

SafeSeaNet Ecosystem GUI

Quick Start Guide (v0.2)

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List of Abbreviations

AIS	Automatic Identification System
ABM	Automated Behaviour Monitoring
EMSA	European Maritime Safety Agency
EO	Earth Observation
GUI	Graphical User Interface
IMS	Integrated Maritime Services
(I)VTMIS	(Integrated) Vessel Traffic Monitoring and Information System
NCA	National Competent Authority
PoC	Point of Contact
SEG	SafeSeaNet Ecosystem Graphical User Interface
SSN	SafeSeaNet
LRIT	Long Range Identification and Tracking
TTT	Timeline Tables and Thumbnails
VMS	Vessel Monitoring System

1. Introduction

The SafeSeaNet Ecosystem¹ GUI (SEG) is the new EMSA common graphical user interface providing access to EMSA's applications/services and their data sets:

- Long Range Identification and Tracking (LRIT)
- SafeSeaNet (SSN)
- CleanSeaNet (CSN)/Earth Observation -Data Centre (EO-DC)
- Integrated Maritime Services (IMS)

As such the SEG² is a single interface providing access to the maritime information services contributing to the SafeSeaNet Ecosystem. The SEG replaces the SSN Graphical Interface (GI), the IMS IMDatE Web User Portal (WUP) and partly the CSN GIS Viewer and LRIT User Web Interface (UWI).

2. Purpose of this document

The purpose of this Quick Start Guide is to assist new users to get up-and-running on the SEG. This guide provides an initial orientation on the interface, an overview of the main menu items and features and how to use them.

3. Availability on Devices & Web Browsers

The SEG is designed to work on fixed and mobile devices

- Desktops
- Laptops
- Tablets (via HTML browsers)

Touchscreen devices are supported.

Supported web browsers are Firefox, Safari and Chrome. Internet Explorer is supported from v1.1.

3.1 Browser option to track your physical location

The browser will request permission to track your physical location. Accepting this request will enable the SEG to locate and identify your physical position based on your local IP address. When you open the SEG it will be centred on your physical position.

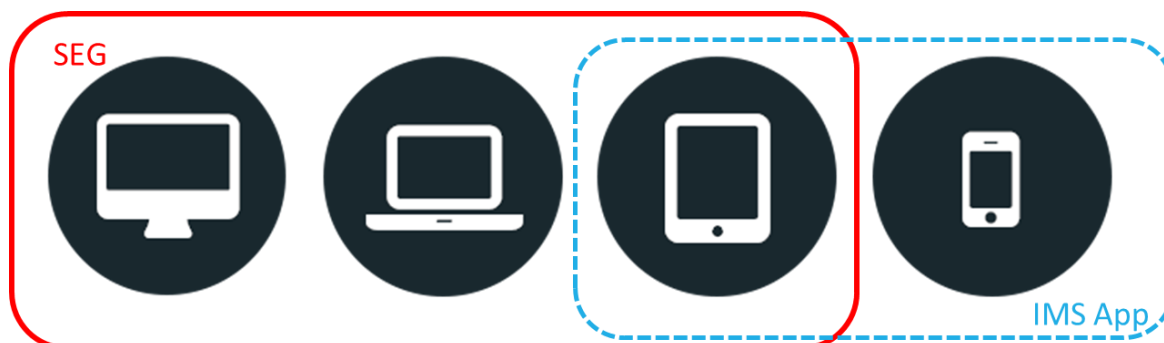
3.2 IMS Mobile App

The IMS Mobile App is the application developed and adapted for the mobile devices running Android or iOS operating systems, providing access to the maritime applications/services and their data. The SEG and the IMS Mobile App have a similar look and feel. Individual users have the possibility of sharing data (Favourites) between the 2 platforms.

¹ SafeSeaNet Ecosystem (Community Vessel Traffic Monitoring and Information System). The SSN Ecosystem may be defined as the technical framework encompassing the following maritime applications: SafeSeaNet, Integrated Maritime Data Environment, Earth Observation Data Centre and LRIT Cooperative Data Centre. As such the SSN Ecosystem is the provider of a number of different maritime information services to Member States, EU bodies and relevant third party partners, in accordance with the VTMIS Directive (2002/59/EC). To improve situational awareness in the maritime domain and to provide tailor made solutions to authorities, the VTMIS Directive was amended by Commission Directive 2014/100/EU. This allows information gathered and exchanged through SSN to be integrated with data from the EU's other monitoring and tracking systems, such as CleanSeaNet, EU LRIT DC, THETIS, and from external systems such as satellite AIS.

² The SEG is a working title for the interface and may be re-named in the future.

