



# TIMEZERO PROFESSIONAL V4

New Features

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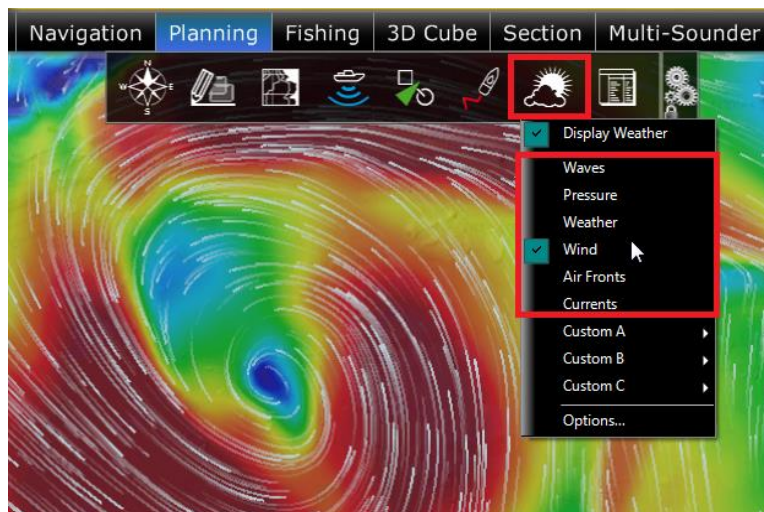
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# Weather

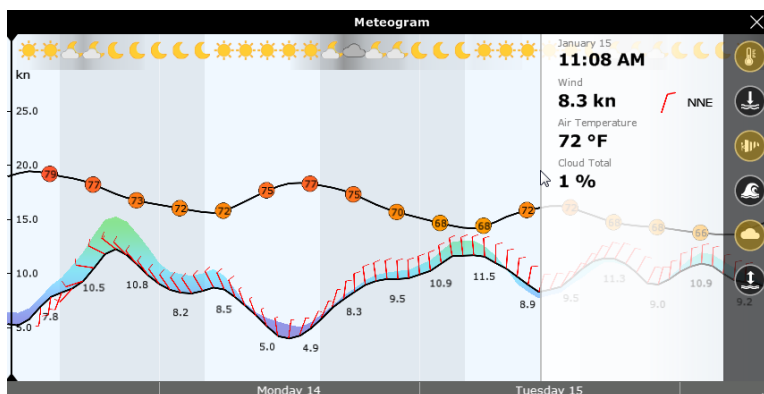
## Display Improvement

TZ Professional V4 offers a new and innovative weather presentation using particle animation. It is now very easy to visualize the “flow” of weather and oceanographic conditions such as wind, currents and waves.

To access the various types of presentation and data, new presets have been added:



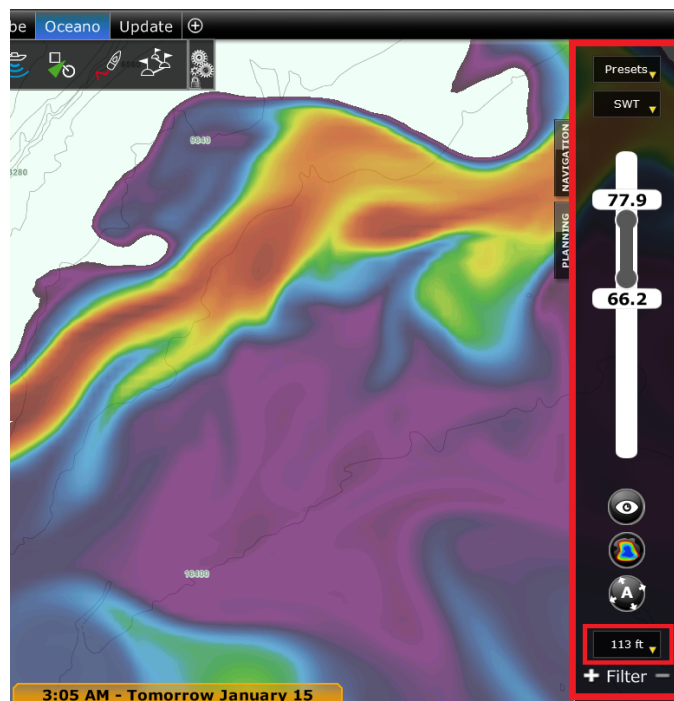
TZ Professional V4 also introduces a new “Meteogram” window that allows users to see a graphical presentation of one or more meteorological variables with respect to time in a particular location:



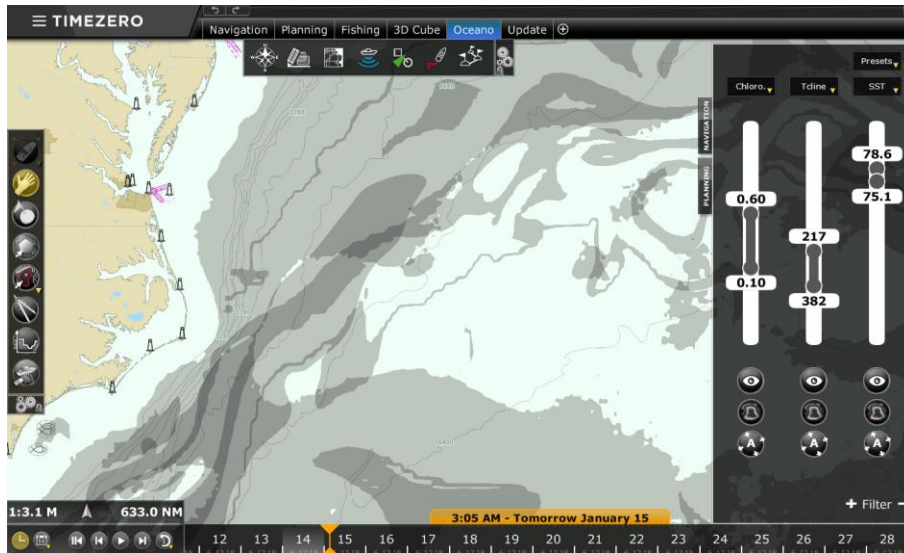
The “Meteogram” can be very useful when it comes to seeing the evolution of weather at a specific point and determining the best departure or arrival time. The Meteogram can also be displayed along a route. The route projected speed and ETA will be used to show the various conditions that you will encounter along the journey.

