S-124 progress

Report of the S-124 Correspondence Group of the WWNWS-SC

By France

Membership

- Brazil, Canada, China, Republic of Korea (KHOA), C-MAP, TRANSAS and INMARSAT joined the CG during the period.
- Since 31 August 2016, C-MAP is no more involved
- 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, INMARSAT and Eivind Mong.

Activities since HSSC7 – Points to be considered Introduction

- Focused on the development the S-100 ProdSpec for the Navigational Warnings (NWs).
- NWs of the World Wide Navigational Warning Service (WWNWS).
- The WWNWS is part of the MSI service of the Global Maritime Distress and Safety System (GMDSS).
- NAVAREA, Sub-area and coastal warnings produced by Coordinators and currently broadcast via SafetyNET and NAVTEX.
- S-124 should be also suitable for local NWs.
- MET forecasts and MET warnings are not in the perimeter.
- S-124 will be a component of the e-navigation and of the modernization of the GMDSS.

Modeling (main activity during the period)

- NW = HAZARD + POSITION
- Goal : to structure the data to allow new functionalities on board in response to the users needs like:
  - Improvement of the filtering of NWs
  - 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 an harmonized model from KRISO-Jeppesen with input from DMA (ACCSEAS project) for the continuation of its work.

Modeling

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).

Affected Area

-> ECDIS : detect the NWs of interest/along the planned route

Without Affected Area

With Affected Area

WARNING ! Light unlit !

Modeling

Other expectations:

- 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.
  - 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.

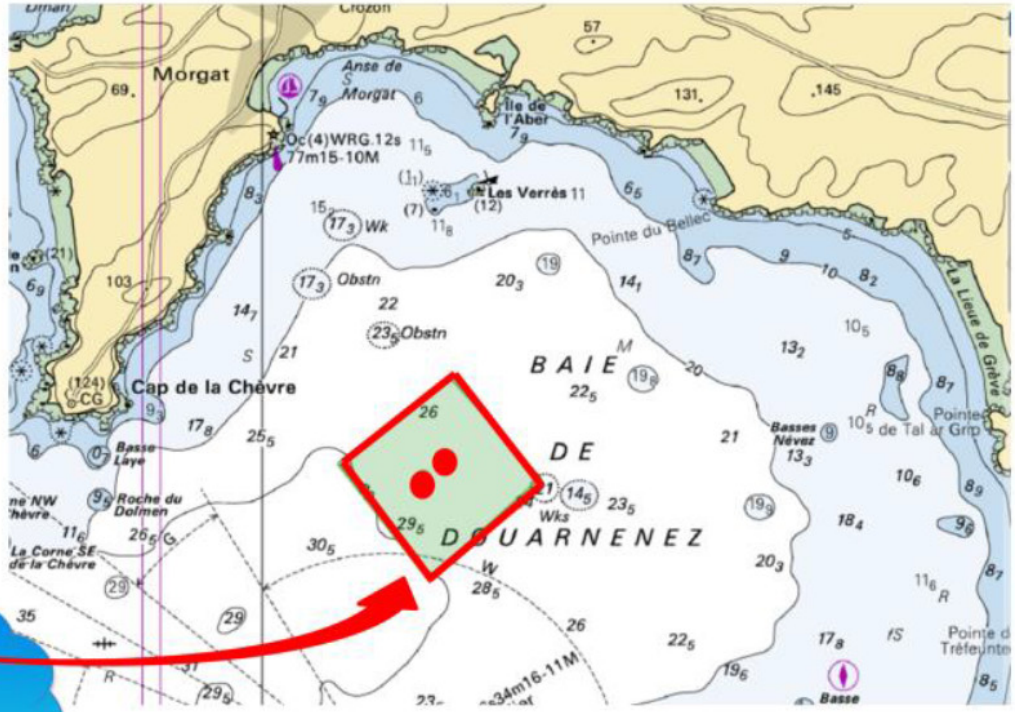
InformationType is also used for information which is not localized (eg. a NW about a malfunctioning of a satellite-navigation service).

NavWarn 12/2016
Iroise

A ship has sunk 48-09.55N 004-26.94W. The wreck is marked by an emergency buoy blue and yellow 48-09.37N 004-27.32W. Refloating operations are ongoing in the area bounded by 48-09.54N 004-28.74W, 48-10.49N 004-26.87W, 48-09.38N 004-25.37W, 48-08.26N 004-27.24W. This area is restricted.

With an unique NavWarnPart

localized by 2 points and a polygon



Where is the buoy on the chart?

With multiple NavWarnParts

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I easily understand the situation

Modeling

- First version of the draft ProdSpec issued thanks to C-MAP (Dec 2015).
- Data samples of S-124 NWs produced.
- **The model is not stabilized and will evolve further on !**
  - 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 – Here we are.**

General comments:

- Coordinators worry about the complexity of the model.
- 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.

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.
- NWs are currently produced using simple text editors of messaging.
  - 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.
  - to be considered in the design of the production systems and therefore in the design of S-124.

The WWNWS context

- 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 in a **specific binary format**.
- S-124 NWs will be data in S-100 format, i.e. an ISO format like GML or ISO8211.
  - The current NAVTEX, SafetyNET and AIS will not be able to convey NWs in S-124.
  - 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 (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.

Thank you for your attention

System for a dual production