Figure 1 Devices for SEG and IMS App

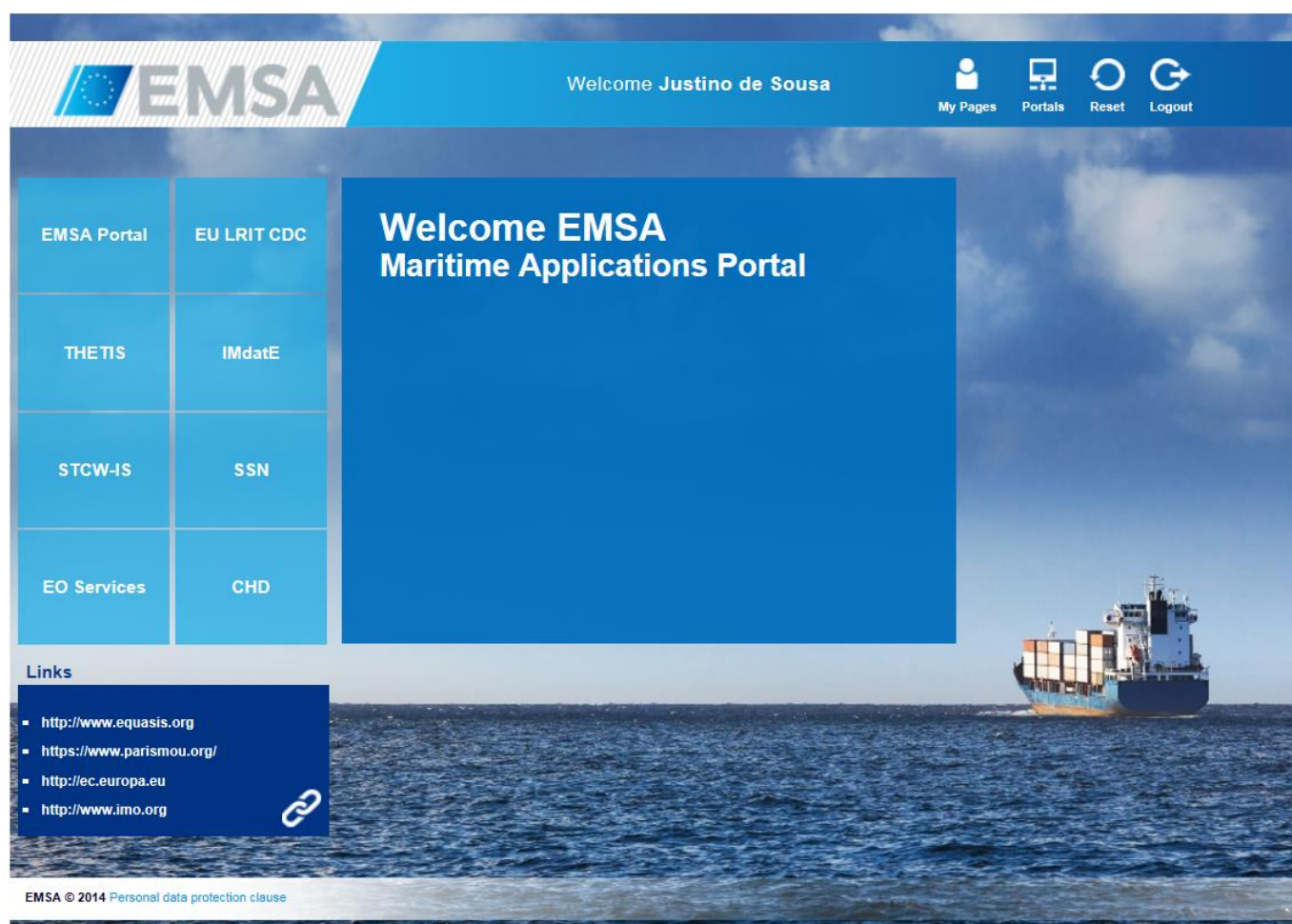


SSN Ecosystem GUI: html on desktop, laptop and tablet.
IMS Mobile App: iOS and Android on tablet and smart phone.

4. Log-in via the EMSA Maritime Applications Portal

To access the SEG from your desktop, laptop or table, open the web browser and enter the EMSA Maritime Applications Portal URL in the address field. <https://portal.emsa.europa.eu>

Figure 2 Maritime Applications Portal



4.1 Username and password

The SEG is a web application that is accessed by entering a valid login and password. If you have an existing user name and password for one of the following maritime applications (SSN GI, LRIT UWI, IMS WUP or CSN GISViewer) the same username and password may be used to log onto the SEG.

4.2 New users

To add new users the National Competent Authority (NCA) or Point of Contact (PoC) for each application (SSN, LRIT services, IMS or CSN) may apply for the new accounts by contacting the MSS by email (MaritimeSupportServices@emsa.europa.eu)

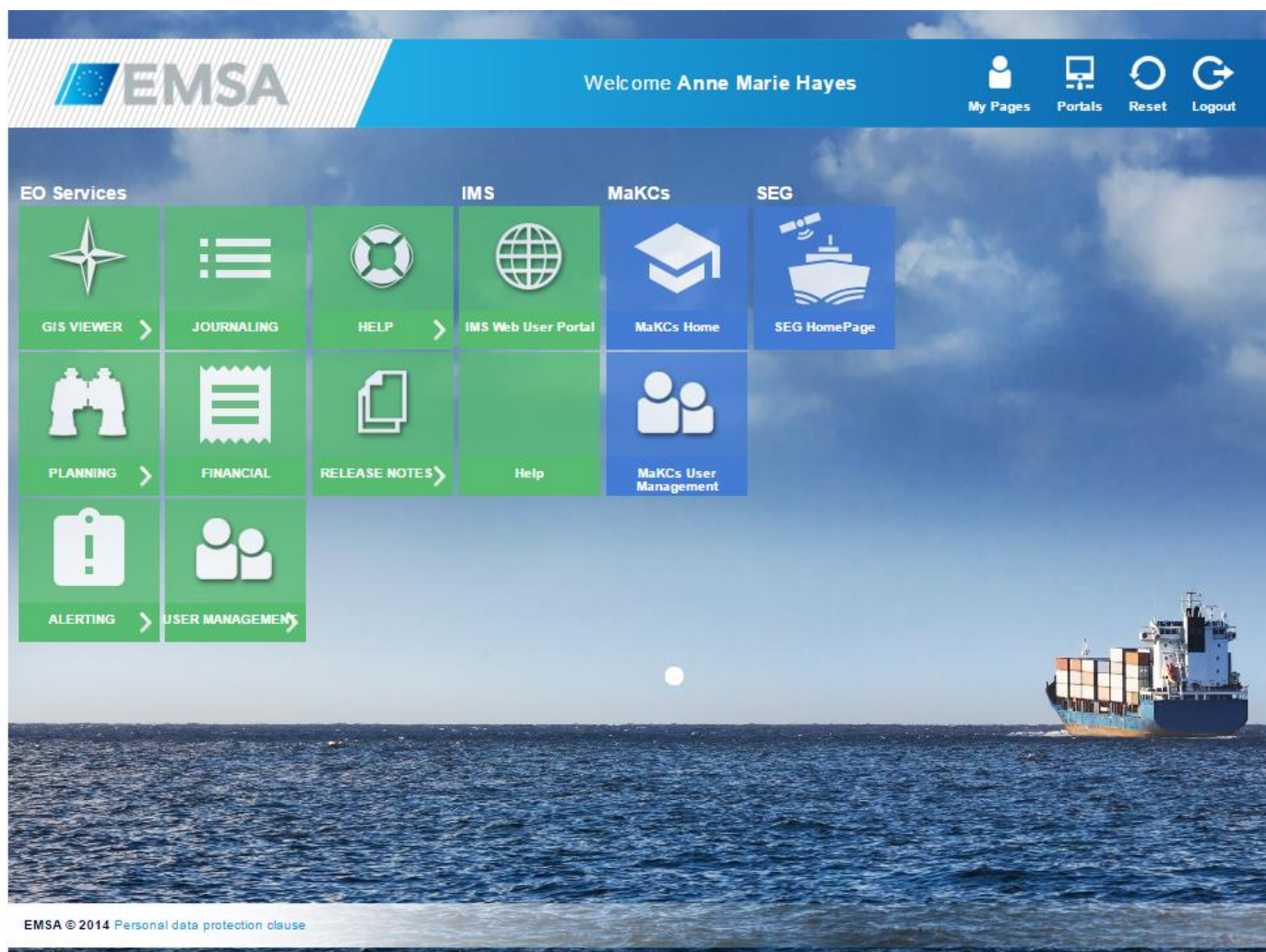
4.3 Maritime Applications Portal Home Page

Once logged in to the Maritime Applications Portal, the Home Page will display various maritime applications and services as tiles, according to permissions settings and data access rights associated with the user.