## Premium Oceanography Service

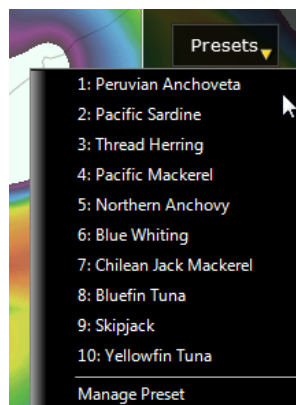
In addition to the free weather and oceanographic data that we have been providing for years, TZ Professional V4 introduces a new premium oceanography service that will provide high resolution and a new type of multi-layer data. This service is geared toward commercial fishermen and advanced Sportfishing customers that want to find and target fishing spots. When subscribed to this premium service, a new “Ocean-O” WorkSpace is unlocked allowing the customer to select and precisely adjust the color scale of any type of data. For multi-layered data, it is also possible to select the depth at which the data is rendered on screen:



The user can also add and combine multiple types of data at the same time. In this case, a grayscale color is used, with a darker shade corresponding to areas that match more parameters. This is an extremely valuable tool to find areas matching multiple criteria and targeting specific fish species:

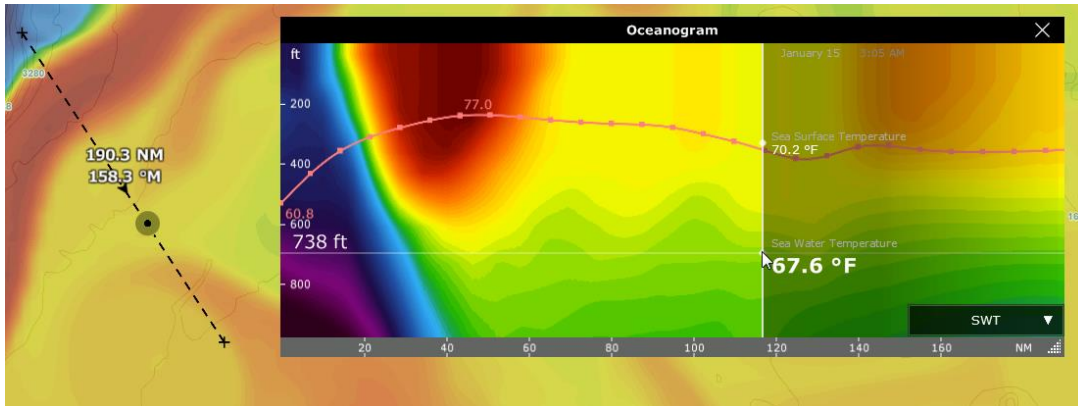


TZ Professional V4 comes with built-in presets (that can be customized) in order to give users a starting point:



In addition, if a customer knows a specific area that is a good fishing spot, a simple right-click will allow the user to select "Auto-Filter". TZ Professional V4 will then automatically find any other areas on the chart that match the same parameters!

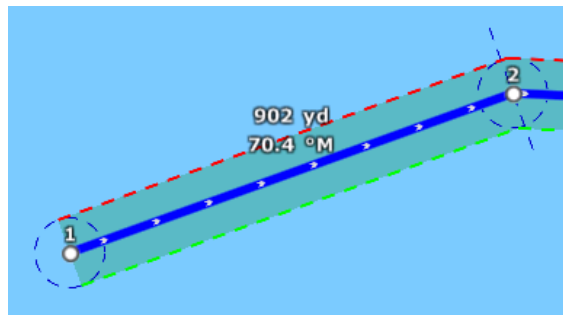
Finally, an “Oceanogram” window is also available allowing to analyze multi-layer data along a divider line providing a clear view of the water column:



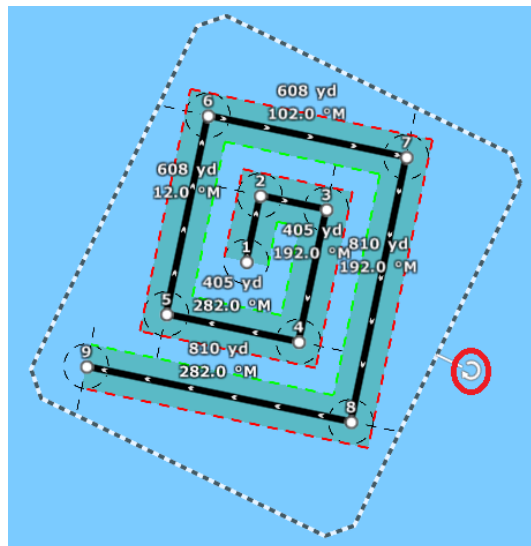
## User Objects

User Objects (marks, routes, boundaries, annotations and photos) have been optimized and the database can now handle millions of objects. TZ Professional is now much faster, even with very large databases.

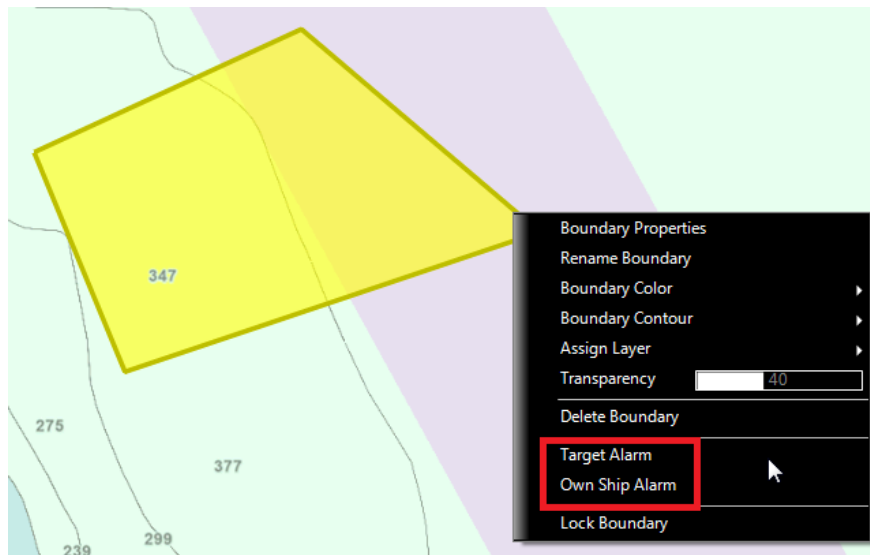
Route drawing has been improved and uses animations to highlight the direction of the route. The perpendicular line and circle switching parameters are also displayed on the chart:



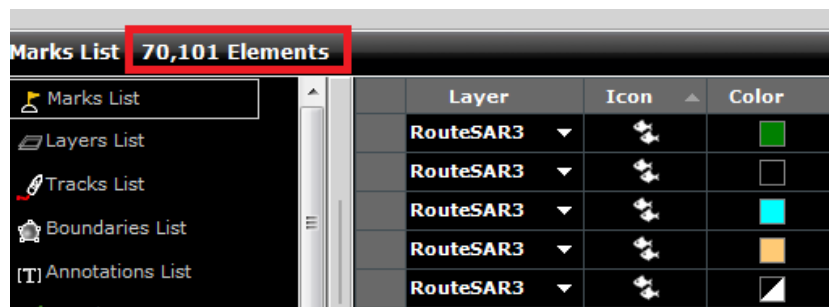
Search and Rescue (SAR) routes (that can be created by right clicking on the Route tool or from the “User Objects” button) can now be moved and rotated allowing for last minute adjustments:



Boundaries can now be setup individually as “Own Ship Alarm” (useful to avoid restricted or dangerous areas) and/or as “Target Alarm” when you want to watch other vessels (AIS or ARPA target) entering specific areas:



Lists are no longer restricted to the first 1000 objects, and will now display the full content of the database:



*Note: It is only possible to select a maximum of 50,000 objects at once (using CTRL-A or Shift Click) from the list.*



# Synchronization

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## Local Synchronization

The active route and all user objects (Marks, Routes, Boundaries, Annotations and Photos) created on the default “TimeZero” layer are now synchronized automatically with other compatible TimeZero platforms (TZ Navigator, TZ iBoat and Furuno TZtouch2 MFD) if they are connected on the same local network.

Note that the new “TimeZero” layer has limitations about the number of objects it can hold:

- Marks = 30,000 maximum
- Routes = 200 with up to 500 waypoints per route
- Boundary (Areas and Lines) = 100 with up to 50 vertices per object
- Circles = 100 maximum
- Annotations = 100 maximum
- Photos = 1,000 maximum

Note that any other layer(s) that the user creates (or migrate/import for previous versions) are NOT limited (but objects will not be synchronized with other TimeZero platforms unless they are transferred over to the TimeZero layer).

