

Information Paper

Progress in the development of the S-100 Product Specification for Navigational Warnings (S-124)

Submitted by:	Chair of the World-Wide Navigational Warning Service Sub-Committee (WWNWS-SC)
Executive Summary:	The WWNWS-SC created an S-124 Correspondence Group in October 2013 to develop an S-100 Product Specification for Navigational Warnings. This paper reports on the establishment and on work of the S-124 CG.
Related Documents:	IMO Background Related to the Development of E-Navigation (S124 CG web pages).
Related Projects:	E-navigation, MSI Maritime Service Portfolios, Modernization of GMDSS.

Establishment of the S-124 CG

During its 5th meeting (October 2013), the WWNWS-SC decided to create the S-124 CG. The objective of the S-124 CG is to develop a S-100 product specification for Navigational Warnings (NW) to improve dissemination and integration within bridge systems and shore systems via a digital format. The product specification is expected to contribute to the technical infrastructure of the e-navigation as designed by IMO and to the modernization of the Global Maritime Distress and Safety Systems (GMDSS).

According to its TOR¹, the CG should liaise with the future S-100 WG of the HSSC and the final draft of the product specification should be submitted by WWNWS-SC to HSSC for endorsement.

Australia, France, Greece, Japan, New-Zealand, Norway, Sweden, United-Kingdom, United States joined the Group at the creation and France leads. The CIRM and Danish Maritime Authority (DMA) joined in February 2014.

Oct 2013 – September 2014 activities

An overview of tasks was drawn up (December 2013) and the key elements of the IMO background related to the development of e-navigation were gathered for consideration by the members of the CG (March 2014).

The analysis of these elements shows that the development of S-124 participates decisively in the response to several strong e-navigation's needs and gaps. It is in accordance with the prioritized solutions S4 *integration and presentation of available information in graphical displays received via communication equipment* and S9 *improved communication of VTS service portfolio (Not limited to VTS stations)*. It contributes to the risk control option (RCO) 6 *improved shore-based services* and to the RCO 1 *integration of navigation information and equipment including improved software quality assurance*. It is in the scope of tasks T13, T14 and T17 of the Strategy Implementation Plan (SIP) submitted to the approval of IMO MSC (November 2014).

The principles of the method to follow in the S-100 modeling of NW have been defined.

The method adopted is based on use case diagram (see Annex 1) to identify actors aboard and onshore, their roles, their needs and the current gaps. This will be used to design and validate the S-100 model (UML) for NW. This method allows linking the actors' point of views and the S-100 NW model with the solutions envisaged and to be developed by the operators and by the industry.

¹ http://www.iho.int/srv1/index.php?option=com_content&view=article&id=611&Itemid=850

The CG has reviewed (September 2014) the needs and gaps for each actor on the basis of the elements of the IMO e-navigation background.

Way ahead

The group's work will continue schematically on the following topics:

- Consider the background of the modernization of the GMDSS.
- Identify basic functions that should or could apply to digital NW (ashore and on board) in accordance with new ways of operations.
- Review and improve the initial model provided by DMA and issued from ACCSEAS project (see Annex 2)
 - o to ensure that the content of the current NW is supported
 - o to meet functions' requirements.
- These functions could be the basis for new draft performances standards issued by IMO in relation with other relevant organizations.
- Define the portrayal of the NW in relation other relevant organizations.
- Proceed to a test-bed to refine the draft S-124 and to prove its technical value before approval and implementation.
- Reach a consensus on the project of S-124
 - o by demonstrating its contribution to the development of solutions,
 - o by assessing the impact on the stakeholders.
- Enlarge as appropriate the membership and relationships with other entities.
- Submit S-124 PS for endorsement.

The work is conducted on an iterative process between items and by successive rounds within the group and in exchanges with other entities. The tentative schedule in Annex 4 gives the approximate periods during which the work will focus on the different items.

Points to be considered

New ways of operations and definition of Maritime Service Portfolios

Standardized digital NWs, as other new technical components, will allow new ways of operations. Reciprocally, the design of the S-124 data model depends to a certain extent of the new ways of operations envisaged (and of other technical components). It is assumed that this principle applies to other S-100 product specifications.

So, in parallel with the development of S-100 product specifications, the reflexion on new ways of operations which is in the scope of definition of the Maritime Service Portfolios² (T17 of the e-navigation SIP) should progress to feed the development of the product specification.

Global approach

In the modelling exercise, the S-124 CG has noted some similarities between NWs and T&P NMs. The two concepts contribute to the same user need for safety related information. The combination of the different means to provide the nautical information (e.g. NW and Notice and Mariners) could be reviewed as a new global and harmonized information system within Maritime Service Portfolios. This could imply the modelling of Preliminary and Temporary Notices to Mariners.

