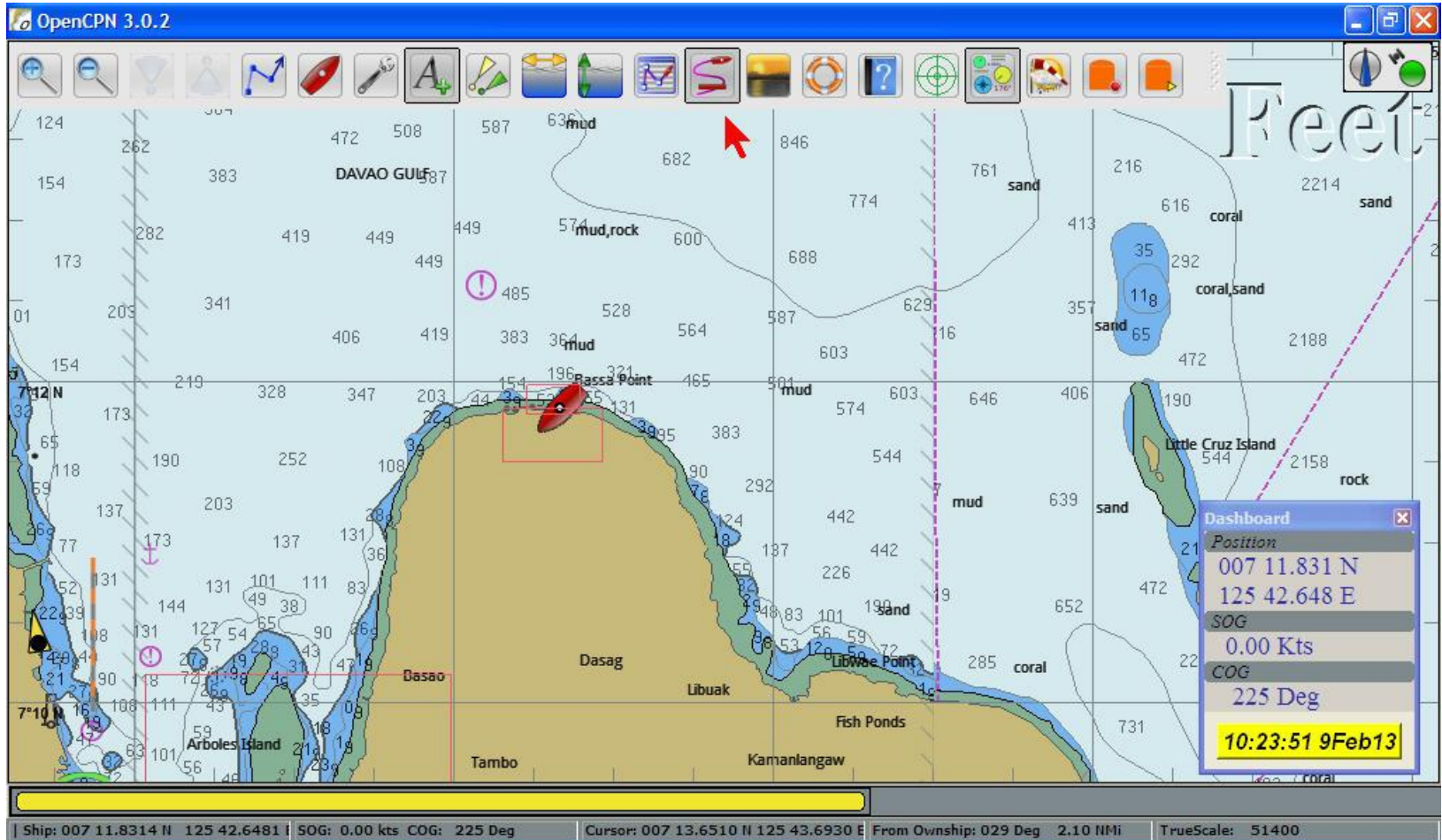




# Tracks

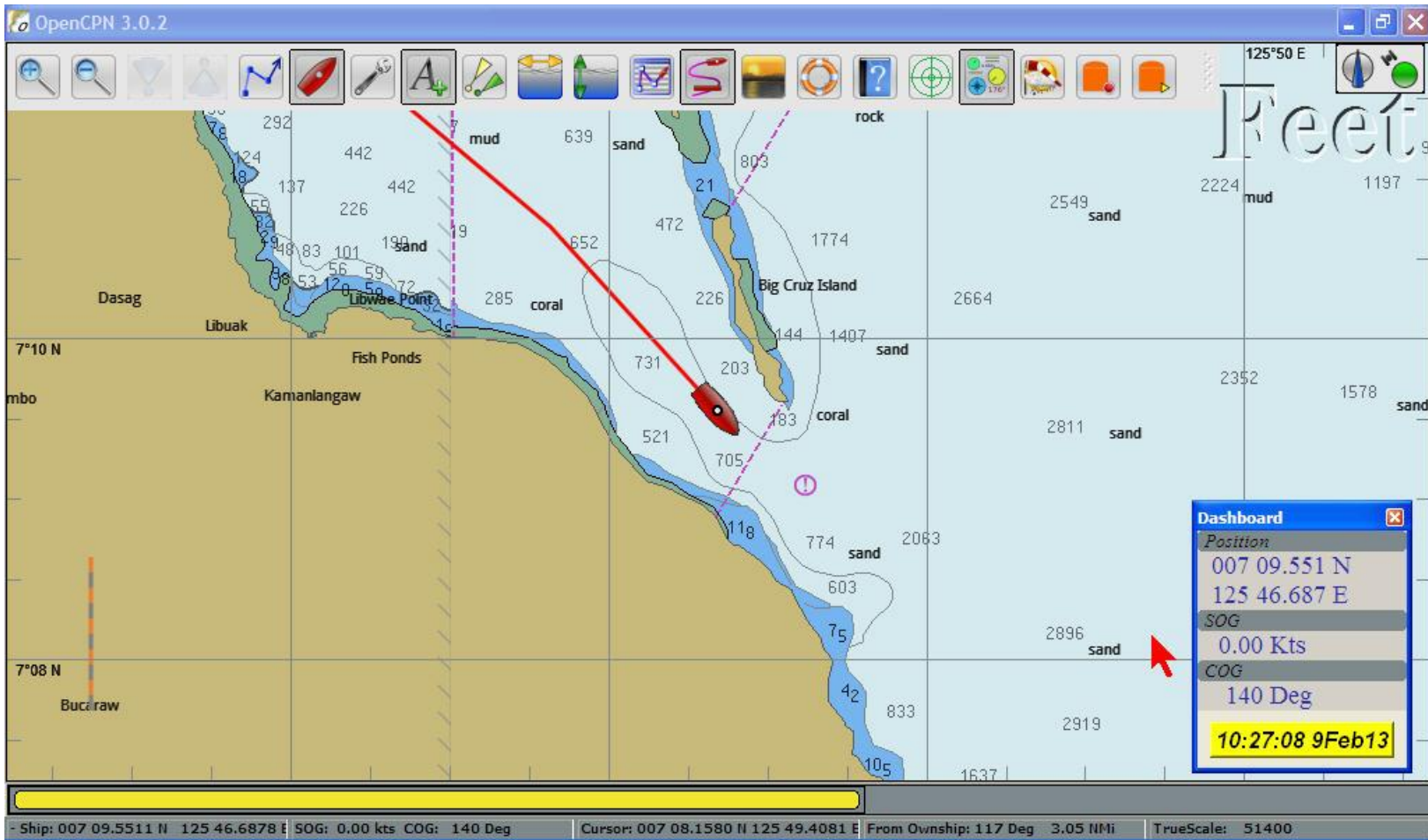
## Creating a Track

Tracking is confirmed by the icon being shaded



# Tracks

## Creating a Track



# Tracks

## Saving Tracks

Like routes,  
You can rename,  
Save offline,  
Import, etc

The screenshot shows the OpenCPN 3.0.2 interface. The 'Route Manager' dialog box is open, displaying a table of tracks. The track '2013-02-09 02:24:02' with a length of 4.97 is highlighted. The 'Export Track...' button is circled in red. A 'Dashboard' window is also visible in the bottom right corner, showing position, speed, and course information.

Track name	Length
2013-02-09 02:24:02	4.97

Dashboard

Position  
007 09.551 N  
125 46.687 E

SOG  
0.00 Kts

COG  
140 Deg

10:27:41 9Feb13

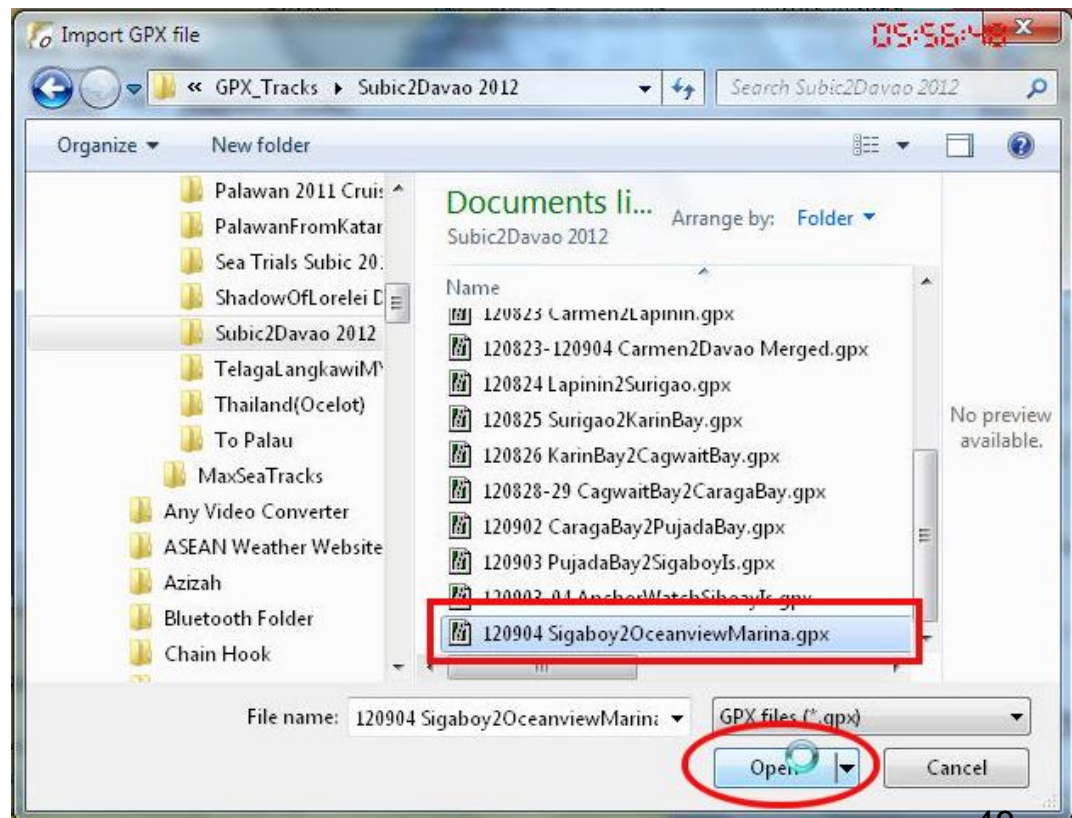
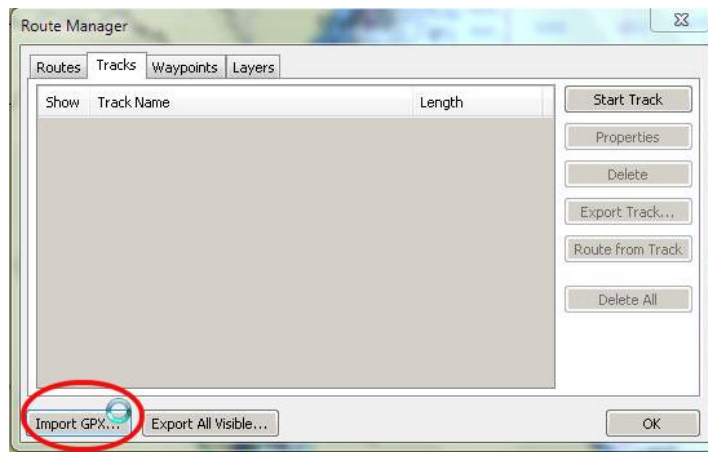
Ships: 007 09.5511 N 125 46.6878 | SOG: 0.00 kts COG: 140 Deg | Cursor: 007 11.1966 N 125 46.6088 E | From Ownship: 357 Deg 1.65 M/N | TrueScale: 51400

