

**Tender Specifications  
attached to the Invitation to tender**

**Invitation to tender N° EMSA/NEG/04/2014 for 'Graphical Interface Design  
Consultancy Services for IMDatE'**

**1. Introduction**

The European Maritime Safety Agency (EMSA) was established under Regulation 1406/2002/EC of the European Parliament and of the Council to contribute to the enhancement of European maritime safety.

Among its tasks, the Agency should ensure a more effective integration of maritime information at the European Level and operate systems that process and distribute maritime based information.

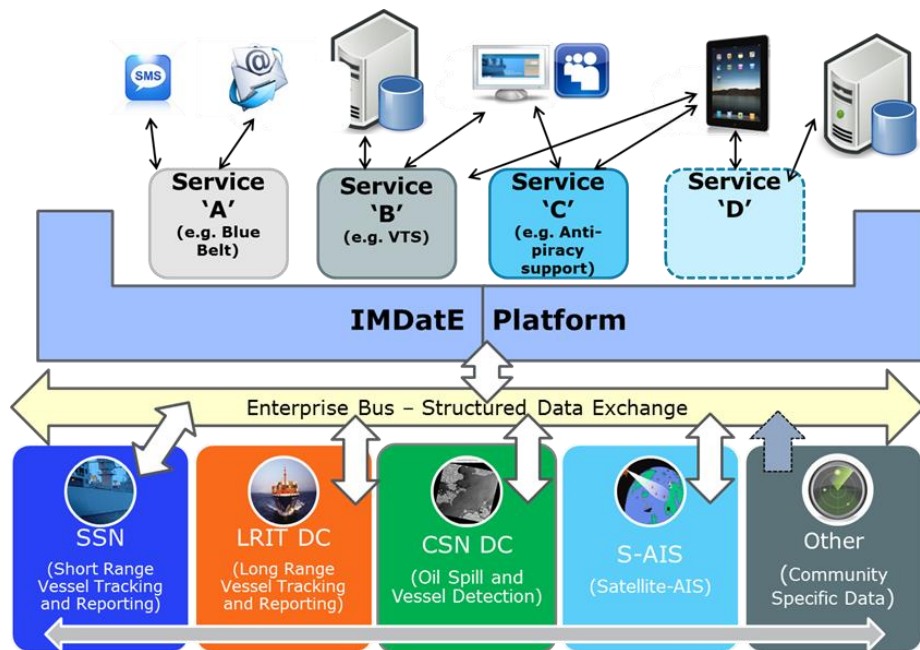
**2. Objective, scope and description of the contract**

What is IMDatE?

IMDatE is EMSA's Integrated Maritime Data Environment, a flexible IT platform enabling set-up and delivery of integrated maritime operations implemented over the last 2 years. The IMDatE has been developed to integrate data and operations from the existing EMSA maritime applications as well as support new user communities that EMSA is engaged with.

The platform is built to systematically collect and fuse ship position reports, perform correlation with ship detected targets from satellite imagery or coastal radar, and aggregate available ship information from the EMSA applications and databases, to provide a complete maritime picture. It has an in-built automated monitoring engine that alerts the user to specific vessel behaviour or events, such as exit or entry to sensitive areas, at-sea encounters between vessels, sudden change of port of call, or even deviation from expected track.

In order to customise the services for a particular user community the concept of an 'Operation/Service' was defined which allows the graphical interface to be customised (symbols, panel content etc) according to the user community needs, as well as user specific data to be overlaid; this may be additional position reports, or even ship particulars provided by the user. The diagram below provides the conceptual view of IMDatE, of how it integrates with the existing EMSA applications, the new capabilities that are available, and way new user communities can be served through the concept of 'Operations/Service'.



### Objective of the contract

Presently the IMDatE application is operational and online with a functional web interface developed by an external contractor.

The objective of the contract is to obtain professional design guidelines of the existing IMDatE web interface and interface components to improve the visual appeal and usability of the system. The contractor will work directly with EMSA and occasionally with the current contractor development team who developed the application further referred to as "development team".

### **3. Contract management responsible body.**

The European Maritime Safety Agency – Unit C3, in charge of satellite based monitoring service – will be responsible for managing the contract.

### **4. Statement of work – Implementation of contract**

#### **4.1 Overview**

For the implementation of the contract the contractor shall perform its activities based on the 3 described work packages (WP):

1. WP1- Prepare the report "IMDatE GUI Design Guidelines"
2. Wp2- Deliver a set of graphical components
3. Wp3- Prepare the report "Open Proposals for Future Development of the IMDatE GUI"

There is a common requirement applicable to all the work packages:

Req_code	Description
----------	-------------

REQ-ADM.1	The contractor shall follow an agile-based approach for implementing the project, with multiple iterations of the solutions presented, to ensure that EMSA's staff can follow-up closely/review, comment and interact with the graphic design experts throughout all phases of project implementation.
REQ-ADM.2	All deliveries and communication with EMSA should be in English Language

The requirements for each of the work packages are defined in the following sections of these tender specifications.

#### 4.2 WP1- Prepare the report "IMDatE GUI Design Guideline"

The contractor will deliver a guideline document to improve the look and feel of the current IMDate Web Interface. A 1 day design review will be organised in EMSA premises to review the design scenarios.

Req_code	Description
REQ-INT.1	<p>The report should be drafted by a professional web graphical designer and describe completely and in detail the improvements of the elements and functions of the current IMDatE user Interface (see Annex 2 for IMDatE User Interface Overview). The improvements aim to improve the 'look and feel' of the existing features but not change the overall ergonomics.</p> <p>The interface designer should:</p> <ul style="list-style-type: none"> <li>- Propose a set of fonts, colour schemes and styles</li> <li>- Design and redraw the buttons/symbols to be more appealing, cleaner, and more consistent with the rest of the GUI.</li> <li>- Design and redraw the panels and banners and the navigation tools to be more appealing. The 2nd level sub-panels design (e.g the queries) should be improved, different fonts types/sizes, problems of miss-alignment should be solved, subpanels should be surrounded by border (cartridge).</li> <li>- Propose solutions to present result tables, menus and frames with a better design</li> </ul>
REQ-INT.2	The contractor should propose strategies to get the most possible visual impact improvement with a minimum of development for the development team ('quick wins').
REQ-INT.3	The improved user interface shall be visually attractive e.g to correspond to the best graphical practice in web design of the market. It should be accepted by EMSA;
REQ-INT.4	It should be possible to implement the proposed improvements with the web technology used for the current interface (see Annex 1 for Description of the Technologies used for the IMDatE GUI). No additional technology should be

	required.
REQ-INT.5	During the contract execution the contractor should deliver 3 design scenarios (mock ups and examples) to give a clear idea of the look and feel of the revised interface. The scenarios should take into account the technical constraints.