The page header displays information regarding the user currently logged in.

Start the SEG by selecting the SEG Home Page tile, or by selecting Portals/SEG.

Figure 3 Maritime Applications Home Page



5. SEG User Interface

5.1 Map

The SEG is map centred and maximises the available screen real estate. The look and feel of the SEG in terms of screen layout and buttons is similar to Google Maps and other popular applications. Maritime information is available by interacting with the buttons and tabs on the interface. There is no mouse right click available.

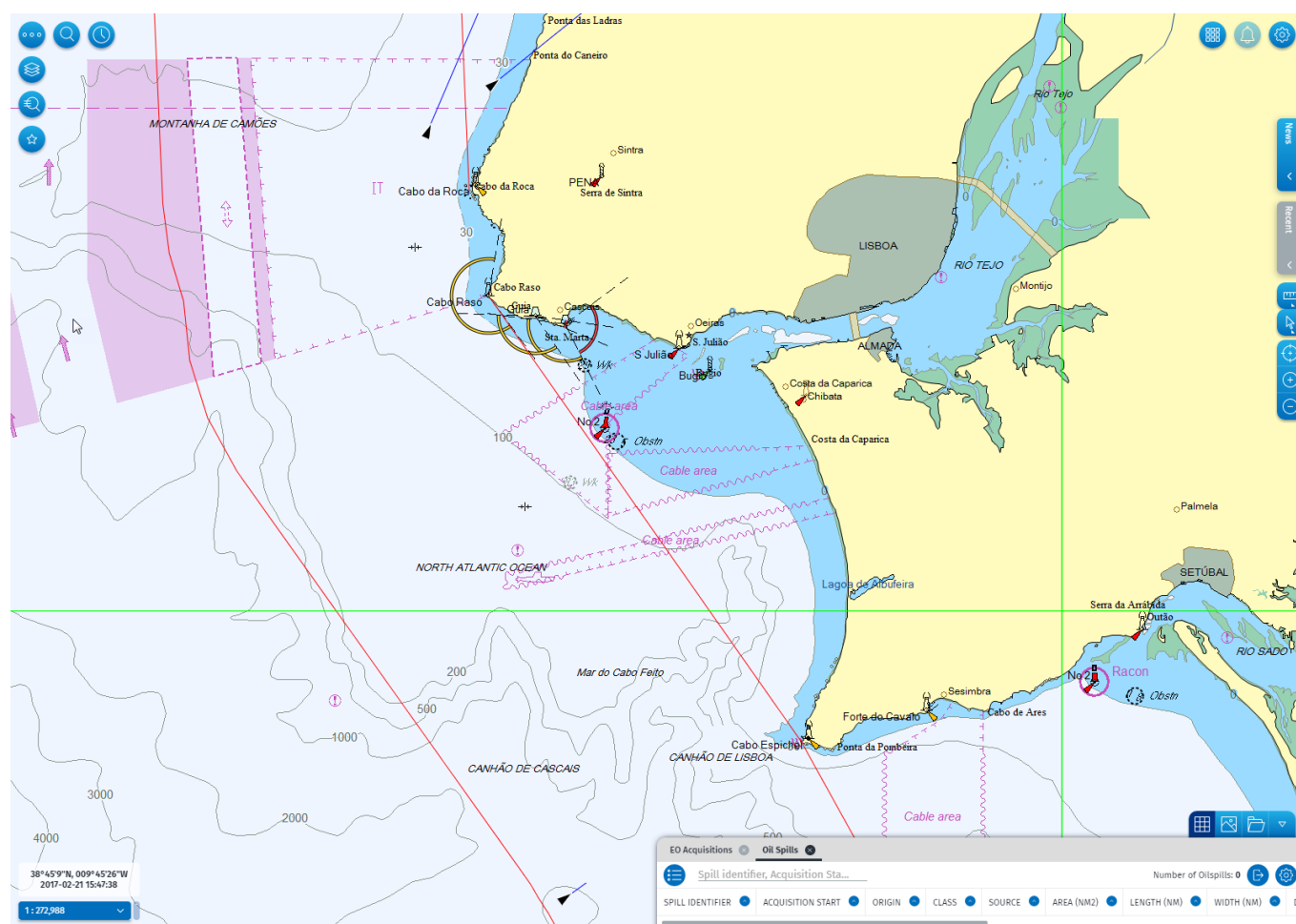
5.2 Information available

Maritime information is made available in accordance with the individual users' data access rights and permissions settings.

The default vessel information displayed is the most recent vessel position (from an available tracking source (regardless of the tracking source LRIT, S-AIS, T-AIS, MRS, VMS, VDS) within the last 24 hours. Earth Observation imagery acquired in the last 3 days and the planned for the next 3 days are shown by default.

Pointing (hovering) on a vessel, or other feature on the map, will display a label with the features attributes. Clicking (selecting) a vessel, or other feature on the map, will reveal more information on the feature in the Command and Info window. Additional information on the feature can be requested and viewed through the Command and Info menu options.

