



SEG Training

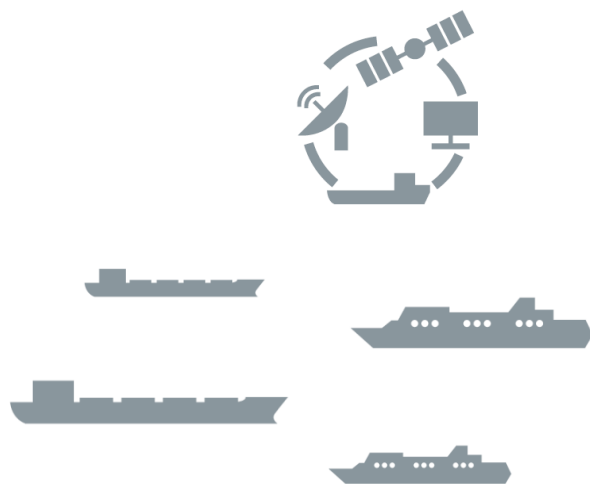
ABM's + eSARSURPIC functions

Lisbon / 19 May 2017

Automated Behaviour Monitoring (ABM's)

Algorithms are used to analyse real time vessel position reports, for a specific time period and area of interest (AOI), as defined by the users.

The system focuses on the detection of specific events, and therefore may be categorized as 'event' or 'rule' based.



ABM Type – description which events are automatically detected	ABM name
Presence of a particular vessel(s) in an area of interest	<i>InArea</i>
Passage of a vessel close to the shore	<i>DistanceToShore</i>
Vessels entering or leaving ports	<i>AtPortAtSea</i>
Anchored vessels	<i>Anchorage</i>
Frequency of vessels' position reports higher or lower than expected	<i>UnderOverReporting</i>
Vessels approaching one another closer than an indicated distance, with a speed below defined threshold	<i>AtSeaEncounter</i>
Change of heading higher than a threshold (e.g. more than 20 deg.)	<i>SuddenChangeOfHeading</i>
Sudden change of speed	<i>SuddenChangeOfSpeed</i>
Change of speed above or below a limit set	<i>SpeedAnomallyOverPeriod</i>

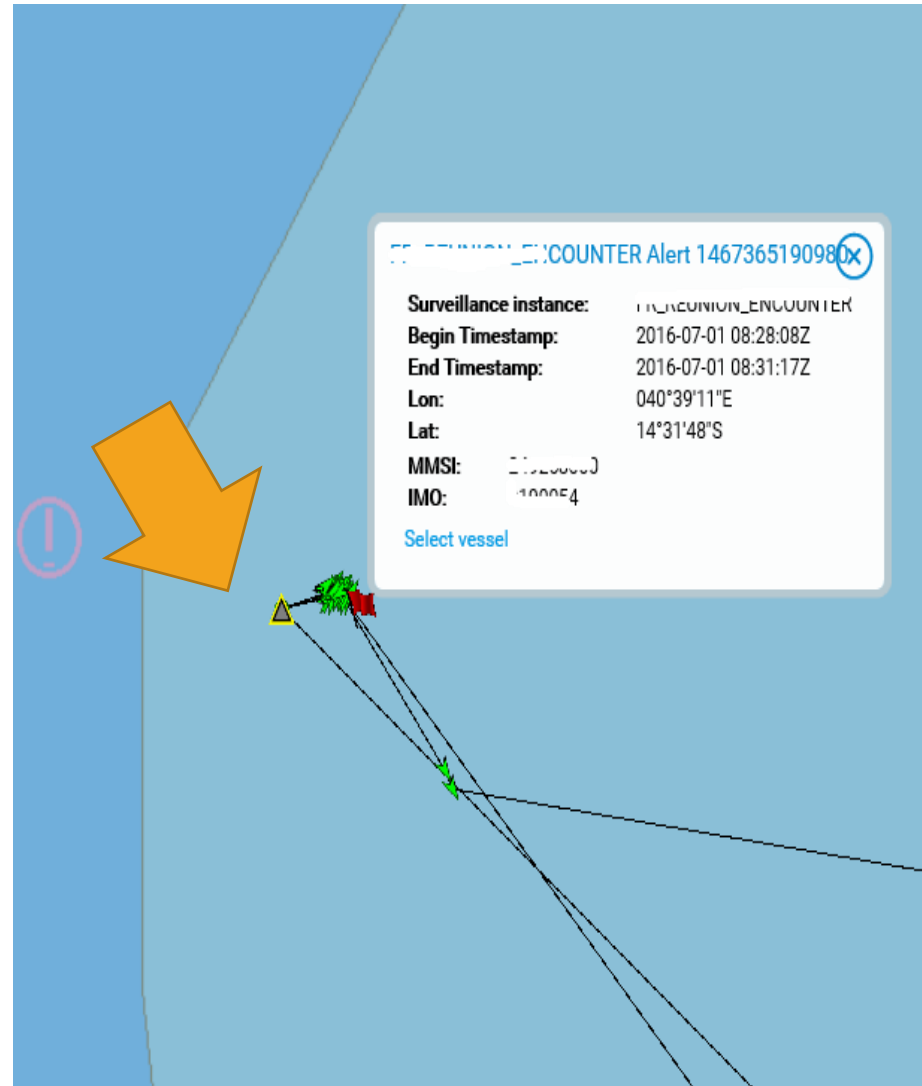
ABM Type – description which events are automatically detected	ABM name
Passage of a vessel close to an area of interest	<i>DistancetoArea</i>
Vessels entering a closed area at a specific time	<i>TimeAndPeriodOfDay</i>
Vessel leaves Area of interest X and enters Area of Interest Y	
Vessel reports position outside an Area X	
Vessel is switching off transponder	