# Importing Tracks

## Route Manager

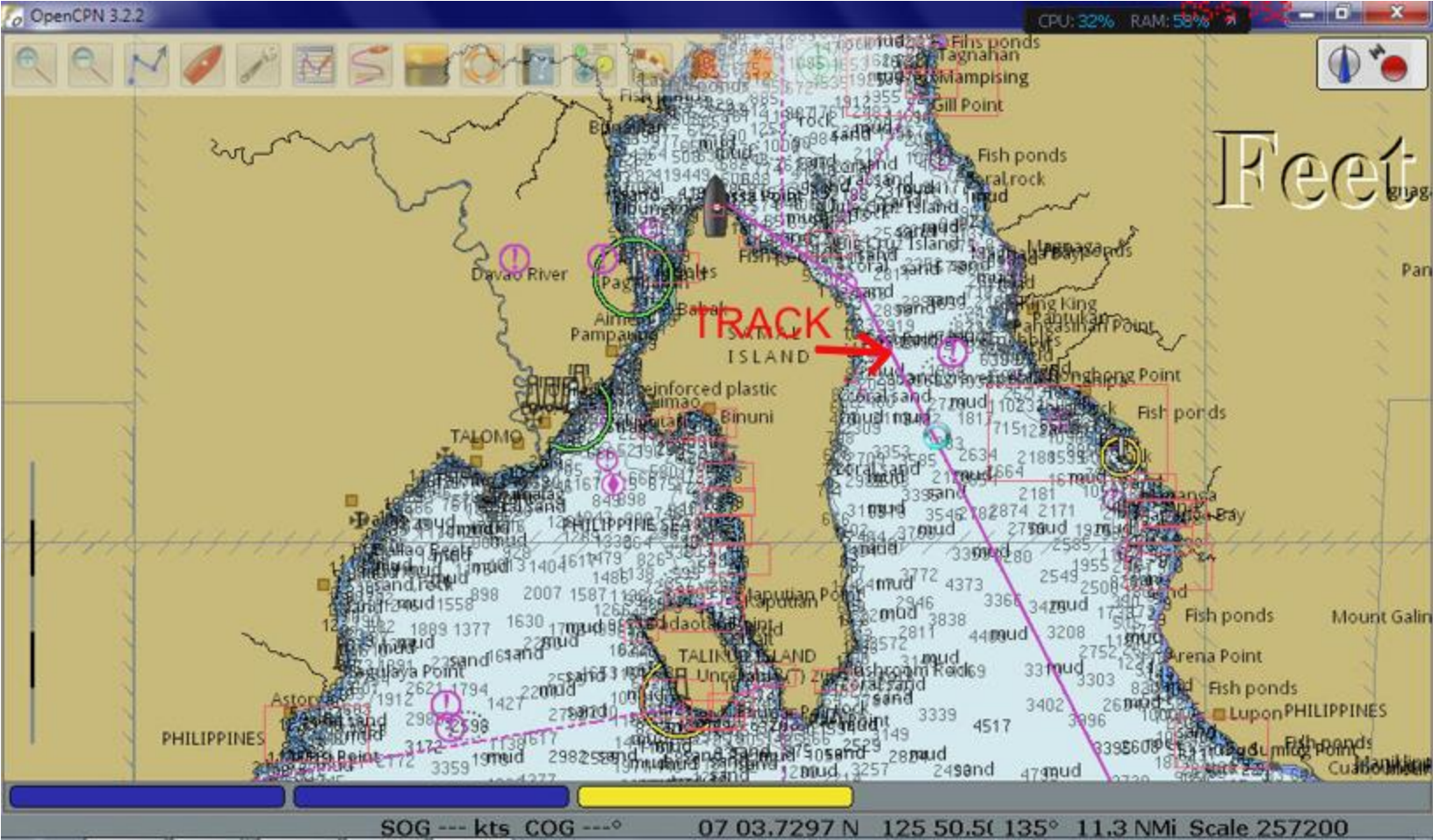
- Select Tracks tab
- Click on Import

Navigate to saved tracks location  
Click Open



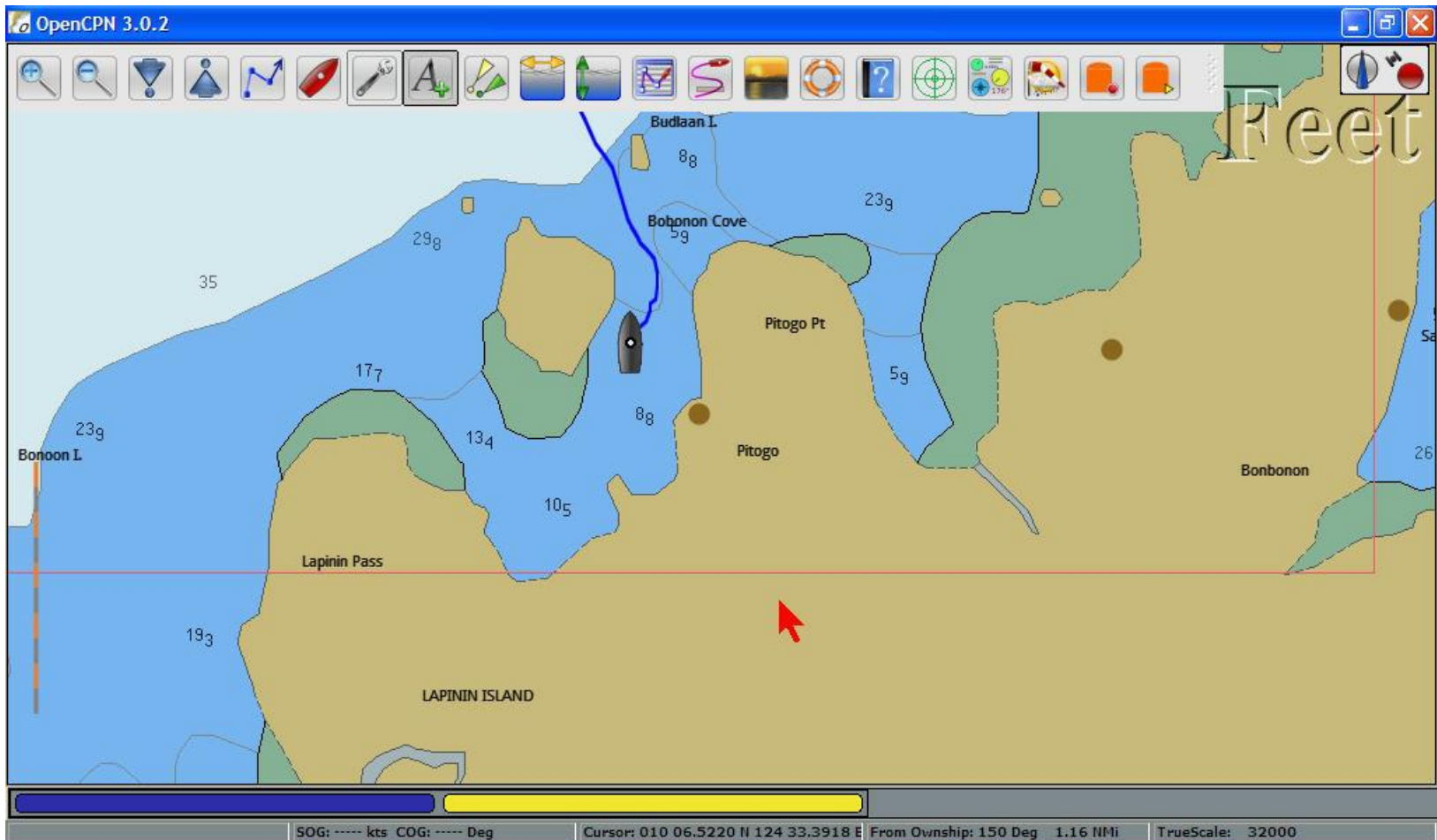


# Importing Tracks



# Saving Waypoints (Marks)

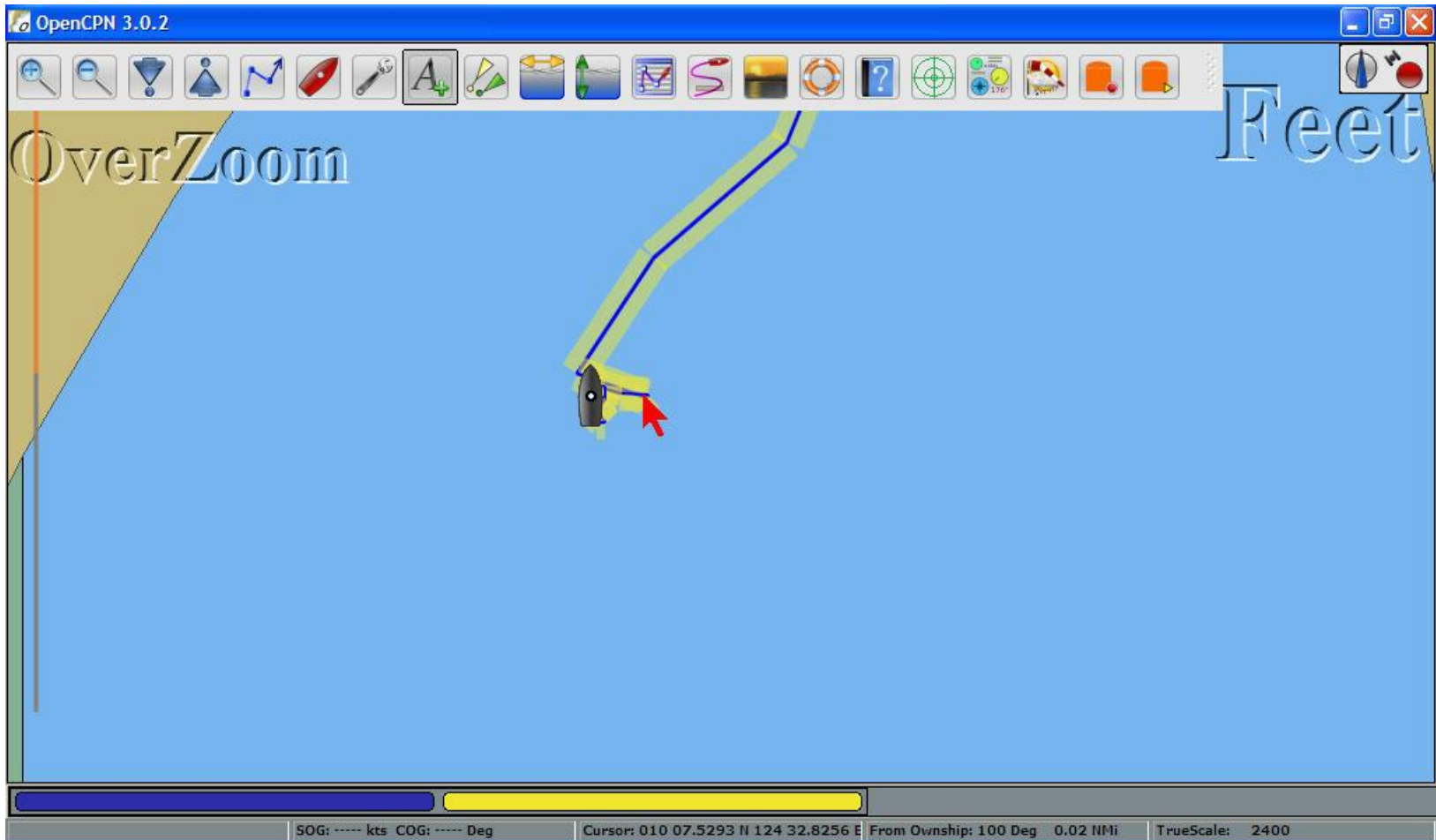
Shown below is the arrival at an anchorage





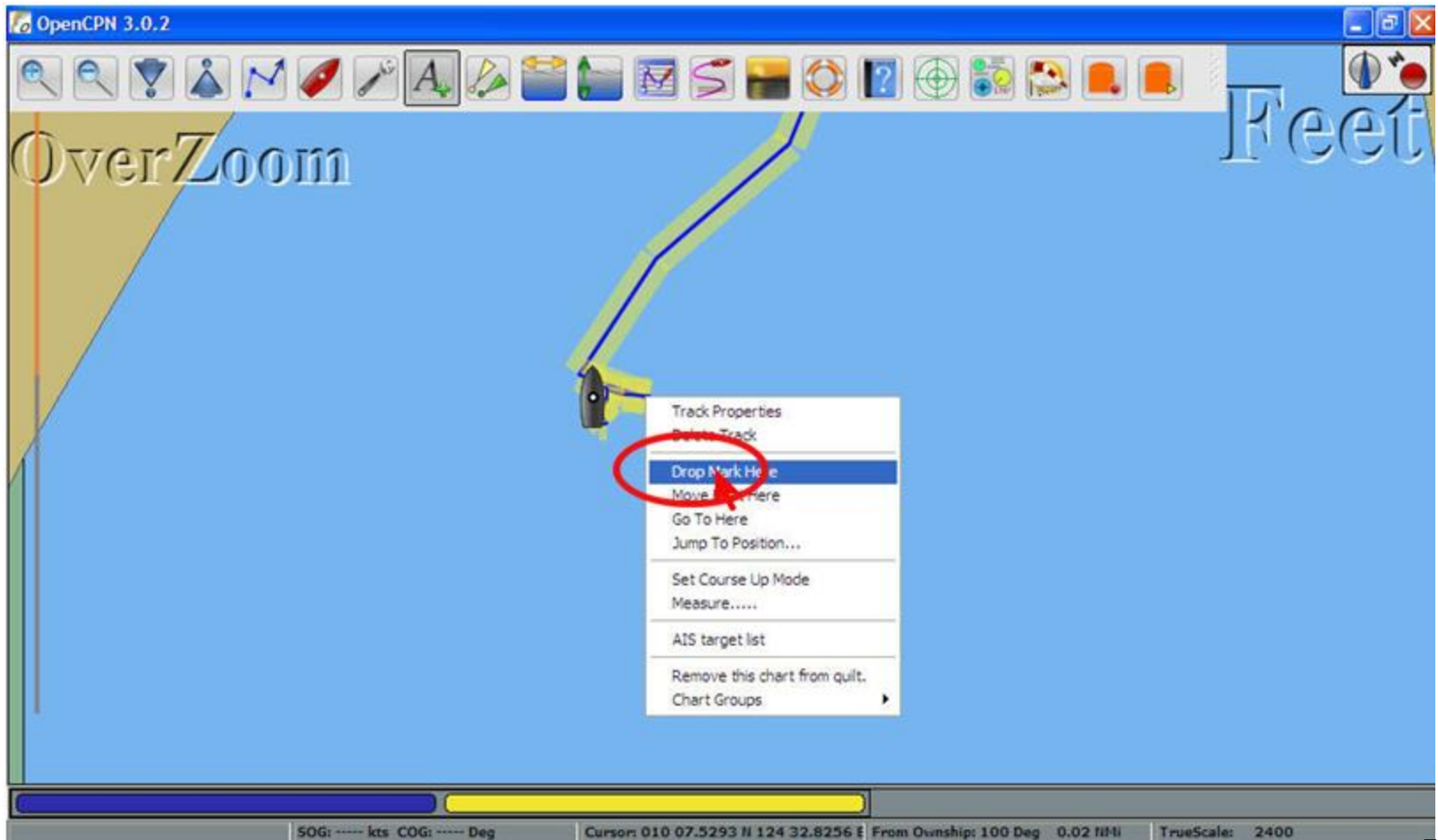
# Saving Waypoints (Marks)

Zoom in to see where the anchor was dropped



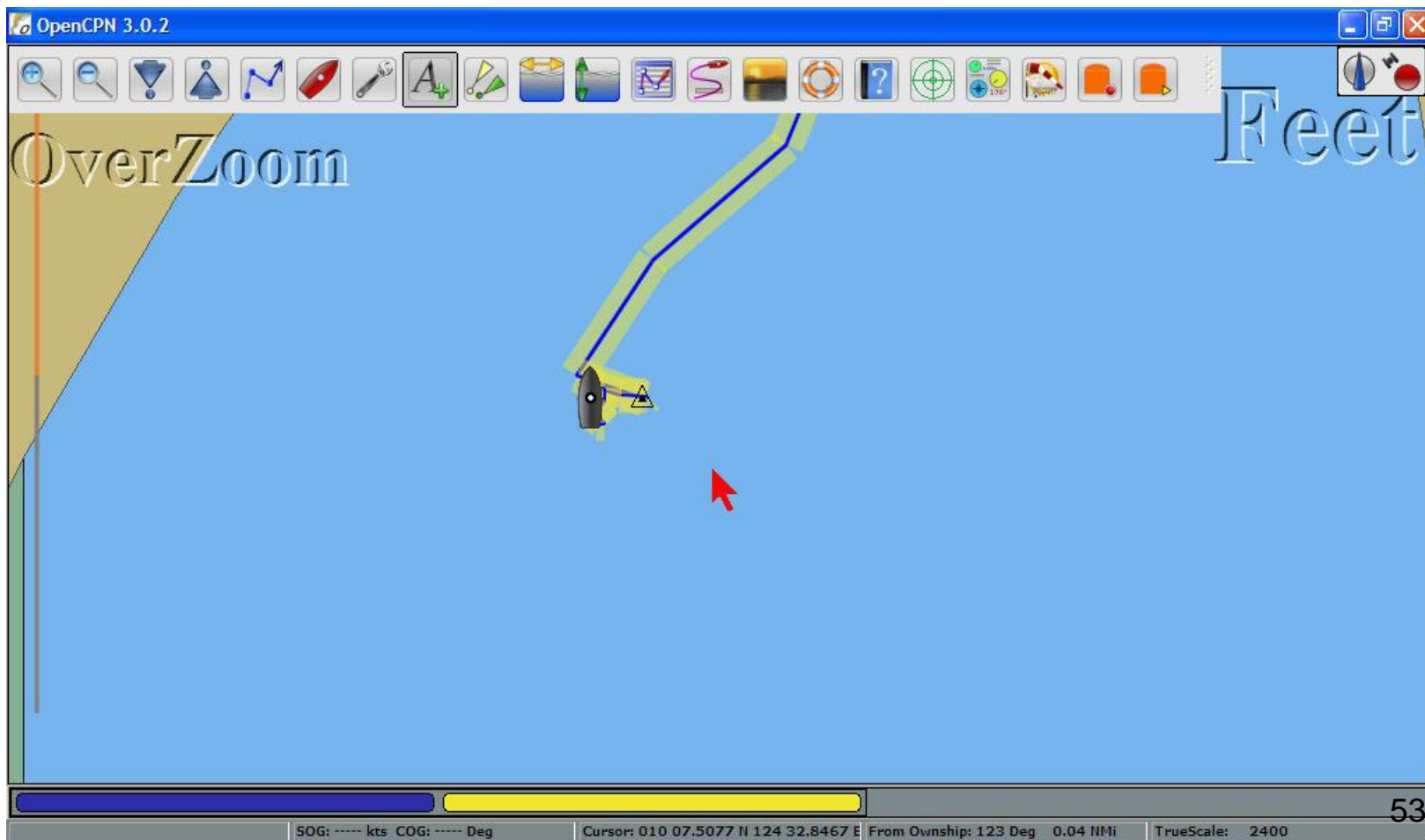
# Saving Waypoints (Marks)

RIGHT-CLICK AND CLICK ON 'Drop Mark (Ctl-M)'



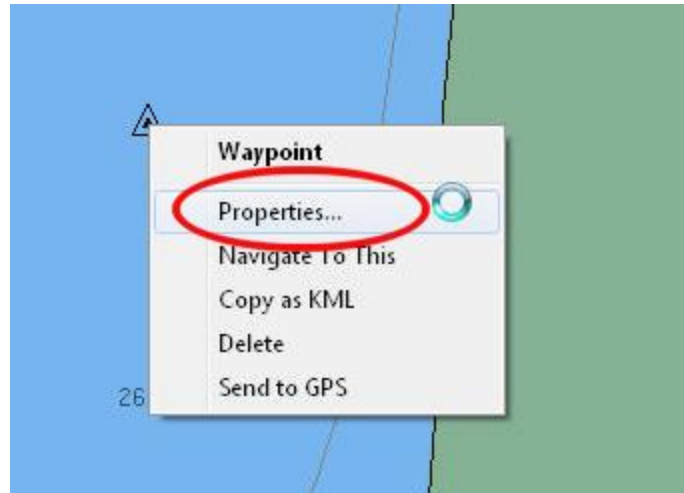
# Saving Waypoints (Marks)

A TRIANGLE APPEARS AT THE SELECTED POINT



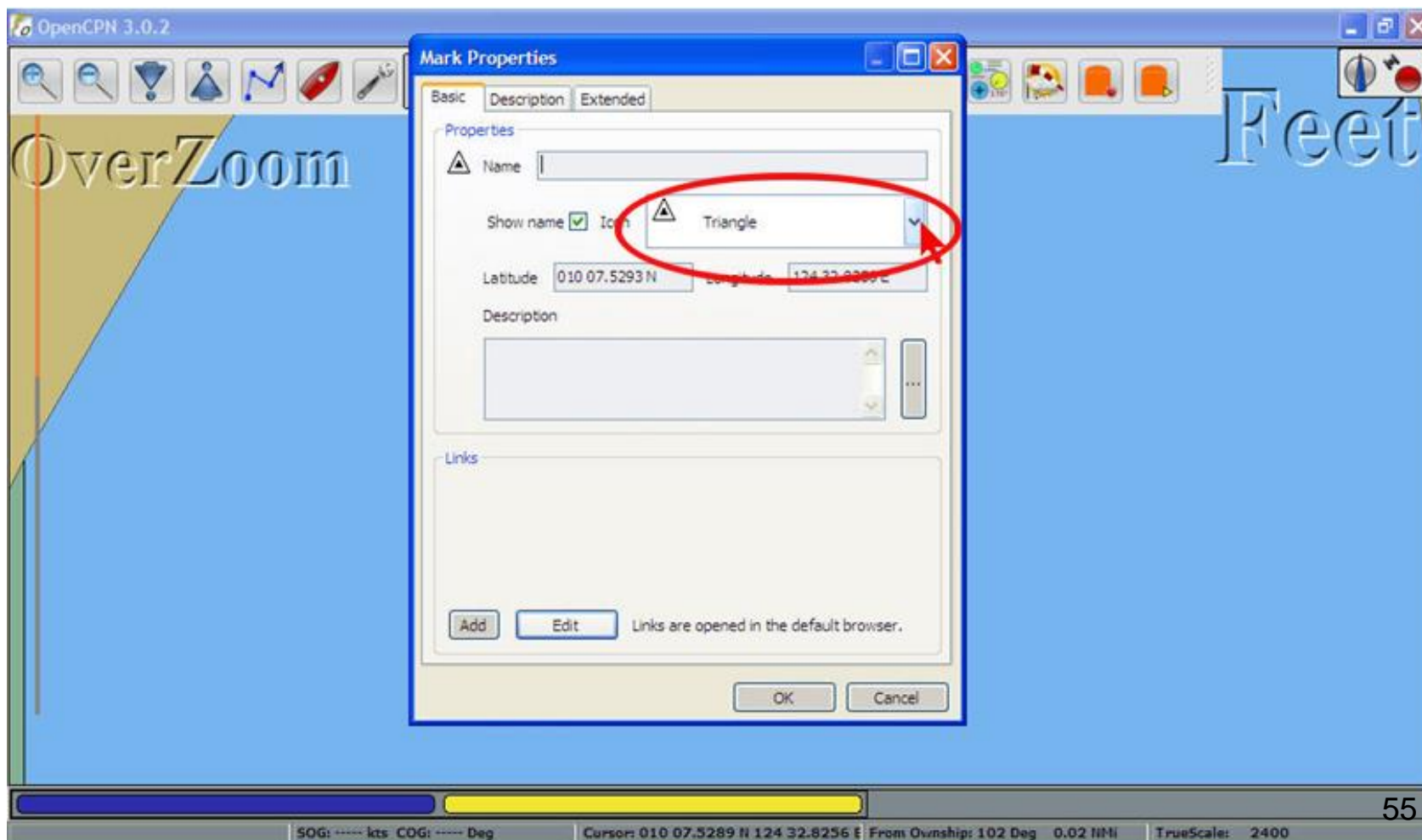
# Changing Waypoints (Marks)