Figure 4 SEG User Interface

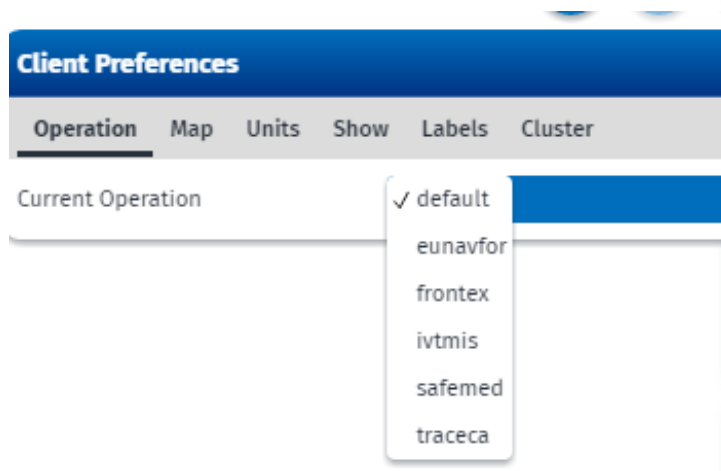


5.3 Client Preferences: SEG Operations

When the user logs in, if the user has accepted the browser request to track physical location, the default map view will be centred on this location (IP address of the user). However the starting point may be configured by the user under Operation/Client Preferences. The starting point may be configured per operation/national area. If the user has access to more than one national area, the zoom level will be adapted to enable to display all areas.

Under Client Preferences a user may change the operations. The IVTMIS operation applies to SSN/LRIT and IMS user communities. Operations can be created upon request to EMSA.

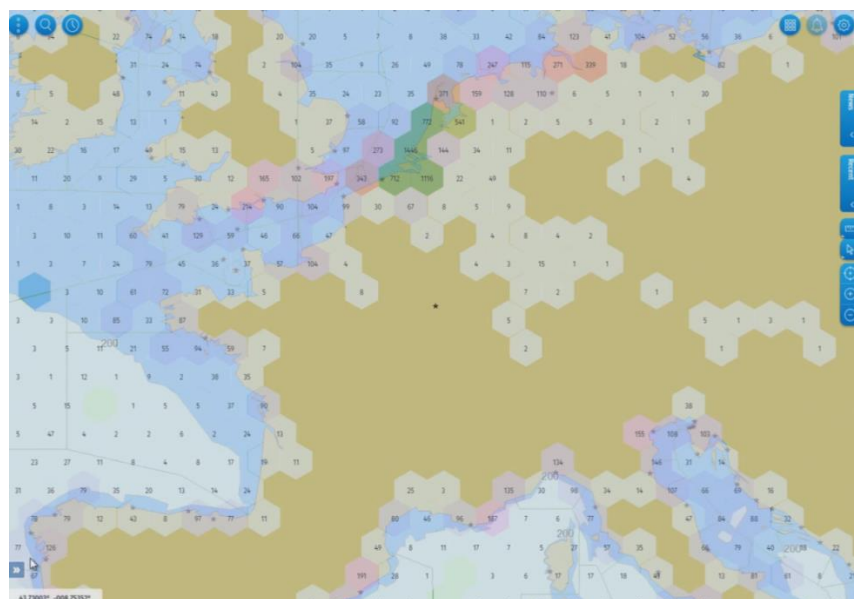
Figure 5 Client Preferences Operation



5.4 Client Preferences: Clustering and other options

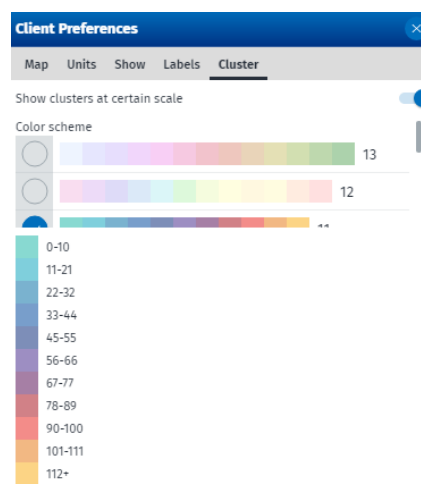
Vessel density is displayed in 'clustering' mode when zoomed-out beyond a user defined threshold. The colours of the hexagons represent the number of vessels present in that area (based on the most recent vessel positions). By progressively zooming into the map, the clustering disappears, and individual vessels become visible.

Figure 6 SEG Clustering



Under Client Preferences the user can display clusters at different scales.







Figure 7 Client Preferences Clustering















5.5 Map menu items

Menu items are designed to be easily recognisable and intuitive to use. If a menu item is greyed out, the menu item is de-activated because there is no associated information available. It is possible to enable a full screen mode where menus are hidden.

Table 1 Map menu items

Menu items	Icon	Description	Options
Client Preferences		Change client settings	<ul style="list-style-type: none"> Operations Map Units Show Labels Cluster
Notifications		ABM alert	
Apps		Available forms and other transversal tools	<ul style="list-style-type: none"> Feedback App Sentinel-2 App to allow you to access External Earth Observation layers
Clear		Removes recent queries	<ul style="list-style-type: none"> All Options
Time slider		Change the time range of the positions on the map for a max of 24h	<ul style="list-style-type: none"> Hour Minutes
Smart Search		Quickly find and filter across	When typing the system will display all results where the text is part of the search elements. Returns the number of