ABM Type – description which events are automatically detected	ABM name
Port of Departure is X	
Port of Arrival is X	
Vessel is probably drifting	
Vessel departs from or heads towards coastline	
Change of position	

Security community

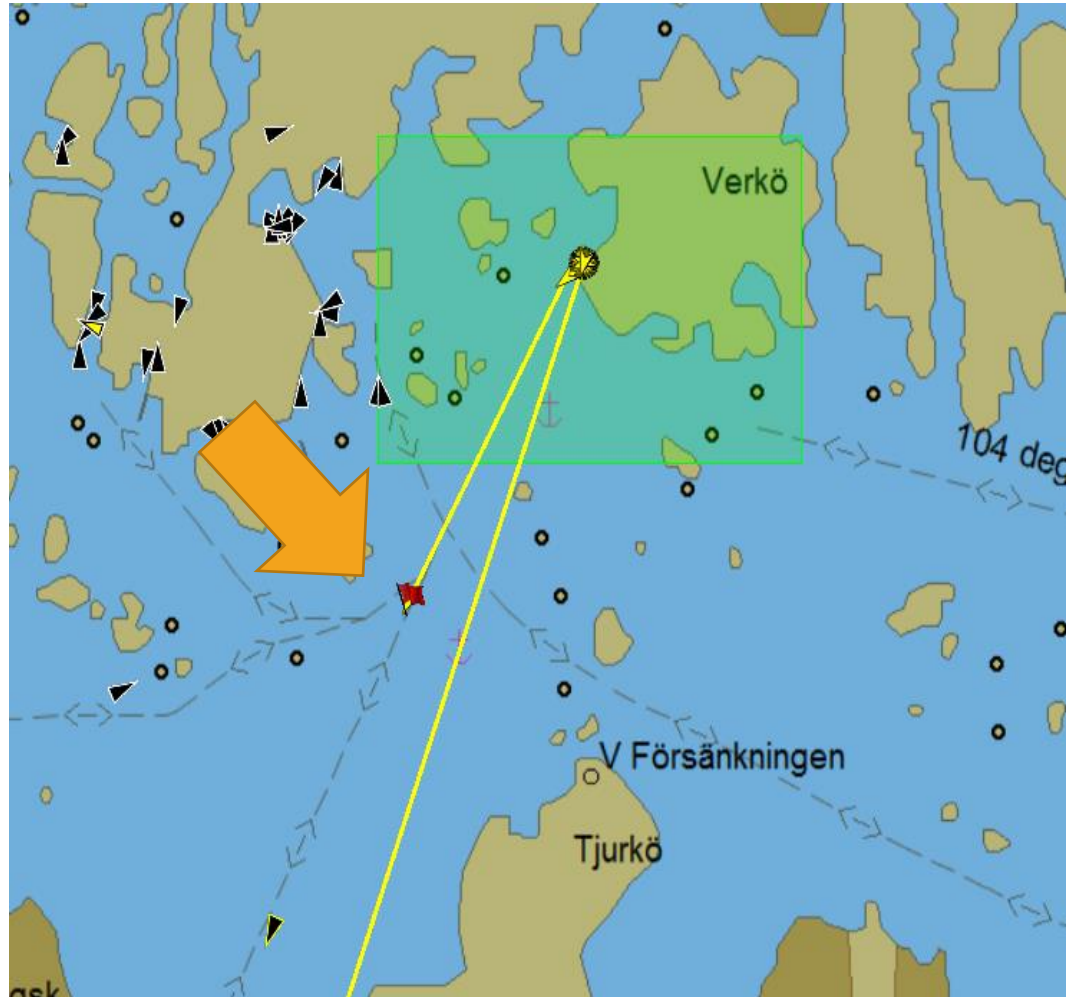
Example of 'at sea encounter'

