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## NAUTICAL CARTOGRAPHY WORKING GROUP

### NCWG Letter 02/2021

To NCWG Members

16 July 2021

#### Request for Comments: S-124 Portrayal

Dear Colleagues,

The S-124 Project Team, under the IHO Sub-Committee on the World-Wide Navigational Warning Service (WWNWS-SC), is working on the S-100 based product specification for Navigational Warnings called S-124. With reference to our task to provide expertise and support to other IHO Working Groups regarding the implementation of S-100, the S-124 Project Team has approached us with a request to provide feedback on their portrayal development.

The portrayal development in S-124 is still very much work in progress, but the S-124PT would like to get some confirmation that they are on the right path with their work.

Attached Annex A contains the working proposals for what the S-124PT thinks the portrayal could be. Further S-124 working documents, including the draft Product Specification, are available at <https://iho.int/en/working-documents>.

The S-124PT Chair has informed me, that, to their knowledge, there currently is no internationally used suitable portrayal to build this development work on. There is an MSI symbol in IEC 62288 that was incorporated in IMO Circ.243/Rev1, however tests showed this caused significant clutter. Therefore, IMO NCSR7 concluded that removing the symbol guidance from Circ.243 was best and issued Rev2.

On the choice of colour, the S-124PT has provided the following reasoning: *“Magenta was chosen after reviewing the S-4 description of the use of colours. Magenta is the better fit among the choices presented there. Orange and Blue was discussed, but S-124PT, conclude with the assistance of project team members with seagoing experience that magenta is the better option based on what a mariner is used to, and what type of information navigational warnings generally convey.”*

In its June 2021 meeting the S-124PT did identify a potential issue with the use of (P), (L) and (A) to make clear distinctions between point, line and area features. The (P) especially could be confused with preliminary NM, or (P) NM. It was therefore proposed at the meeting that this need to distinguish points, lines and areas from each other may not be well founded as this is generally clear from context. The S-124PT has set up a group to review and revise portrayal document to reflect this. The document at Annex A, however, is still unchanged in this regard.

In collaboration with the S-124PT Chair, I have compiled five questions in Annex B for you to consider. But I encourage you to provide any ‘free text’ comments on the matter as well. You may write you additional comments in the space provided at ‘question’ 6 in the response form or as track changes in Annex A.

Please reply, using the Response form at Annex B, **no later than 27 August 2021**. I ask you to use the 'Reply to all' option for responses, to ensure the full Working Group membership is aware of developing discussions.

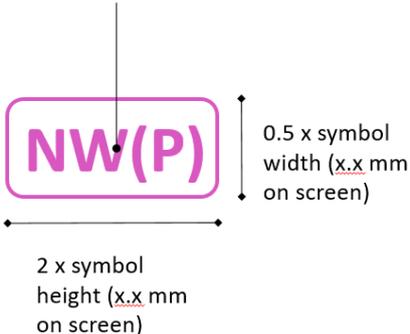
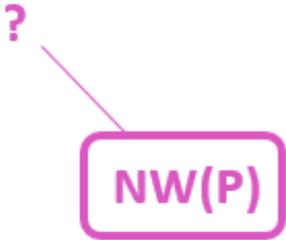
Yours sincerely,

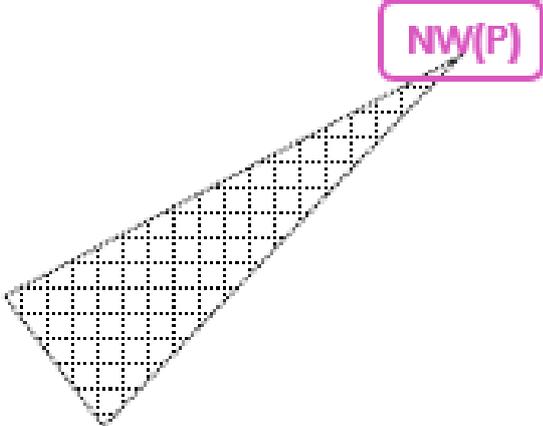
A handwritten signature in black ink, appearing to be 'Mikko Hovi', with a long horizontal stroke extending to the right.