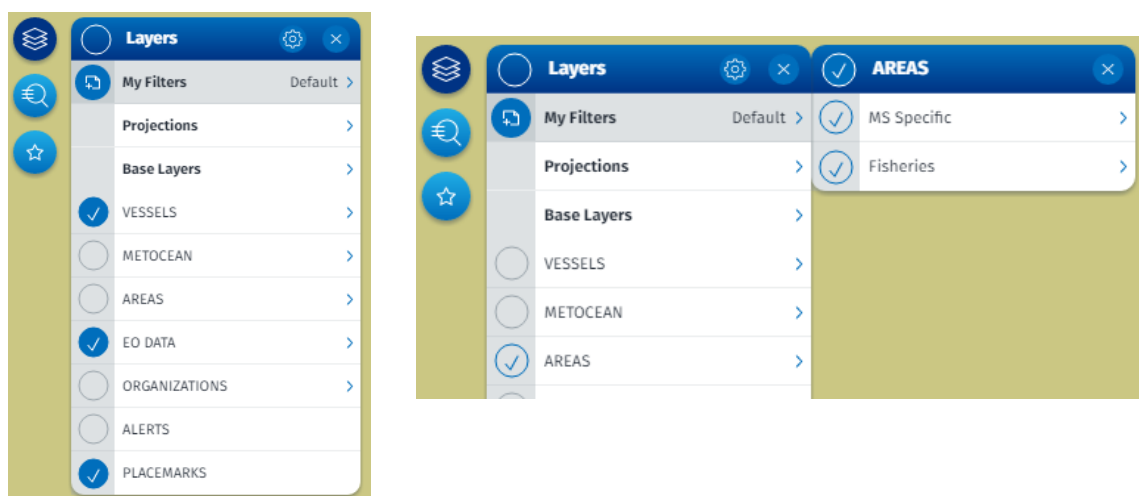
		different object categories (e.g. vessels, ports, areas, accidents, EO products or place marks)	hits in each category. Selecting a category expands the list. The search is performed on all elements available from the service including active and inactive layers.
Main menu		Expand or Close options	<ul style="list-style-type: none"> • Layers and filtering • Query • Favourites
Layers and filtering		Manage information layers on map	<ul style="list-style-type: none"> • Projections • Base layers • Vessels • MetOcean • Areas • EO Data • Organizations • Alerts • Placemarks
		Query	<ul style="list-style-type: none"> • Area (Centric Query) • Get Track • Get Profile • LRIT request • SAR SURPIC
		Favourites are all elements on map that can be marked by users and associated to Favourites Groups.	<p>Groups:</p> <ul style="list-style-type: none"> • TOI: Vessels • AOI: Areas • POI: Placemarks, STMID, Alerts, Incidents/Accidents, Vessel detection (VDS), EO products
Time and Date Scale Bar			
Measure Tools		Click to expand	 <p>Fixed Range Rings, Bearing Measure, Bearing Compass, Distance</p>
Draw Tools		Click to expand	 <p>Place mark, Draw circle, Draw polygon, Draw square, Selection</p>

Centre map (default) Zoom in Zoom out		Click to center and zoom	Zoom in and zoom out is available through the zoom in/out buttons over the map but using mouse left button. Standard 'left button hold' panning of the centre of the display is available as well.
TTT Tables, Thumbnails and Timeline		Click to expand	<ul style="list-style-type: none"> • Timeline options • Timeline • Tabular content • Thumbnails content • Open/close features • Expand panel
News and recent downloads		Click to expand	<ul style="list-style-type: none"> • News: information feed from Twitter. Clicking in each item, opens a new window • Recent: downloads in SEG. The file opens outside SEG. When the tab is grey, there is no download to be consulted.

6. Layers and filtering

The information visible in the map is managed by the Layers menu.

Figure 8 Layers and filtering window



Selecting one category will expand a panel to the right with the related layers of that category. Settings may be managed by clicking on the cog at the top of the first panel. Once selected the cog turns grey and all the layers except the base layers and the Projects become selectable and can be managed:

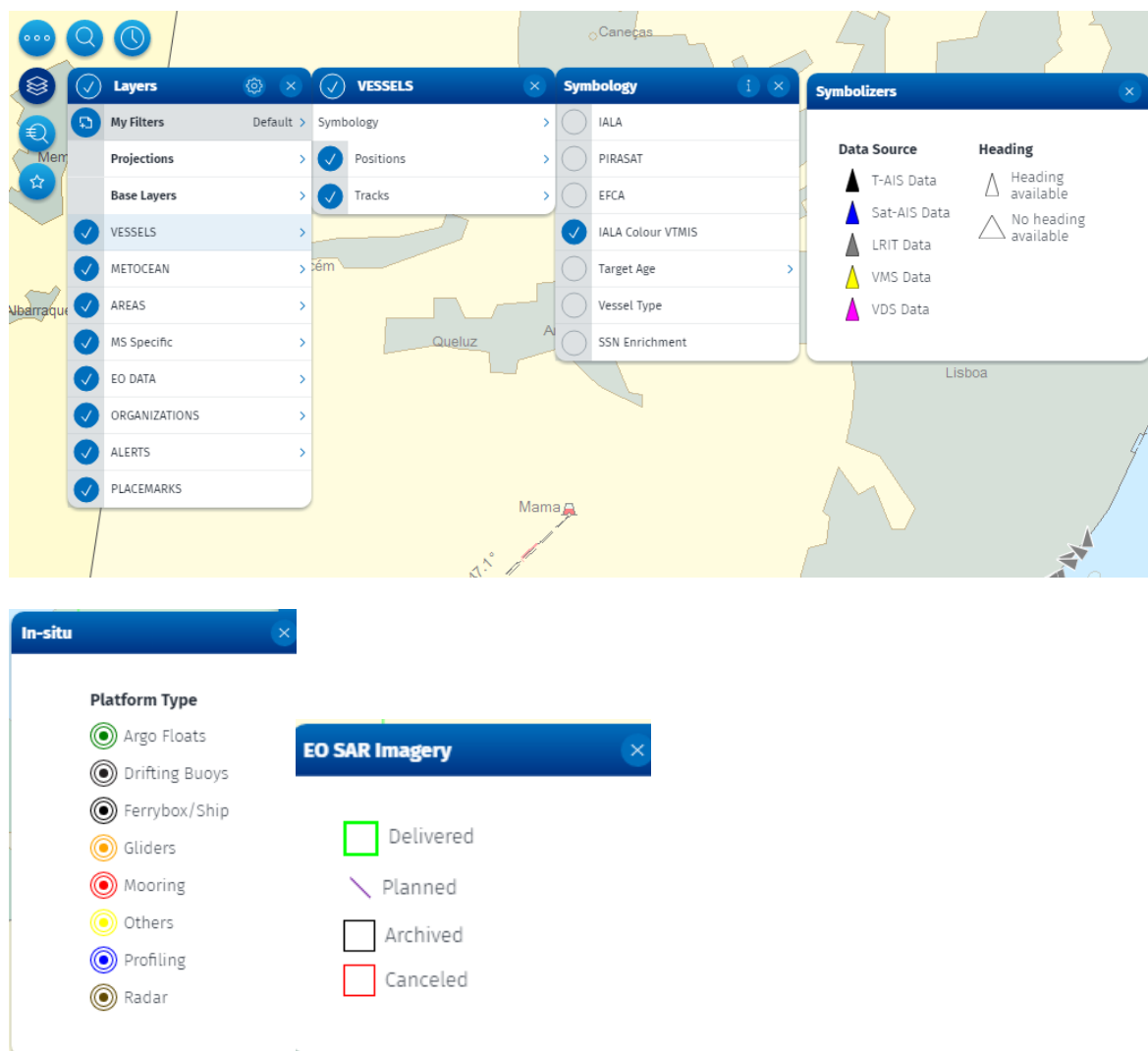
- Order: dragging and dropping each option to define hierarchy on the map;
- Opacity: selecting the intended layers;
- Colour and width (only for Vessel > Tracks)

The SEG co-ordinate system is WGS 84. Default map projection is Mercator.