#### 4.3 WP2- Deliver a set of graphical components

Req_code	Description
REQ-SET.1	The contractor shall provide the graphical components necessary to implement the improvement described in the IMDatE GUI Design Guideline (WP1)
REQ-SET.2	Graphical components shall be delivered as images, source code, libraries, and files. They should be ready to embed in the current code with the installation documentation and the contractor should provide technical support if needed by the development team.
REQ-SET.3	Graphical components shall be delivered in a format where they can be modified further using free tools.
REQ-SET.4	Graphical components shall be delivered to EMSA with full intellectual property rights and free of any additional costs (licenses ...) to be used or modified.

#### 4.4 WP3 - Report "Open Proposals for Future Development of the IMDatE GUI"

The contractor will deliver a study document describing proposals for future development.

Req_code	Description
REQ-PRO.1	The report should propose more significant changes in the design philosophy considering even the benefits of WebGL capabilities. Examples are new creative ways to visualize right mouse contextual menu or to navigate on the map. The task also includes inputs on two new portlet pages summarizing the complete information about vessels and ports (See Annex 3 "New Portlets Under Design")
REQ-PRO.3	The proposals should be coherent as far as possible with the current implementation and technologies.
REQ-PRO.4	The work effort on the report is limited to maximum 30% of the overall budget of the project.

### 5. Deliverables - Implementation of contract

For the implementation of the contract the contractor will deliver:

Delivery name	Description
WP1- Document "IMDatE GUI Graphical Design Guideline"	Guidelines document for the graphical design of the current IMDatE interface.
Wp2- Set of graphical components	All the necessary code and images with their installation

	procedures to improve the current IMDatE web interface.
Wp3- Document "Open Proposals for Future Development of the IMDatE GUI"	A broader report document to propose more significant changes in the design philosophy for future development the IMDatE GUI .

## 6. Project Planning

Meetings:

Meeting name	Location	objective
KOM	EMSA	KOM, contact with the 'development team' and EMSA to agree on design orientation.
Design meeting	EMSA	Presentation of mock-ups + decisions for final design options
Delivery (optional)	EMSA	Review of deliverable

## 7. Timetable and working procedure

The estimated date for signature of the contract is End March 2014.

Event	Time	Schedule	Description
KOM	T0	End March 2014	During the KOM in EMSA premises, the project team will meet the EMSA IMDatE team and contact the IMDatE 'development team' to gather all requirements and wishes. If some points need to be clarified, call conferences will be organized.
Design review meeting	T0+2 weeks	Beg Apr 2014	A 1 day design review will be organised at EMSA premises. The project team will present 3 design scenarios (mock up) giving clear ideas of the revised interfaces. The design scenarios will be reviewed with the EMSA team to agree on a final design choice.
Delivery of the final report "IMDatE GUI Graphical Design Guideline"	T0+5 weeks	End Apr 2014	Final delivery of "IMDatE GUI Graphical Design Guideline" after iterative process. The contractor should propose draft/interim versions of the document.
Delivery of set of graphical components	T0+7 weeks	Beg May 2014	Delivery of the graphical components corresponding to the "IMDatE GUI Graphical Design Guideline"

Delivery of the document "Open Proposals for Future Development of the IMDatE GUI"	T0+9 weeks	End May 2014	Final delivery of the "Open Proposals for Future Development of the IMDatE GUI" after iterative process.
--	------------	--------------	--

## 8. Estimated Value of the Contract

The maximum budget available for this contract is of **15000 Euro** excluding VAT. The maximum budget available for WP3 (point 4.4 of this document) will be 30% of the overall budget.

## 9. Terms of payment

Payment will be made in accordance with the provisions of the draft contract in the Procurement Section under the call to tender EMSA/NEG/04/2014 on the EMSA website at the following address: [www.emsa.europa.eu](http://www.emsa.europa.eu)

## 10. Terms of contract

In drawing up a bid, the tenderer should bear in mind the terms of the draft contract.

EMSA may, before the contract is signed, either abandon the procurement or cancel the award procedure without the tenderers being entitled to claim any compensation.

## 11. Subcontracting

If the tenderer intends to either sub contract part of the work or realise the work in co-operation with other partners he shall indicate in his offer which part will be subcontracted, as well as the name and qualifications of the subcontractor or partner. (NB: overall responsibility for the work remains with the tenderer).

If the tenderer relies on the capacities of subcontractors to fulfil selection criteria as specified in section 15.4 (technical and professional capacity) then each subcontractor must provide the required evidence for the exclusion and selection criteria. To rely on the capacities of a subcontractor does not mean that the contractor has to use deliveries or services of another company but that this company and its special capacity is central to the capacity of the contractor to fulfil the contract and that it cannot be easily changed or replaced. The exclusion criteria will be assessed in relation to each economic operator individually. Concerning the selection criteria, the evidence provided will be checked to ensure that the tenderer and its subcontractors as a whole fulfils the criteria.

## 12. Requirements as to the tender

Bids can be submitted in any of the official languages of the EU. The working language of the Agency is English. Bids must include an English version of the documents requested under point 15.4 & 16 of the present tender specifications.

The tenderer shall complete Tenderer's checklist.

If the tenderer intends to either sub contract part of the work or realise the work in co-operation with other partners (Joint Offers) he shall indicate in his offer by completion of the form – Information regarding joint offers and subcontracting.

The tender must be presented as follows and must include:

**Signed cover letter** indicating the name and position of the person authorised to sign the contract/Purchase Order and the bank account on which payments are to be made.

**Financial Form** completed, signed and stamped; available on the Procurement Section (Financial Form) on the EMSA Website at the following address: [www.emsa.europa.eu](http://www.emsa.europa.eu)

**Legal Entity Form** completed, signed and stamped and requested accompanying documentation, available on the Procurement Section (Legal Entity Form) on the EMSA Website at the following address: [www.emsa.europa.eu](http://www.emsa.europa.eu)

Tenderers are exempt from submitting the Legal Entity Form and Financial Form requested if such a form has already been completed and sent either to EMSA or any EU Institution previously during the last 12 months preceding this invitation to tender. In this case the tenderer should simply indicate on the cover letter the bank account number to be used for any payment in case of award.