Right-click on the mark  
and select 'Properties'  
Or  
Double-click on mark



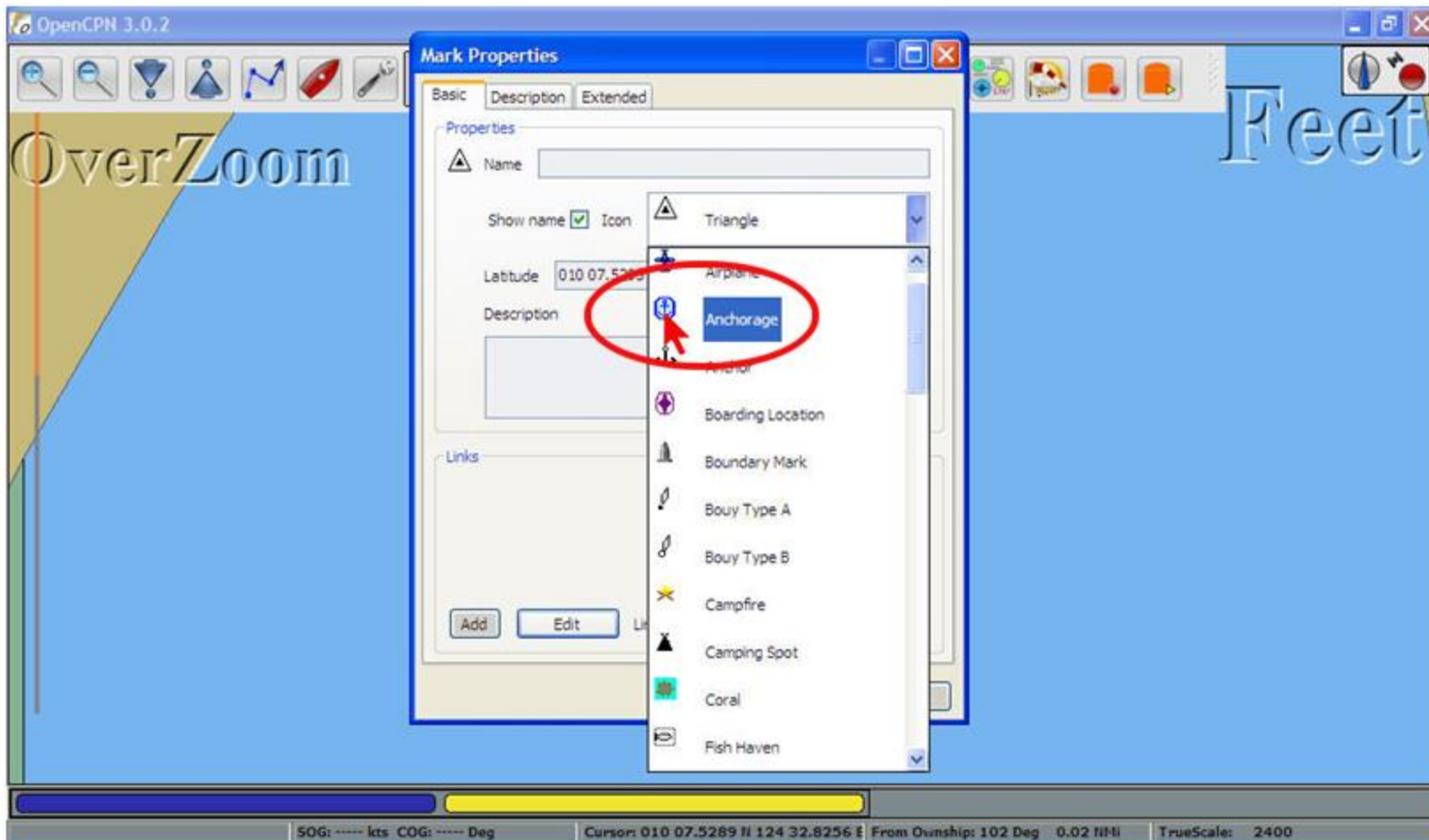
# Changing Waypoints (Marks)

The small triangle is difficult to see on most charts  
Change waypoint icon to a different icon



# Saving Waypoints (Marks)

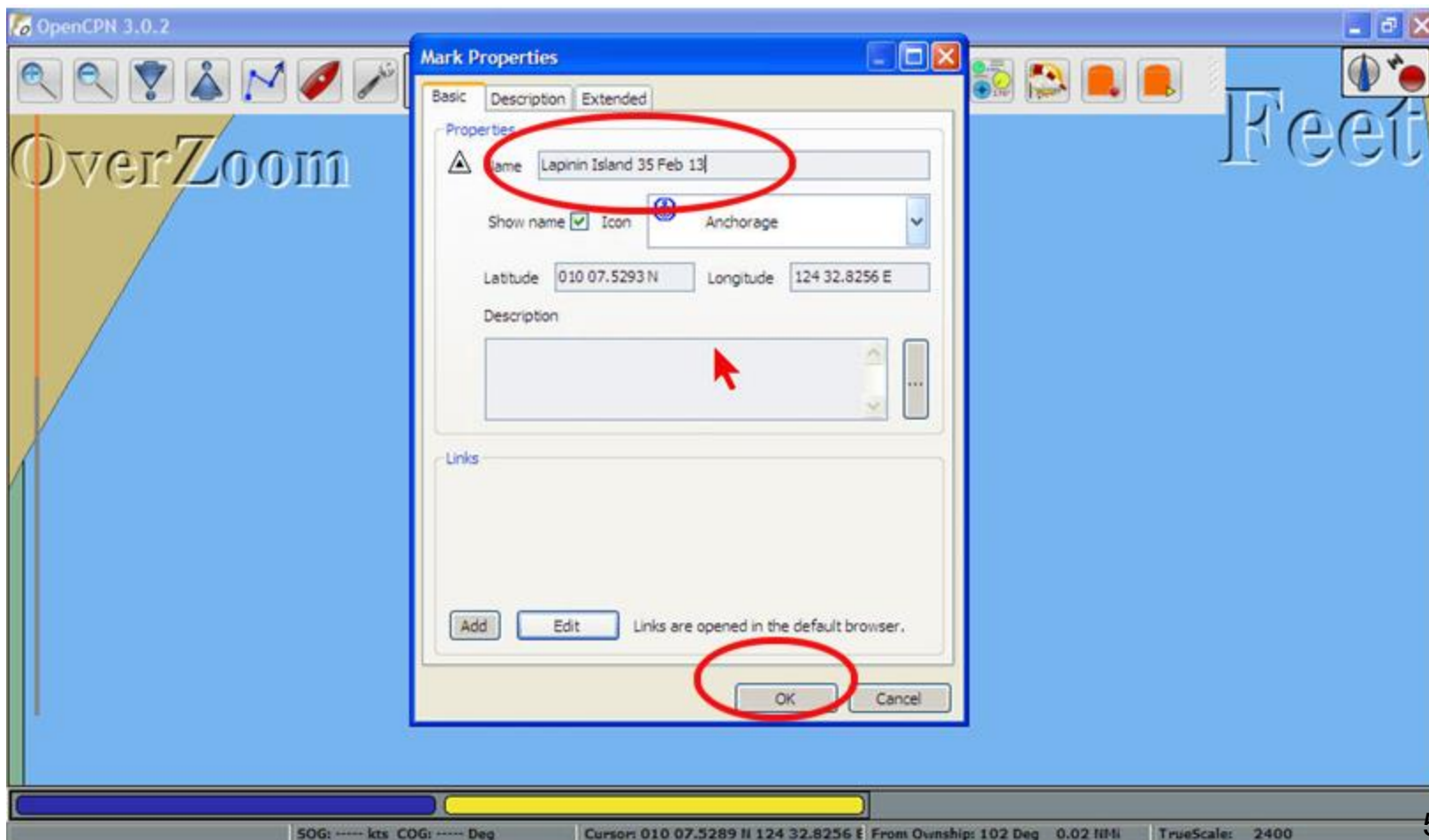
Select the Anchorage symbol



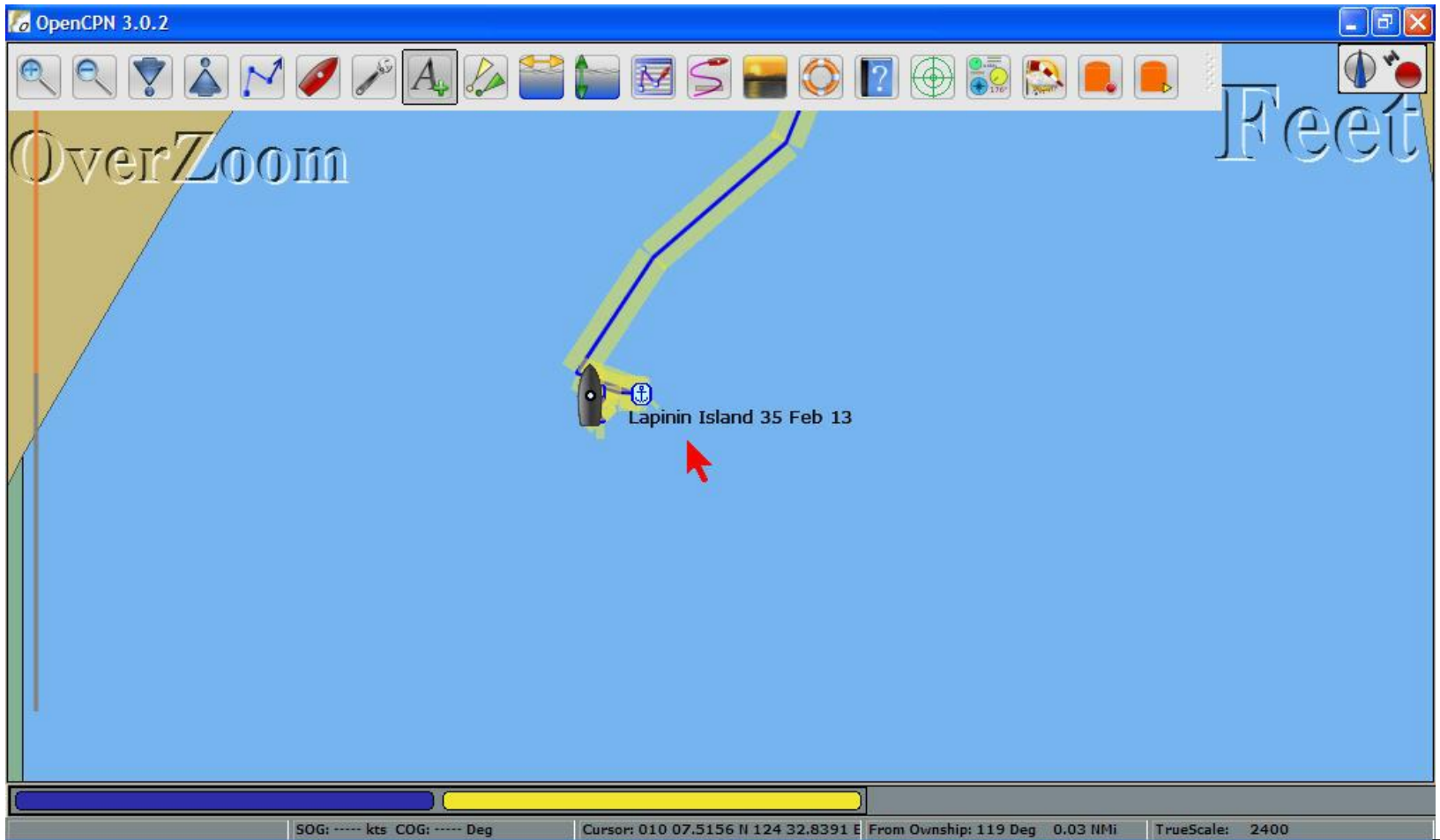


# Changing Waypoints (Marks)

Also change name, and add a short description



# Changing Waypoints (Marks)



# Saving Waypoints (Marks)

Waypoints can be manipulated just like routes and tracks

- Export to file
- Import from file

Waypoints can also be exported in groups

At the end of a sailing season, export Routes, Waypoints, Tracks to files

# Hiding and Un-Hiding Routes and Tracks

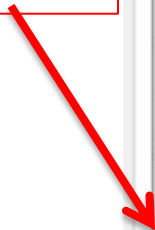
Route & Mark Manager

Routes Tracks Waypoints Layers

Sh...	Route Name	To
	Borneo - Keramat to	Pulau Keramat - Kudat
	Borneo - KK to Keramat	Kota Kinabalu - Pulau Keremat
	Borneo - Labuan to Tii...	Labuan - Pulau Tiga
	Borneo - Tiga to KK	Pualu Tiga - Kota Kinabalu
	BorneoN - Kudat to Ti...	Kudat - P Tigabu
	BorneoN - S Marawop ...	Marawop River Entrance - Dent Haven
	BorneoN - Tigabu to Sil...	P Tigabu - Silingaan, Turtle Islands
	BorneoN Dent-Balut	Dent Haven, Borneo - Balut Island, Phil
	BorneoN P Tikus To Sa...	Pulau Tikus - Sandakan
	Malay - ESingapore to ...	E Singapore - Borneo Labuan
	Malay - Puteri to Sunga...	Puteri Marina - Sungai Santi Anchorag...
	MalayW - Admiral to W...	
	MalavW - Ansa to Ad...	Pulau Ansa - Admiral Marina

- Properties...
- Activate
- Center View
- Reverse
- Delete
- Export selected...
- Send to GPS
- Delete All

Hidden Route



Import GPX... Export All Visible...

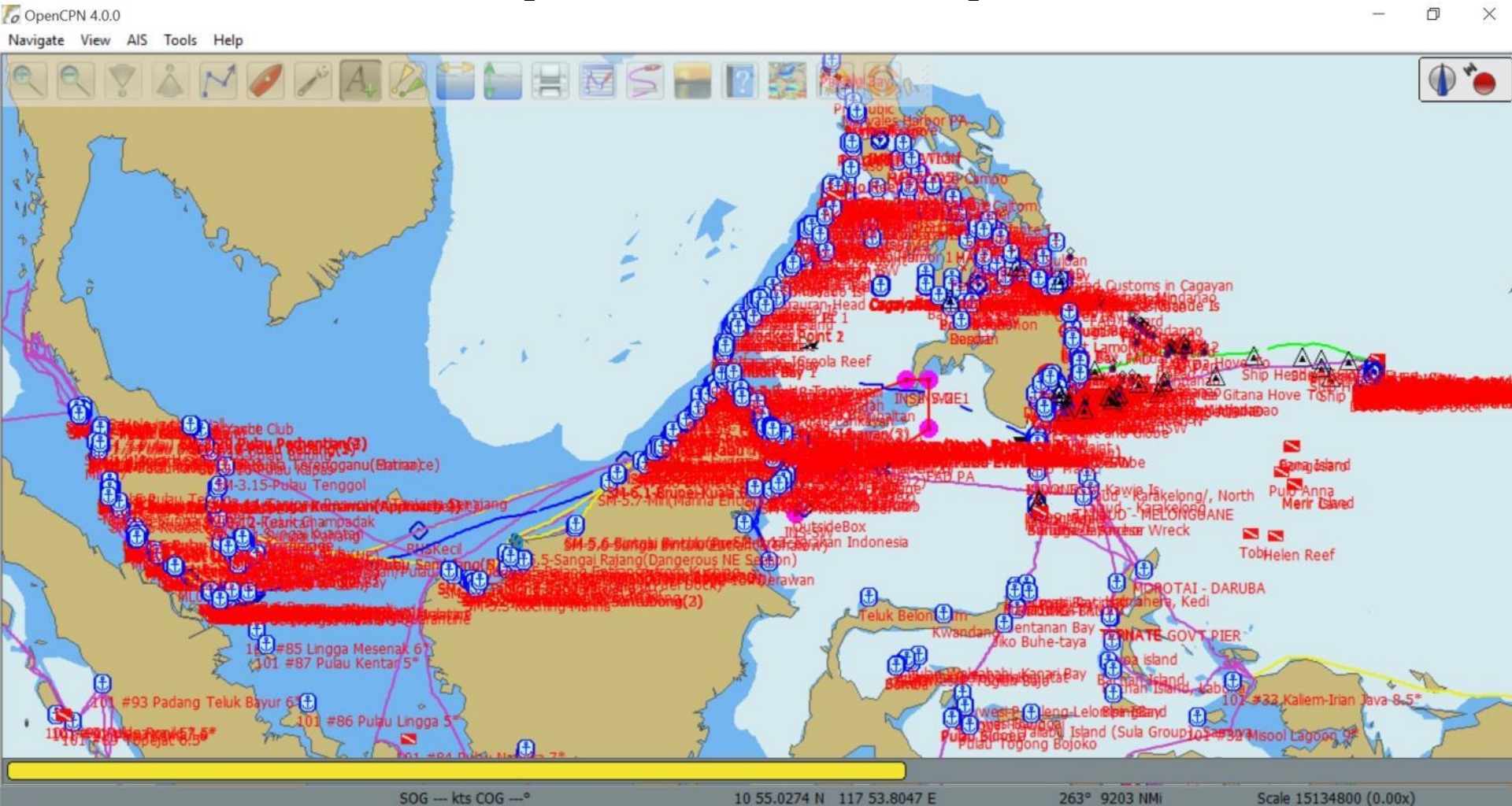
OK

# The Power of Layers

- A collection of waypoints, routes, and/or tracks that can be hidden and un-hidden with one click.
- It is kept separate from your own waypoints, routes, and tracks
- Temporary layer – lets you “import” data that stays only until you restart the program
- Permanent layers – Persist until uninstalled
- On the Layers tab of Route Manager