6.1 Information on layers and symbols

Information on symbols and layers are available on the menu through the 'i' icon.

Figure 9 Information on the layers and symbols



6.2 Filtering

Users can create groups of selected layers through a list of saved filters called ('My Filters'). By selecting the Add filter button  it is possible to edit the name of the group  and select the labels in the panel for that group. Delete  options are available for each saved layer selection.

If an option in the layers menu is greyed out, then a filter is applied.

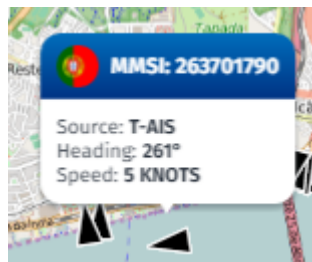
7. Vessel information

The most recent position of the ship from any source (as per user's access rights) is displayed. The default setting are vessels in the last 24h.

7.1.1 Tooltips

Hovering the mouse over a vessel presents a Tooltip. The tooltip shows summarised information for the vessel selected. Tooltips are configurable from the Client Preferences menu.

Figure 10 Tooltips Vessel



7.1.2 Command and Info

Selecting a ship displays a circle around it. Multiple ships can be selected using select+SHIFT.

Clicking on a vessel, highlights the vessel selected and opens the Command and Info window. The Command and Info window presents more detailed information and offers available functions relevant to the vessel selected.

Figure 11 Command Info Vessels

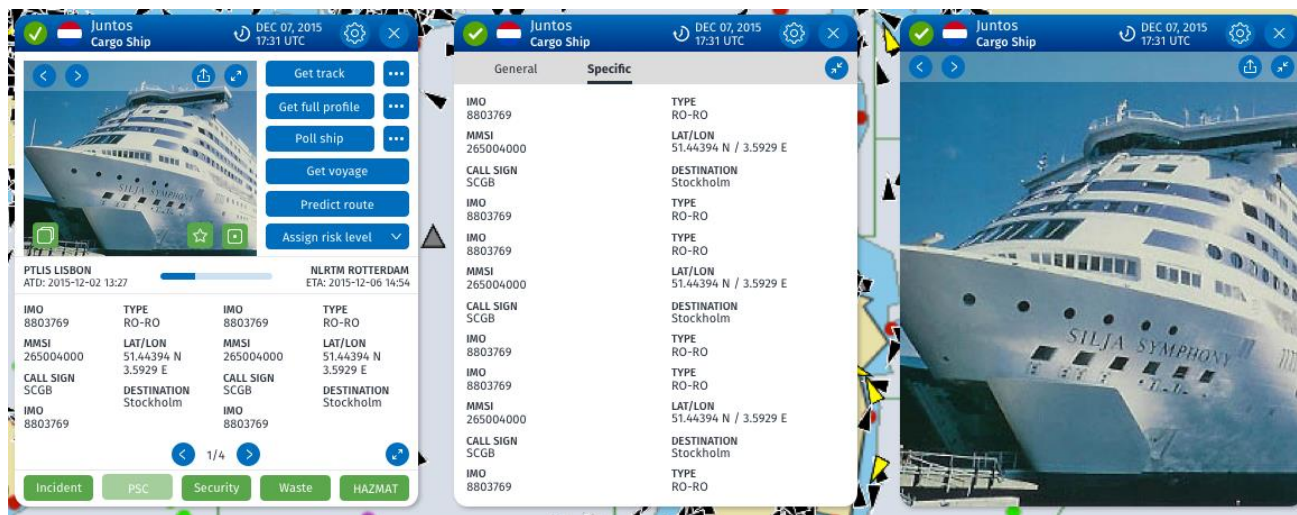







Table 2 Vessels Command and Info menu

Menu items	Icon	Description	Options
Upload image/GA plan		Upload an image/General Arrangement Plan associated with a vessel	
Equasis		Link to EQUASIS (Link to Marine Traffic website will be replaced with a link to EQUASIS)	
ISP datasheet		Single PDF document containing the latest position of the ship as well as the enrichment information, events and the	

		information from the reference data bases that are relevant for the ship.	
Fisheries		Link to EU Fleet Register for Fisheries on European Commission website	
Expand image		Expand to the full panel mode	
Centre in map		Position the vessel in the center of the map	
Add to Favourites		Open the Favorites panel	
Follow-up mode		Situate the location of the selected ship in the centre of the map. The map will move when the position reports are refreshed.	
Get Track		The historical track of a vessel derived from all the tracking systems the user is authorised to view. 'Advanced' historical track allows selection of the tracking system(s) used and the time period up to the last 6 months.	Position Sources Fuse and smooth SSN Enrichment Extrapolate
Get profile		The Integrated Ship Profile provides aggregated information including the vessel historical track for the last 6 months, all events related to the ship for the time period specified by the use	Vessel Tracks HAZMAT Voyage MRS Time range
LRIT request		LRIT authorised users can request LRIT position	Access type Request type Time range
User Risk level		Define a risk level to a vessel. This categorization is private.	High Moderate Low
Get Voyages		Open in TTT tabular view voyage information including port departed and port arrival ETD/ATD and ETA/ATA.	Last & planned 10 voyages
Incidents		List in the TTT tabular view incidents associated with the vessel. Selecting each row a pop-up with the details of the incident will be displayed.	

7.1.3 SafeSeaNet Enrichment Information

The SSN Enrichment information for a vessel, on HAZMAT, Waste, Security, Incidents, Exemptions and MRS, are visible in the row of buttons on the bottom of the Command & Info panel for the vessel selected. The buttons are active if the corresponding information is available. The buttons are deactivated if corresponding information is not available. By selecting one of the active SSN Enrichment buttons, the user is directed to the SSN information tab. Once in the SSN information tab a summary of the enrichment information is displayed. The "More information" calls the PortPlus notification service to return and display more detailed information.

7.1.4 Select one or multiple vessels

One or more vessels can be selected using the Shift key and then clicking on the vessel (s). Alternatively the Drawing Tool can be used to select one or more vessels. Use the Query menu to search for information on the vessels selected.