**Part A:** all the information and documents required by the contracting authority for the appraisal of tenders on the basis of the points **11, 14, 15.2, 15.3** of these specifications (**Exclusion criteria**)

**Part B:** all the information and documents required by the contracting authority for the appraisal of tenders on the basis of the **Technical and professional capacity** (part of the Selection Criteria) set out under point **15.4** of these specifications.

**Part C:** all the information and documents required by the contracting authority for the appraisal of tenders on the basis of the **Award Criteria** set out under point **16** of these specifications;

**Part D:** setting out **prices** in accordance with **point 13** of these specifications.

### **13. Price**

One fixed price must be quoted for complete implementation of the contract for the 'Graphical Interface Design Consultancy Services for IMDatE GUI' and shall be all inclusive (e.g including meetings related costs and intellectual property rights)

- The tender should provide a quotation breakdown of the price based on the Work Packages specified in chapter 4 of this document.
- The maximum budget available for WP3 (point 4.4 of this document) will be 30% of the overall budget.
- Prices must be fixed amounts and non revisable.
- Prices must be quoted in euro.

- Under Article 3 and 4 of the Protocol on the privileges and immunities of the European Communities, the latter is exempt from all duties, taxes and other charges, including VAT. This applies to EMSA pursuant to the Regulation 1406/2002/EC. Therefore price and the amount of VAT must be shown separately.

#### **14. Joint Offer**

Groupings, irrespective of their legal form, may submit bids. Tenderers may, after forming a grouping, submit a joint bid on condition that it complies with the rules of competition. Such groupings (or consortia) must specify the company or person heading the project and must also submit a copy of the document authorising this company or person to submit a bid.

Each member of the consortium must provide the required evidence for the exclusion and selection criteria. The exclusion criteria will be assessed in relation to each economic operator individually. Concerning the selection criteria, the evidence provided by each member of the consortium will be checked to ensure that the consortium as a whole fulfils the criteria.

If awarded, the contract will be signed by the person authorised by all members of the consortium. Tenders from consortiums of firms or groups of service providers, contractors or suppliers must specify the role, qualifications and experience of each member or group.

#### **15. Information concerning the personal situation of the service provider and information and formalities necessary for the evaluation of the minimum economic, financial, technical and professional capacity required**

##### **15.1. Legal position – means of proof required**

When submitting their bid, tenderers are requested to complete and enclose the **Legal Entity Form** available on the Procurement Section on the EMSA Website at the following address: [www.emsa.europa.eu](http://www.emsa.europa.eu).

##### **15.2. Grounds for exclusion – Exclusion criteria**

To be eligible to participate in this contract award procedure, tenderers must not be in any of the following exclusion grounds:

- (a) they are bankrupt or being wound up, are having their affairs administered by the courts, have entered into an arrangement with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- (b) they have been convicted of an offence concerning their professional conduct by a judgement which has the force of res judicata;
- (c) they have been guilty of grave professional misconduct proven by any means which the contracting authority can justify;



- (d) they have not fulfilled obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those of the country of the contracting authority or those of the country where the contract is to be performed;
- (e) they have been the subject of a judgement which has the force of res judicata for fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the Communities' financial interests;
- (f) following another procurement procedure or grant award procedure financed by the Community budget, they have been declared to be in serious breach of contract for failure to comply with their contractual obligations.

### **15.3.Evidence to be provided by the tenderers**

For this purpose the Declaration on Honour available on the Procurement Section on the EMSA Website ([www.emsa.europa.eu](http://www.emsa.europa.eu)) shall be completed and signed.

### **15.4.Technical and professional capacity – Selection criteria**

The tenderer's technical capacity will be evaluated on the basis of the following criteria that will be applied to the legal entity submitting the offer and executing the contract:

1/ The tenderer should have a recent proven experience in the development of a web based application (mobile or desktop) in the maritime domain including vessel monitoring.

Evidence: The offer should include documentation describing a minimum of 1 similar project implemented by the tenderer within the last 3 years.

2/ The tenderer should have experience in graphics design.

Evidence: The offer should include examples of minimum 2 graphical works (drawings) performed by the tenderer within the last 3 years.

3/ The project team should be composed as minimum of the following profiles, with for each the minimum requirement per profile stated below:

#### Project Manager

- University Degree(s) in relevant fields including: IT, software development or Engineering.
- Excellent English speaking and writing skills.
- Proven hands-on experience in Project Management.
- Minimum of 5 years relevant experience as project manager.

#### Web graphical designer

- Degree (minimum 2 years post-secondary), or equivalent background knowledge and experience in graphical web application design;
- Good knowledge of English language;
- Minimum of 3 year experience in using design related tools, such as Photoshop, Illustrator, Dreamweaver...

- Minimum 2 of years previous experience in user experience design (UXD or UED)\*
- Experience in web page design.

\*The offer should include some examples of previous web graphical works (drawings) the web graphical designer has done if possible relevant to maritime or transportation field.

#### Web developer

- Degree (minimum 2 years post-secondary), or equivalent background knowledge and experience in web design or IT;
- Good knowledge of English language;
- Proven experience in web development;
- Minimum 3 years previous experience in: HTML, CSS, Javascript implementation, DOM, graphic libraries like Yahoo User Interface (YUI), jQuery;

Evidence: The tenderer shall provide detailed curriculum vitae of all the members of the project team that will be delivering the service under the proposed contract.

### **16. Award criteria**

Only the tenders meeting the requirements of the exclusion and selection criteria will be evaluated in terms of quality and price.

The contract will be awarded to the tenderer who submits the most economically advantageous bid (the one with highest score) based on the following quality criteria and their associated weightings:

Criterion 1: Quality of the services for implementation of WP1 & WP2 - based on the information provided in the offer (40%). Demonstrating the capacity to create attractive graphic designs corresponding to the best standards on the market is considered as a major advantage.

Documentation to be provided: Proposed approach for implementation of all the requirements mentioned in the chapter 4.2 WP1 (references REQ-INT) and chapter 4.3 WP2 (references REQ-SET) of this technical specification providing adequate details to enable EMSA to assess the quality of the bid.

Criterion 2: Quality of the services for WP3 - based on the information provided in the offer (20%).

Documentation to be provided: Proposed approach for implementation of all the requirements mentioned in chapter 4.4 WP3 (references REQ-PRO) of this technical specification providing adequate details to enable EMSA to assess the quality of the bid.