# Why You Need Layers



# Lots of Shared Info

Route & Mark Manager ✕

Routes Tracks Waypoints **Layers**

	Layer Name	No. of items	
	MindtheGap Tracks	127	
	Palau	661	
	Philippines	554	
	Sail Malaysia Waypoints	250	
	Sumatra, Indonesien-Malaysia W, Borneo,...	1	
	Talau-Morotai2	1	
	Thailand, Malaysia, Borneo	1	
	Totem-2012-2013 Indonesia	2	
	Totem-2013 Malaysia, Brunei, Singapore	1	
	Totem-2013 Sabah, Saruwak, Brunei	1	

Temporary layer  
Delete  
Hide from chart  
Hide WPT names  
List contents

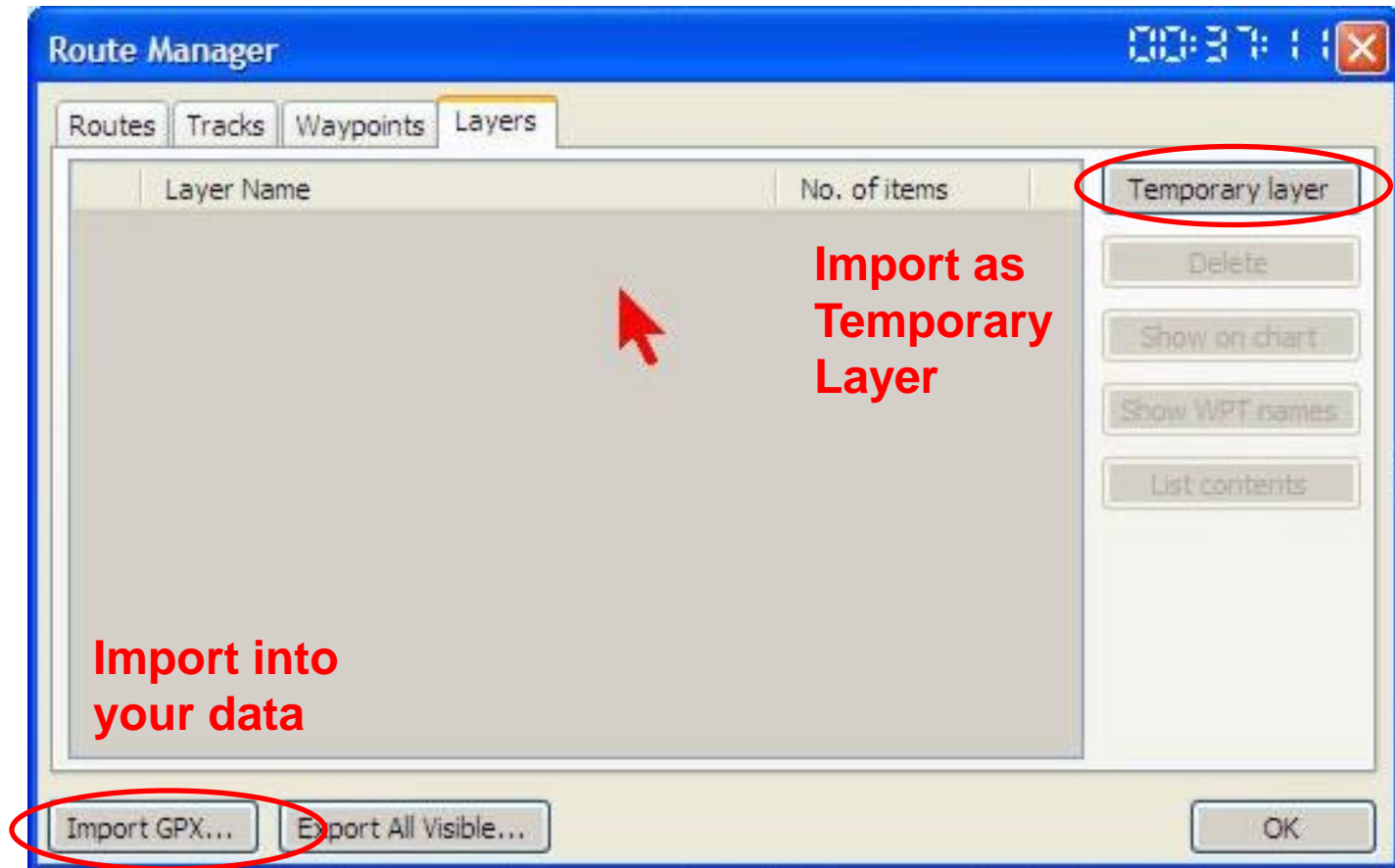
Import GPX... Export All Visible... OK

# Importing Others' GPX Files

- Just Import
  - Intermingles with your routes/tracks/wpts
  - Difficult to get rid of
  - Eventually impacts performance
- Import as Temporary Layer
  - Lets you temporarily load a GPX file
  - Can delete the layer in the Layers tab (doesn't delete the file) or just close OpenCPN

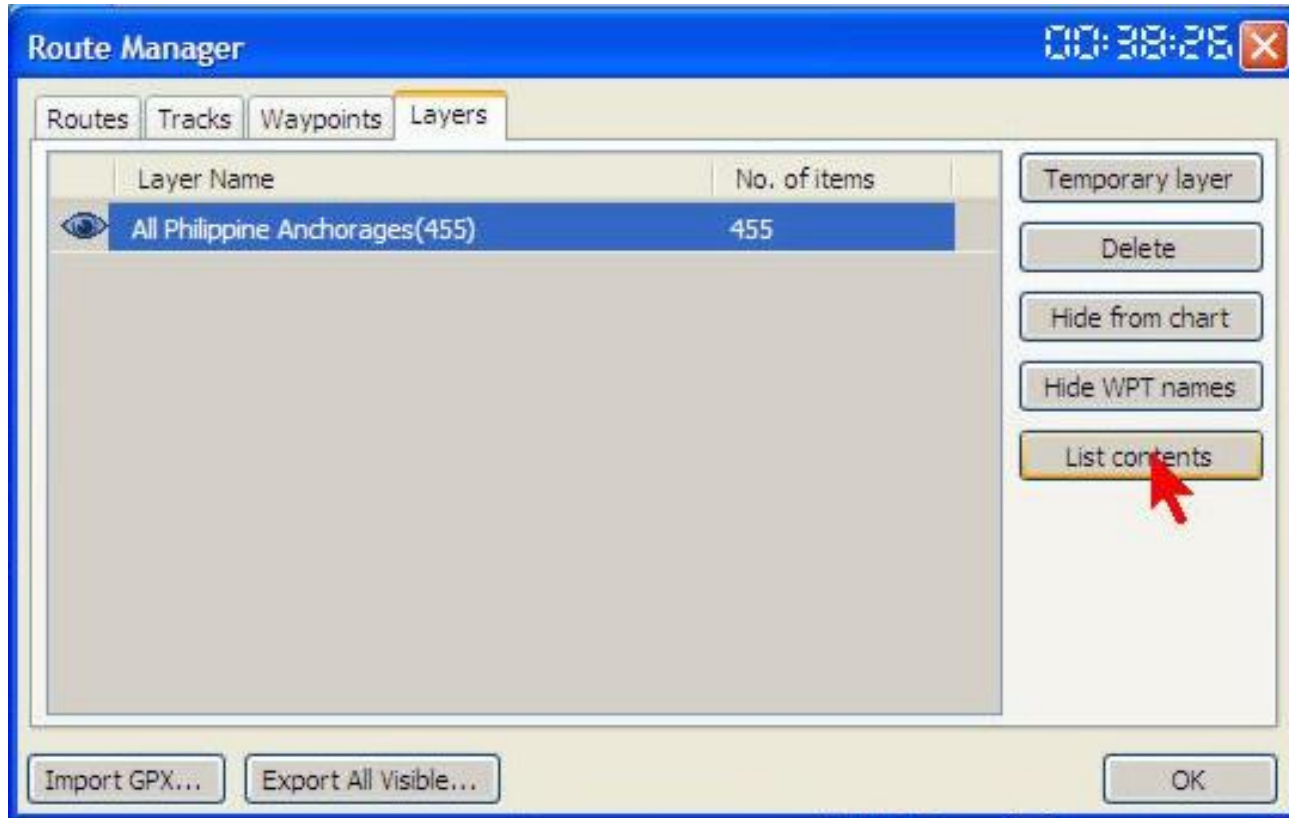
# Importing Others' GPX Files

On OpenCPN open the Route Manager and click on the 'Layers' tab



# Exploring OpenCPN – LAYERS

If “List Contents” is not selected, the individual waypoints, routes, and tracks won’t show in the list





# For the Geeks: What A GPX File Looks Like

```
Sail Malaysia Waypoints.gpx * SciTE
File Edit Search View Tools Options Language Buffers Help
1 Sail Malaysia Waypoints.gpx *
1  <?xml version="1.0"?>
2  - <gpx version="1.1" creator="OpenCPN" xmlns:xsi="http://www.w3.org/2001/XMLSchema
3  - <wpt lat="2.513166667" lon="101.803833333">
4    <time>2013-11-16T08:34:56Z</time>
5    <name>SM-1.11-Palau Burung 2</name>
6    <sym>anchorage</sym>
7    <type>WPT</type>
8  - <extensions>
9    <opencpn:guid>4c1dffff-af83-4f1f-9224-0a5271faffff</opencpn:guid>
10   <opencpn:viz_name>1</opencpn:viz_name>
11  </extensions>
12 </wpt>
13 - <wpt lat="2.542833333" lon="101.785500000">
14   <time>2013-11-16T08:33:40Z</time>
15   <name>SM-1.11-Pulau Burung</name>
16   <sym>anchorage</sym>
17   <type>WPT</type>
18 - <extensions>
19   <opencpn:guid>5efbffff-c757-42e6-a33c-2bd4185d0000</opencpn:guid>
20   <opencpn:viz_name>1</opencpn:viz_name>
21  </extensions>
22 </wpt>
23 - <wpt lat="2.476000000" lon="101.846000000">
24   <time>2013-11-16T08:31:05Z</time>
25   <name>SM-1.12-Port Dickson Admiral Marina</name>
26   <sym>anchorage</sym>
27   <type>WPT</type>
28 - <extensions>
29   <opencpn:guid>71ceffff-787e-4a0d-8b13-d1851b3b0000</opencpn:guid>
30   <opencpn:viz_name>1</opencpn:viz_name>
31  </extensions>
32 </wpt>
```

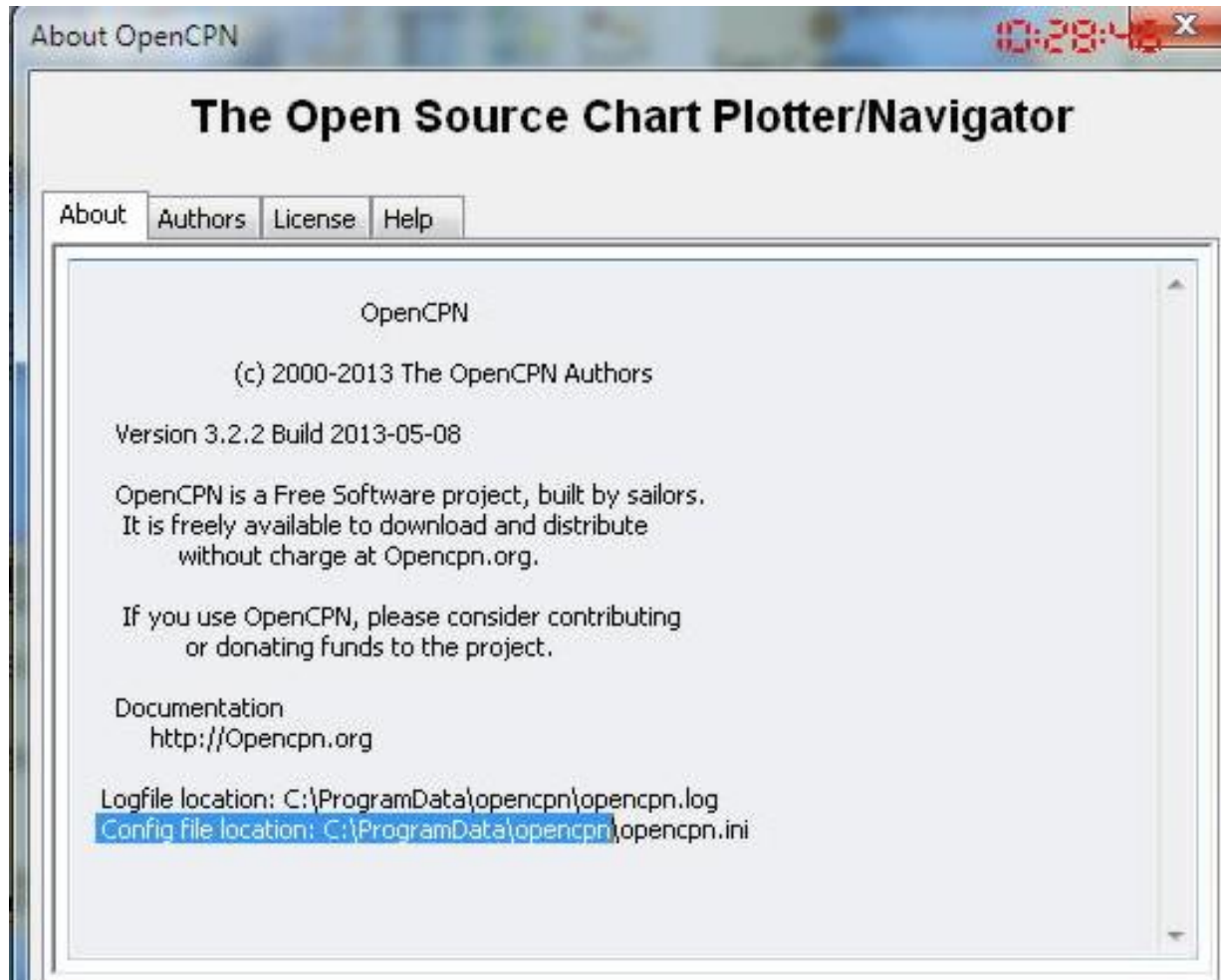
Structured text (XML)  
Can edit with Notepad  
I use SciTE  
Easy to email (zips well)

# Permanent Layers

- For layers to be permanently available they must be manually placed in the OpenCPN data folder
- The location of this folder is dependent on the operating system ...
- But The OpenCPN program helps you find the location !!

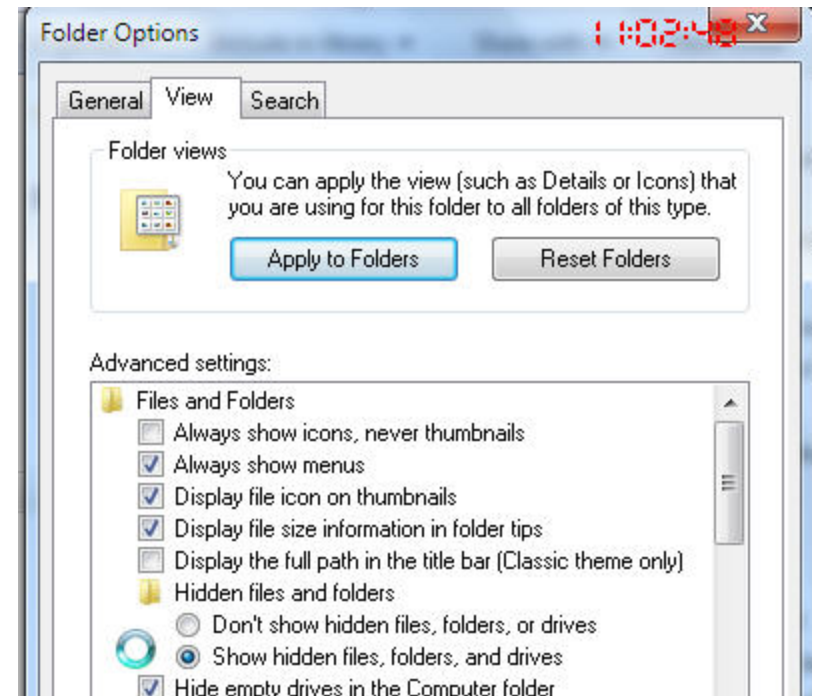
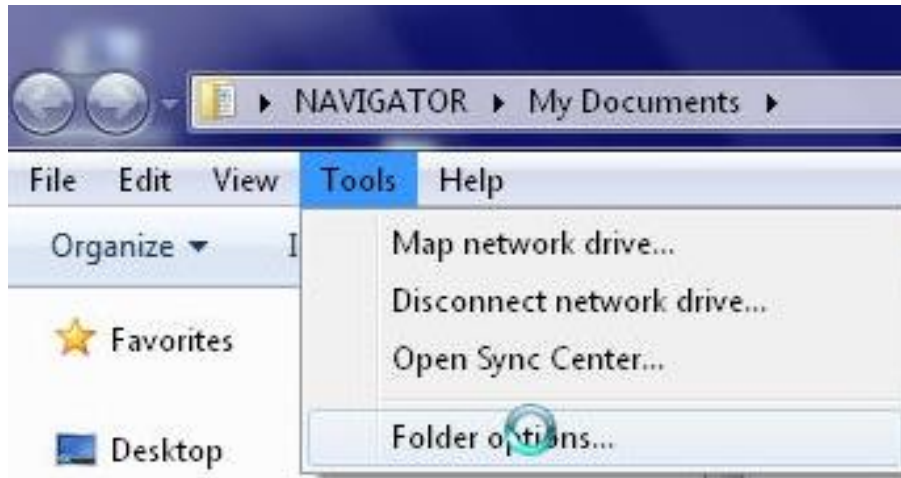
# Permanent Layers Location