8. EO images and derived information

Planned EO images (+ 3 days) and delivered EO images and derived products (-3 days) are displayed.

8.1.1 Tooltips

Hovering the mouse over an EO scene presents a Tooltip. Tooltips show summarised information for the EO selected scene. Tooltips are configurable from the Client Preferences menu

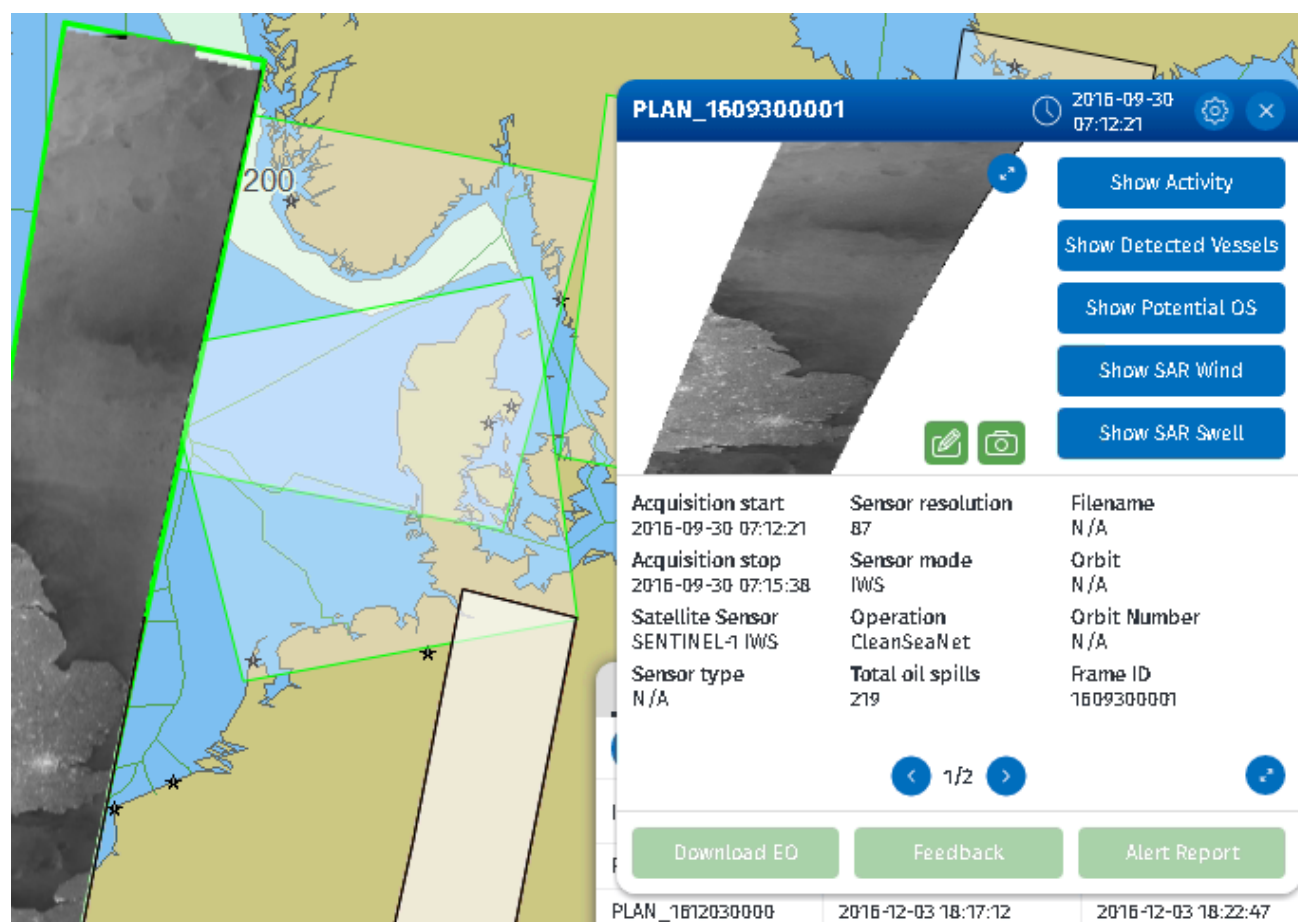
Figure 12 Tooltips EO Scene



8.1.2 Command and Info


Clicking on an EO scene, highlights the scene selected and opens the EO Command and Info window. By selecting a scene in the map or a record in the tabular view, detailed information for an EO scene shall be displayed.

Figure 13 Command and Info EO Scene



The user shall only see delivered acquisitions and associated added value products if they are delivered for the operations the user belongs to.

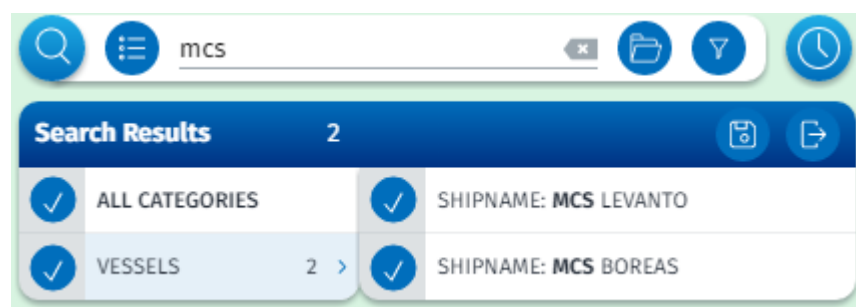
Table 3 EO Command and Info menu

Menu items	Icon	Description	Options
Expand image		Expand the image in the full panel mode	
Show Activity		Show activities detected in this service ID on the map and in tabular view.	Toggle on and off
Show Detected Vessels		Show correlated and uncorrelated positions	Correlated/Uncorrelated With estimated heading/No estimated heading
Show potential OS		Show all possible spills on the map on top of the image and in tabular view.	Toggle on and off
Show SAR Wind		Show SAR wind speed and direction displayed on top of the image.	Toggle on and off
Show SAR Swell		Show SAR wave swell and direction displayed on top of the image	Toggle on and off
Download EO		Download the EO product. Accept the End User License Agreement before the download starts.	
Feedback		Launch the Feedback App	
Alert Report		Indicates the number of alert reports where the oil spill is reported and allows to download all the reports	

9. Smart Search

Smart Search enables the user to quickly find and filter across different object categories (e.g. vessels, ports, areas, accidents, EO products or place marks) currently provided by service. No wildcards are necessary. It is not necessary to insert the complete name or number of the identifier being searched. Search returns the number of hits in each category. Selecting a category expands the list.