Criterion 3: Quality of the proposed general project implementation plan and associated project team – based on the clarity and completeness of the project plan and the experience and distribution of responsibilities for each member of the team (10%).

The offer should include:

- i. Detailed project work-plan and Gantt chart, outlining the main milestones and deliverables;
- ii. Work Breakdown Structure indicating the main activities and the assigned person-day effort per activity and allocated profiles for executing the work;
- iii. The proposed duration/time of development and delivery;
- iv. Compliance matrix for the requirement mentioned in the chapter 4.1 (reference REQ-ADM) of this technical specification providing adequate details to enable EMSA to assess the quality of the bid.

1. Quality criterion 1 ( $W_1 = 40\%$ ),
  2. Quality criterion 2 ( $W_2 = 20\%$ ),
  3. Quality criterion 3 ( $W_3 = 10\%$ ),
- and the price criterion and associated weighting:
4. Price of the bid ( $W_{Price} = 30\%$ ).

For all bids evaluators will give marks between 0-10 (half points are possible) for each quality criterion.

The score is calculated as

$$S = SQ + SP$$

where:

The average quality for quality criterion  $i$  is

$$Q_i = \frac{1}{\text{number of evaluators}} * \sum_{\text{evaluator}} \text{mark of the evaluator for quality criterion } i$$

The overall weighted quality is

$$Q = \sum_i Q_i * W_i$$

The score for quality is

$$SQ = \frac{Q}{Q \text{ of the bid with highest } Q} * 100 * \sum_i W_i$$

The score for price is

$$PP = \sum_i \frac{\text{lowest Price}_i \text{ of all bids}}{\text{Price}_i} * 100 * W_{Price_i}$$

Only bids that have reached a minimum of 60 % for  $Q_1$ , a minimum of 60 % for  $Q_2$ , a minimum of 60 % for  $Q_3$ , will be taken into consideration when calculating the score for quality  $SQ$ , score for price  $SP$  and score  $S$ .

Only bids that have reached a minimum of 60 % for the score  $S$  will be taken into consideration for awarding the contract.

**17.Contracts will not be awarded to tenderers who during the procurement procedure:**

- (a) are subject to a conflict of interest
- (b) are guilty of misrepresentation in supplying the information required by the contracting authority as a condition of participation in the contract procedure or fail to supply this information.

**18. False declarations**

Without prejudice to the application of penalties laid down in the contract, tenderers and contractors who have been guilty of making false declarations concerning situations referred to in points 12 and 13 above or have been found to have seriously failed to meet their contractual obligations in an earlier procurement procedure or grant shall be subject to administrative and financial penalties set out in Article 145 of Commission Delegated Regulation of 29.10.2012 on the rules of application of Regulation (EU) No 966/2012 of the European Parliament and of the Council on the financial rules applicable to the general budget of the Union.

**19.Intellectual Property Right (IPR)**

Please consult the contract for IPR related clauses.

If the results are not fully created for the purpose of the contract this should be clearly pointed out by the tenderer in the tender. Information should be provided about the scope of pre-existing rights, their source and when and how the rights have been or will be acquired.

In the tender all quotations or information originating from other sources and to which third parties may claim rights have to be clearly marked (source publication including date and place, creator, number, full title etc.) in a way allowing easy identification.

# **Annex 1**

## **Description of the Technologies used for the IMDatE GUI (Informative)**

The IMDatE map client is a pure HTML/javascript application.

Two main macro components can be identified:

- The map object
- The user interface

WebGL is used for rendering the map and all its associated geo-referenced entities (raster layers, vessels, alerts etc). The visual aspect of the different map objects can be customized through a set configuration files, allowing to define, for example, the symbols icons, size, colour and orientation, based on the associated metadata.

Yahoo User Interface library (YUI) is used for the other elements of the user interface (panels, tables, forms and other widgets), while jQuery library is used to standardize DOM interaction amongst the different browser implementation. Custom extensions had been made to improve the user experience and other libraries had been integrated to implement specific functionalities (e.g. the time explorer component). The visual appearance of these elements is defined using standard CSS stylesheets, while their behaviour, their composition and the interaction between the different components, is controlled from Javascript code exploiting the functionalities offered by YUI widgets implementation, and through custom defined interfaces.

## **Annex 2**

### **IMDatE User Interface Overview (Informative)**

Below are listed most of the functionalities supported by the IMDatE interface extracted from the user manual. The list is not exhaustive.

Access the Graphical User Interface (WUP) – fig 1 -  
Change the symbology  
Change units a) DMS units; b) Decimal units  
Client Control menu –fig 4-  
Preferences function can be used to customise each user's options –fig 4-  
Left panel toggle button  
Time slider can be used to define the temporal resolution of displayed positions  
Time slides can be fully configured within a temporal range  
Client Preferences for accessing CSN data in Real Time  
Details of the possible position sources  
Additional visualization details (Risk status, ship type and navigation status)  
Search in Map tab-Place Search  
Search in Map tab-Vessel OVR search – fig 2 -  
Using multiple search fields – fig 2 -  
Save Query window  
Queries drop down menu  
Example of using the Draw Polygon Area tool  
Set area window (Area type: BBOX)  
Set area window (Area type: Polygon)  
Example of Area Centric Query-Vessel Tracks – fig 5-  
Time Explorer tab – fig 8-  
Vessel Tracks  
Example of Area centric Query- CSN-DC Oil spills and CSN-DC EO Products  
CSN-DC EO Products tab  
Example use of the Distance Measure tool  
Vessel Track Query tab  
Vessel Track query for the last four days  
A Vessel 120 min extrapolation  
Vessel Track Query window  
Area centric query around potential oil spills  
Integrated ship profile and the event timeline  
Statistics  
Videos visualisation –fig 7-  
Alert configuration and visualisation –fig 6-