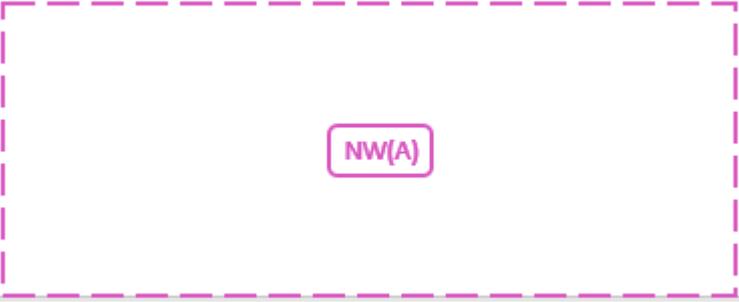
Mikko Hovi,  
Chair NCWG

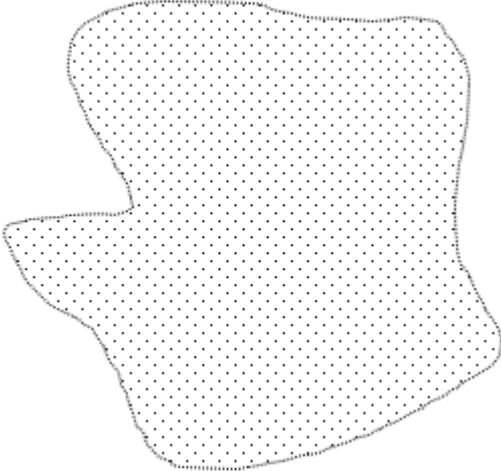
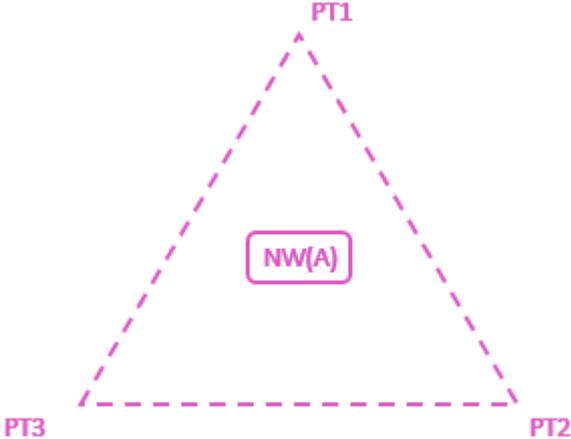
Navigational Warning must always be on when use in route monitoring mode.

System must have function to list all Navigational Warning on the screen plus a buffer around the screen (buffer size? Fixed size, e.g. 20NM? Scale based buffer?). List function must include means to distinguish between already viewed Navigational Warning and new to the user Navigational warning. List should be user specific so to track what acknowledgments each user has done and permit easy discovery of changes between watches.

Symbology	Description	Encoding Description
<p>Pivot point for point symbol</p>  <p>0.5 x symbol width (x.x mm on screen)</p> <p>2 x symbol height (x.x mm on screen)</p>	Point symbol [To do: need to create symbol engineering drawing]	
	Line style	
	Area	
	<p>Navigational Warning point with position approximate.</p> <p>Majority of NW will probably be this kind.</p> <p>No fill background to reduce blocking underlying objects.</p>	

	<p>NW with position known. No fill background to reduce blocking underlying objects.</p>	
	<p>Navigational Warning point symbol (position known) with user action (e.g. selected in pick report) causing affected area to be highlighted</p> <p>NW point with affected area highlight. For example a light outage with the light arc. Location of light is the NW and the light arc is the affected area.</p> <p>Use of affected area would be to help user see impact of a Navigational Warning and for enabling a system query based on route + buffer to better find Navigational Warning affecting route planning and monitoring.</p>	
 <p>2 3 4 5 6 7 8 9</p>	<p>Grouping of NWs that are close and causing clutter at screen resolution. The number of grouped NW is shown in the circle in the right side of the symbol. Numbers 2 through 9 are possible. Any grouping over 9 retain 9.</p>	

