



Hydrographic Services and Standards Committee

Report of the Republic of Korea (KHOA)

To HSSC6, November 2014

IHO Digital Reference Tool for Cartographers (IHO DRT Carto)

Introduction / Background

- ✦ Nautical chart production
 - S-57 database based chart production system has been widely used for the production of paper charts and ENC. Nautical cartographers produce their products by referring to the IHO's various standards such as S-57 and S-4.
- ✦ ROK developed a S/W named DRT Carto
 - to support efficient nautical chart production in response to the fast-changing chart production system
 - to make use of it as a training reference tool in the delivery of capacity building programs



Introduction / Background

- ✦ Open to the IHO Member states
 - ROK proposed that the DRTC application be shared among the IHO Member States, and it was endorsed by the IHB.
 - As a result, a new webpage has been created on the IHO website (http://www.iho.int/iho_pubs/misc/S-4_S-57UOC_KHOA/index.htm).
- ✦ This agenda item is intended to introduce the major features of DRTC and the updates implemented since the first version of DRTC.



Analysis/Discussion

- ✦ ROK recognized

- the need of a tool which allows users search and access the IHO's various chart production publications

- ✦ This application integrates

- S-57, Appendix B.1, Annex A - Use of the Object Catalogue for ENC - UOC (Ed. 3.1.0 Nov 2012).

- S-4 Regulations for International (INT) Charts and Chart Specifications of the IHO (English: Edition 4.4.0, September 2013).

- S-32 Hydrographic Dictionary - Part I Volume I, English (FIFTH EDITION, 1994).

- S-32 App 1 Hydrographic Dictionary - Glossary of ECDIS Terms.



Analysis/Discussion

✦ IHO Digital Reference Tool for Cartographer

17 Masking

To improve the look and feel of the display of ENCs in ECDIS for the mariner certain objects, or certain edges of objects, should be masked (see S-57 Appendix B.1 – ENC Product Specification clause 3.8). For example, the boundaries of anchorage area symbols overwrite coincident pontoon symbols:

In order to best determine the appropriate level of masking required for an ENC cell, it is recommended that the ENC be viewed in an ECDIS.

The following scenarios where masking is recommended should be considered by compilers:

1. Area objects crossing ENC cell boundaries: When a single area object crosses the boundaries of adjoining ENC cells, mask the edge where it shares the geometry of the boundary in each ENC:

Before masking is applied. **After masking is applied**

This allows the objects to be displayed as a single area object rather than being divided at the cell boundary and having the representation of two separate objects. Note that some ENC production software will automatically truncate (mask) features at the cell boundary.

NOTE: Occasionally an edge of the boundary of an area actually coincides with the ENC cell boundary. Where this occurs and the ENC production system applies automatic truncation (masking) of this edge, the compiler must “unmask” that edge so as to avoid the appearance of the area to be “open ended”.

Object & Attribute

Object: Caution area
Acronym: CTNARE
Code: 27

Geometric primitives: P, A

Set Attribute_A: DATEND; DATSTA; PEREND; PERSTA;
Set Attribute_B: (?JINFORM; NINFORM; NTXDTS; (?SEAMAX; SCAMIN; (?TXDTS;
Set Attribute_C: (?REGDFA; (?REGIND; SORDAT; SORIND;

Definition:
Generally, an area where the mariner has to be made aware of circumstances influencing the safety of navigation.

References:
INT 1: IM 29.2;
S.4: not specified;

Remarks:
This object class may be required to identify:
- a danger
- a risk
- a rule

Attribute: Date end
Acronym: DATEND
Code: 85

Attribute type: A Used in: ACHARE

Indication:
the 'date_end' should be encoded using 4 digits for the calendar year (CCYY), 2 digits for the month (MM) (e.g. April = 04) and 2 digits for the day (DD), according to ISO 8601: 1988.

Format:
CCYYMMDD (mandatory)

Example:
19961007 for 07 October 1996 as ending date.

Remarks:
The attribute 'date_end' indicates the latest date on which an object (e.g. a buoy) will be present. This attribute is to be used to indicate the removal or cancellation of an object at a specific date in the future. See also 'periodic date_end'.

The source of Object/Attribute Catalogue is from "www.s-57.com"

Analysis/Discussion

- ★ The DRTC application provides the following functions
 - The table of contents of S-57 UOC is displayed in the tree node structure, users can search the content of the UOC.
 - access the content of S-4 relevant to the titles of S-57 UOC simply by clicking on the link provided in the S-57 UOC title.
 - check the relevant information of S-57 Object Catalogue and Attribute Catalogue by clicking on the ACRONYM of object names included in the body of S-57 UOC.
 - check symbols on a sample ENC by clicking on the ACRONYM of object names included in the body of S-57 UOC



Analysis/Discussion

- ✦ the following updates have been made
 - Updated in accordance with the revised S-57 UOC: (Ed. 4.0.0 Feb 2014)
 - S-4 being updated in HTML file group, not PDF format.
 - The digital version S-57 Object Catalogue/Attribute Catalogue being updated reflecting S-57 Supplement No 3 to Edition 3.1 (June 2014 - incorporates the former Supplement No 2).
 - The DRTC video clip being updated.



Analysis/Discussion

- ★ ROK is confident

- DRTC application will contribute to chart production and capacity building programmes,
- hopes that the IHO Member States will find this useful.

- ★ In addition, ROK will ensure that the DRTC application remain up-to-date reflecting any changes in the IHO standards and will continue to strive to improve DRTC further to contribute to the work of hydrographic offices.



Action Required of HSSC

- ✦ The HSSC is invited to:
 - take note of this initiative;
 - consider measures to promote the use of DRTC by the IHO Member States such as increased exposure of the DRTC webpage and change of the DRTC webpage location on the IHO website.
 - provide recommendations on the Digital Reference Tool for Cartographers;