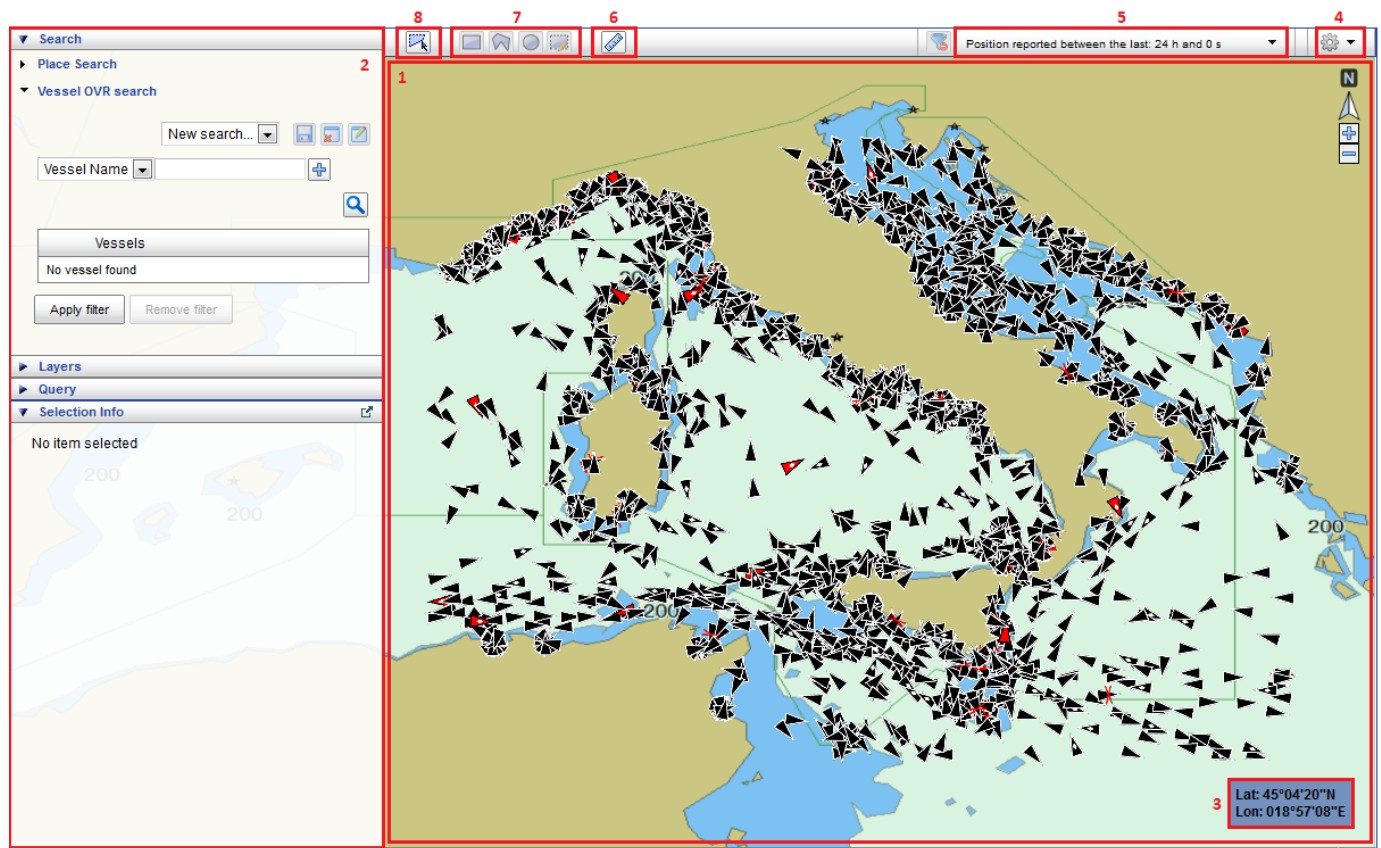


Fig 1 - General Screenshot of the interface with the main graphic elements

1. Map;
2. Left menu (left panel);
3. Position;
4. Client Control;
5. Positions reported time range;
6. Distance Measure Button;
7. Draw and Edit Areas Buttons;
8. Select button;

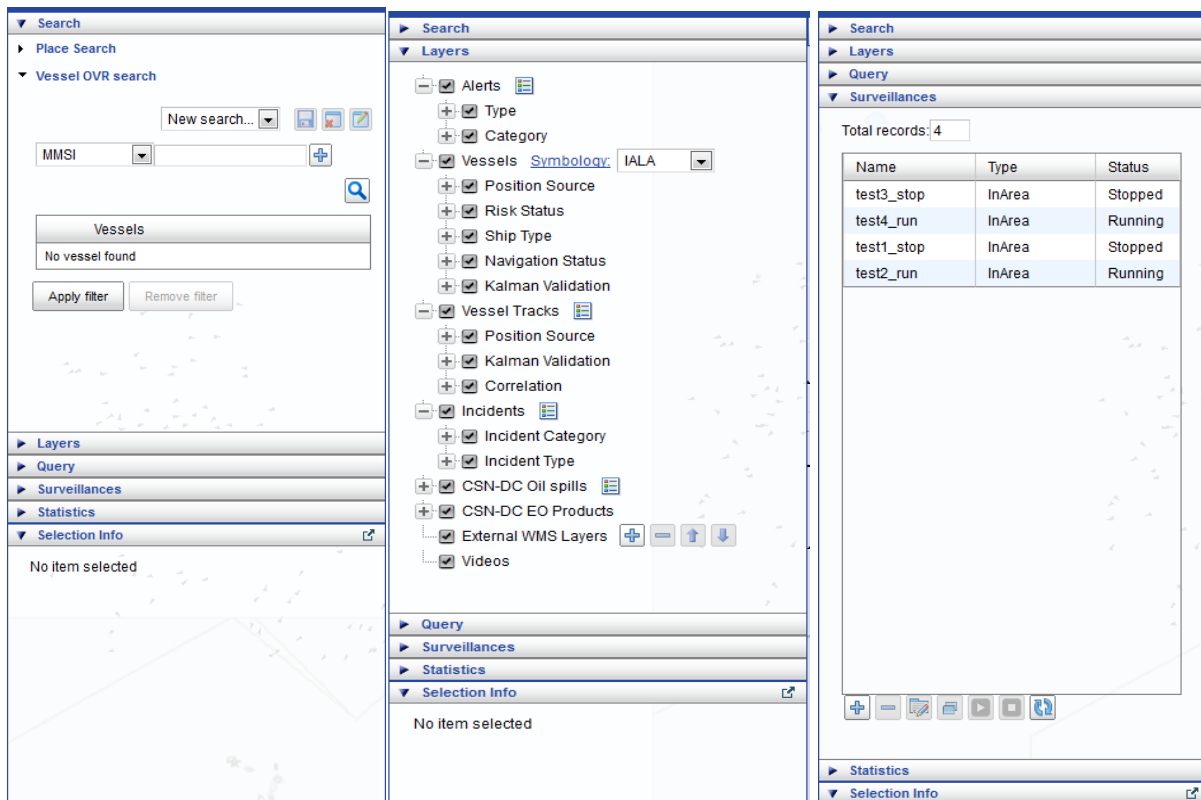


Fig 2: Screenshots of some subpanels located in the left panel.