**IMPORTANT: TZ Professional V4 will no longer be compatible (for routes and waypoints synchronization) with Furuno NavNet3D or with the first generation of NavNet TZtouch MFDs. Radar and Sounder connected to a NavNet3D or a NavNet TZtouch network remain compatible. Also, the synchronization with Furuno TZtouch2 MFDs will only be available with a firmware update (v7) that will be released by Furuno later this year. Exchange of Routes and Waypoints will still be possible (with NavNet3D and TZtouch) by manually exporting a file (TZD or CSV) onto an SD-Card.**

## Cloud Synchronization

All user objects (Marks, Routes, Boundaries, Annotations and Photos) created on the default “TimeZero” layer will be synchronized with the cloud (when Internet is available).

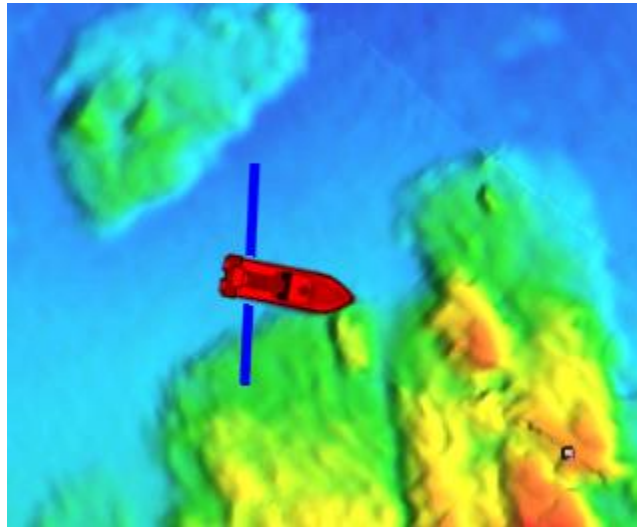
Cloud synchronization will allow multiple TimeZero platforms to automatically share data even if they are not connected to the same local network. If you only have TZ Professional, the Cloud Synchronization will backup your user objects (that are on the default “TimeZero” layer) automatically.

User Objects that are synchronized with the cloud will also be viewable on the My TimeZero website using any modern web browser!

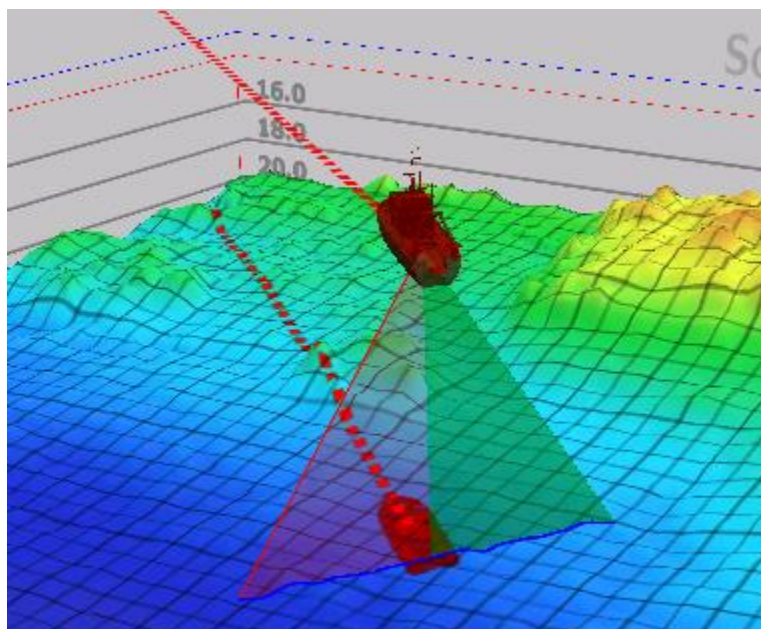
Note: *User Data is kept confidential and is NOT shared with any other users.*

### Swath Display

The DFF3D and WASSP swath is now displayed when PBG is enabled (allowing you to see exactly the coverage area that is being mapped):

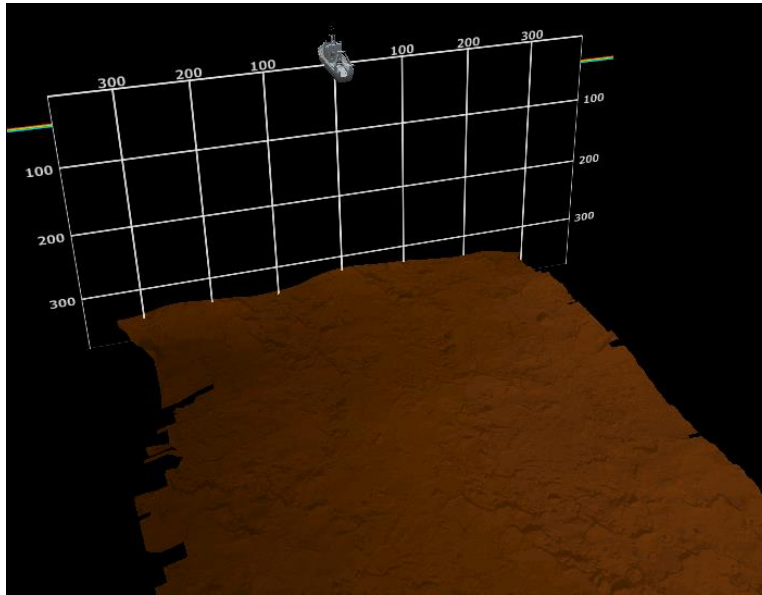


The multi-beam swath is also displayed in 3D:

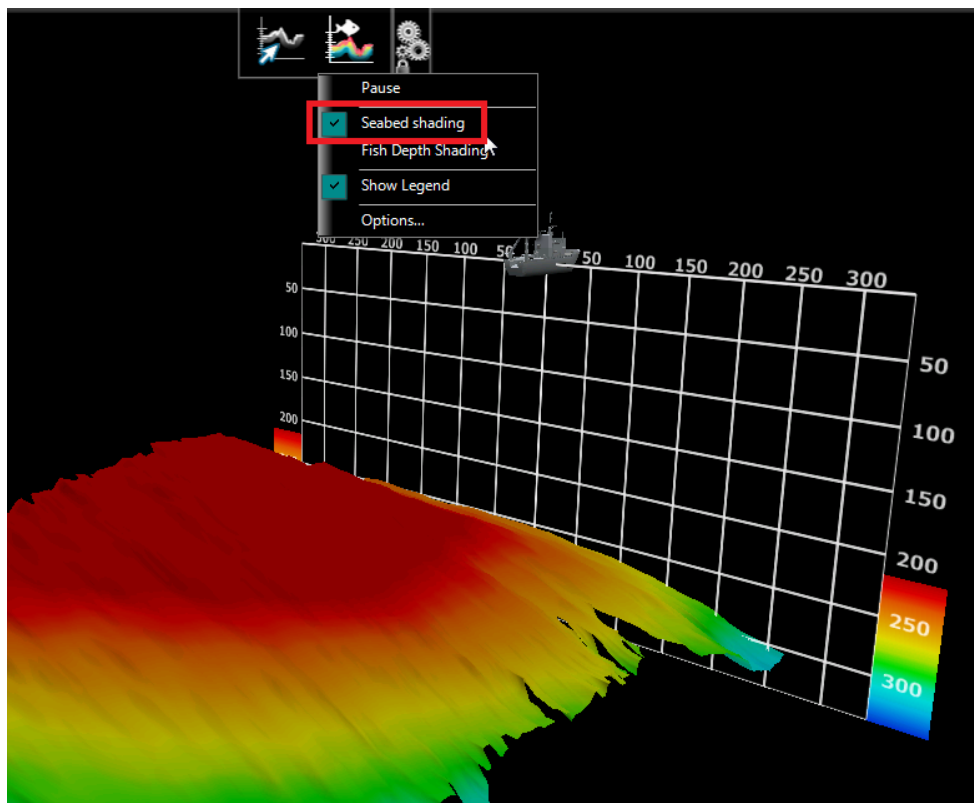


## Water Column Improvements

The Water Column default terrain shading has been improved (textured):

