

Questionnaire on the use of a drift modelling tool for SAR and Maritime Safety

Background

As agreed at the IMS Group 12th User Consultation Meeting (UCM#12), the IMS Correspondence Expert Group on “Drift Modelling” should propose Guidelines for developing an operational IMS Drift Modelling tool to be used for Search and Rescue and other Maritime Safety purposes.

The objective of the Guidelines is to gather expert knowledge on the user needs and thus have a common understanding of the features and functionalities to be implemented in the IMS Drift Modelling Tool.

The Guidelines will thus provide requirements on the drift parameters for connecting to existing models and on how to display results in the IMS graphical map interfaces (SEG and IMS Mobile App).

To develop these guidelines, it is important to collect from the IMS Correspondence Expert Group on “Drift Modelling” the relevant information to initiate the drafting.

This information can be grouped in the following categories identified in the ToR:

1. Identification of user workflow (e.g. request one (or more) simulations to be routed to “external” model(s));
2. List of configurable drift parameters for input to the model;
3. List of different types of objects whose drift should be simulated;
4. Options for display of drift results (e.g. probability of results);
5. Definition of user specific near-real time met-ocean data inputs;
6. Configuration, selection and display of search patterns based on the output model results;
7. Display of results in the SEG.

The following questions address the different categories above.

Questions

1. Identification of user workflow (e.g. request one (or more) simulations to be routed to “external” model(s))

1.1. What tool do you use at national level for Drift modelling for SAR and maritime Safety?

Name of the tool	remark
SARMAP	
OSERIT	
MOTHY	
NOOS DRIFT	
OPEN DRIFT	
OVERSEE	
SARMASTER	
OCEAN SAR	
SARIS	
Other model:	

1.2. Are you interested in running different models in parallel?
and with what objectives:

- a) Training purposes
- b) Comparing outcomes of different models
- c) Other

2. List of configurable drift parameters for input to the model

2.1. What is the required input to run the model (please check the user manual or specifications of the modelling applications you are currently using)?

2.1.1.Mandatory input

Name of the parameter	Format	length	definition

2.1.2.Optional input (what parameters you would like to have available for modelling)

Name of the parameter	Format	length	definition

2.1.3.Time dimension as parameter you would like to have available for modelling

- d) forecasting future positions
- e) backtracking previous position
- f) both of the above

3. List of different types of objects whose drift should be simulated

3.1. Can you provide the list of objects available in the model you use? Should you have a library with the description, and definition could you provide it in attachment.

Name of the object	Format	length	definition

3.2. Do you have need to simulate drifting of some other objects that would be necessary or useful for you?

Name of the object	Format	length	definition

4. Options for display of drift results (e.g. probability of results)

Please indicate the option(s) you would expect

- a) including timeline (predicted positions of the object in time, e.g. trajectory on hourly bases) or only for one specific moment in time including reference/visualization of the probability ranking (areas/points/lines of higher probabilities as well as lower probabilities)
- b) Specification of the output (line, point, group of points, polygon, several polygons, other...)
- c) List of mandatory attributes

Name of the parameter	Format	length	definition

- d) List of optional attributes

Name of the parameter	Format	length	definition

5. Display of results in the IMS Graphical interface:

5.1. Shall the drift model result be integrated with the IMS maritime picture or being a standalone displayed result?

if the drift model result shall be integrated with the IMS maritime picture should it be:

- 5.2. Available on top of ship positions?
- 5.3. Available on Top of available Positions + Earth Observation images (SAR or optical) and products (vessels detected via satellite and correlated or not using positions reports)
- 5.4. Available on top of Enhanced SAR SURPIC?
- 5.5. Would you be interested in visualising the result in IMS Mobile App?
- 5.6. Would you be interested in receiving the result via system to system?
 - 5.6.1.If yes, what are the preferred formats?

6. Configuration, selection and display of search patterns based on the output model results

6.1. Do you expect to have the search pattern available via the IMS platform?

Y/N

6.2. If yes can you identify the search patterns you would require?

Name of the search pattern

6.3. Do you expect to be able to share this pattern with assets/other users? And if yes in which format.

7. Definition of user specific near-real time met-ocean data inputs (this refers to meteorological and oceanographic models used to provide input for drift model)

7.1. What are the necessary MetOcean data input?

7.1.1. Current

7.1.1.1. Please explain what type of currents and where it could be made available

7.1.2. Weather forecast

7.1.2.1. Please explain what type of weather forecast information and where it could be made available

7.1.3. Others (e.g in situ data like sea temperature etc..)

7.1.3.1. Please detail and identify where it could be made available

7.2. Would you be interested in accessing additional MetOcean data?

7.2.1. If yes which ones?

7.3. Please provide the information on MetOcean model(s) you use or would like to use

- a) Title/name of the model
- b) General geographical area of coverage
- c) Provider of the model (website/contact)
- d) Average resolution of the model
- e) Type/format/standard of the model (e.g. ROMS, etc)

8. Any additional comments, proposal you foresee to draft these guidelines with the necessary requirements on the drift parameters for connecting to existing models and on how to display results in the IMS graphical interfaces?