**3ʳᵈ NCWG MEETING**
**ESRI HQ, Redlands, California, USA 16-19 May 2017**

**Paper for Consideration by NCWG**

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| ***Submitted by:*** | Chair ENCWG (Tom Mellor) |
| ***Executive Summary:*** | Response to ENCWG Work Item K2 and NCWG Work Item H2 derived from HSSC8: Prepare a single educative IHO authoritative document addressing the issue of "equivalent" T&Ps for ENCs, in view of its distribution to HOs, Port State Control authorities and mariners after approval. |
| ***Related Documents:*** | S-4 B-633 & B-634; S-57 UOC Clauses 2.6.2.2 & 2.6.2.3 |
| ***Related Projects:*** | None |

**INTERNATIONAL HYDROGRAPHIC ORGANIZATION**

**ORGANISATION HYDROGRAPHIQUE INTERNATIONALE**

# ENC STANDARDS MAINTENANCE WORKING GROUP (ENCWG)

[A Working Group of the Hydrographic Services and Standards Committee (HSSC)]

**Promulgating T&P NM information using IHO S-57**

**Introduction / Background**

Not all ENC producers are currently choosing to distribute updates to their ENCs that are Temporary and Preliminary (T&P) in nature. This document is intended provide information to ENC data providers on the importance of promulgating updates that are Temporary and Preliminary using the S-57 temporal attributes, and how the ECDIS will use this attribute information to display these updates effectively.

The concept of a T or P NM does not exist in ENC, any change to the data contained in the ECDIS is simply a digital update. Once loaded into the ECDIS the automatic change that has occurred to the ENC can be viewed by the Mariner. The IHO S-52 Presentation Library defines all the symbols used in ENC and defines a series of symbols designed to indicate where the change to the ENC has occurred.

Fig1. Automatic Update Symbols

**What are T&P updates?**
A Temporary Notices to Mariners, (T)NM promulgates navigationally significant information that will remain valid for a limited period of time.

A Preliminary (P) NM is issued to promulgate navigationally significant data early to the mariner when:
> • Action/work will shortly be taking place (for example: harbour developments; installation of, or alterations to, important aids to navigation). If possible, at least 8 weeks notice should be given, with the date of entry into force indicated.

The S-57 attributes that can carry temporal information are;

**Date Start (DATSTA)** - The attribute 'date start' indicates the earliest date on which an object (e.g. a buoy) will be presented on the ECDIS display.

**Date End (DATEND)** - The attribute 'date end' indicates the latest date on which an object (e.g. a buoy) will be presented on the ECDIS display.

**Period Start (PERSTA)** - The start of the active period for a seasonal object (e.g. a buoy)

**Period End (PEREND)** - The end of the active period for a seasonal object (e.g. a buoy)

Diagrams to support (P) NMs are very useful to the mariner, for example:
• where a new, amended or complex series of routeing measures is being announced;
• a new bridge is being constructed and shipping routes need to be diverted.
Diagrams should be a different scale from the chart, to prevent the mariner from using them as blocks to directly amend the chart. If a diagram is at the same scale as the chart, it must contain a 'Not to be pasted on the chart', or equivalent legend.
It may be best to produce such diagrams in monochrome, using black stipple in lieu of tints if necessary, because:
• digital file sizes may be an issue for receipt by some users;
• the recipient may not be able to reproduce colours.

**ECDIS display**

Port state and SIREs (Ship Inspection and Reporting) inspectors want to see evidence that a vessel is managing and taking note of T&P information; if the vessel cannot adequately demonstrate this, it gets a deficiency.

The new S-52 Presentation Library edition 4.0 has introduced a new magenta 'd' symbol to highlight ENC features that have a temporal attribute encoded making the identification of this information much easier.
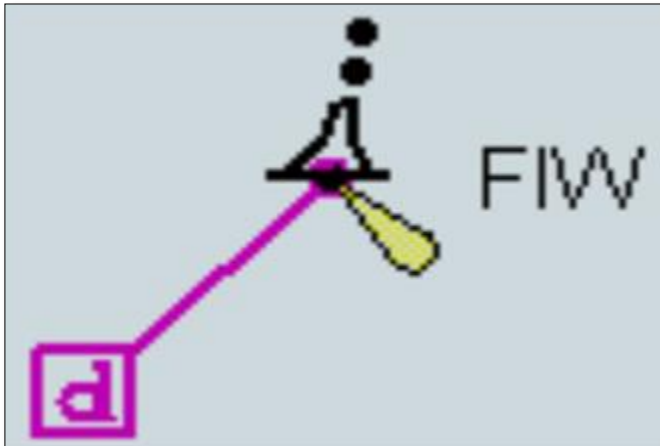


Fig 2. The display of date dependent information is indicated by the symbol SY(CHDATD01)

Setting date range

There are a number of objects within the Marine environment, which are seasonal, such as racing buoys. These objects are only to be displayed over a certain period, S-57 uses the attributes Period Start (PERSTA) and Period End (PEREND) to encode these dates. Other objects, such as traffic separation schemes, use the attributes Date Start (DATSTA) and Date End (DATEND) to indicate their introduction or removal. In order for the Mariner to receive important changes to traffic separation schemes before the event Hydrographic Offices are required to provide updates or new editions containing the alterations at least one month before they come into force. Any S-57 object with one of the above attributes must not be displayed outside its effective dates unless requested by the Mariner.

To provide the Mariner with effective route planning capabilities and for the look-ahead function during route monitoring ECDIS must display date dependent chart data based on a Mariner selected date or date range (start viewing date and end viewing date).
During route planning and monitoring the Mariner must be able to select a date or date range to display all date dependent chart objects. The display of date dependent information is indicated by the symbol SY(CHDATD01)

Example: A new traffic separation scheme is coming into effect on 01.01.2013, it has been encoded by the ENC producer using the attribute date start (DATSTA). The current date is 12.12.2012 and the Mariner is planning a route that will cross this area over the effective start period.
The ECDIS must be capable of providing the Mariner the ability to set the date he will be in the area (02.01.2013) and the system must show the new traffic scheme.

IMPORTANT: When viewing date or date range do not include current date. The Mariner must be informed by a permanent indication on the chart display that the date has been adjusted. Please use one of the following options below.

Display Not Real Time – Display is based on date dd mmm yyyy

Or

Display Not Real Time – Display is based on viewing date range from dd mmm yyyy to dd mmm yyyy
(Note: dd mmm yyyy = Day, Month, Year, example; 28 Jan 2014)

(NEED ECDIS EXAMPLE)