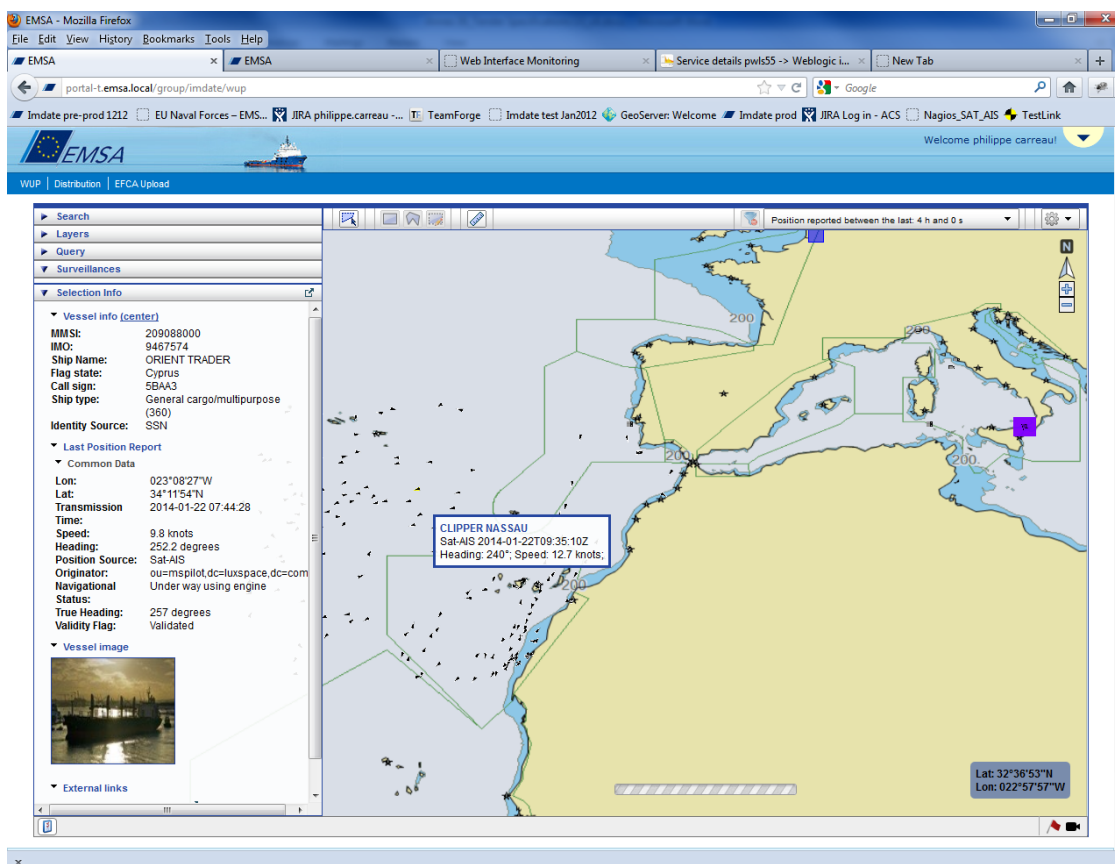


Fig 3: Screenshot in a general view of the 'selection info' panel located in the left panel. This panel displays any kind of information for vessels, alert, geographical layer ...



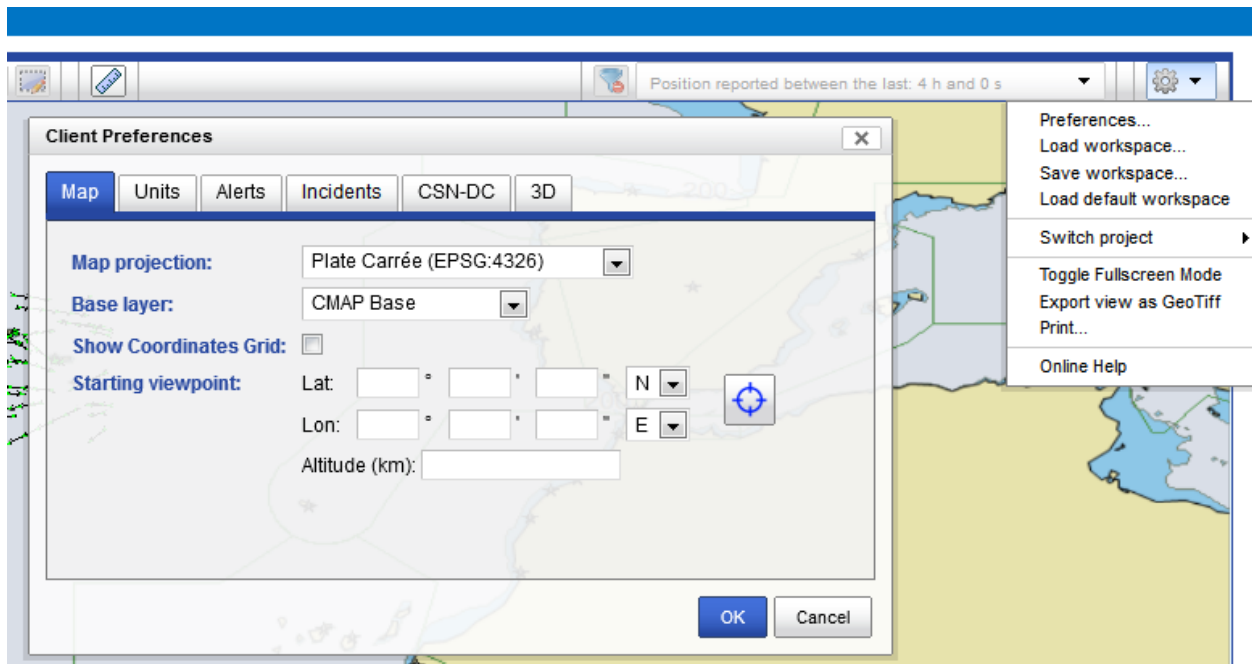


Fig 4: Screenshot of the client control menu + the client preference configuration window

