

Paper for Consideration by HSSC

S-124 Correspondence Group (S-124CG) Report

Submitted by:	Chair, S-124 Correspondence Group
Executive Summary:	The development of S-124 continues with improvements to the data model. A full review has been finalized and the comments are being adjudicated. E- Navigation testbeds continue to provide valuable input and the work on the product specification document has started.
Related Documents:	S-124 Product Specification Draft 1.0.2 - Draft9, IALA G1128
Related Projects:	N/A

Introduction / Background

The World-Wide Navigational Warning Service Sub-Committee (WWNWS-SC) established the S-124 Correspondence Group to develop the next generation navigational warnings to enable integration with bridge systems and shore systems using the S-100 framework. Hydrographic Standards and Services Committee (HSSC) at its 9th meeting invited S-124CG to reinvigorate the liaison with NIPWG and S-100WG (HSSC9/44). This report of the latest activities of S-124CG is in response to that invitation.

Analysis/Discussion

Since HSSC10, the S-124CG chair has attended S-100WG TSM6, NIPWG6 and S-100WG4 to report on S-124 development, seek input on direction of S-124 development and to remain current with S-100 and related developments.

1. Membership

Since last WWNWS10, we have gained a number of new members. An updated list of members is uploaded to the S-124CG webpage. Please see

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

New members include Amund Gjersøe (Kongsberg Norcontrol AS), Elena Maria Gnehm (German Hydrographic Office/BSH), Ed Weaver (WR Systems) and Dave Wilson (Maritime New Zealand) replacing Stuart Caie (LINZ).

2. WWNWS10, and Navigational Warnings and Temporary and Preliminary Notices

WWNWS10 clarified that the inclusion of Temporary and Preliminary Notices in S-124 is not within the current scope of S-124 so we have therefore removed this concept from the data model and GML schema.

See Annex A for an updated view of the S-124 data model.


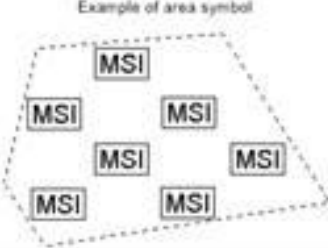

The data model which included Temporary and Preliminary Notices was shared with NIPWG, who is developing an NtM exchange format, as an input to their development at a recently held workshop in Genoa (See https://www.iho.int/mtg_docs/com_wg/NIPWG/WorkshopXMLNtM2018/Input%20paper%20on%20NtM%20information%20exchange%20format_final.docx).

3. Draft S-124 Product Specification development


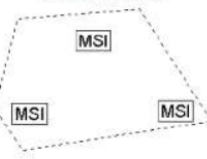
With assistance from Yves LeFranc (SHOM) the S-124 product specification draft has progressed well and it's now at a stage where the general concepts and ideas can be seen. The draft was therefore sent out to the S-124 membership for their input mid-October, 2018 with a review deadline of November 30th. Responses were received from Sweden, Germany, France and New Zealand. These comments are being adjudicated and a new version of the S-124 draft product specification is under development.

Portrayal of S-124 is a challenge due to IMO and IEC guidelines defining one common symbol for MSI which means it is not possible to visually distinguish between navigational warnings, weather warnings or other MSI information.

Complicating this issue is the number of categories that a navigational warning can have, coupled with requests from mariners to have a function to categorise navigational warnings in their user system. This issue will be a discussion topic in a planned workshop on S-124 matters that are planned in conjunction with WWNWS11 in August.

<p>5.4</p>	<p>Maritime Safety Information, MSI</p> <p>MSI point symbol shall be presented as box with the "MSI" inscribed inside it. The box shall be centred at the position derived from MSI message. The box shall be [6] mm in height, drawn using a thick solid line style.</p> <p>MSI area symbol shall be presented as a series of lines bounding a geographic area designated as "caution" to navigation. Connecting lines shall be drawn using thin dashed line style and using same basic colour as the symbol itself. The area shall be filled with a pattern of MSI point symbols.</p> <p>NOTE: Source of MSI may be NAVTEX, AIS ASM(22, 23), etc.</p>	<p>Example of point symbol</p>  <p>Example of area symbol</p> 
<p>5.5</p>	<p>AIS shore base station</p> <p>AIS shore base station shall be presented as a diamond with crossed lines centred at the reported position of the base station. The</p>	

Screen shot from IEC 62288

Topic	Symbol	Description
<p><u>MSI</u></p>	<p>Example of point symbol</p>  <p>Example of area symbol</p> 	<p><u>MSI point symbol should be presented as a box with the "MSI" inscribed inside it. The box should be centred at the position derived from the MSI message. The box should be drawn using a thick solid line style.</u></p> <p><u>The MSI area symbol should be presented as a series of lines bounding a geographic area designated as "caution" to navigation. Connecting lines should be drawn using thin dashed line style and using the same basic colour as the symbol itself. The area should be filled with a sparse pattern of MSI point symbols.</u></p> <p><u>Note that the source of MSI may be NAVTEX, AIS ASM function identifier 22 or 23 (SN.1/Circ.289), etc.</u></p>

Screen shot from NCSR6 report [Guidelines for the Standardization of User Interface Design for Navigation Equipment]

S-100 has been released as Edition 4.0.0. The next version of S-124 draft product specification will be updated to comply with the latest version of S-100. Likewise, assessments are ongoing with regards to the latest guidance from DQWG regarding data quality and how this may impact S-124.