two vessels within a close distance



Safety community

Example of a vessel leaving area of interest



Safety community

Distance to shore
less than a defined
threshold



Enhanced Search and Rescue Surface Picture

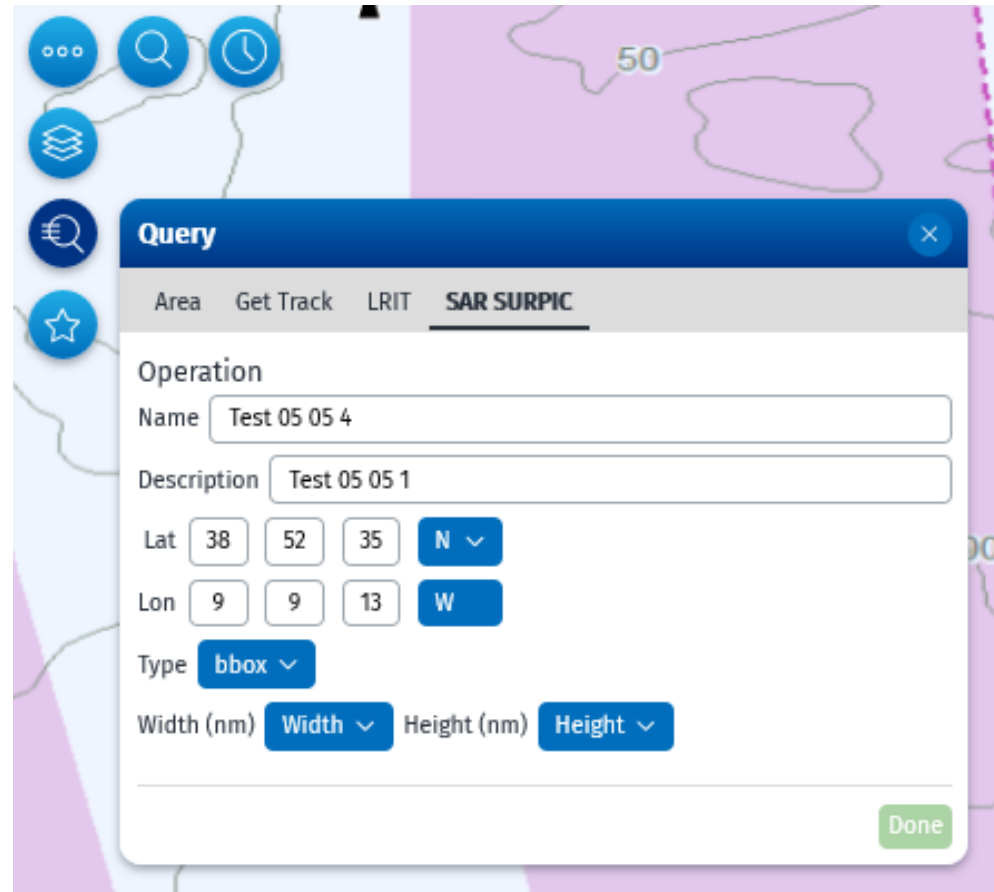
- The SAR SURPIC tool provides an enhanced SURPIC based on the existing LRIT SAR SURPIC function
- All latest ship positions of the last 24 hours will be displayed on the screen, irrespective of the data source (currently T-AIS, Sat-AIS, LRIT).
- List of identified ships with distance to target: shows the ships that are closest to the SURPIC center

