



**IHO C&SMWG 17**  
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**Proposed changes to ECDIS Chart1**

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## Fixing problems of existing implementation

The existing ECDIS Chart1 (as of Presentation Library 3.3) consists of a set of S-57 (Ed. 3.0) cells, lookup tables and written instructions for their usage.

It has following deficiencies:

- The cells contain cartographic objects which are not allowed for ENC's
- Some objects have invalid attribute values (for example a RESARE with CATREA=3)
- The cells are not conform to the ENC PS, but have a PRSP value of 1 (=ENC)
- For proper symbolization, special lookup tables are required
- Layout of the cells is not harmonized

A new edition of the ECDIS Chart1 needs to be prepared in order to:

- Reflect new features and changes to both S-57 (Ed. 3.1.1) and S-52 (PL 3.4)
- Fix the problems with the existing Chart1 implementation

The new Chart1 should:

- Include new S-57 Ed. 3.1.1 / S-52 PL 3.4 features
- Use only ENC (and, if necessary, MIO) objects
- Minimize or eliminate the need for own lookup tables if possible
- Offer a harmonized layout of the cells

The reason for the existing Chart1 to use cartographic objects was the necessity to display symbols that are not triggered by chart objects. Examples are the north arrow, scale bar or dividing lines.

The cartographic objects can be replaced by either MIOs (Mariner's information objects) using own lookup tables or the new S-57 3.1.1. object NEWOBJ with an appropriate symbolization attribute SYMINS.

Both options have advantages as well as disadvantages which may be discussed at C&SMWG17.

When using MIOs:

- Chart1 cells can be displayed by ECDIS not supporting S-57 Ed. 3.1.1
- A set of special lookup tables is required for the MIOs
- Chart1 cells are not ENC PS conform (MIOs are not part of the ENC PS)

When using NEWOBJ:

- Chart1 cells can only be displayed by ECDIS supporting S-57 Ed. 3.1.1
- No special lookup tables are required
- Chart1 cells are ENC PS conform

### **Indication of support for new features**

The new edition of ECDIS Chart1 should enable the mariner (and type approval organizations) to determine whether the ECDIS supports the new S-57 ed. 3.1.1 and S-52 PL 3.4 features.

This can be achieved by including a NEWOBJ with attribute SYMSTR="S-57 Ed 3.1.1" which, if symbolized properly, would indicate that the new features are supported. If a "?" is shown, the ECDIS supports S-57 Ed. 3.1 only. If the text "S-57 Ed 3.1.1" is shown, the ECDIS supports S-57 Ed. 3.1.1. This indication could be implemented in the "index" cell of Chart1. Other new features like ESSA/PSSA and ASL need to be coded in a separate cell which would display properly only if the ECDIS supports the new features, or show "?" otherwise.