An impact study will be conducted once the product specification matures further, as it is likely too early at this stage to get a fair assessment of impacts.

4. E-Navigation Testbeds

The STM-Validation Project has been extended 6 months giving more time to test concepts including the STM version of Navigational Warning service. The SMART Navigation Project continues to support the testing of S-124 and is developing the test cases for additional tests of a full NAVWARN service. A team of participants from STM

Note: FOR REASONS OF ECONOMY, DELEGATES ARE KINDLY REQUESTED TO BRING THEIR OWN COPIES OF THE DOCUMENTS TO THE MEETING

and SMART Navigation meets regularly with the S-124 Chair to coordinate the testing and development of S-124. The Marine Connectivity Platform (MCP) consortium facilitates a discussion forum that comprise industry, research and government for discussions on how to further develop S-124, which has been very helpful in advancing the development of the product specification.

5. Technical Service Description

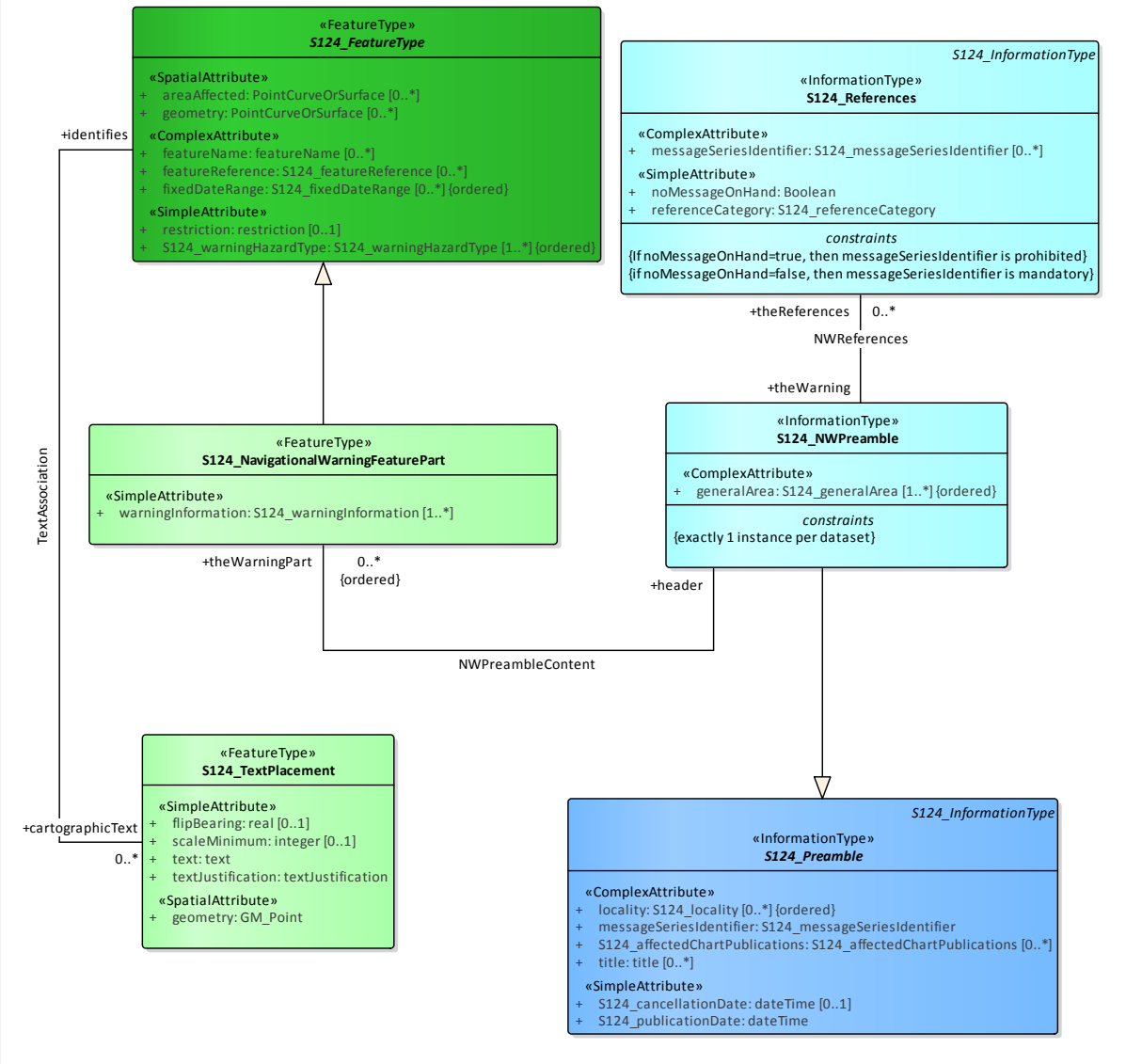
Using IALA G1128 (Specification of e-Navigation Technical Services) Sweden is drafting a technical service description of a Navigational Warning service. They have also reviewed an earlier Danish draft Technical Service Description (IALA ENAV21-9.6) for additional guidance. When finalized the draft should be shared with the Correspondence Group for wider review.