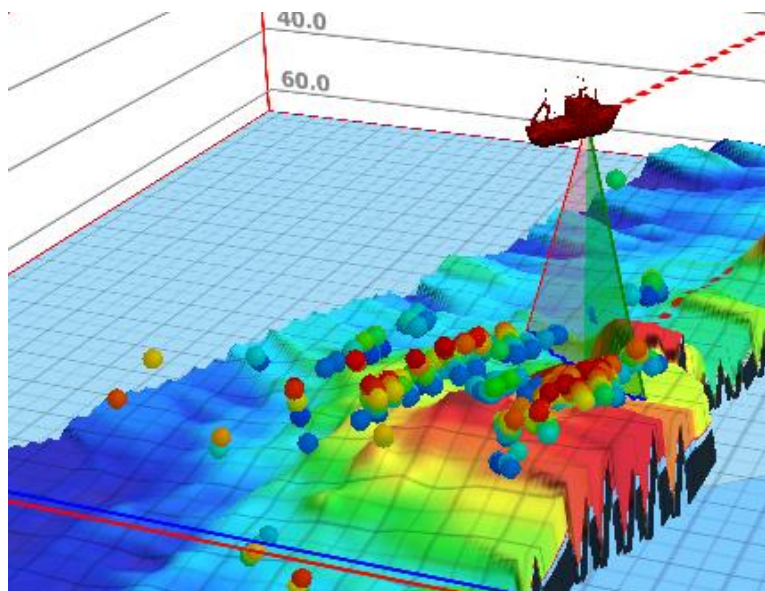
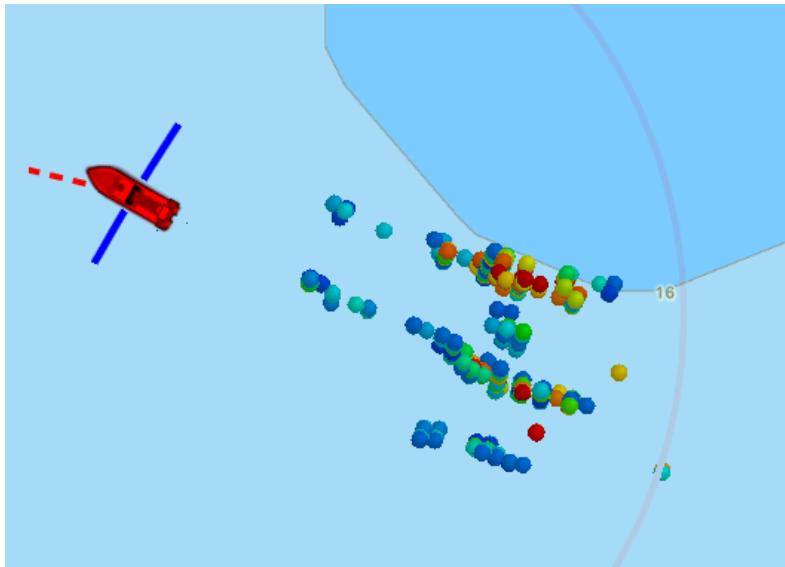


It is also possible to enable the Seabed Shading to render the bottom using a color scale (similar to the presentation achieved on a Furuno MFD):



## Fish Targets

Up to 500,000 Fish Targets (generated from either DFF3D or WASSP G3) are now automatically saved in a database. Thanks to this new database, Fish Targets can now be displayed on the Chart and on the 3D Cube (using the real Fish Target depth):

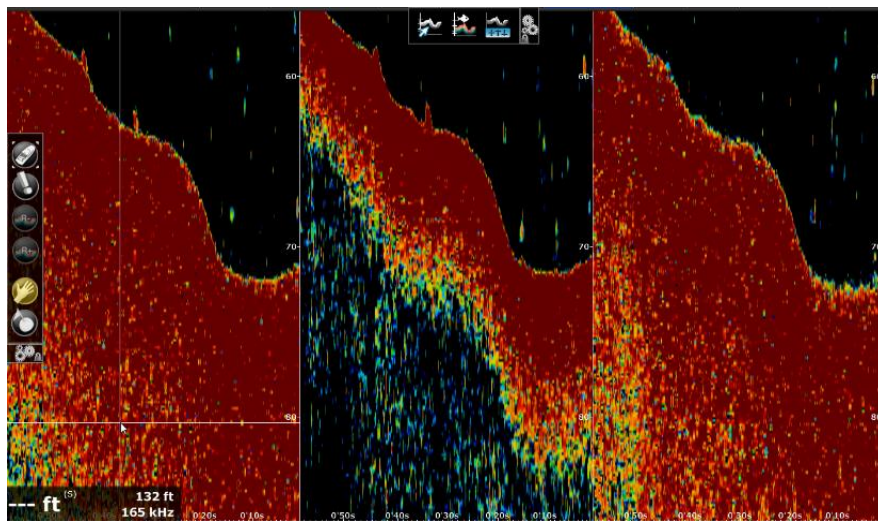
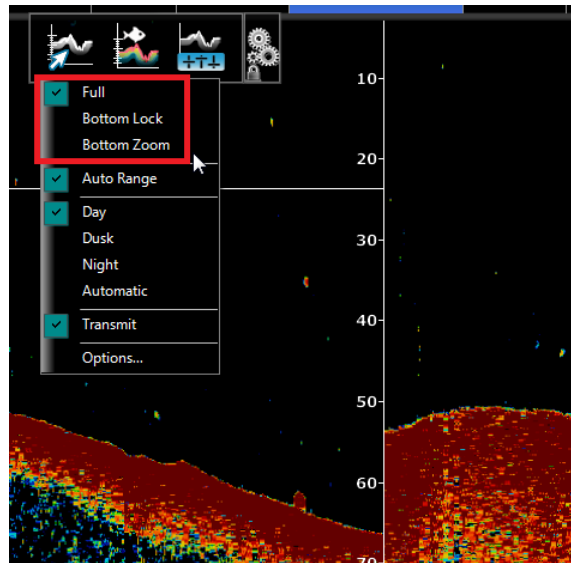


It is possible to filter Fish Targets by time, size or strength.

