INTERNATIONAL HYDROGRAPHIC ORGANIZATION

4b, quai Antoine Ier
B.P. 445
MC 98011 MONACO CEDEX
PRINCIPAUTE DE MONACO

ORGANISATION HYDROGRAPHIQUE INTERNATIONALE

Tel : +377.93.10.81.00
Fax : +377.93.10.81.40
e-mail : info@iho.int
web : www.iho.int

10th October 2016

Checking the IHO S-52 Presentation Library edition 4.0 in ECDIS

Background - IHO ECDIS Data Presentation and Performance Check

In October 2011 the IHO issued the ECDIS Data Presentation and Performance Checks, two fictitious ENC cells intended to assist Mariners identifying if their ECDIS was using the latest IHO S-52 Presentation Library, edition 3.4. The dataset also highlighted if there were any known ENC display anomalies present in the ECDIS system. Mariners were asked to run a series of quick ECDIS tests using the check datasets to ascertain if they were experiencing a display issue. If the system was found to be running an old IHO Presentation Library or had a more serious display anomaly Mariners were advised to contact their ECDIS manufacturer to obtain software patches and investigate further to resolve the issues. Results of the tests were to be sent to the IHO to inform the IMO, national Hydrographic Offices and for use in revising IHO standards.

The IHO ECDIS Data Presentation and Performance Checklist were not ever intended for, and are not suitable to be used as a Port State Inspection / Carriage compliance test for ECDIS.

To further address the ECDIS display anomalies and improve the ECDIS user experience the IHO issued S-52 Presentation Library edition 4.0 in September 2014.

The principal benefit of upgrading ECDIS systems to the latest IHO Presentation Library will be the reduction in audible alarms, helping ease the issue of alarm fatigue on the bridge whilst maintaining safety at sea. The introduction of an alert model based on the requirements in the IMO ECDIS Performance Standard will also harmonize ECDIS alarm and indication behaviour across different manufacturers systems.

A number of new symbols have been added to the IHO Presentation Library edition 4.0. These symbols will identify features that require an indication highlight, the location of automatic ENC updates and ENC features that have a temporal attribute.

A number of other significant changes in the S-52 Presentation Library have come directly from Mariner feedback. For example, the names of Fairways and Anchorage Areas will now appear on the ENC display and a hover over function for certain charted features has been introduced.

The IHO co-ordinated with the IEC to align issue dates of S-52 and IEC 61174 – ECDIS Operational and performance requirements, methods of testing and required test results, and as a result in Aug 2015IEC 61174 edition 4.0 was published in Aug 2015. These standard updates affect all new ECDIS systems and new installations from Aug 19th 2015. Current ECDIS users have until Aug 31st 2017 to update their systems to comply with the ECDIS software updating guidance in MSC.1.Circ.1503.

Changes to the IHO S-52 Presentation Library introduced in edition 4.0 will invalidate the tests contained in IHO ECDIS Data Presentation and Performance Checks which were specifically designed and developed for ECDIS using IHO S-52 Presentation Library edition 3.4 or earlier. An ECDIS type approval certificate showing conformance with tests in edition 4.0 of IEC 61174 demonstrates the ECDIS does not have any of the identified ENC display anomalies. The subsequent guidance in this document describes the method by which Mariners can check the ECDIS displays for the new ENC symbols contained in the new IHO S-52 Presentation Library edition 4.0.

ECDIS and the IHO Presentation Library Edition Number

All ECDIS must have a function to display the edition number of the IHO Presentation Library that is in use within the ECDIS. The new IHO ECDIS Presentation Library edition 4.0 clause 19.1 states *'The edition number of the PresLib installed must be available to the Mariner on request'*. This requirement is tested for in the standard IEC 61174 edition 4 clause 5.5.1 Presentation library (S-52/Annex A, Part I/19.1) *'The edition number of the PresLib installed shall be available to the Mariner on request'*.

All Mariners must familiarise themselves with the function in their ECDIS that will display the edition number of the IHO Presentation Library as this varies across ECDIS manufactures. This function will be required when Port State Control officers want evidence that the ECDIS is up-to-date to the latest IHO standards. MSC.1.Circ.1503: *'Additionally, ECDIS software should be kept up to date such that it is capable of displaying up-to-date electronic charts correctly according to the latest version of IHO's chart content and display standards'*.

A list of current IHO Standards in force is maintained on the IHO website.
http://www.iho.int/mtg_docs/enc/ECDIS-ENC_StdsIn_Force.htm

ECDIS Chart 1 and IHO Presentation Library edition 4.0

For a graphical way to establish the ECDIS is correctly displaying the new symbols introduced in IHO S-52 Presentation Library edition 4.0 the Mariner can check ECDIS Chart 1. ECDIS chart 1 is a legend of the entire set of symbols that may be used within an ENC, it is installed on all type approved ECDIS systems.