In the OpenCPN Data Folder (varies by OS)  
Open the About tab for exact location



# Windows 7-10, it's in ProgramData

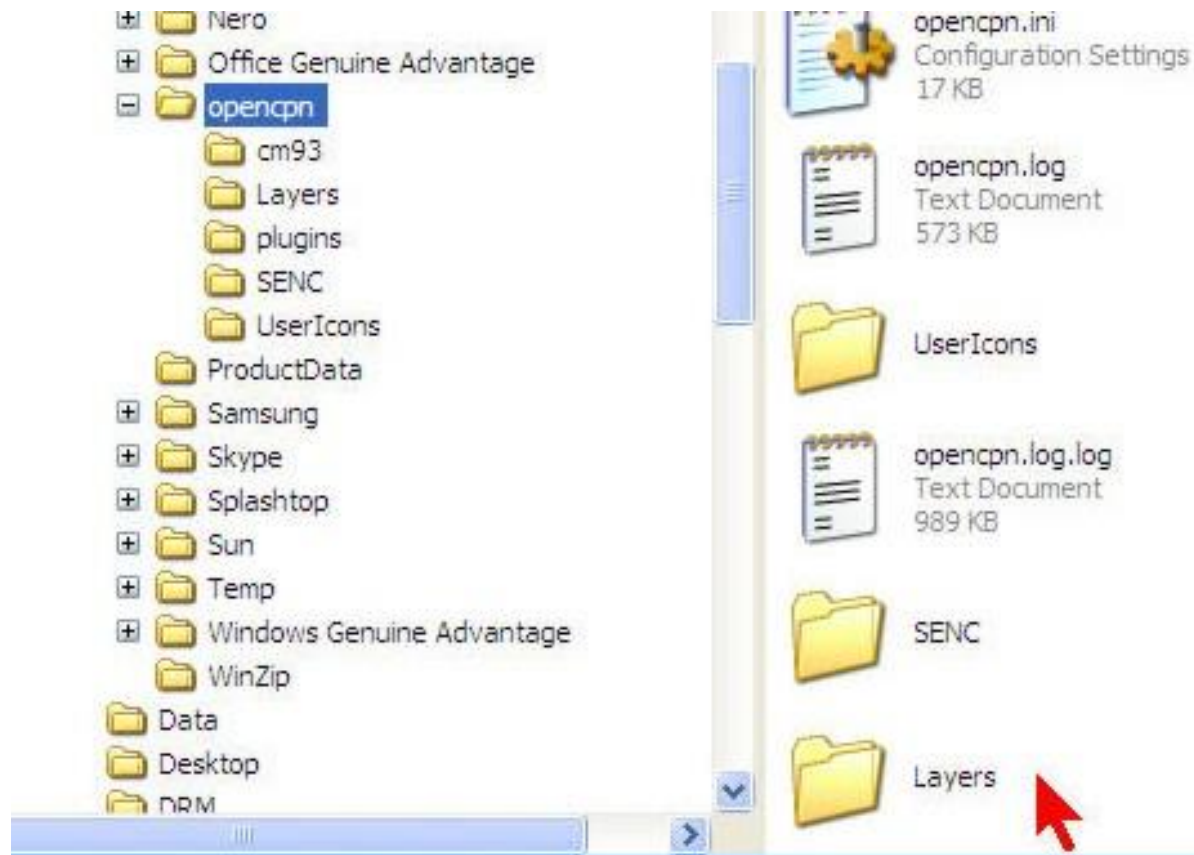
- The ProgramData folder is usually hidden  
Go to 'Tools' and click on 'Folder Options ...'
- On the 'View' tab check the button  
'Show hidden files, folders or Drives'.
- Click 'OK'
- Only need to do once



# Create Layers Folder

It's only necessary to create this folder once.

All future layer information will be placed in this folder.



**Create a new folder named Layers in the OpenCPN Data folder**



# Managing Layers Files

- To put a layer in OpenCPN, copy the gpx file to the Layers folder
  - Layers are loaded at startup (must restart OpenCPN)
- Make a shortcut to Layers in the folder where you manage your saved gpx files
- Move or copy gpx files in and out of OpenCpn/Layers

## My Documents / Navigation /GPX Files

- My gpx data (folders by region)
- Others gpx data (folders by region)

# Managing Layers Files

- ANY .gpx file can be put in a layer.  
This includes routes, tracks, anchorages and other information that has been saved in the .gpx format.
- Waypoints and routes in a layer are locked and cannot be changed. This prevents the unplanned movement of a waypoint while clicking on the screen
- Only files with .gpx will be loaded (temp unload a layer by renaming .gpy)
- GPX Files within a folder will be loaded as one layer
  - MyRoutes.gpx and MyWpts.gpx placed in SoggyPaws folder will load as layer SoggyPaws

# TIPS

To make a complete backup of all your routes, waypoints, and tracks data,  
Copy the entire OpenCPN folder in  
ProgramData to a backup drive!

(navobj.xml is the OpenCPN database, moving that file to the OpenCPN data folder on a new computer will move all your routes, waypoints, and tracks!)

To share your info with someone else, copy navobj.xml somewhere else, and rename it Whatever.gpx

# Adding Functionality with Plugins

- Plugins: Snap-in functionality to extend basic OpenCPN functionality
- Two plugins built-in: Dashboard and Grib
- Others can be downloaded from OpenCPN site

There are about 20 plugins!

Three we'll cover here:



**GRIB File** – View downloaded GRIB files on chart



**Chart Downloader** - Download charts from within OpenCPN



**Climatology** - Planning tool, to help visualize weather patterns. Better data than US Pilot Charts because wx data is updated.

# Exploring OpenCPN - Plugins

## *Downloading Plugins*


DOWNLOAD THE DESIRED PLUGIN(S) FROM THE OpenCPN SITE

<http://opencpn.org/ocpn/downloadplugins>



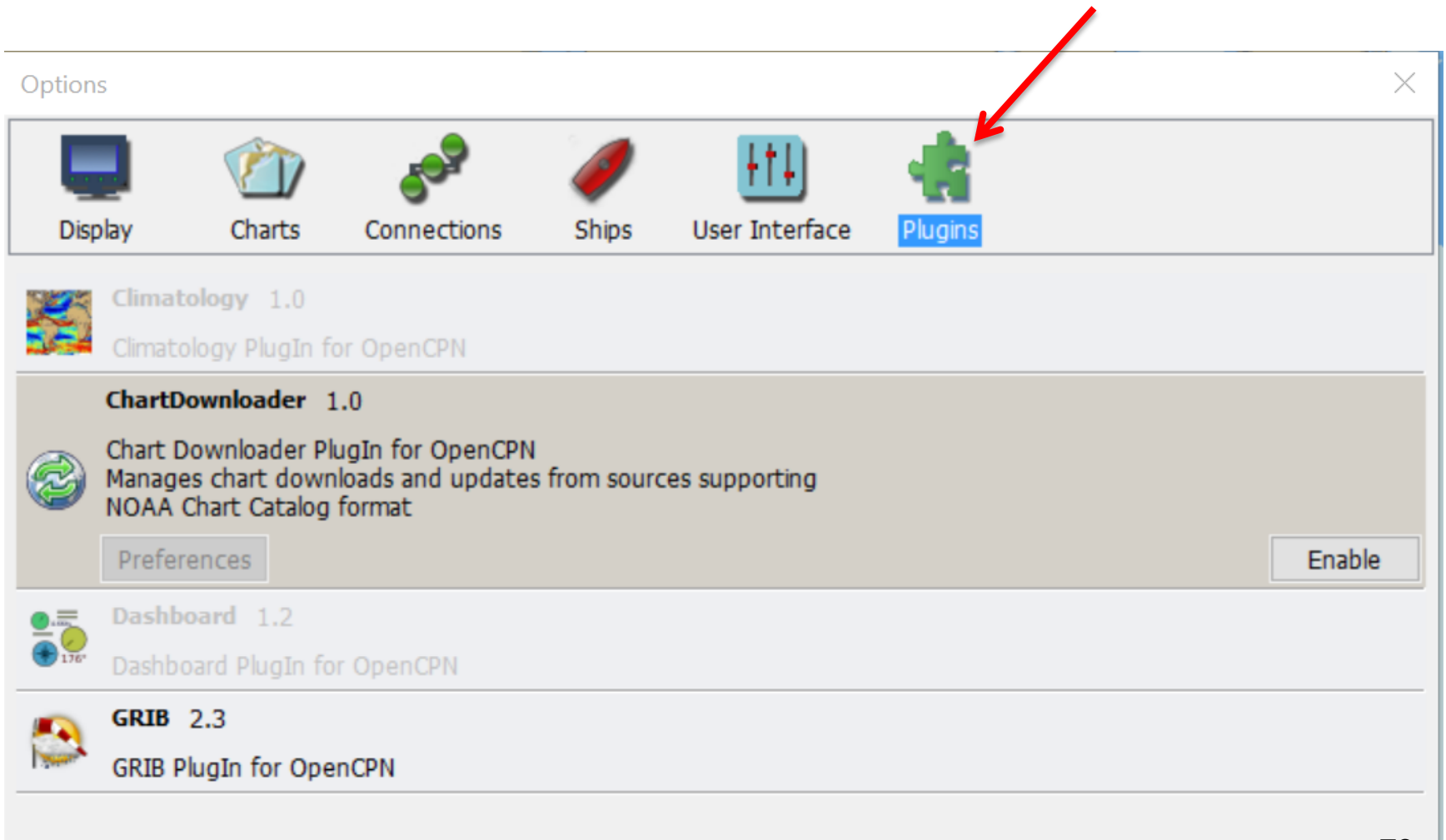


# After Plugin Download

- Close OpenCPN
- Locate the setup file you downloaded
- Run the “setup” file
- Restart OpenCPN
- Enable the Plugin
  - Setup  / Plugins / Enable

Note: GRIB plugin already included in OpenCPN

# Enable Plugin and Set Preferences



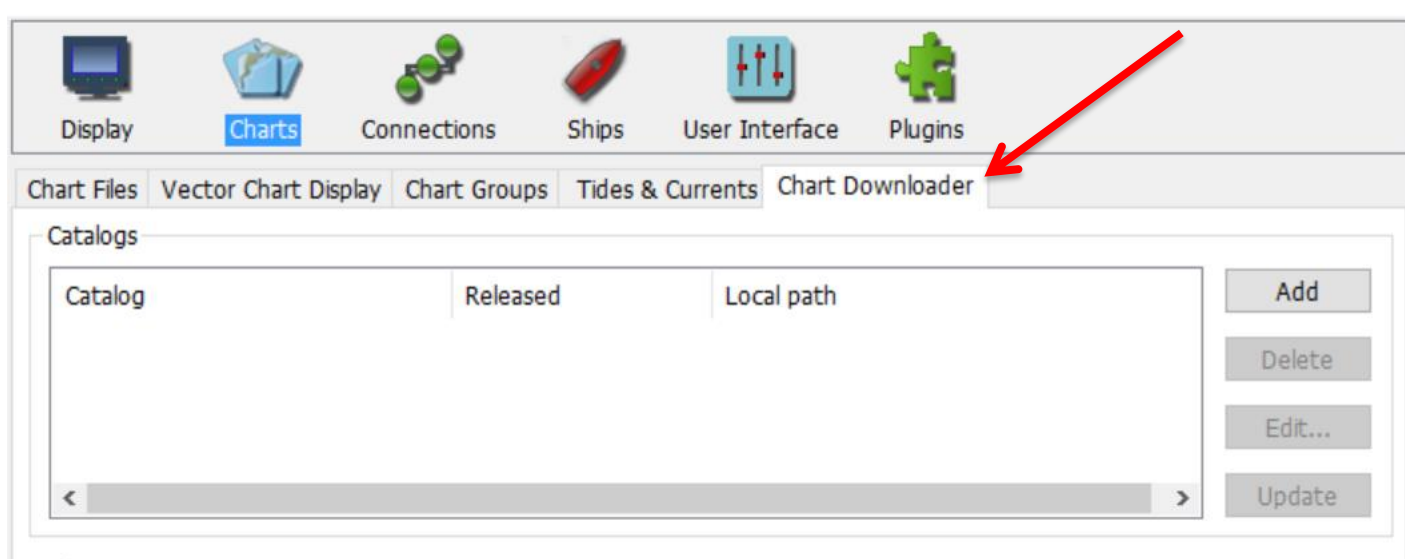
The screenshot shows the 'Options' dialog box in OpenCPN. At the top, there is a horizontal menu with icons for 'Display', 'Charts', 'Connections', 'Ships', 'User Interface', and 'Plugins'. A red arrow points to the 'Plugins' icon. Below this menu, the 'Plugins' section is expanded, showing a list of installed plugins. The 'ChartDownloader 1.0' plugin is highlighted in a light gray background. It has a circular icon with two arrows forming a loop. The text next to it reads 'Chart Downloader PlugIn for OpenCPN' and 'Manages chart downloads and updates from sources supporting NOAA Chart Catalog format'. At the bottom of this plugin's entry, there are two buttons: 'Preferences' on the left and 'Enable' on the right. Other visible plugins include 'Climatology 1.0' and 'Dashboard 1.2'.