Figure 14 Smart Search Window



Clicking in each result the user is sent to the current position of the selected object. To select/unselect all choices, the user should select/unselect the check of the corresponding category, i.e., if the user wants to select all vessels of the search result he should select the check of the category "Vessels". Search results objects, have a green selection mark to differentiate them from other unselected objects



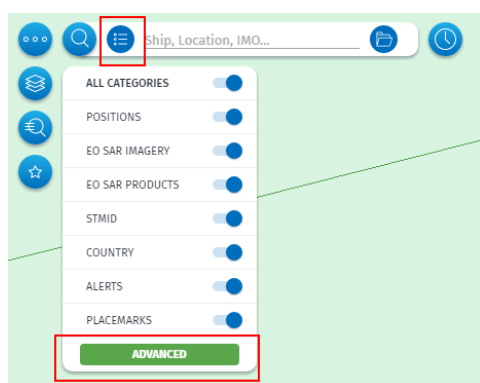
An option to save the search results is also available. Max 100 search results may be saved.



9.1 Advanced search

It's possible to do advanced search by: vessels, EO products, Oil spills and ABM Alerts. The results are displayed in the TTT tabular view.

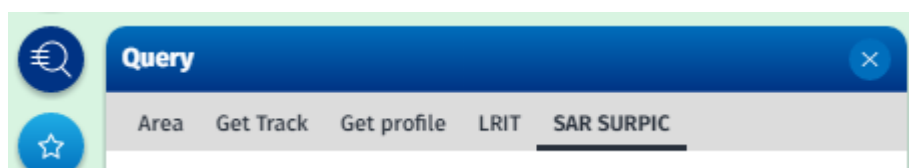
Figure 15 Advanced Search



10. Query

The Query menu allows a user to make a query (search) on the map.

Figure 16 Query



- Area Centric Query (defined by a rectangular Bounding Box search area only with a limit of 2000 ships)
- Get Track -> The historical track of a vessel is based upon the integrated ship data, derived from all the tracking systems the user is authorised to view,
- Get profile -> The Integrated Ship Profile provides aggregated information for the vessel selected including the tracks for the last 6 months, all events related to the ship for the time period specified by the user.
- LRIT -> Request Form: Request LRIT and display LRIT position reports. The vessel must have an IMO number.
- SAR SURPIC -> For Search and Rescue purposes, searches for the most recent position/ identification of ships within a defined area (from all position sources within the last 24 hours). The user should do the following steps:
 1. Position the map in the desired area;

2. Go to the Query Panel;
3. Select tab SAR SURPIC and fill all fields

By default a square 10x10 area is draw in the centre of the map. Note that for the LRIT position reports a maximum of 4 positions can be made available in the last 24 hours.

11. Favourites

Favourites can be one or more elements on the map that can be marked by users and associated to Favourites Groups. Three types of groups are possible:

- TOI Vessels
- AOI: Areas
- POI: Place marks, STMID, Alerts, Incidents/Accidents, Vessel detection (VDS), EO products.

12. TTT (Timeline, Tables and Thumbnails)

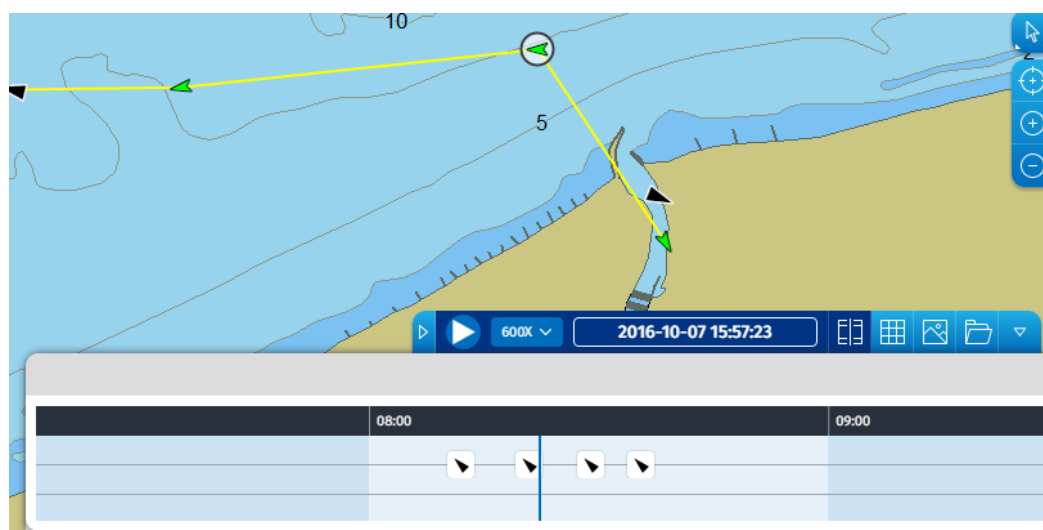
12.1 Table

A tabular view of information is available from the TTT panel. In the table a user can sort (ascend/descend) ,and configure the columns in which the search is made.

12.2 Timeline

Information can be viewed along a timeline. A playback module is available. All the positions are displayed in the map. Timeline zoom and clustering is available and can be managed using the mouse wheel or the swipe gesture in mobile devices. When in playing mode, when the timeline passes a time where a position was reported, that position is marked on the map with a circle.

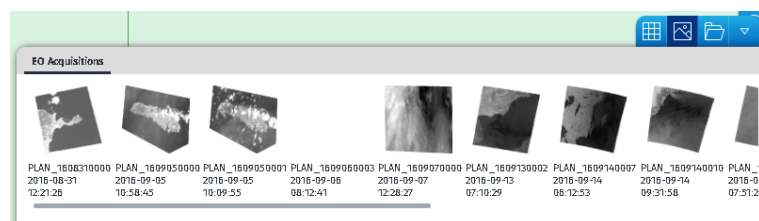
Figure 17 Timeline



12.3 Thumbnails

The thumbnail view presents a miniature version of each EO image product.

Figure 18 Thumbnails



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