

**IHO CSMWG 17
NHS Stavanger, Norway 11-13 June 2007**

PROPOSAL FOR A NEW ENC ENCODING BULLETIN

'Unknown' Objects

Submitted by CSMWG 30 April 2007

Executive Summary:	Although TSMAD13 approved the encoding of INFORM and or TXTSDC attributes for all of the new object classes associated with S-57 Supplement No1 (Edition 3.1.1), this strong recommendation via an ENC Encoding Bulletin also needs to apply to any 'unknown' object class encoded within an Edition 3.1 ENC
Actions to be taken:	As a priority, issue an ENC Encoding Bulletin for 'unknown' objects, attributes or attribute values for E3.1 ENCs.
Related Documents:	<ul style="list-style-type: none"> i) S-57 Supplement No1 (E3.1.1) for NEWOBJ ii) CSMWG16 Action 5 (section 5.2 of the Minutes of that meeting) iii) S-52 Appendix 2, Annex A, sections 8.3.3.7, 8.6.1.1 iv) S-57 Appendix B.1 Product Specifications for ENCs (Edition 2.0)

1. Introduction / Scope

Numerous tests were carried out by various HOs regarding the new object classes being developed for the S-57 Supplement No1 (Edition 3.1.1) for TSMAD13. Tests demonstrated that some type approved ECDIS do not portray 'unknown' objects in accordance with the S-52 standard and specifications (related doc iii) above). An 'unknown' object is one which does not correspond with an object class within the S-57 ENC Product Specification, Edition 2.0, which is based on S-57 Edition 3.1, but is included within an ENC.

2. Analysis / Discussion

For ECDIS, any object class, attribute or attribute value included in an ENC that is not specified in the S-57 ENC PS (Edition 2.0) is handled by the S-52 Presentation Library as an 'unknown' object. In accordance with related doc iii) above, such objects are portrayed by questionmark symbols, and more information about the object should be available from the S-57 attributes INFORM and or TXTDSC by pick report. Currently the ENC PS only mentions 'permitted' objects (clause 3.3) and 'prohibited' objects (clause 3.2). No mention has been made of 'unknown' objects. With S-57 Edition 3.1 ENCs, it is unlikely that a HO would publish an ENC with an 'unknown' object encoded, however now that the S-57 Supplement No1 (Edition 3.1.1) is operational (from 12 Jan 2007), there are two legal editions of S-57 ENCs. It is anticipated that only those HOs that have to encode ASLs, ESSAs or PSSAs will adopt the S-57 Supplement No1 and then, only produce a minimum number of ENCs based on this supplement. It is also anticipated that many ECDIS at sea will NOT be updated to S-52 PL E3.4, at least initially (proposed date of implementation is Jan 2008). If an ENC is published based on the S-57 Supplement No1 (Edition 3.1.1) using one of the new object classes and/or attributes, these features should be treated by older editions of the S-52 PL as 'unknown' objects and appear as questionmark symbols. For mariners to obtain any intelligent information about such features, it is essential that HOs encode INFORM and or TXTDSC explaining exactly what the feature is. CSMWG goes one step further and has recommended that HOs also issue a NtM update for any of the new S-57 Supplement object classes to ensure that the mariner knows what these features are. This is particularly important if the feature has the potential to affect the safety of navigation.

It is considered that an ENC encoding bulletin on this topic be issued as a priority, so that HOs are made aware of portrayal issues with 'unknown' objects.

Up until recently, the only ENC EBs to be issued were for the UOC. There does not appear to be any section in the UOC that related to 'unknown' objects, but it does fit with the ENC PS (clause 3.2). It is therefore suggested that a new section within the ENC EBs be created for matters relating specifically to the Product Specifications for ENCs, starting a new numbering scheme from No1.

3. Target Completion Date

It is considered that an ENC encoding bulletin on this topic should be issued as a priority, so that HOs are made aware of portrayal issues with 'unknown' objects. It is anticipated that agreement could be reached on this bulletin at the combined TSMAD/CSMWG meeting in June 2007 with publication (if approved) shortly after.

5. Action Required

TSMAD SubWg on ENC Encoding Bulletins and FAQs discuss and agree to the proposed ENC Encoding Bulletin (see Annex A), for discussion at the combined TSMAD/CSMWG meeting in June, 2007. If approved, issue via the IHO website the new encoding bulletin. The S-58 SubWg be asked to review the EB for a possible future test.

Annex A

Proposed ENC Encoding Bulletin No

Product Specifications for ENCs (proposed new section)

ENC PS No # 'Unknown' objects.

Background: Unknown objects are object classes that are not listed as 'permitted' objects in the S-57 Product Specifications for ENCs (Edition 2.0). They may also include the new object classes in the S-57 Supplement No1 (E3.1.1) until such time as ECDIS at sea are updated to implement the future S-52 Presentation Library, Edition 3.4. S-52 requires such object classes to be portrayed by questionmark symbology with all of the valid attributes (as defined in S-57 Product Specifications for ENC) being available for picking by the user. Some ECDIS currently do not display an 'unknown object' at all, while others do not permit the user to pick valid attributes such as INFORM or TXTDSC to ascertain what the feature is.

For any object class, attribute or attribute value included in ENCs, that does not correspond with the 'S-57 Product Specifications for ENCs (Edition 2.0)', the attributes INFORM and or TXTDSC must be populated to inform the mariner the nature of the feature encoded. The IHO CSMWG also recommends that hydrographic offices issuing 'unknown objects' in any official ENCs, also consider issuing a Notice to Mariners update, providing details of the location and nature of the feature. Mariners will then be able to plot these features onto their SENC as Mariner's Objects. This process may help to overcome the issue of ECDIS' at sea not always being updated to the latest edition of the S-52 Presentation Library, particularly when an 'unknown' object has safety implications to navigation.