# Most Plugins Add a New Icon on the Toolbar



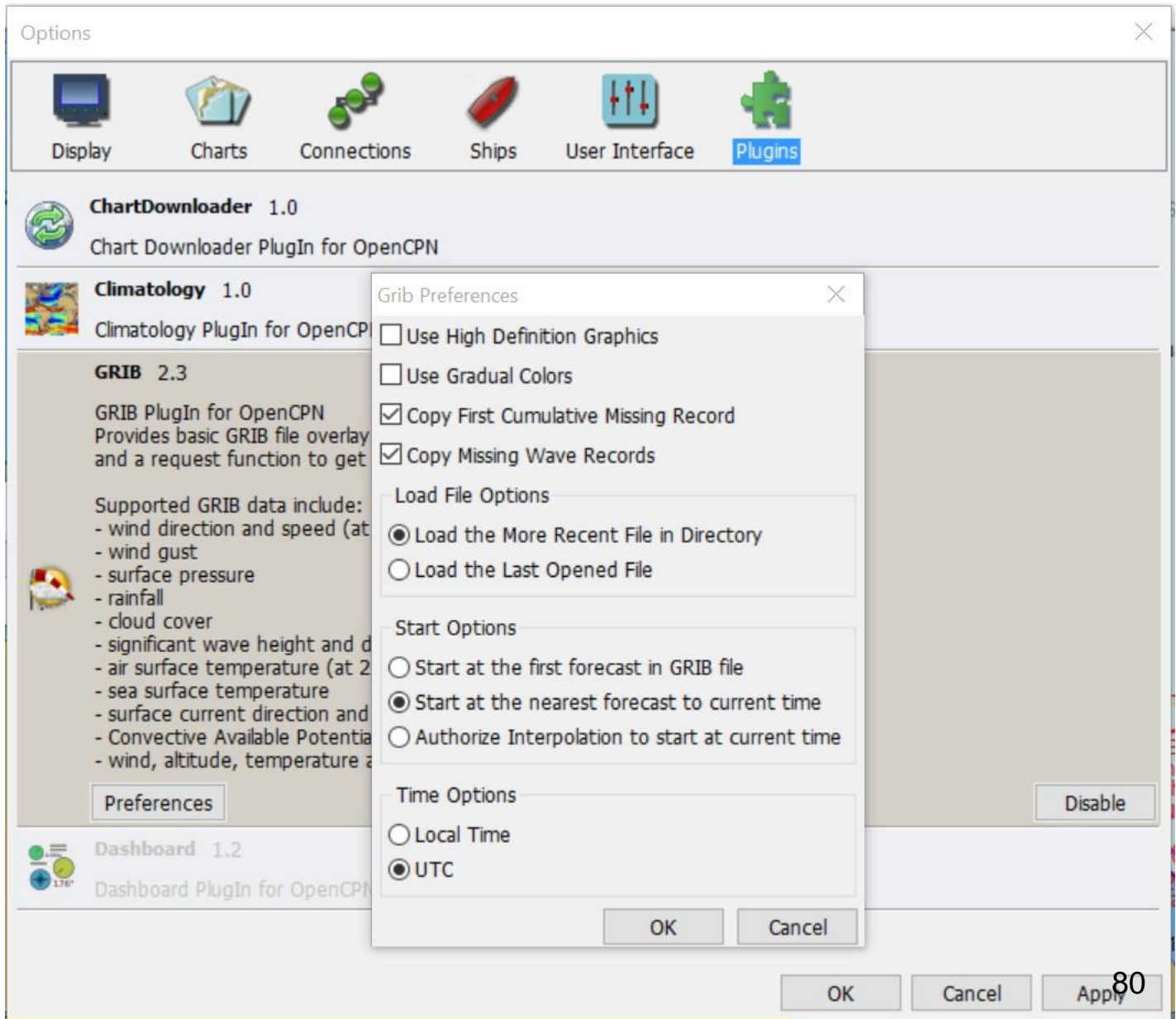
Two new icons... GRIB and Climatology

Chart Downloader adds a new tab on the Charts page

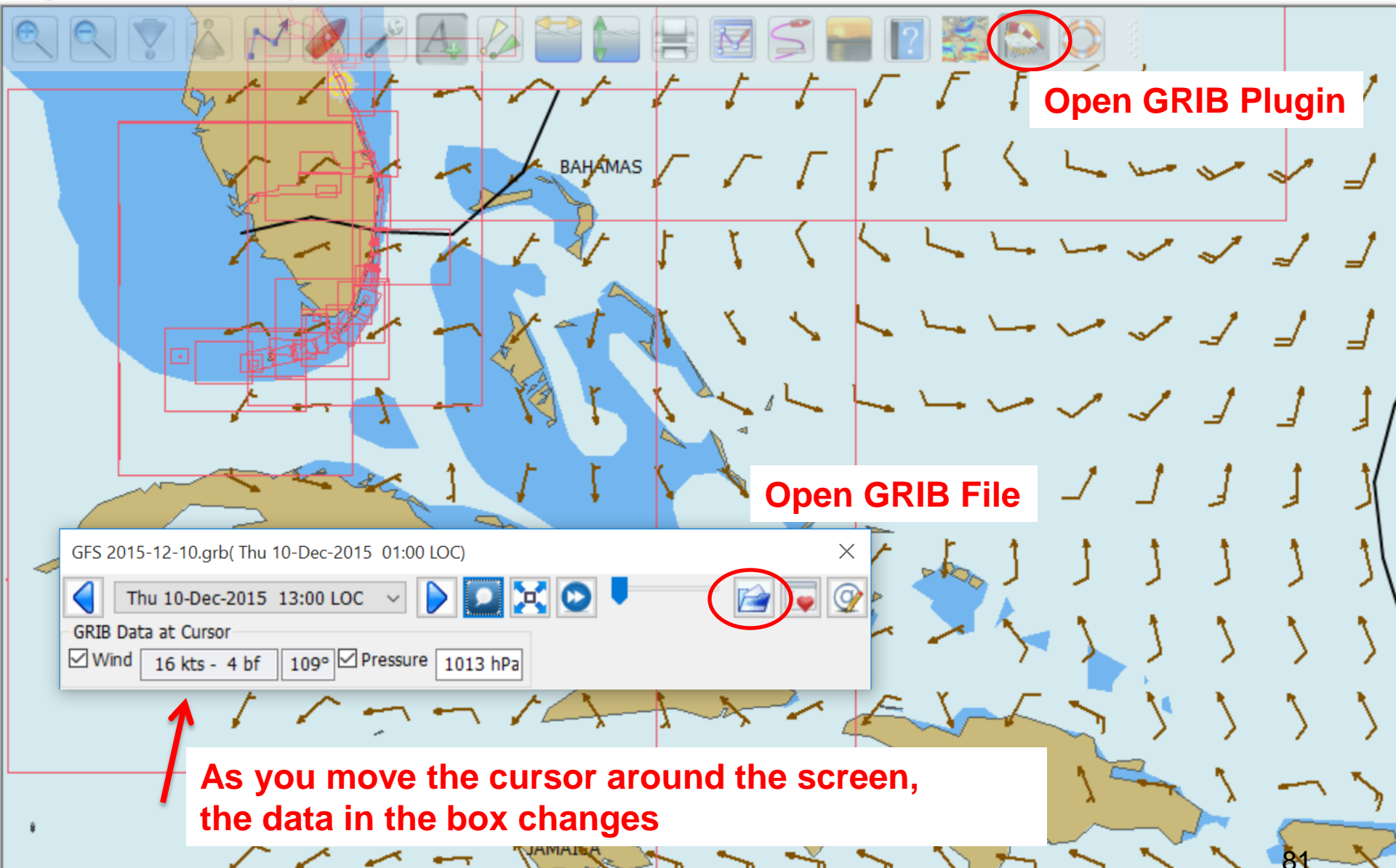


# GRIB Plugin

Check  
GRIB  
Plugin  
Preferences



# Open GRIB Plugin



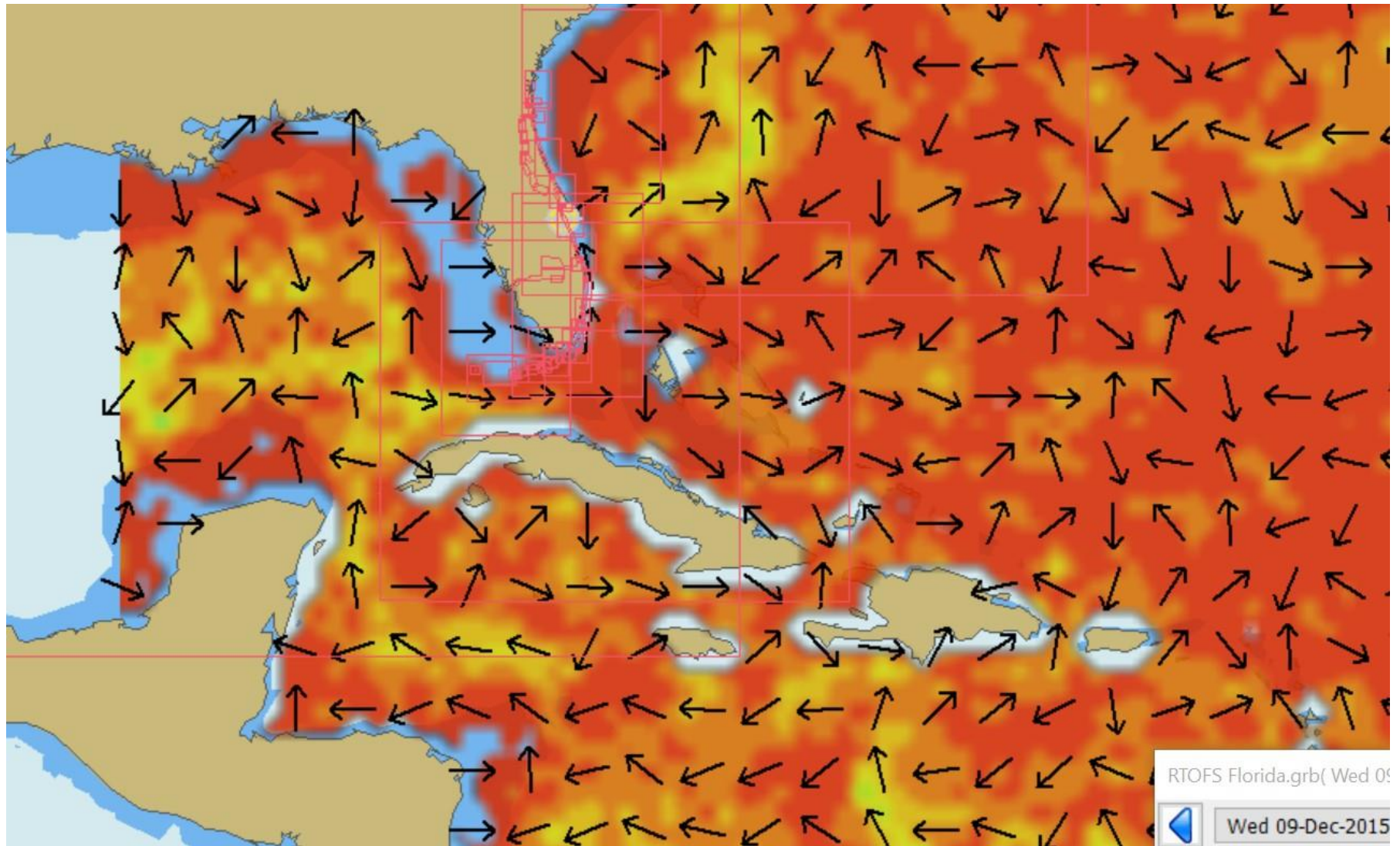
**Open GRIB Plugin**

**Open GRIB File**

**As you move the cursor around the screen,  
the data in the box changes**



# RTOFS (Current) Display

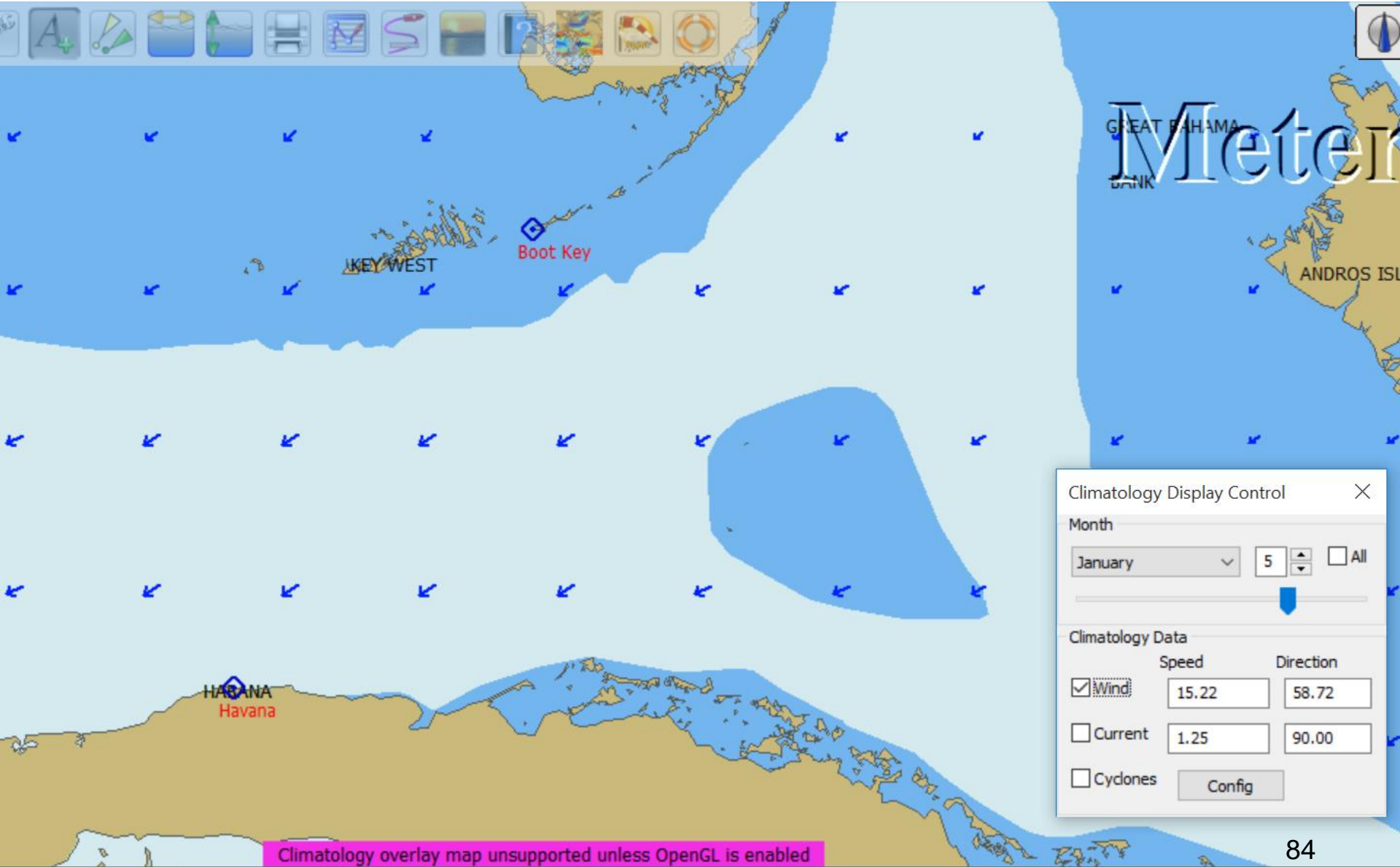




# Climatology Plugin

- Pilot charts overlaid on your chart
- Updated with RECENT data
- Wind, currents, and tropical storm tracks
- Traditional wind rose display, or wind barbs

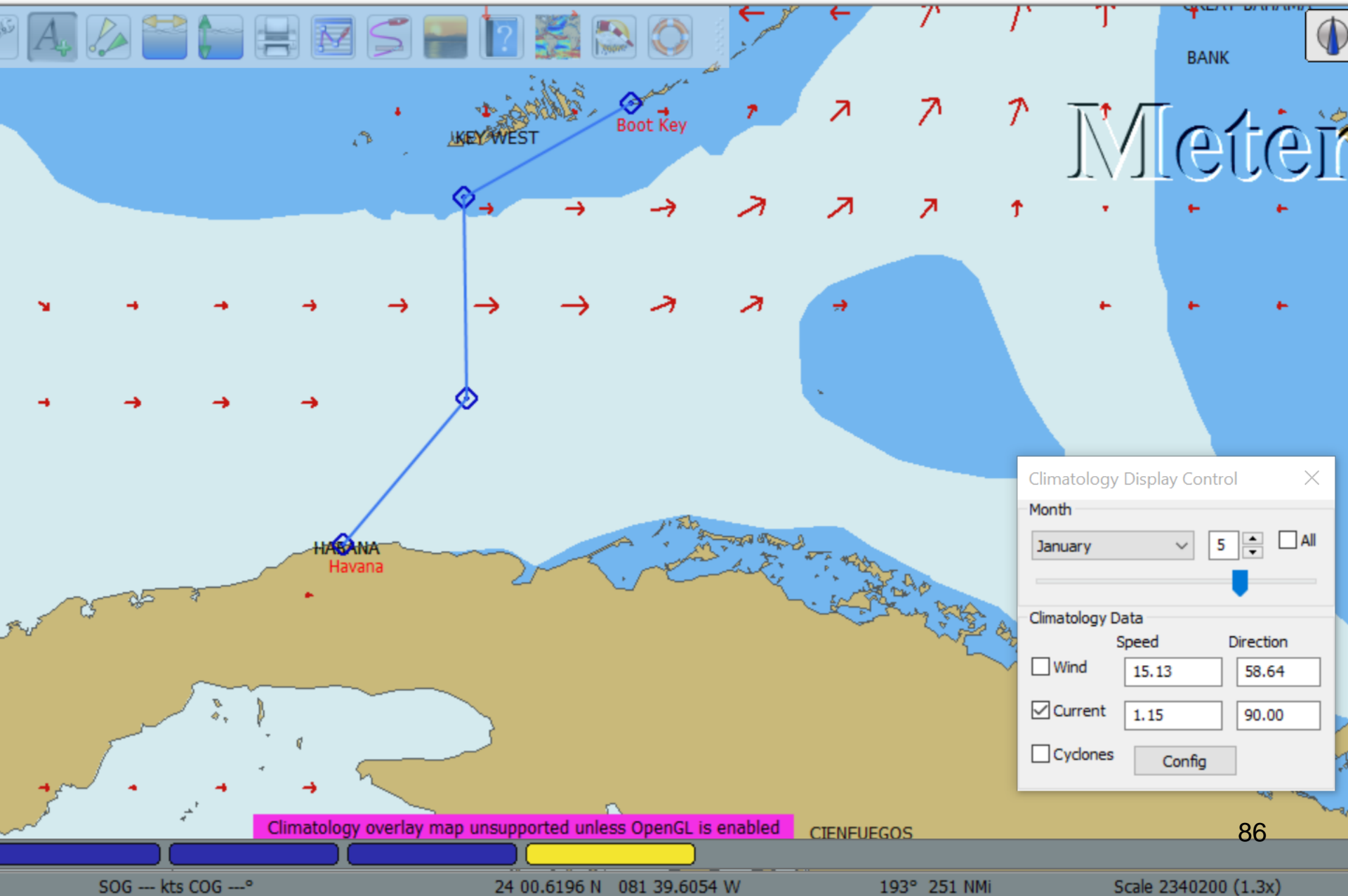
# Climatology for January - Wind



# Climatology for January - Currents

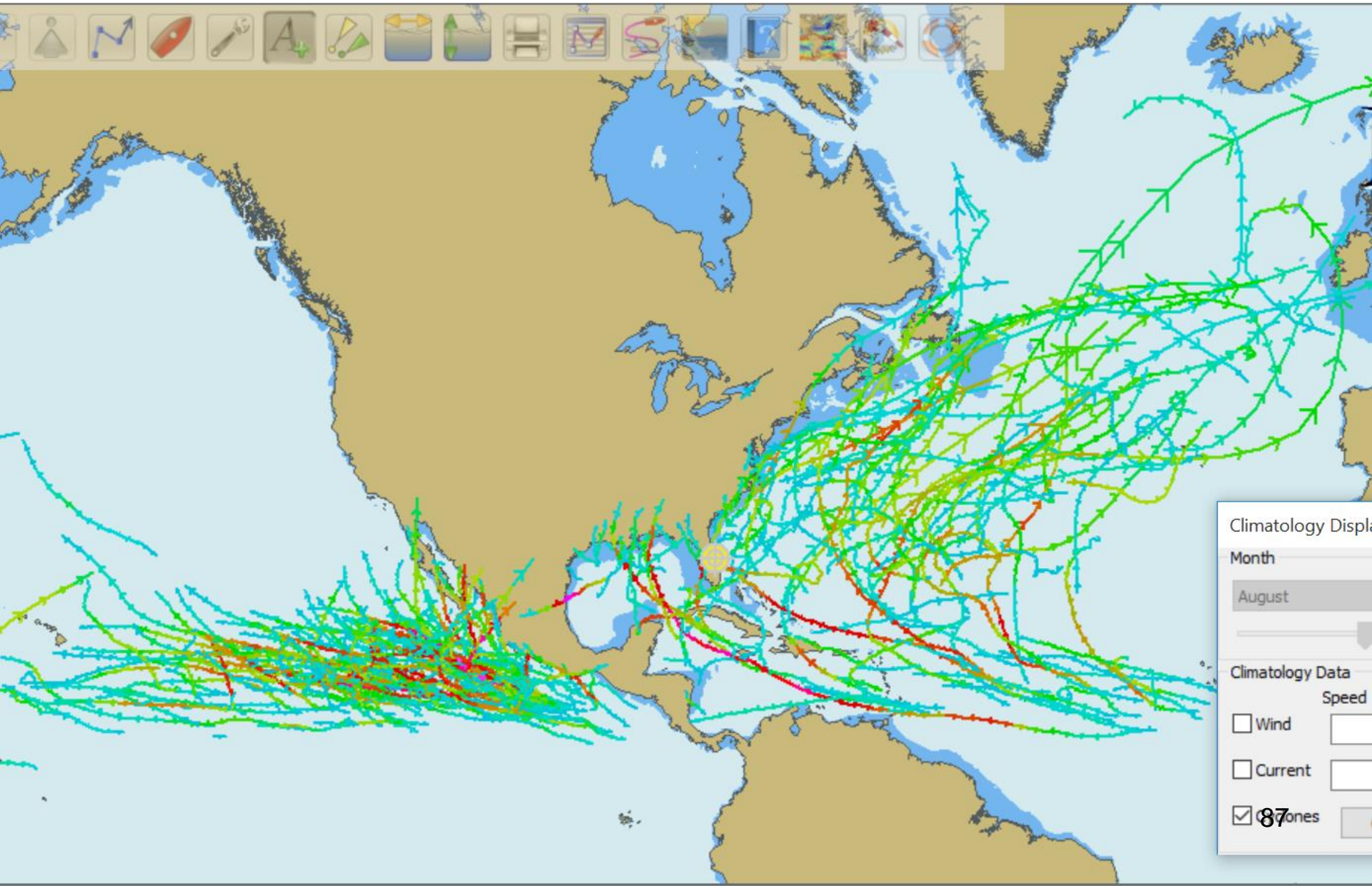


# Rough Route Plan





# Where is a Safe Place to Be In August?



# Climatology Config Screen

Climatology Configuration

Standard Displays Wind Cyclones About

Start Date: 12/ 5/1972

End Date: 12/ 7/2015

Display Spanning: 30 days









El Nino Period:  
 El Nino  La Nina  
 Neutral  N/A

Min Windspeed: 35

Max Pressure: 1010

Storm Types:  
 Tropical  Sub Tropical  
 ExtraTropical  Remanent

Sustained Wind Key (knots):