Enhanced Search and Rescue Surface Picture

- Default square 10 NM x 10 NM is drawn on the map, up to 500 NM x 500 NM
- Circle can be selected, from 10 to 1000 NM
- for LRIT position reports a maximum of 4 positions available for the last 24 hours
- The SAR SURPIC tab provides access to
 - Active SAR SURPIC operations (list of vessels, log of the request, timeline)
 - Past SAR SURPIC operations

How to make a SAR SURPIC – 1

- Click on the Query button, and select the tab: SAR SURPIC.
- Enter a name and a description
- Update the coordinates if needed



The screenshot shows a web interface for creating a SAR SURPIC. A 'Query' dialog box is open over a map. The dialog has tabs for 'Area', 'Get Track', 'LRIT', and 'SAR SURPIC'. The 'SAR SURPIC' tab is selected. Inside the dialog, there are fields for 'Name' (Test 05 05 4) and 'Description' (Test 05 05 1). Below these are coordinate fields: 'Lat' (38, 52, 35) with a dropdown set to 'N', and 'Lon' (9, 9, 13) with a dropdown set to 'W'. There is also a 'Type' dropdown set to 'bbox'. At the bottom, there are 'Width (nm)' and 'Height (nm)' fields, each with a dropdown menu. A 'Done' button is in the bottom right corner of the dialog.