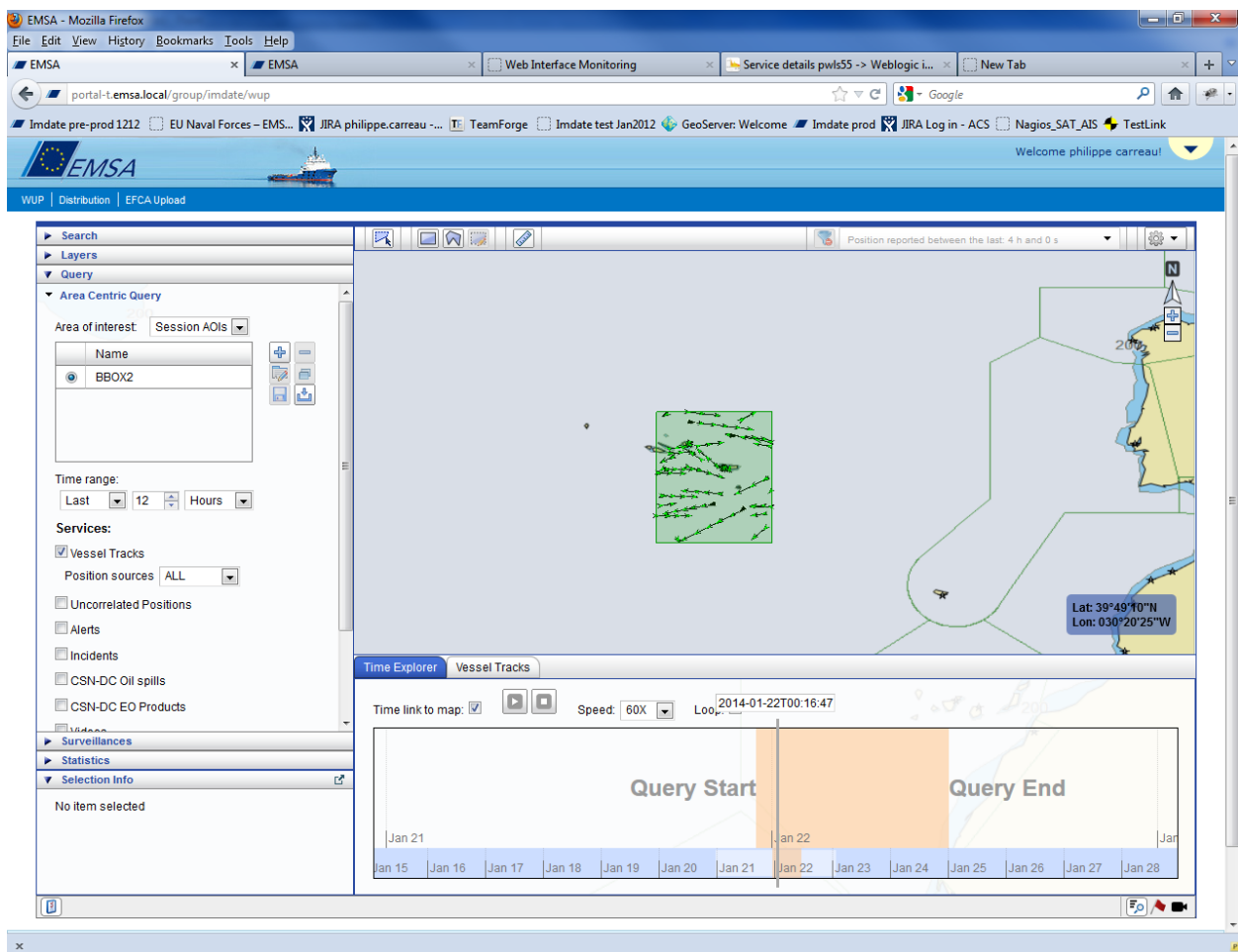


Fig 5: Example of area centric query with the configuration in the left panel and a subpanel 'time explorer' to visualize the information