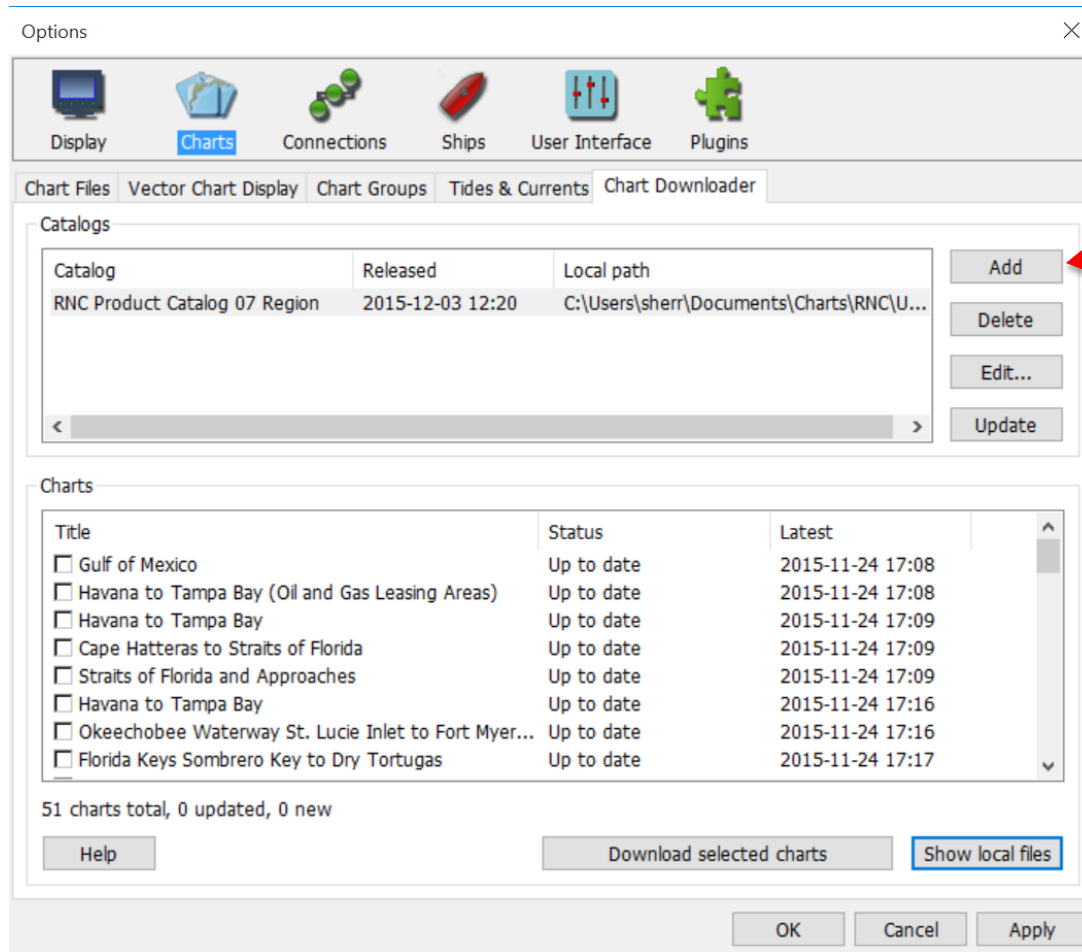
 20	 40	 60
 80	 100	 120
 140	 160	200

Direction arrows are spaced every 6 hours on storm track

About Author Close



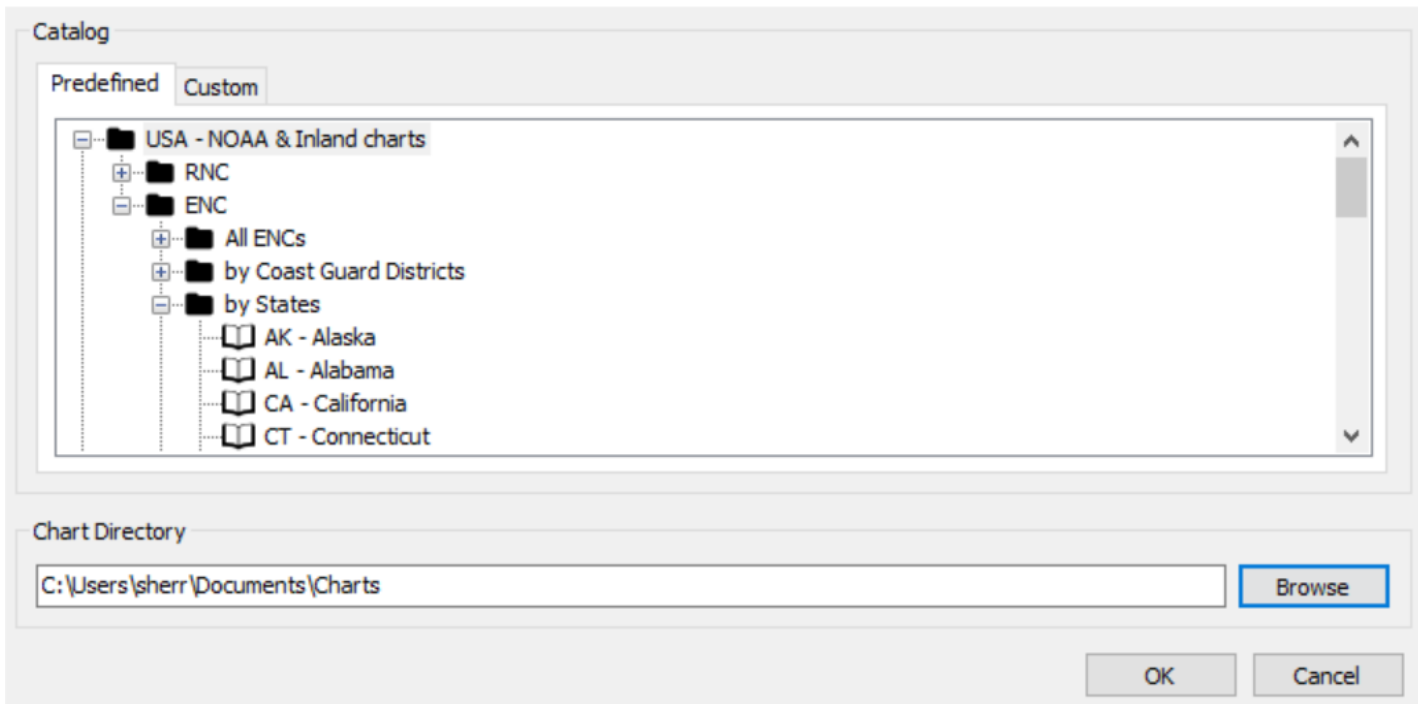
# Chart Downloader Plugin



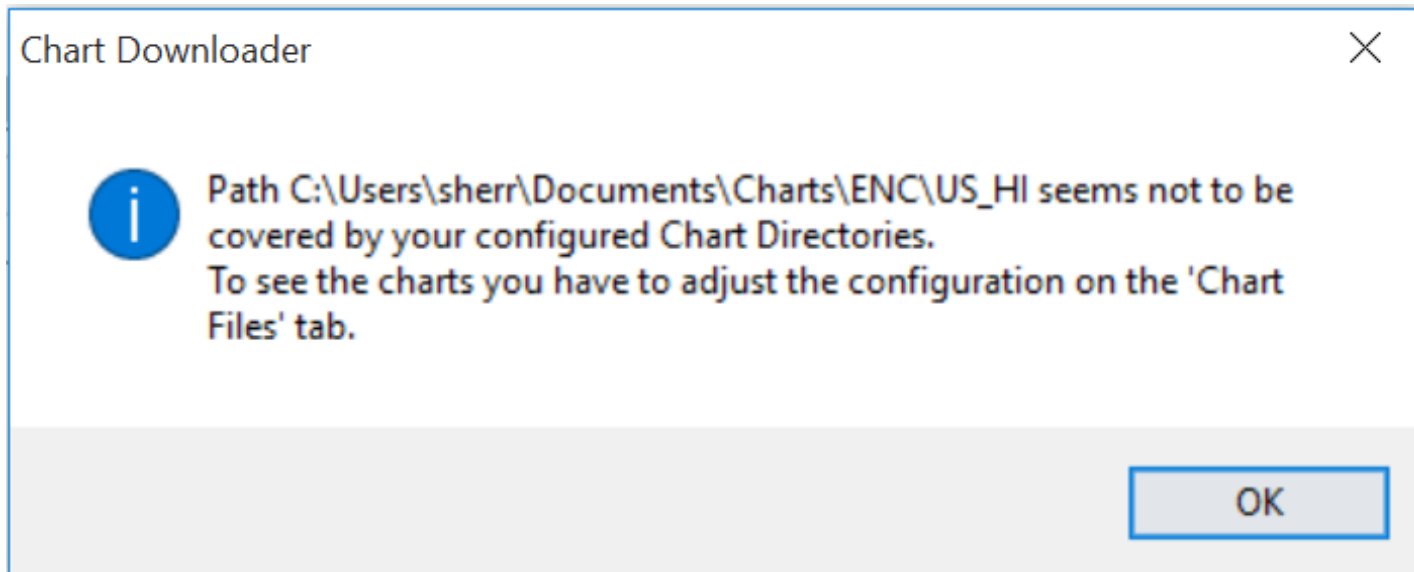
To download a new chart area

# Select Charts by Region

New chart source



# Chart Downloader Weird Error



I don't know exactly what this means, happens on new selection

# Update Chart Catalog

Options ×

Display **Charts** Connections Ships User Interface Plugins

Chart Files Vector Chart Display Chart Groups Tides & Currents Chart Downloader

Catalogs

Catalog	Released	Local path
RNC Product Catalog 07 Region	2015-12-03 12:20	C:\Users\sherr\Documents\Charts\RNC\U...
HI - Hawaii	(Please update first)	C:\Users\sherr\Documents\Charts\ENC\U...

< >


Add  
Delete  
Edit...  
**Update**

Charts

Title	Status	Latest
-------	--------	--------

Help Download selected charts Show local files

OK Cancel Apply



# Download Charts

Options

Display **Charts** Connections Ships User Interface Plugins

Chart Files Vector Chart Display Chart Groups Tides & Currents Chart Downloader

Catalogs

Catalog	Released	Local path
RNC Product Catalog 07 Region	2015-12-03 12:20	C:\Users\sherr\Documents\Charts\RNC\U...
ENC Product Catalog HI	2015-12-03 17:42	C:\Users\sherr\Documents\Charts\ENC\U...

Add  
Delete  
Edit...  
Update

Charts

Title	Status	Latest
<input type="checkbox"/> West Pacific; Wake Island, Mariana Islands, Guam	New	2015-02-23 15:54
<input type="checkbox"/> Hawaiian Islands	New	2014-08-12 12:57
<input type="checkbox"/> Hawaii to French Frigate Shoals	New	2015-02-09 13:53
<input type="checkbox"/> North Pacific Ocean (eastern part) Bering Sea Conti...	New	2013-10-23 13:51
<input type="checkbox"/> San Diego to Aleutian Islands and Hawaiian Islands	New	2015-09-24 09:52
<input type="checkbox"/> Hawaiian Islands southern part	New	2015-02-09 13:54
<input type="checkbox"/> Hawaiian Islands northern part	New	2015-01-30 14:35
<input type="checkbox"/> Niihau to French Frigate Shoals;Necker Island;Nihoa	New	2014-02-10 11:52