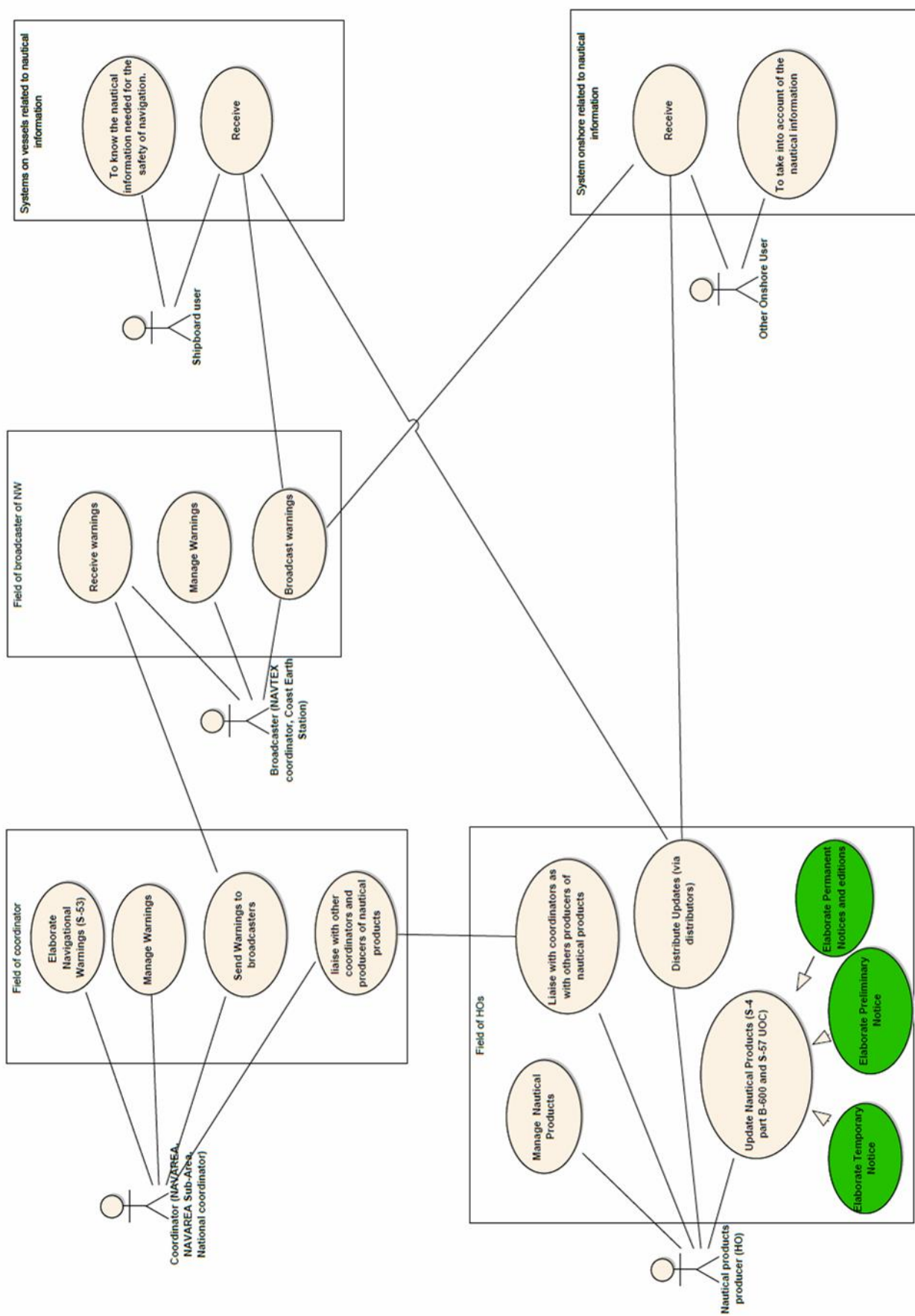
Action Required of HSSC

The HCCS is invited to:

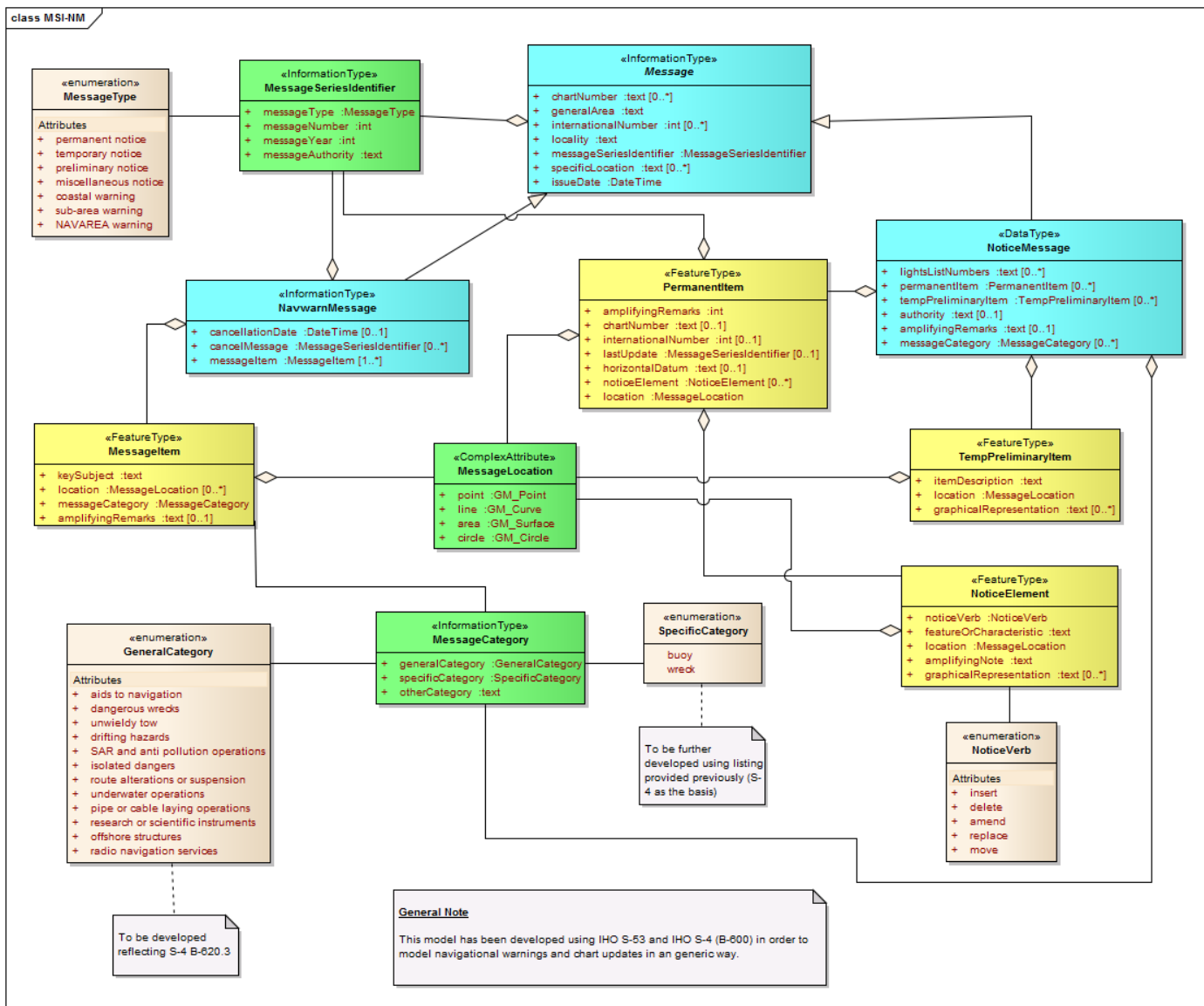
- note this information,
- include a new item in the S-100 WG program to support S-124 development.

² MSPs have been identified as the means of providing electronic information in a harmonized way.

Nautical information use case diagram



Initial model from ACCSEAS project



Tentative schedule

Work Item	Date start	Date end	Comment
Define a work program			An overview of tasks was drawn up (December 2013). Refine the work program is a permanent task
Review needs, gaps and requirements	Feb. 2014	Nov. 2014	From e-navigation background: on going. From GMDSS' modernization: Sept 2014 – Nov 2014
Identify basic functions	Dec. 2014	Dec. 2015	Aboard functions have priority. In relation with WWNWS for the new ways of operations and the scenario of the transition
Improve UML model	Feb. 2015	Dec. 2015	
Define the portrayal of the NW	Sep. 2015	Jul. 2016	
Tests	2015	2017	
Contribute to draft performances standards	2016	2017	
Enlarge as appropriate the membership and relationships	2014	2017	So that other projects feed us of their ideas and find a normative outlet in them works, to validate functions by actors, to feed other works of other bodies, to reach a consensus, ...
Reach a consensus (impact on stakeholders,...)	2016	2017	
Submit S124 for endorsement		2017	