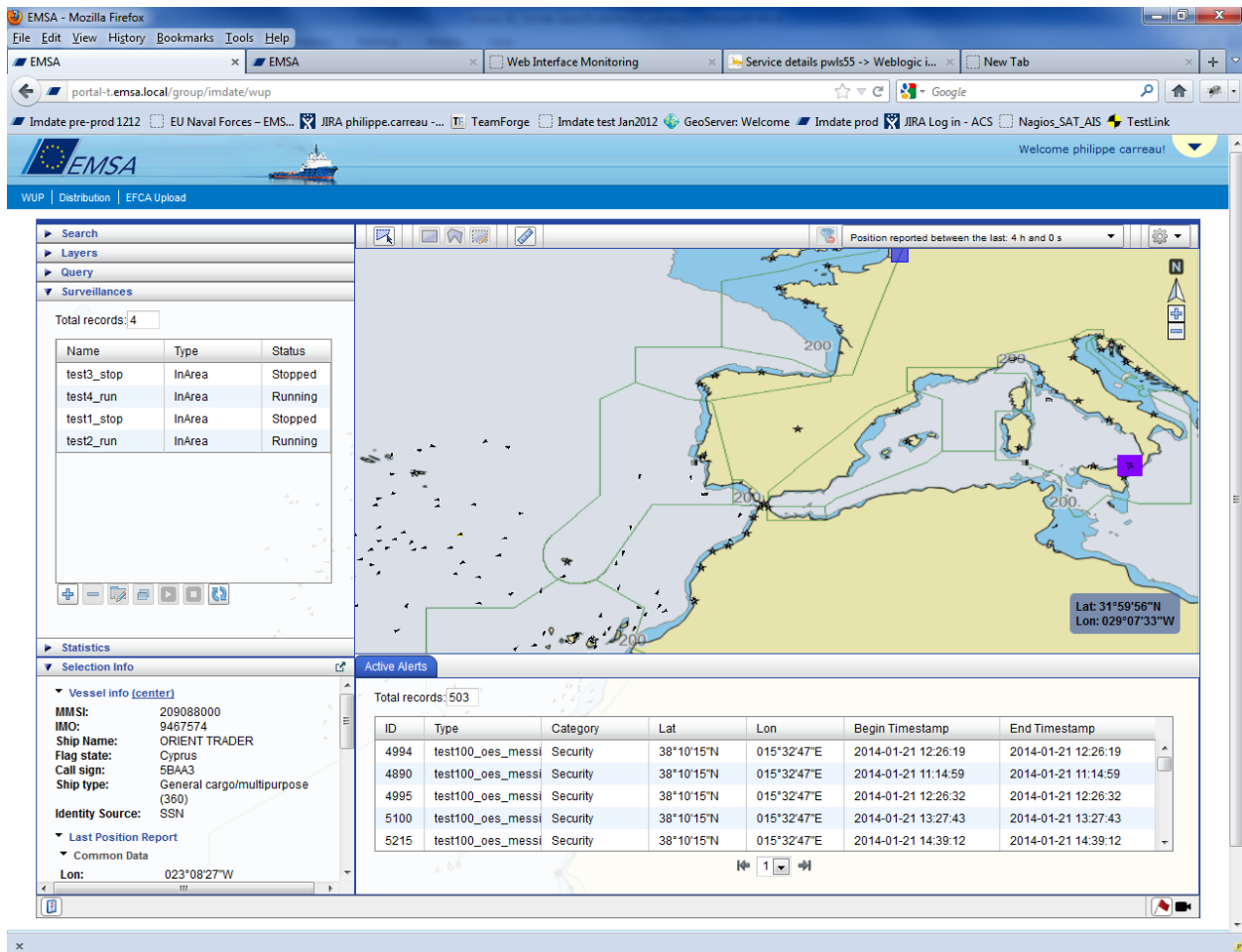


Fig 6: Screenshot of the alert subpanel showing the active alert in a general view

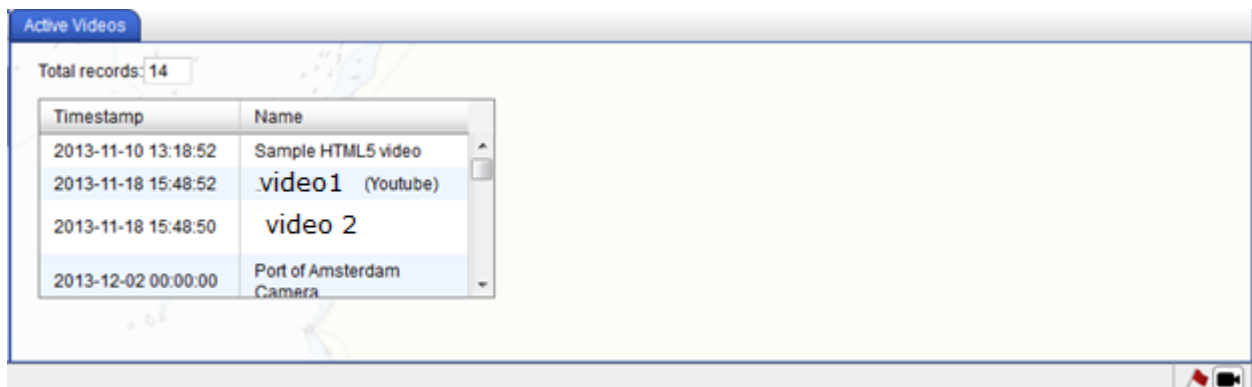


Fig 7: Screenshot of the video subpanel

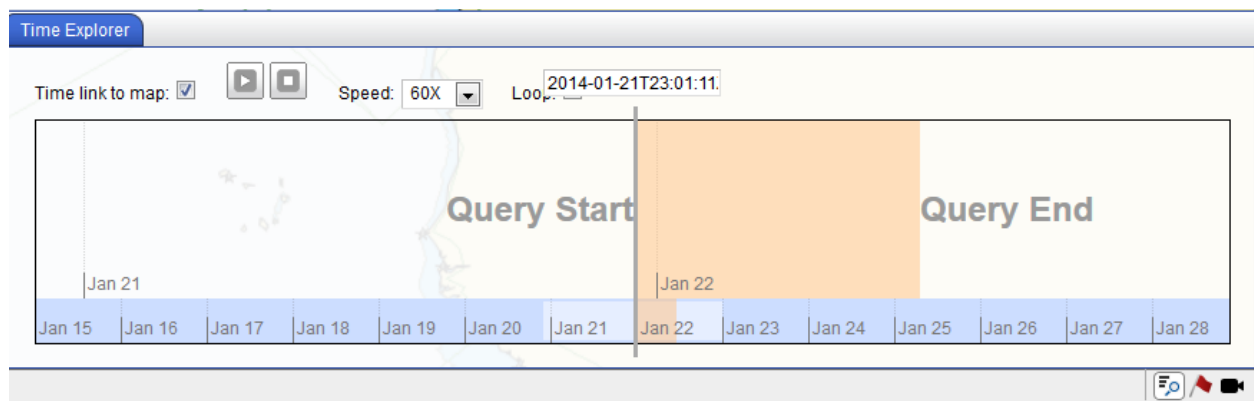


Fig 8: Screenshot of the time explorer subpanel

## Annex 3

### New Portlets Under Design (Informative)

Below are representative portlet interfaces under design that will be integrated in IMDatE.

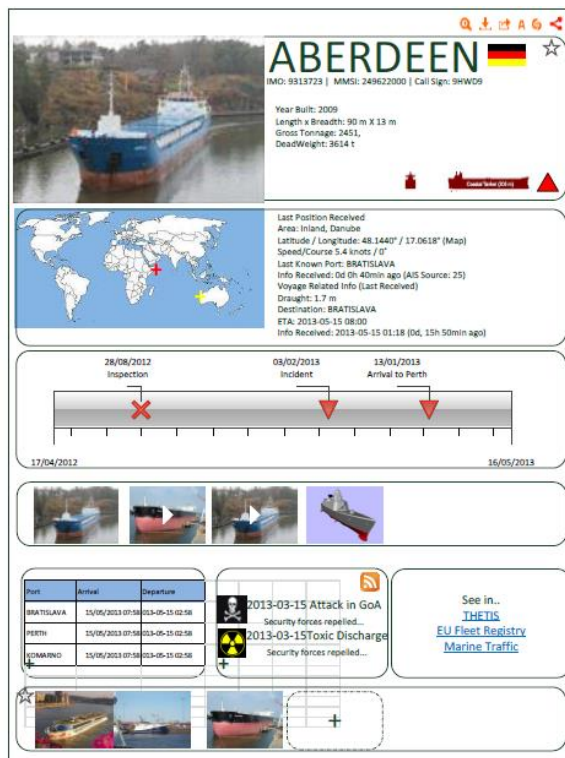


Fig1 : Portlet proposal for complete integrated ship profile



Fig2 : Portlet proposal for port information