

## S-124 progress

### *Development of a S-100 Product Specification for Navigational Warnings (S-124)*

<b>Submitted by:</b>	Leader of the S-124 Correspondence Group (Mr Yves Le Franc – France)
<b>Executive Summary:</b>	This paper reports on the work of the S-124 CG since HSSC7.
<b>Related Documents:</b>	On IHO/IRCC/WWNWS-SC/S-124 CG web pages
<b>Related Projects:</b>	E-navigation, Modernization of GMDSS.

#### Membership

Brazil, Canada, China, Republic of Korea (KHOA), C-MAP and TRANSAS joined the CG during the period. C-MAP is no more involved since September 2016.

The members are:

Australia, Brazil, Canada, China, Denmark (Danish Maritime Authority - DMA), France, Greece, Japan, New-Zealand, Norway, Republic of Korea, Sweden, Turkey, United-Kingdom, United States, CIRM, KRISO, TRANSAS and Eivind Mong.

#### Activities since HSSC 7 - Points to be considered

##### Introduction

The S-124 CG is focused on the development of the S-100 ProdSpec for the Navigational Warnings (NWs) of the World Wide Navigational Warning Service which is part of the MSI service of the GMDSS. This includes NAVAREA, Sub-area and coastal warnings produced by Coordinators and currently broadcast via SafetyNET and NAVTEX in a TELEX format. It is of course highly wished that S-124 be also suitable for local NWs. MET forecasts and MET warnings are not in the perimeter of the CG tasks.

S-124 will be a component of the e-navigation and of the modernization of the GMDSS.

##### Modeling

The modeling was the main activity during the period.

A NW is essentially HAZARD + POSITION. The goal of S-124 is to structure the data to allow new functionalities on board in response to the users needs like the improvement of the filtering of the NWs, the automatic report of the NWs in a graphic overlay, over the ENC on ECDIS. The CG previously reviewed the needs and outlined solutions.

In August 2015, the CG adopted a harmonized model from KRISO-Jeppesen with input from DMA (ACCSEAS project) for the continuation of its work.

This model was modified to reach some expectations:

- Detection by the ECDIS of an event not on the ship's route but in the neighborhood of the route and affecting the safety of navigation along the route (eg. a light unlit on the coast).
- Filtering according to the period of time when the danger subject of the NW is active.
- NWs in English and in national language.
- Easy cross reading from the descriptive text and the associated locations on the chart display.

The result of the last point above is that a NW may be decomposed in several geo-objects (FeatureType) reflecting the separate localized parts of the NW. The use of labels on geometries could also ease the cross reading. InformationType is also used for information which is not localized (eg. a NW about a malfunctioning of a satellite-navigation service).

The first version of the draft ProdSpec has been issued thanks to C-MAP and data samples of S-124 NWs were produced. They are important results even if the ProdSpec including the model is not stabilized and will evolve further on. It is why the S-124 CG didn't create new elements in the IHO S-100 Registry at this stage.

The GC achieved a “paper” encoding exercise based on various samples of real NWs to review the draft ProdSpec (paper forms reflecting the model were used). The comments provided by members gave indications on how the model should be amended. The changes to be done are under discussion.

Members who are coordinators worry about the complexity of the model and recall that NWs must be easily and quickly promulgated. The structuring of the data must be justified by obvious benefits to the end user noting that the ergonomics of the production systems should help to overcome some difficulties in data creation.

In the close future, demonstrators and test-beds will be useful to make things more concrete and so refine the ProdSpec. DMA has already offered that some of the testing of the model will take place into the EfficienSea 2 project.

### **The WWNWS context**

Coordinators will need a production system for issuing S-124 NWs while the NWs are currently produced using simple text editors of messaging. Thus, S-124 strongly impacts the coordinators. During the period of transition, NWs will be produced both as current NWs (compliant with S-53) and S-124 NWs. This fact has to be considered in the design of the production systems and therefore in the design of S-124.

The NWs of the WWNWS are currently broadcast via NAVTEX and SafetyNET in a TELEX format. Out of the perimeter of the WWNWS, AIS has the capability to exchange navigation safety information via Application Specific Messages (ASM/Area Notice) in a specific binary format. S-124 NWs will be data in S-100 format, i.e. an ISO format like GML or ISO8211. So, the current NAVTEX, SafetyNET and AIS will not be able to convey NWs in S-124. Therefore, S-124 NWs should be distributed by new communication systems (NAVDAT, VDES, ...) identified in the modernization plan of the GMDSS under development.

### **Development of new systems on-board**

The S-124 CG was involved in the IHO response to the new IMO draft Module F of the Performance Standards for INS (Display of information received via Communication Equipment – coordinated by China).

The S-124 CG contributed to the Product Specification Interoperability Analysis carried out by the S-100WG.

The S-124 CG will liaise with the NIPWG which is part the correspondence group coordinated by Norway on the development of the “Guideline for the Harmonized display of information received via communication equipment”.

These items will contribute to define the portrayal of the NWs. This subject will be addressed when the model is stabilized (2017).

### **Way ahead**

The group's work will continue schematically on the following topics (tentative schedule):

- Review the ProdSpec for a version ready for test-beds (2017)
- Define the portrayal of the NW (2017-2018)
- Proceed to test-beds in relation with projects (2017-2018)
- Submit S-124 PS for endorsement (2019 ?)

### **Action Required of the HSSC**

The HCCS is invited to note the report.