*Note: Fish Target strength is only available with WASSP G3.*

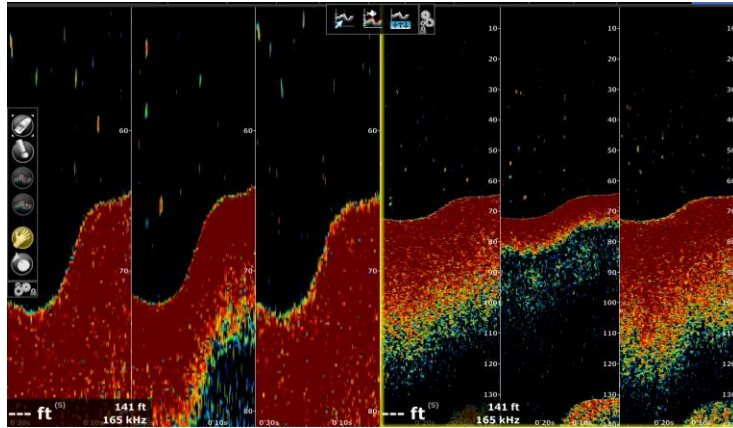
## Bottom Lock and Bottom Zoom

A new Bottom Zoom sounder view is available for both WASSP G3 and DFF3D:



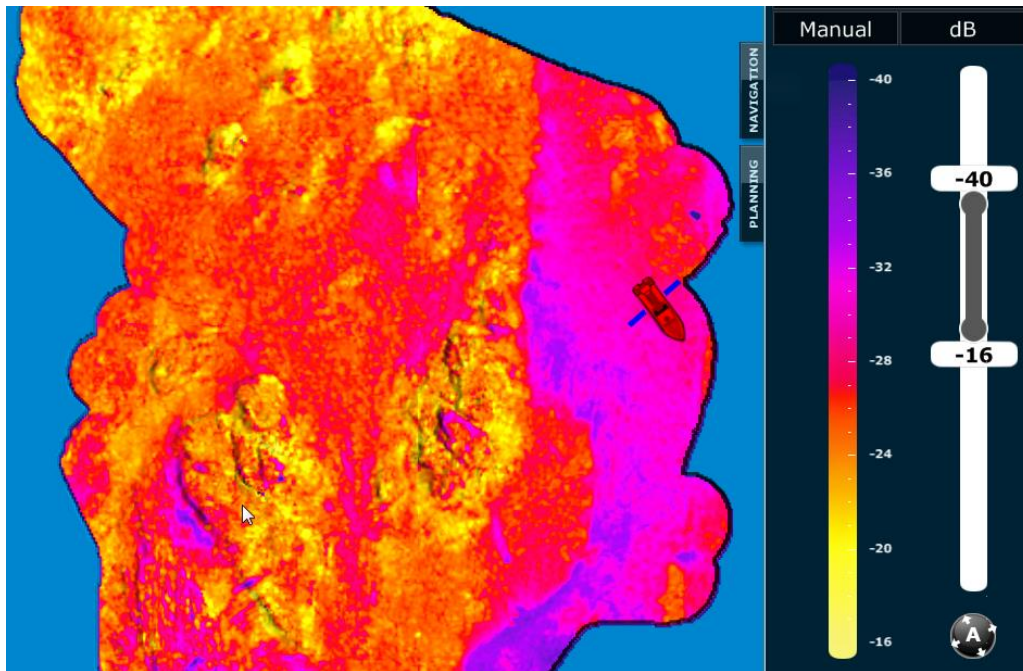
*Note: The Bottom Zoom view just performs a “digital zoom” of the picture sent by WASSP or DFF3D. Make sure to adjust the Bottom Zoom and Bottom Lock range span accordingly.*

Note that it is possible to configure independent displays with normal and zoomed mode:



## New Backscatter Color Palette

A new color palette is now used for displaying Backscatter (available with WASSP) and Bottom Discrimination (available with BBDS1, DFF1-UHD and internal TZT2 sounder):



Just like with depth shading, Auto, Manual and Discreet mode are available, with the ability to record presets.

## Bottom Hardness compatibility with 3<sup>rd</sup> party sounders

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Bottom Hardness can now be recorded via NMEA0183 using the following sounders:

- Simrad ES70 and ES80 (\$PSIMDHB sentence)
- Koden CVS-FX series (\$PKODS sentence)
- Hondex HDX-121, HE-1500Di, and HE-7300Di (\$PHDX sentence)
- JRC JFC-130 series (\$PJRCS sentence)
- Seascan (\$PSAP sentence)

*Note: Bottom Roughness is not supported, only hardness.*

Please note that a new Bottom Hardness module will be required for TZ Professional v4 to accept these new NMEA0183 sentences.

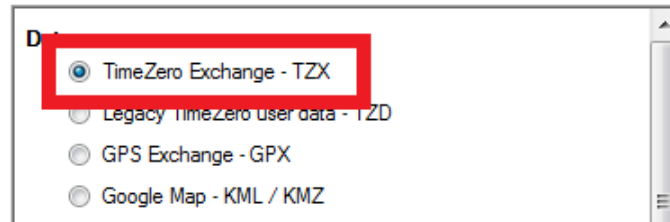
*Note: this module is not required for Bottom Discrimination data generated over the network by the BBDS1, DFF1-UHD or TZT2 Internal Sounder (feature included with the Sounder module).*



# Import & Export Wizard

## New TZX exchange format

TZ Professional v4 introduces a new file format to import/export User Objects and Tracks data:

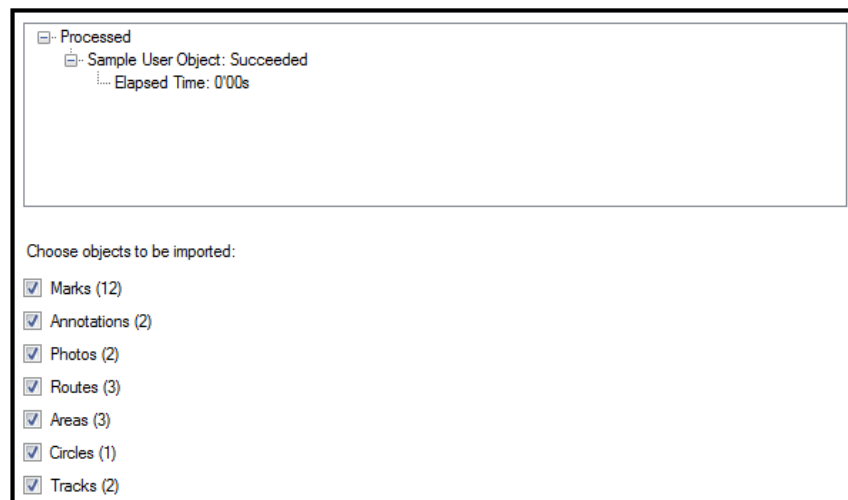


This new format was designed to handle more data and provides faster import/export.