67 charts total, 0 updated, 67 new

Help Download selected charts Show local files

OK Cancel Apply

**Charts in  
Hawaii  
Catalog**

**Check to  
Download**

# Selected Charts Downloading

Downloading file 7 of 7



Chart: Hawaiian Islands northern part

**URL:** <http://www.charts.noaa.gov/ENCs/US2HA05M.zip>

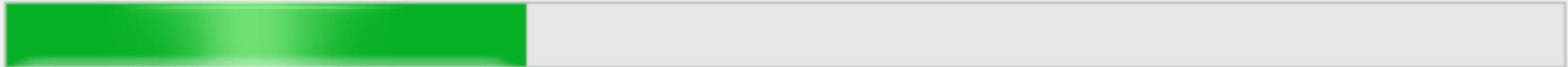
**Speed:** 166.8 kB/s

**Downloaded:** 333.6 kB / 333.6 kB

**Elapsed time:** 00:00:02

**Estimated total time:** 00:00:02

**Estimated remaining time:** 00:00:00



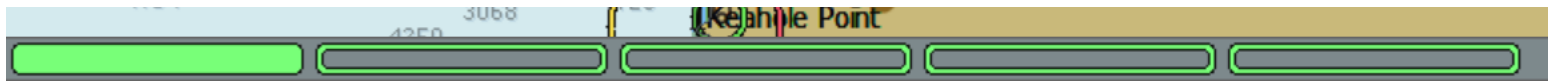
Abort

Pause



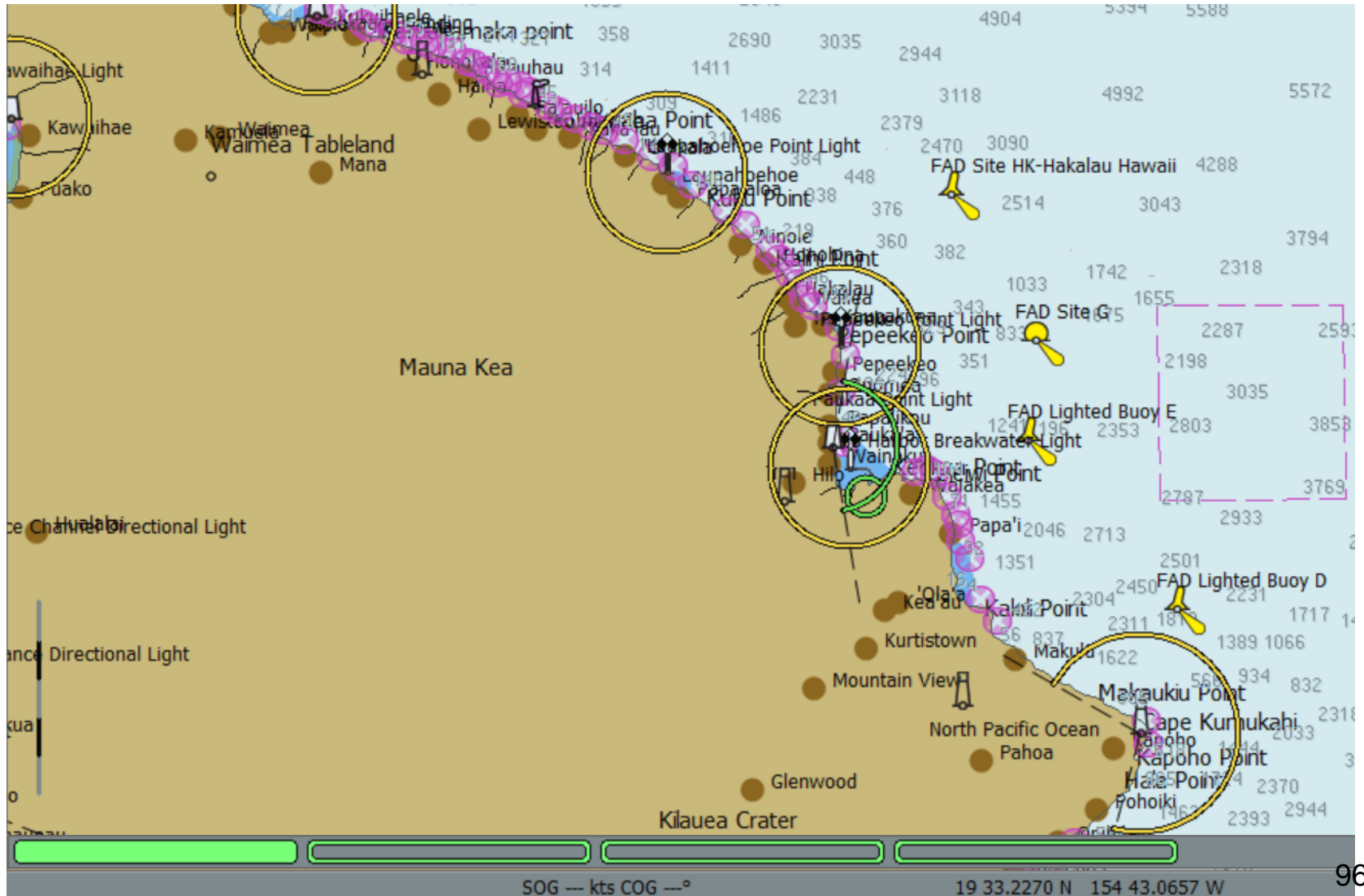
# Note on ENC Charts

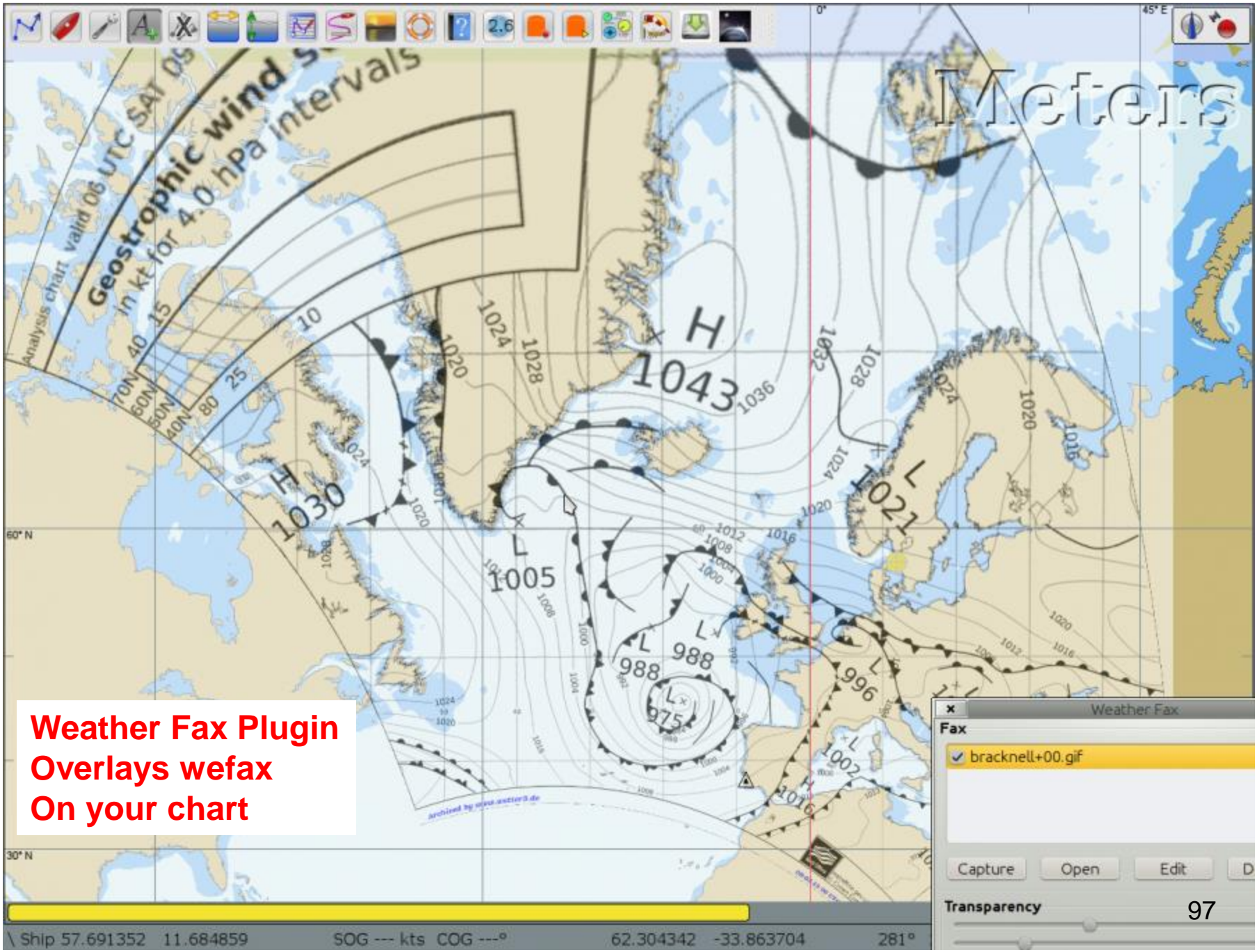
- After Download completes, must add charts using the normal add chart function
- Charts are fully downloaded to your computer and will stay there, even if you delete them in the Chart Downloader
- You can update them using the Update function on the Chart Downloader
- New green bubble at bottom of chart screen



- ENC charts are loaded for viewing as you use them. (I found this a bit quirky)

# ENC Chart for Hawaii





Meters

**Weather Fax Plugin  
Overlays wefax  
On your chart**

Weather Fax

Fax

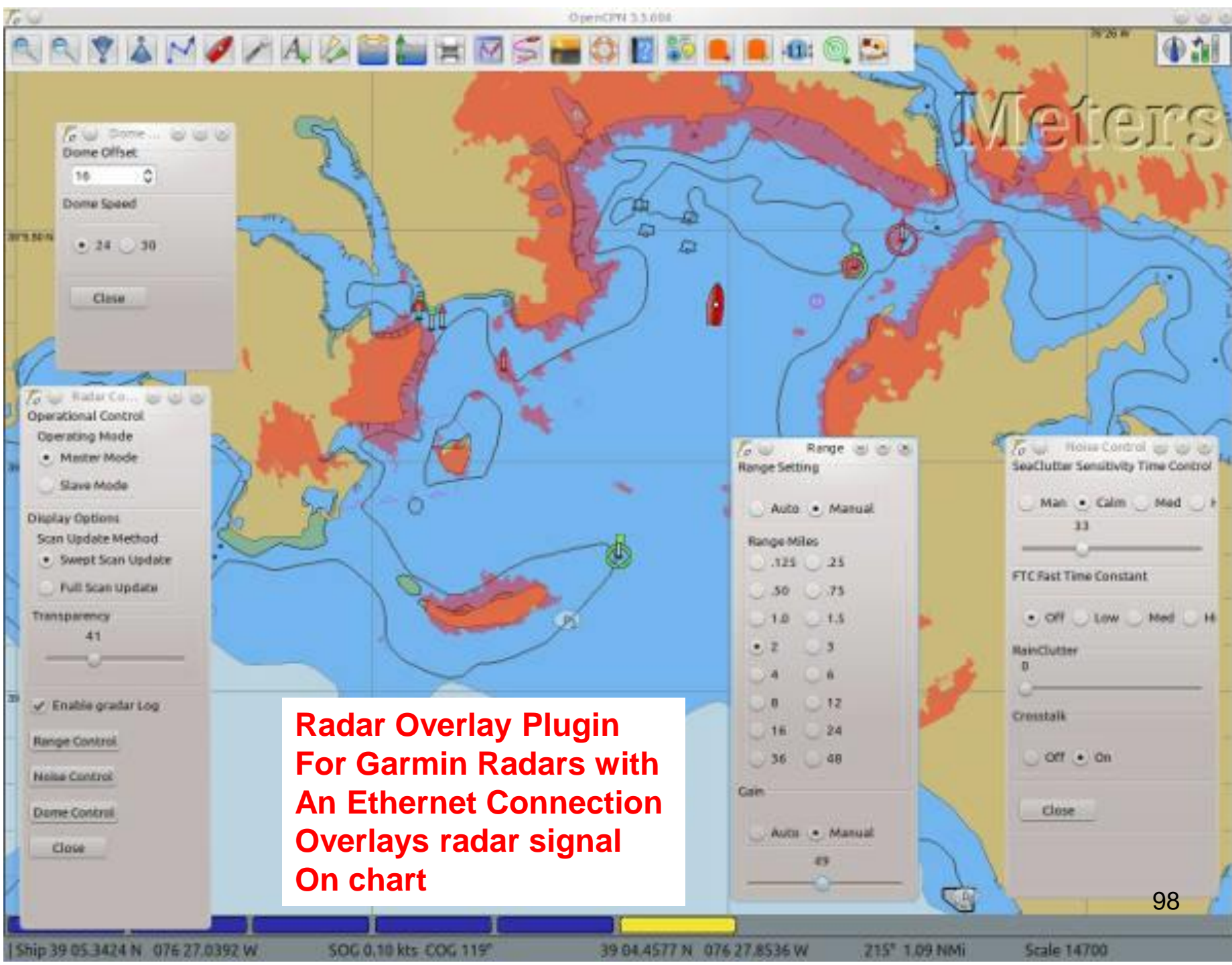
- bracknell+00.gif

Capture Open Edit D

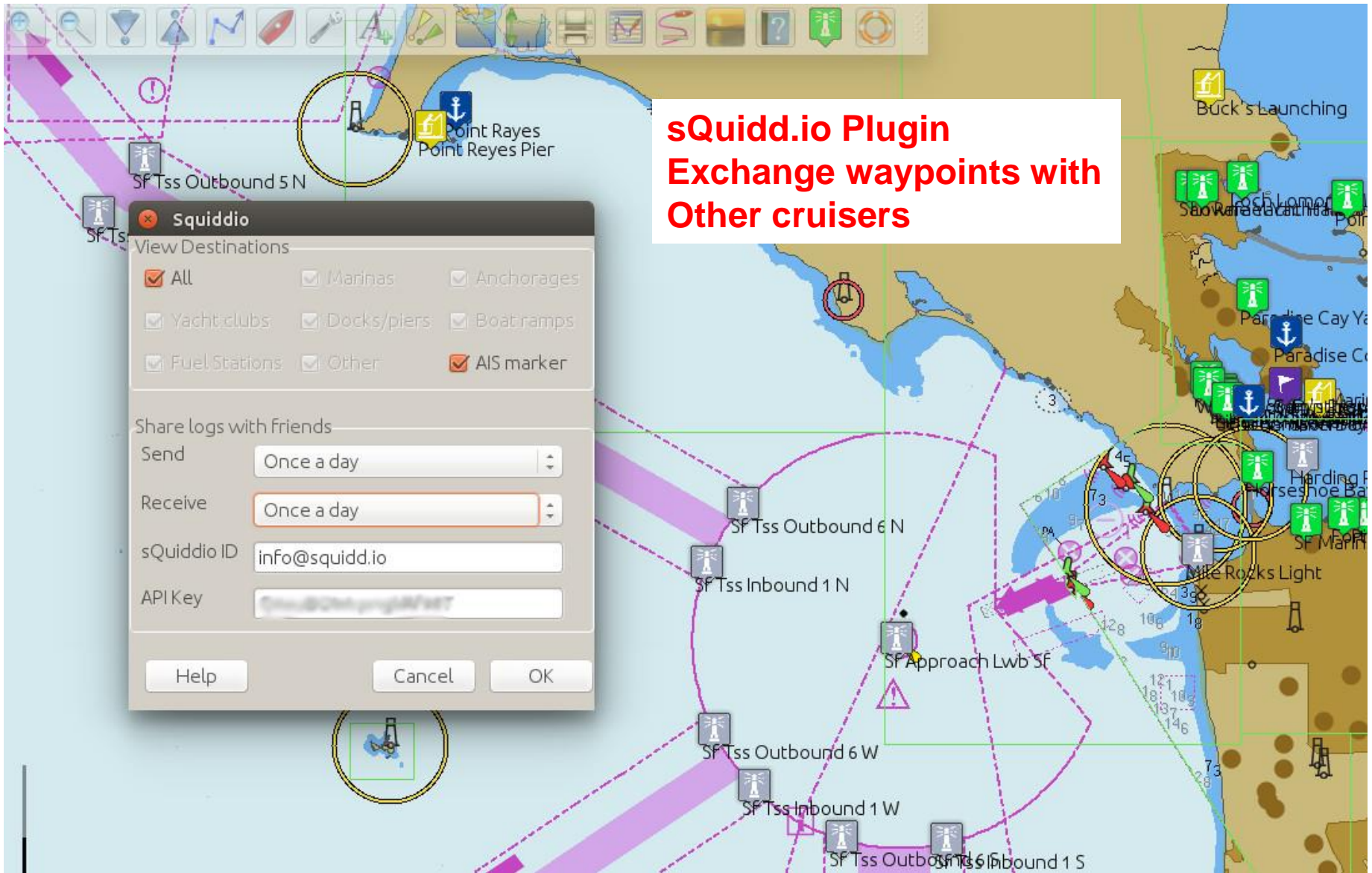
Transparency 97

Ship 57.691352 11.684859 SOG --- kts COG ---° 62.304342 -33.863704 281°





**Radar Overlay Plugin  
For Garmin Radars with  
An Ethernet Connection  
Overlays radar signal  
On chart**



(Similar in concept to Active Captain)



# Weather Routing Plugin

The screenshot displays a complex software interface for weather routing. The central element is a map showing a route (indicated by a red line) across a body of water, with various weather data overlays. To the left, there is a panel with a table of route segments and a polar plot showing wind speed and direction data. To the right, there are several control panels, including one for route management and another for weather data configuration.

Leg	To/From	Distance	Speed	Latitude	Longitude
00	Weather Route	23.01	050.0k	39 28.726	889 28.93
01	Weather Route	21.71	050.0k	39 36.196	889 31.91
02	Weather Route	21.23	050.0k	39 44.832	889 35.78
03	Weather Route	21.46	050.0k	39 53.581	889 39.38
04	Weather Route	22.11	050.0k	39 57.298	889 42.63
05	Weather Route	25.31	050.0k	40 01.078	889 45.29
06	Weather Route	21.71	050.0k	40 04.378	889 47.83
07	Weather Route	28.41	050.0k	40 12.408	889 50.61
08	Weather Route	32.08	050.0k	40 19.094	889 53.15
09	Weather Route	37.03	050.0k	40 24.736	889 55.85
10	Weather Route	34.61	050.0k	40 30.341	889 58.24
11	Weather Route	36.88	050.0k	40 35.911	889 60.33
12	Weather Route	35.30	050.0k	40 41.451	889 62.17
13	Weather Route	43.83	050.0k	40 47.007	889 63.85
14	Weather Route	41.74	050.0k	40 52.47	889 65.11
15	Weather Route	49.24	050.0k	40 57.957	889 66.11
16	Weather Route	49.11	050.0k	41 03.348	889 66.85
17	Weather Route	38.31	050.0k	41 08.781	889 67.34
18	Weather Route	33.01	050.0k	41 14.195	889 67.63
19	Weather Route	24.88	050.0k	41 19.578	889 67.83

Use GRIB & Climatology Data and boat polars to plan an optimized route 100



# OpenCPN for Android

- Just released in October.
- Install \$9.99 version from Google Play
  - this is the supported version & will receive automatic updates
  - There is a free version for Android, but not supported
- Identical in most respects to Windows version, just on a tiny screen
- Chart downloader plugin built-in (but pretty quirky on small phone)

# Primary screen in Android



Click and hold to right click

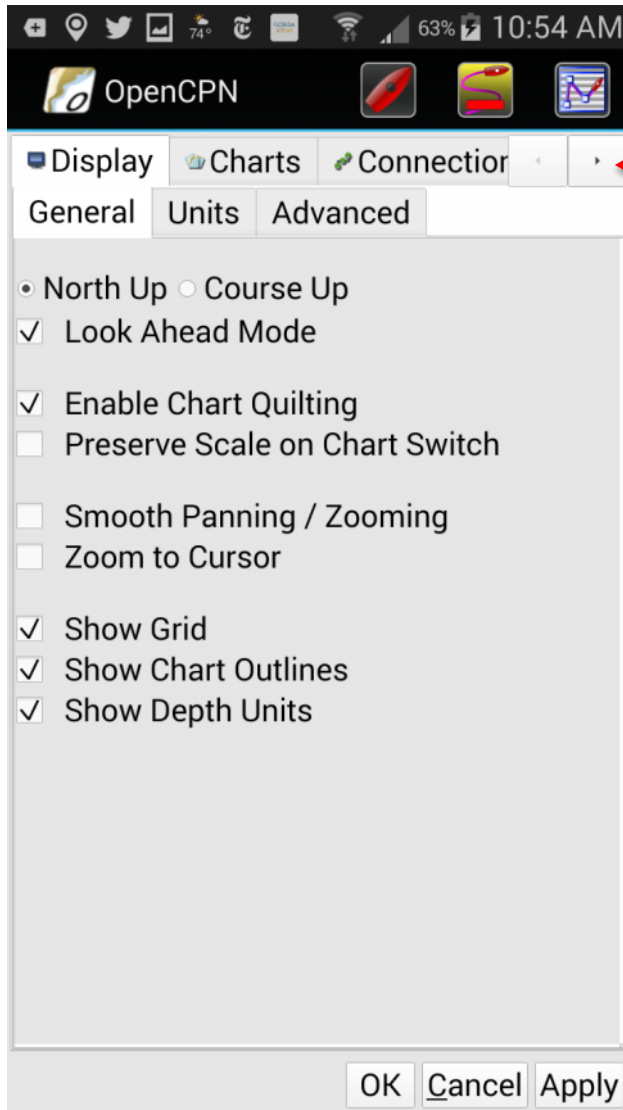
- Pops right-click menu (couldn't get screen shot)
- All the right click functions appropriate to where you are right-clicking

Pinch and un-pinch to zoom in/out

Swipe to move

Click and hold to get toolbar config screen up (add more tb icons)

# Options screen in Android



Click on tab to change tabs

Scroll tabs horizontally

Loading charts & GPX files

- Manually move to device (put on SD card is best)
- Use Charts tab to load charts

Downloading charts

- Use downloader
- Difficult to select chart catalog (+ too small to select, no zoom)
- Difficult to navigate to Charts directory on SD Card
- Scoll bars need to be scrolled on bars, not in window area

# Navigation Mode screen in Android



# OpenCPN for Android

- Difficult to use fully on a phone (maybe better with stylus)
  - Difficult to move a waypoint
  - Chart Downloader config pop-up too big—unusable
  - No esc button
- Probably much better on a tablet
- Still a little buggy
  - Crashed when I tried to delete a waypoint—wants a quick click not a long click on ‘delete’
  - Chart Downloader seemed to hang (bad folder selection)
- Not quite ready for Prime Time, but getting there
- No documentation for Android yet
  - See Terry’s Sargent’s handout

# Questions?

## More Info

- Just play with it--NOT on your Nav computer!
- OpenCPN Website / User Manual
- Bigdumboat.com (videos)
- Cruiser's Forum



A big THANKS to Terry Sargent

<http://yachtvalhalla.net>