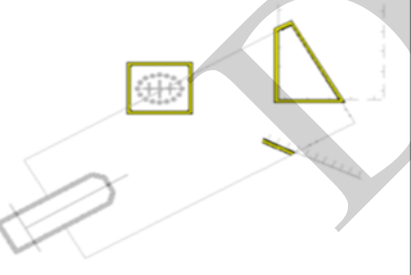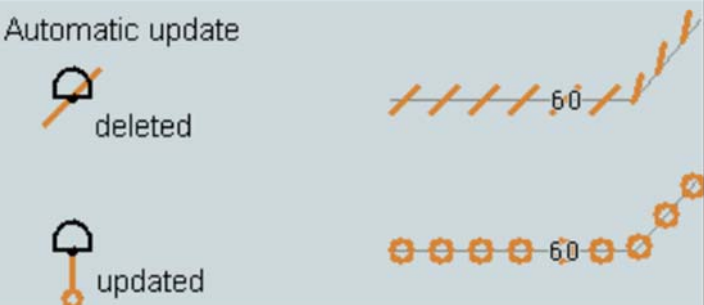The new symbols introduced in IHO Presentation Library edition 4.0 are listed below;

Symbol	Description
	Magenta 'd' symbol for use with features that have temporal attribute populated.
	Indication highlight for use when features pose a danger to the vessels intended track.
	Automatic update symbology for identifying where changes to the ENCs have occurred.

Fig 1. New ENC Symbols introduced in IHO S-52 Presentation Library edition 4.0

ECDIS Chart 1

Only ECDIS updated to IHO Presentation Library edition 4.0 will be able to show the new ENC symbols highlighted in red below. To check the ECDIS display Mariners are requested to open Chart 1, Information about chart display (A,B), and ensure they can view the symbols. ECDIS that have not been updated will not be able to display the new symbols. This is the IHO recommended method for checking that the ECDIS system can display the new symbols in IHO Presentation Library edition 4.0.
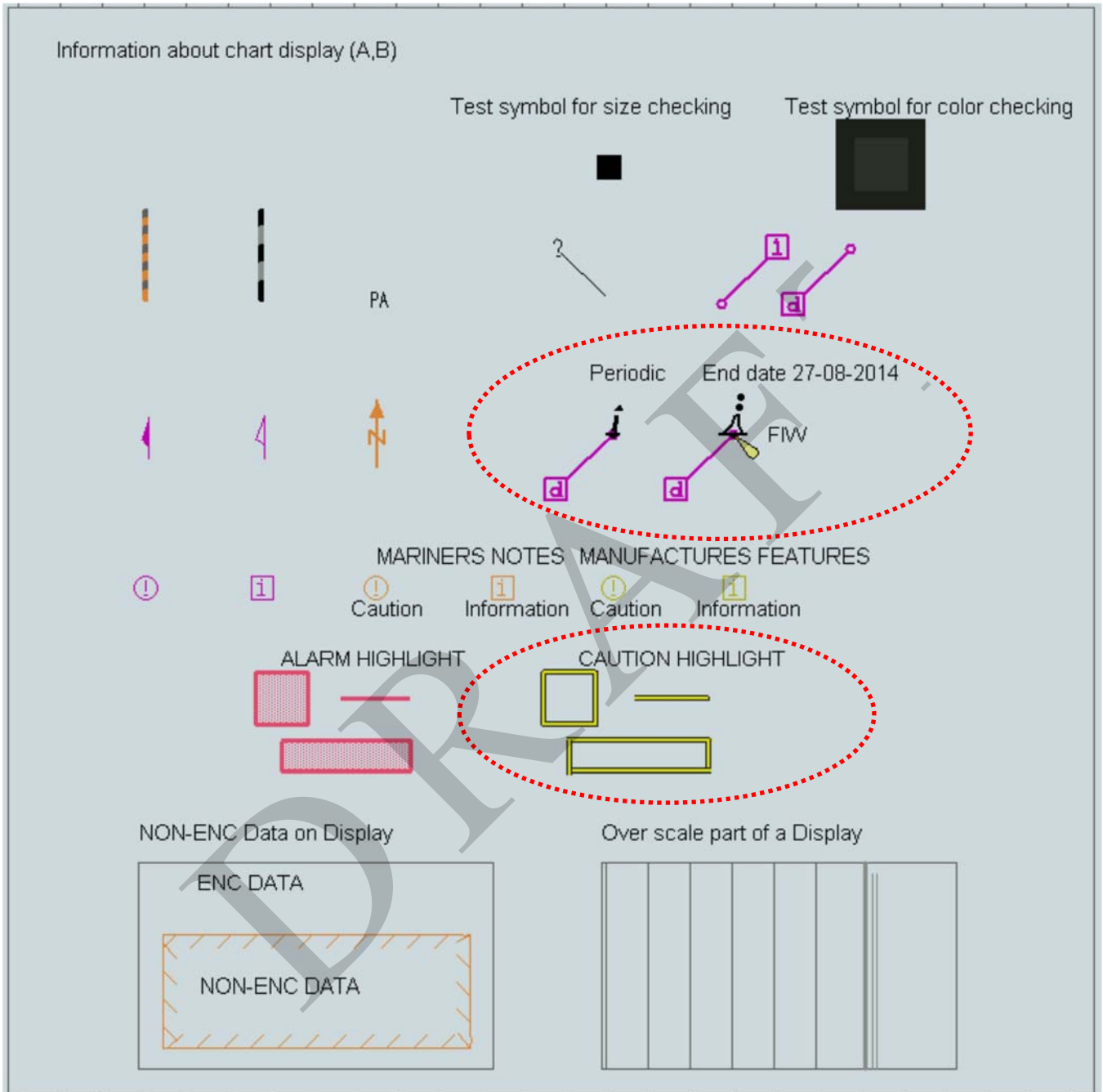

