

**IHO CSMWG 16
IHB Monaco 29-31 May 2006**

Display of Group 1 objects



**C&SMWG
16. Meeting, Monaco, May 2006**

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Pontoons as Group 1 / PERSTA, PEREND

Background Information

The ENC Product Specification (Ed. 2.0, S-57 Appendix B.1) defines two groups of objects: Group 1 and Group 2 (3.10). Objects belonging to Group 1 form the “skin of the earth”. They must not overlap each other. Area type objects of following object classes are in Group 1:

“DEPARE”, “DRGARE”, “FLODOC”, “HULKES”, “LNDARE”, “PONTON”, “UNSARE”

Area type objects of class “PONTON” are allowed to carry the attributes “PERSTA”/”PEREND”.

The Annex A of the ENC Product Specification (“Use of the Object Catalogue for ENC”) contains a paragraph (2.2.7) about the usage of the “SCAMIN” attribute at Group 1 objects: “Group 1 must always be displayed. Therefore, SCAMIN must not be used with Group 1 objects.” UOC does not contain a similar paragraph about attributes “PERSTA”/”PEREND”, “DATSTA”/”DATEND” at Group 1 objects.

The “IHO ECDIS Presentation Library” (S-52, Annex A of Appendix 2) contains a graph of a “display generator concept” (Fig. 1). It also provides guidance for the display of date or scale depending objects (8.4). No special rules are given there for Group 1 objects.

Problem

If an ENC contains an area type object of class “PONTON” which carries the “PERSTA”/”PEREND” attributes, an ECDIS which strictly follows the display generator concept as laid out in Fig. 1 of the Presentation Library will not display that object if the date is not within the range of the corresponding attributes. Because the area “PONTON” belongs to Group 1, there would be a display “hole” in the skin of the earth. Most likely the “No Data” pattern and fill colour would “show through”. Whether this is a safety related problem or just an aesthetic one needs to be discussed.

Solution

The solution that makes most sense is to remove the object classes “FLODOC”, “HULKES” and “PONTON” from Group 1. This would allow data producers to encode a depth area underneath such an object, which corresponds to the real world much more than the current coding scheme.

This solution would require a change of the ENC Product Specification. The C&SMWG could send a letter to TSMAD to request such a change (which is however unlikely to happen in the near future).

Another solution (which is probably easier to achieve) is a change of the display generator concept and the related paragraph 8.4 of the Presentation Library document. This would include an explicit statement about the handling of Group 1 objects. A proposed version of the graph is shown at the end of this document. The section 8.4 could be amended as follows:

8.4.1 Date-dependant objects

...

Objects belonging to Group 1 should always be displayed, irrespective of their period or date attributes.

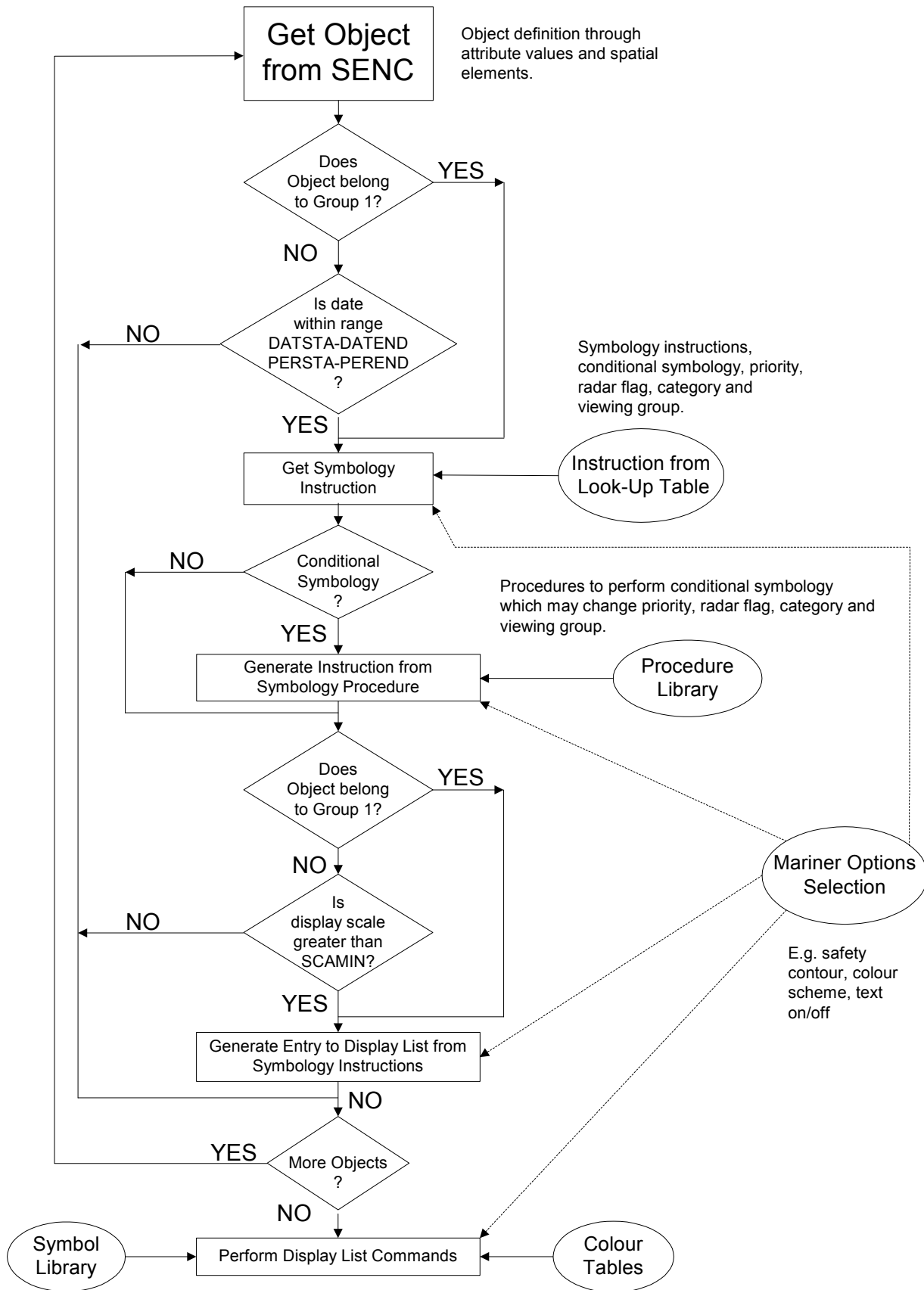
8.4.2 Scale-dependant objects

...

Objects belonging to Group 1 should always be displayed, irrespective of their scale attributes.

Impact on ECDIS

A change of the display generator concept would most probably require a software update on ECDIS systems.



Simplified and full chart symbols, linestyles and patterns.