Query

Area Get Track LRIT **SAR SURPIC**

Operation

Name Test 05 05 4

Description Test 05 05 1

Lat 38 52 35 N

Lon 9 9 13 W

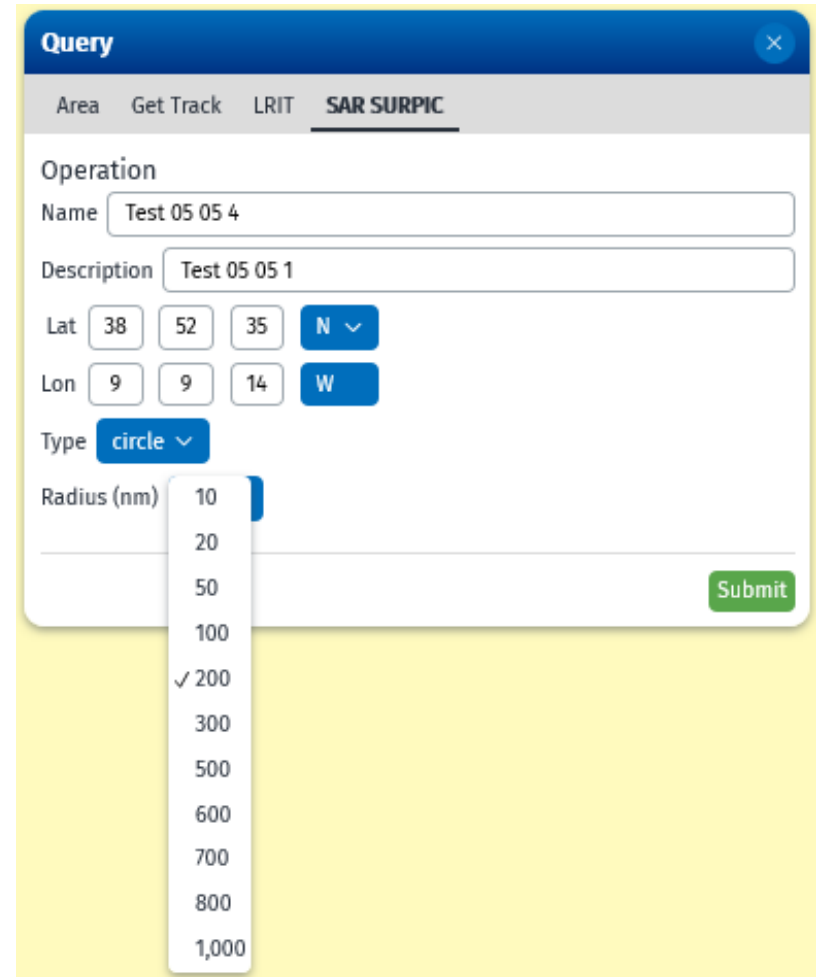
Type bbox

Width (nm) Width Height (nm) Height

Done

How to make a SAR SURPIC – 2

- Select circle or bbox, then the size
- Click on Submit button

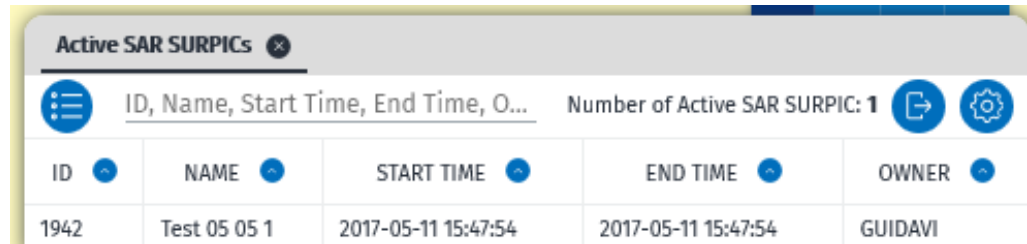


The screenshot shows a web interface titled "Query" with a close button (X) in the top right corner. Below the title bar, there are four tabs: "Area", "Get Track", "LRIT", and "SAR SURPIC", with "SAR SURPIC" being the active tab. The form contains the following fields and controls:

- Operation**
 - Name**: A text input field containing "Test 05 05 4".
 - Description**: A text input field containing "Test 05 05 1".
- Lat**: Three input fields containing "38", "52", and "35", followed by a dropdown menu showing "N".
- Lon**: Three input fields containing "9", "9", and "14", followed by a dropdown menu showing "W".
- Type**: A dropdown menu showing "circle".
- Radius (nm)**: A dropdown menu with the following options: 10, 20, 50, 100, 200 (selected with a checkmark), 300, 500, 600, 700, 800, and 1,000.
- Submit**: A green button located at the bottom right of the form.

How to make a SAR SURPIC – 3

- The SAR SURPIC appears in a new tab

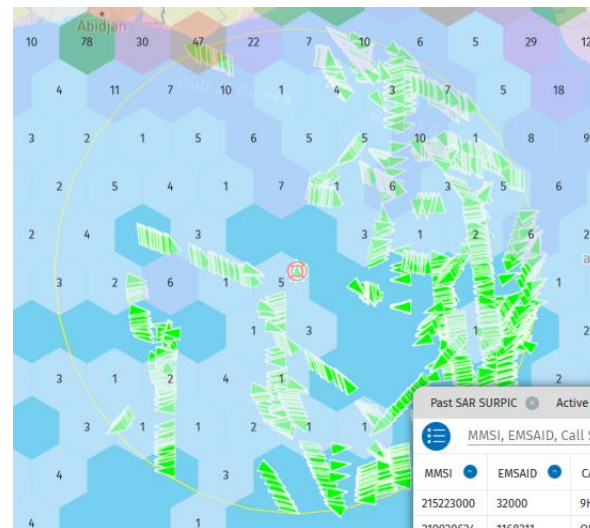


Active SAR SURPICs

ID, Name, Start Time, End Time, O... Number of Active SAR SURPIC: 1

ID	NAME	START TIME	END TIME	OWNER
1942	Test 05 05 1	2017-05-11 15:47:54	2017-05-11 15:47:54	GUIDAVI

- And the positions are visible on the map





Thank you for your attention

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