	<p>No fill background to reduce blocking underlying objects.</p> <p>From S-100WG5: grouping symbol need further specification. It is at rendering side and could apply to all S-100 symbols. OEMs want some specification. <u>Can be supported by some form of attribute in the portrayal that points to a grouping symbol that systems should use when appropriate. May require some changes to the portrayal model, but are probably limited to point features.</u></p> <p>May be sufficient to propose an optional attribute to the point symbol reference in portrayal instructions to give an alternative symbol for use with groupings.</p>	
 <p>The diagram shows a horizontal dashed line. Two rounded rectangular boxes, each containing the text 'NW(L)', are positioned on the line. The line continues to the left and right of each box.</p>	<p>Line style for NW with line geometry</p>	
 <p>The diagram shows a large dashed rectangular border. Inside the border, centered, is a rounded rectangular box containing the text 'NW(A)'. Below the dashed border, there is a solid horizontal line.</p>	<p>NW Area pattern style with a fixed offset between the NW symbol</p>	

	<p>Affected area pattern style. Only to display when the NW is selected by pick report or other user action.</p> <p>Also recommended to be used for whole NAVAREA messages and other very large areas.</p> <p>Question to consider; should users be allowed to turn it on if they so choose?</p>	
	<p>Area NW with text placements to simplify visual reference between NW text and NW area.</p> <p>An example of use can be a new regulation that adds an area with 3 points. The 3 points can be marked with text to improve the cognitive connection between the text and the point 'on the screen'.</p>	

#### Additional considerations;

Is it possible that NW symbols do not mask the chart details by for example using transparency or symbol with an offset? Example of use case; when a NW is related to a charted AtoN, then the AtoN on the chart should remain visible.

Is it possible to add a function of a trailing symbol behind own ship symbol that can indicate the area type, including any NW area? Trailing symbol function could replace or enhance the centered symbol function described in S-52 Presentation Library, section 8.5. [need drawing to illustrate] It has been suggested that this functionality can serve as an enhancement of portrayal of Navigational Warning with no portrayal (e.g. very large areas, poorly defined areas or whole NAVAREA messages).

**S-124 Portrayal**

## Response Form

(please return to NCWG Chair and Secretary by **27 August 2021**)[mikko.hovi@traficom.fi](mailto:mikko.hovi@traficom.fi), [edward.hands@kartverket.no](mailto:edward.hands@kartverket.no)

No.	Question	Yes	No
1	<p>Do you agree that the general direction of S-124 Portrayal draft is good, and that the S-124PT should continue developing it based on the work presented in Annex A?</p> <p>If 'no', please explain in the space below:</p>		
2	<p>Do you see in the proposed portrayal any conflicts with established cartographic design principles, as laid out in S-4 and S-52/S-101, that would need resolving?</p> <p>If 'yes', please explain in the space below:</p>		
3	<p>Keeping in mind that S-124 envisions resulting portrayal will always be 'on' during route execution in the ECDIS, do you see any potential conflicts with other symbols or symbol combinations with the proposed portrayal?</p> <p>If 'yes', please explain in the space below:</p>		
4	<p>Do you agree that magenta is the right colour to be used for Navigation Warnings information on ECDIS?</p> <p>If 'no', please explain and give your preferred alternative colour with reasoning in the space below:</p>		
5	<p>The portrayal draft at Annex A envisions a need to make clear distinctions between points, line and area symbols. It was proposed at the recent S-124PT2 meeting that this need may not be well founded as this is generally clear from context. Do you think that a clear distinction between points, lines and areas is needed?</p>		

	Please provide your reasoning in the space below:		
6	If you have any further comments, proposals or advice for the S-124PT on the S-124 portrayal, please write the in the space below:		

Date: .....

Name: .....

Organization: .....