*Note: The older TZD file format is still supported in TZ Professional V4.*

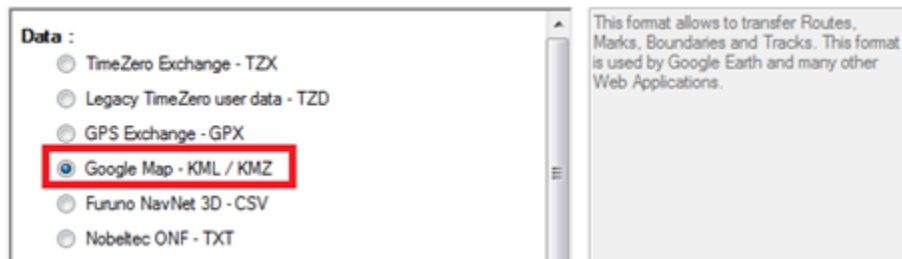
## Filters

The Import Wizard has been improved allowing you to view and select the type of objects before you import them in your database:



## KML/KMZ Import Improvements

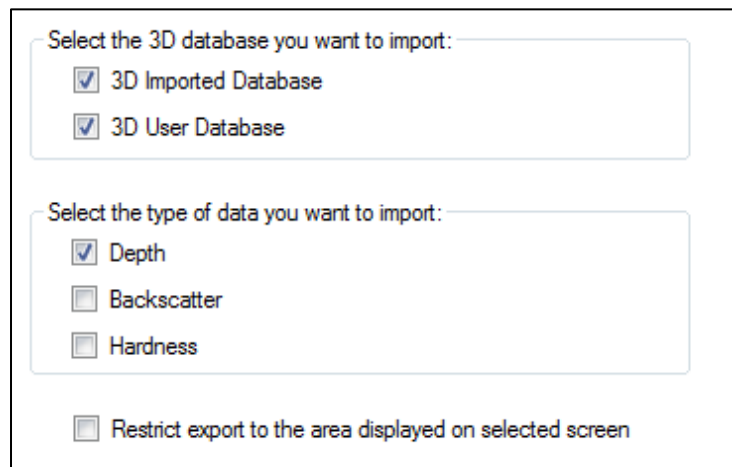
TZ Professional can now import areas and lines created in the KML (or KMZ) format:



*Note:* Lines inside the KML file are no longer imported as routes. They are now imported as line. To import routes in TZ Professional, make sure to use another import format such as the new TZX, TZD or GPX.

## 3D Import / Export Improvements

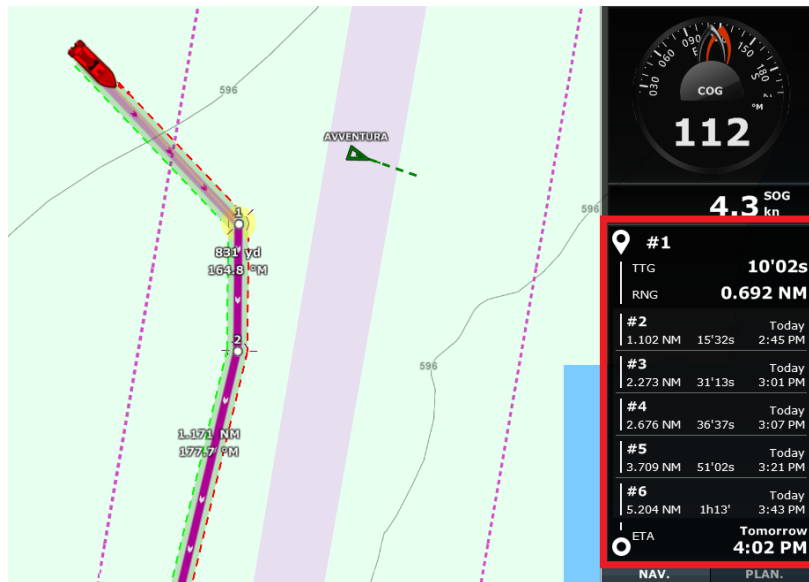
When importing or exporting data using the TimeZero PBG data file format (TZPBG files), it is now possible to choose the type of data and if the user wants to import/export their user database or the imported database:



It is also possible to restrict 3D Data Import or Export by geographical area. Simply adjust the plotter screen to the area you want to import or export before opening the Import/Export Wizard and check the "Restrict to the area displayed on screen" checkbox.

## New Active Route NavData

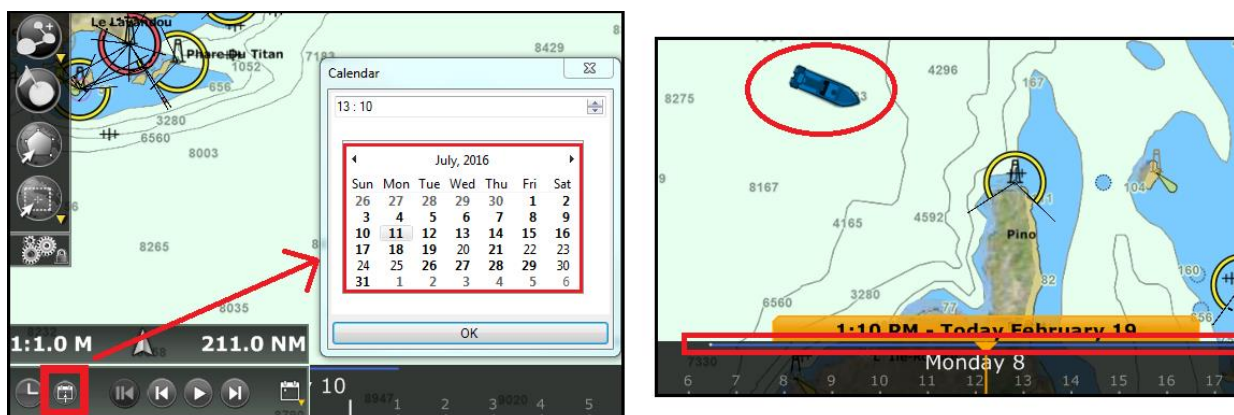
A new Active Route NavData can be added to the NavData side panel. This new type of NavData adapts its size to automatically fill the remaining space of the side panel. When a route is activated, it displays Distance, Time To Go and Estimated Time of Arrival of each waypoint:



If the route contains many waypoints that do not fit inside the NavData, it is possible to scroll the content of the NavData to look at future waypoint information. Note that the last waypoint (the arrival) will always be visible at the bottom of the NavData.

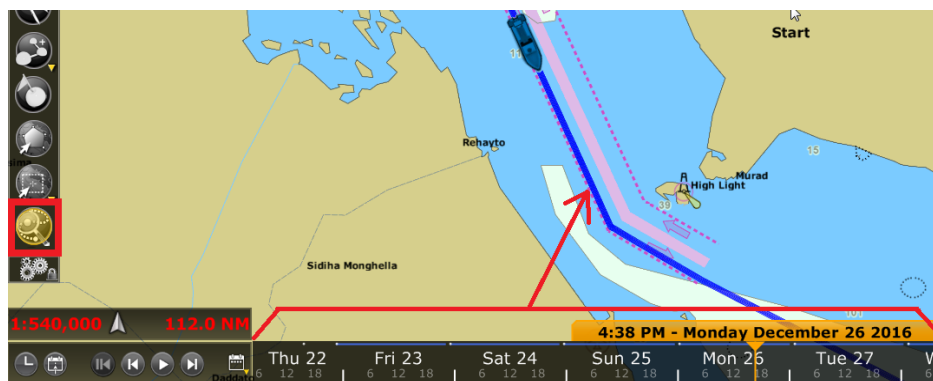
## New Logbook & Track Recall

TZ Professional V4 is introducing a new way to replay your voyages. All your trips are now being automatically saved as soon as TimeZero receives a valid GPS position inside a new Logbook database. Trips can be replayed from the “Planning” WorkSpace by selecting the appropriate date/time in the Time Bar. In addition, it is possible to click on the Calendar icon to open a window that lets you pick a day. Any days that contain trip data will be highlighted in bold making it easy to retrieve your trips. The time bar will also display a blue line indication where trip data is available. A blue boat icon will be displayed on the chart marking the location at that time:

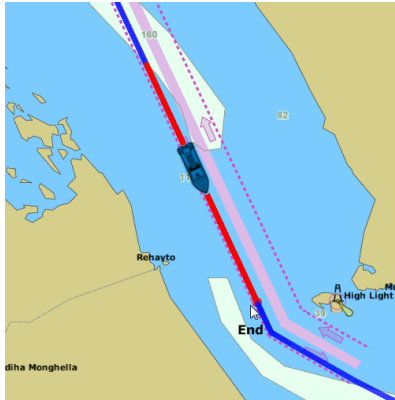


You can click on the blue boat icon (replay boat) to access the data that was recorded at that time (wind, speed, depth etc.).