Fig 2. ECDIS Chart 1 Information about chart display (A,B)

Information about chart display (A,B)

Automatic update

deleted

60

updated

60

Manual update

deleted

60

updated

60

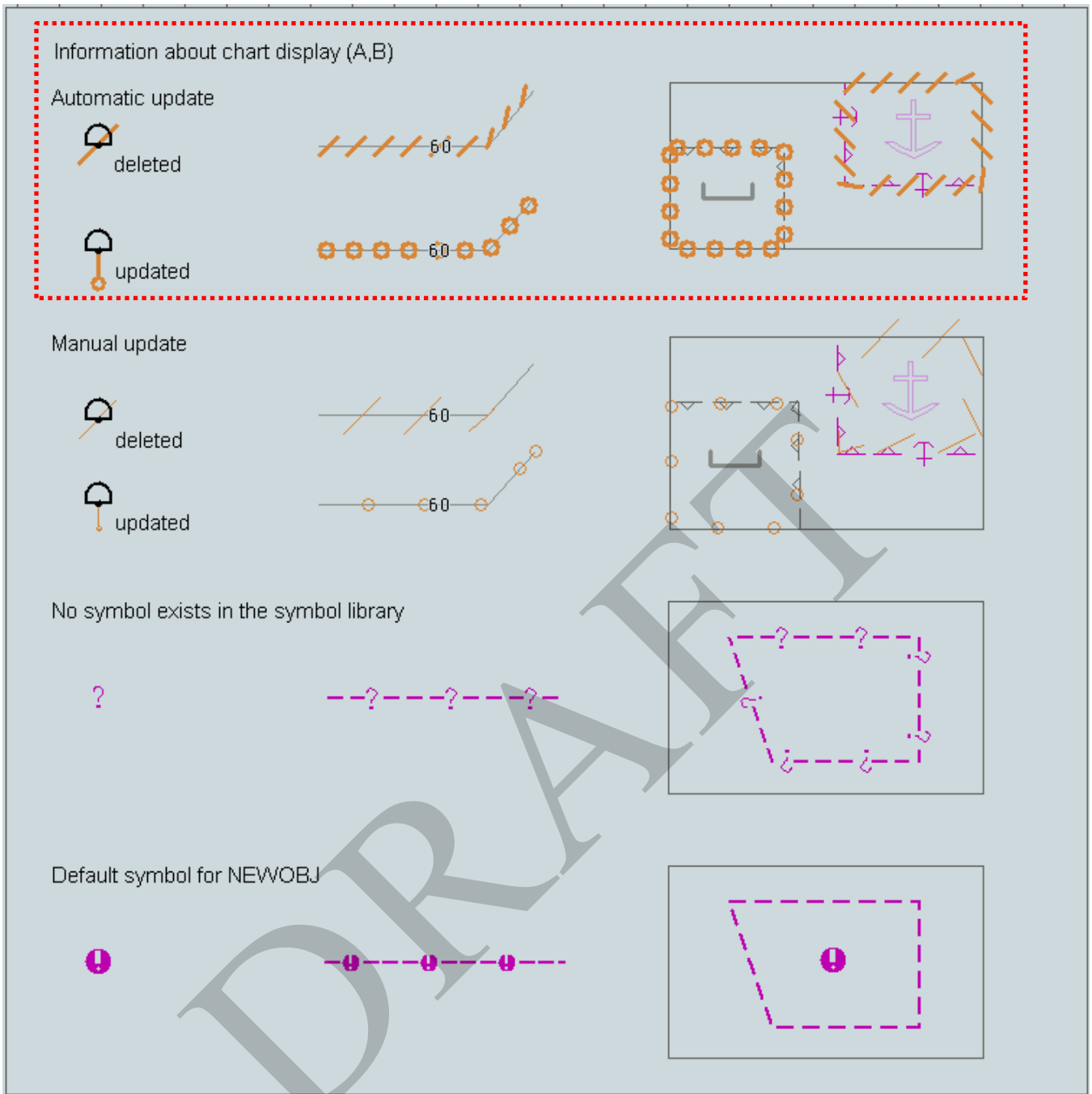No symbol exists in the symbol library

?

- - ? - - - ? - - ?

Default symbol for NEWOBJ

Fig 3. ECDIS Chart 1 Information about chart display (A,B)

4