Action Required of S-100WG

The S-100WG is invited to:

- a. note the report

class S-124 Navigational Warning Features and Information types



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«enumeration»
S124_warningType

local navigational warning = 1
coastal navigational warning = 2
sub-area navigational warning = 3
NAVAREA navigational warning = 4
NAVAREA no warning = 5
sub-area no warning = 6
coastal no warning = 7
local no warning = 8
NAVAREA in force bulletin = 9
sub-area in force bulletin = 10
coastal in force bulletin = 11
local in force bulletin = 12

«enumeration»
S124_referenceCategory

cancellation = 1
source reference = 2
repetition = 3
update = 4
in-force = 5

«enumeration»
restriction

entry restricted = 8
entry prohibited = 7
area to be avoided = 14
stopping prohibited = 25
speed restricted = 27

«enumerati...»
textJustification

left = 1
centred = 2
right = 3

should drive portrayal of border

«S100_CodeList»
ISO639-3

«S100_CodeList»
ISO3166-1

«S100_CodeList»
S62

«S100_CodeList»
EPSG

«S100_CodeList»
S124_warningHazardType

«enum»

- + acoustic recorder
- + aids to navigation
- + AIS surveillance systems
- + anti pollution exercises
- + anti pollution operations
- + aquaculture site
- + breakwater construction
- + buoy adrift
- + buoys
- + cable laying operations
- + cluster of fishing vessels
- + container adrift
- + dangerous wreck
- + dead whale adrift
- + deadhead adrift
- + derelict vessel adrift
- + DGPS
- + diving operations
- + dredging operations
- + drifting hazard (other)
- + drill rig on location
- + drill rig under tow
- + drilling site operations
- + exclusion zones
- + explosive detonation
- + explosive device
- + fallout hazard
- + fireworks
- + firing exercises
- + fish-net adrift
- + floating debris
- + floating dock
- + hazardous area
- + HF Services
- + hydrographic survey
- + ice boom
- + ice control zone in-force/deactivated
- + iceberg outside advertised limits
- + in-force bulletin
- + lights & fog signals
- + log boom adrift
- + marine mammals
- + maritime security - MARSEC level changes
- + MF Services
- + military exercises
- + military operations
- + mines
- + MSI Services
- + mussel farm
- + national health organizations - changes
- + nautical information issues
- + NAVTEX
- + newly discovered dangers
- + offshore structures
- + opening/closing of harbour
- + opening/closing of swing bridge
- + opening/closing of waterway
- + operating anomalies identified within ECDIS including ENC issues
- + pipe laying operations
- + pipe or cable laying operations
- + piracy
- + race
- + RACON
- + radar surveillance systems
- + radio navigation services
- + regatta
- + regulations
- + research or scientific operations
- + restricted area
- + routing Measures
- + SafetyNET
- + sandspit
- + SAR and anti pollution operations
- + SAR operations
- + scientific buoy & apparatus
- + scientific moorings
- + scientific survey
- + sea trials
- + seaplane operations
- + search and rescue exercises
- + seasonal buoy lifting
- + seasonal buoy program
- + security-related requirements
- + seismic surveys
- + shallow depth reported
- + shoal
- + submerged fish-net
- + submerged object
- + subsurface moorings
- + subsurface pipelines
- + survey results
- + swimmers
- + tide gauges
- + traffic congestion
- + tsunami warning
- + tsunamis and other natural phenomena
- + uncharted rock
- + uncharted submarine cables
- + underwater operations
- + unidentified radar target, possible iceberg
- + unwieldy tow
- + vertical clearance reduced
- + vessel adrift
- + vessel disabled
- + VHF Services
- + VTS limit change
- + water levels changed/not as advertised
- + waterway recommended/not recommended for shipping
- + wharf construction
- + works in progress
- + World Health Organization (WHO) health advisory information

tags

codelistType = open enumeration
encoding = other: [something]

To do: Message maintenance must be elaborated. Either with message status, or with using format functions, or another way? Consider including a flow diagram to explain the process.

Should drive portrayal of central symbol. For localization of datasets, should be encoded as a code (or key) instead of plain text.