If you want to recall a track, you can use the new “Recall Track” tool. When selected, all the positions available in the logbook database will be displayed on the map (in blue) for the date range selected on the Time Bar:



You can then click on a first point to set the beginning of the track and click a second time to set the end. TimeZero will then create a track automatically:

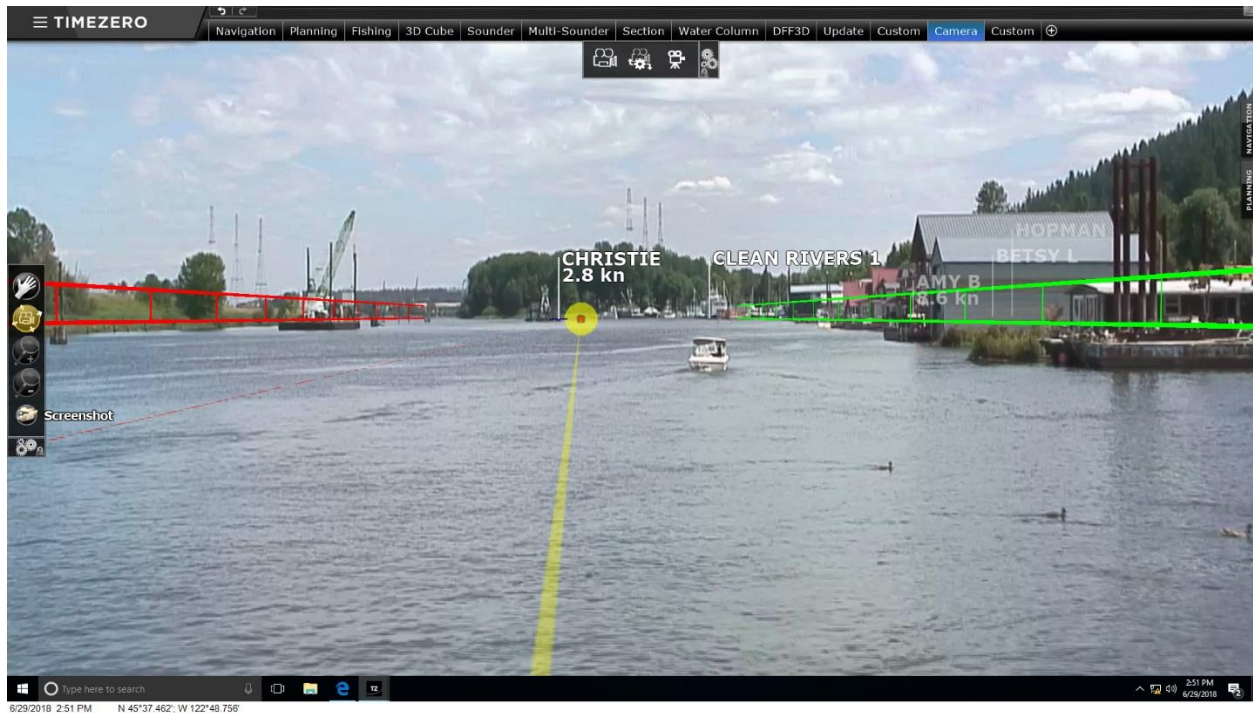


This feature is useful if you forgot to record your tracks during a trip.

## Augmented Reality & H264 Generic Camera compatibility

TZ Professional V4 is now compatible with generic fixed H264 cameras. If a network camera outputs its video feed on the network using H264, you can configure it in TZ Professional using its H264 path (URL).

TZ Professional also allows customers to display the active route and cross track distance directly on the camera video feed:

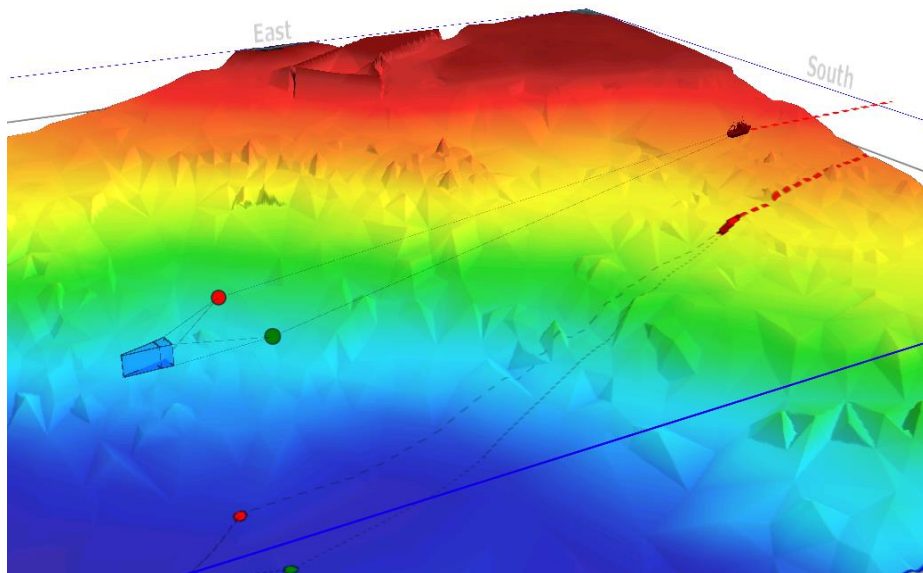
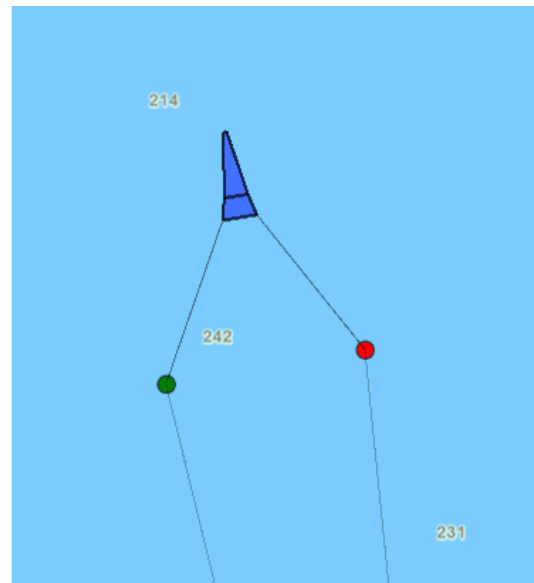


*Note: For the Augmented Reality to work properly, the horizontal field of view of the camera should be of a maximum of 50 degrees.*

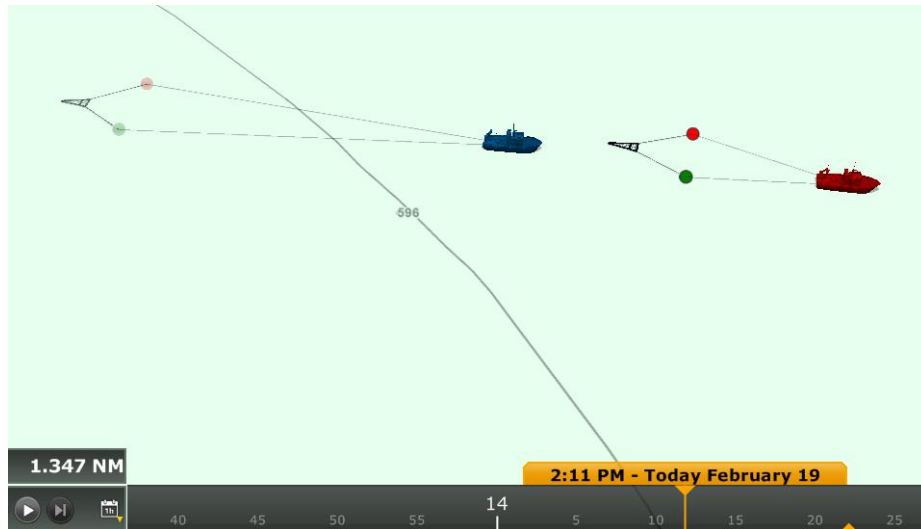
## Trawl Positioning Module

The Trawl Positioning module has been improved. Customers can enter the net parameters (in addition to the door position that is automatically sent by the Marport sensors) so that TZ Professional can render its location in 2D or 3D:

Trawl Display	
<input checked="" type="checkbox"/> Display Net	
Sweep Length (Bridle)	109 yd
Wing End Spread	22 yd
Net Opening (vertical)	5 yd
Net Length (Ribline)	55 yd
<input type="checkbox"/> Trawl COG/SOG predictor	
<input checked="" type="checkbox"/> Trawl cables	
<input type="checkbox"/> Trawl Trail	

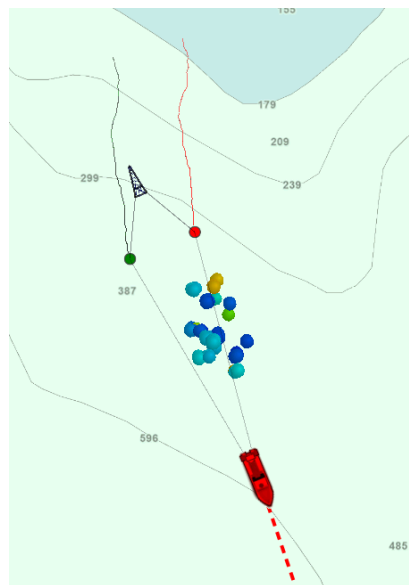


The door position is also automatically saved (inside the new Logbook database) allowing you to replay previous boat and net positions from the Planning WorkSpace:



This is very useful to see the evolution of the net position overtime according to the ship's behavior.

Paired with the WASSP G3 or the DFF3D (that can both generate Fish Targets), the Trawl Positioning module will allow you to see how to position precisely your trawl on the chart according to the fish school location:





## TZ Professional V4 Regression

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- 1) TZ Professional V4 will NOT be able to synchronize marks and routes with NN3D and TZT (1st generation) over the network (including synchronization of the active route). Only NavNet TZtouch2 will be supported with firmware v7. Note that Radar/Sounder compatibility and sensor data through the network (Position, Speed, Heading, AIS...) will still be supported. If a TZ Professional V4 user wants to exchange Routes / Waypoints with NN3D, the CSV file format can be used (exchanging data via SD-Card). For exchanging data with TZT (1st generation), the TZD file format can be used.

*Note: TZ Professional V4 will only be able to synchronize with TZT2 after a firmware update of the MFD. This firmware update is required because the synchronization will not be limited to Routes and Marks. Boundaries (Area, Lines, Circles) and Photos will also be synchronized, bringing new capabilities to the MFD. Unfortunately, it means that for a period of time, the TZT2 synchronization will not work with TZ Professional V4 until TZT2 gets updated to firmware v7 (planned at the end of 2019).*

**IF A CUSTOMER WANTS TO SYNCHRONIZE MARKS AND ROUTES OVER THE NETWORK WITH NN3D OR TZT, THEN, HE SHOULD NOT UPGRADE TO V4.**

**IF A CUSTOMER WANTS TO SYNCHRONIZE MARKS AND ROUTES OVER THE NETWORK WITH TZT2, THEN, HE SHOULD HOLD OFF ON UPGRADING OR HOLD OFF ON INSTALLING V4 UNTIL FURUNO RELEASE THE NEW FIRMWARE.**

*Note: If a customer purchases TZ Professional V4, he can use the TZ Professional installer v3.3 and then use the TZ Professional v4 installer at a later time (this will not require a new activation).*

- 2) Marks cannot belong to a route or boundary (they will be duplicated when upgrading from an old database and they will be displayed on top of the route or boundary). In general, user objects in v4 are all independent (they cannot share their points with any other objects). For example, it is not possible to create a route that uses existing marks. If the user clicks on an existing mark while creating a route, it will create a new waypoint on top of the mark at the exact same location, but they will not be linked. If the user moves the mark after creating the route, this will not move the waypoint of the route (it will just move the mark).  
*Note: When building a route and clicking over an existing mark, although the objects are not shared, the waypoint will be created with the exact same position as the mark ("magnetism" is still working).*
- 3) It is no longer possible to create a HTML note on user objects. The new user objects properties are restricted to Name and Comment (which are both texts only properties). Notes will be lost during upgrade.  
*Note: If customer attached a picture to a user object using the "Note" HTML field, a "Photo" User Object will be created at the same position.*

- 4) The feature "Attach Picture with Event" from the "Marks & Boundaries" Option has been removed (because picture cannot be attached to mark via the Note field anymore).
- 5) The new "TimeZero" Layer (used for local and cloud synchronization) cannot be erased or disabled in TZ Professional V4. It will always be there (but its content can be hidden).
- 6) The Active Route List will no longer be available (It is replaced by the new Active Route NavData).
- 7) The "Start from Boat" option is removed from the Planning Route Detail.
- 8) TZ Professional V4 removes the ability to send routes and waypoints to GPS using the NMEA0183 \$RTE and \$WPL sentences.
- 9) It will not be possible to reverse the Active Route. Only the planning route can be reversed.
- 10) TZ Professional V4 removes the compatibility with the proprietary NMEA0183 Man Over Board ("PMXS, MOB") sentence. Proprietary MOB solutions have been largely replaced by the AIS SART standard (that TZ Professional V4 fully supports).
- 11) KML file cannot be used anymore to exchange routes between TZ users. This is because in V4, KML lines are now imported as lines and not as route. So, a user that exports a route using a KML file and import it on another PC will end up with a line.
- 12) The Bottom Discrimination Cursor is deprecated. TimeZero will no longer record the discrimination values (rock/gravel/sand/mud) in the database. Instead, and to be compatible with more sounders, TimeZero will just record a Bottom Hardness value (from 0 to 100%) with its quality (so that filtering according to quality is still possible with BBDS1/DFF1-UHD). Customers that really want to know the discrimination values will need to use the track (as bottom discrimination is still recorded in the track).
- 13) The Track Data recorded window (that lets user choose what data to record in the track) is removed. TZ Professional V4 will now automatically and always record in the track data Speed (SOG) + Depth + Bottom Classification + SST. However, it will no longer be possible for users to record extra data such as wind.
- 14) "True" mode for EBL was removed
- 15) It is no longer possible to display the route safety tooltip on top of the XTE lines when the leg of a route is in red. In the future (v4.x) we will work on improving the Route Safety feedback (using icons where the actual dangers are located).

