

**TSMAD20 / DIPWG2**  
**3 to 7 May 2010 (Rostock, Germany)**

Paper for Consideration by TSMAD/DIPWG

**Unknown Mandatory Attributes**

<i>Submitted by:</i>	S-101 Work Item
<i>Executive Summary:</i>	In S-57 the use of unknown mandatory attribute values has lead to the overuse of the ? symbol on the ECDIS portrayal. In S-101, the goal is to reduce the display of the ? symbol for when the feature does not symbolize.
<i>Related Documents:</i>	S-101
<i>Related Projects:</i>	NA

### Introduction / Background

There is a need to reduce the number of "?" on the ECDIS display. The majority are currently generated when a hydrographic office populates a mandatory attribute as unknown. However, in many cases, there may be a legitimate reason why the HO has populated this as unknown. If the end state is to eliminate the ? on the ECDIS, how will S-101 resolve this issue?

### Analysis/Discussion

One of the main issues that causes the ECDIS to symbolize a ? is that in S-57 it is allowed for a Hydrographic Office to use unknown mandatory attribute values. One of the goals of S-101 is to limit the ? to instances where the feature does not symbolise in an intuitive way to the mariner.

The following is the proposed new wording for the unknown mandatory attribute section in S-101.

### Unknown Attribute Values (S-57 PS 3.5.1)

In a base data set, when an attribute code is present but the attribute value is missing, it means that the producer wishes to indicate that this attribute value is unknown.

In an update data set, when an attribute code is present but the attribute value is missing it means:

- that the value of this attribute is to be replaced by an unknown value if it was present in the original data set,
- that an unknown value is to be inserted if the attribute was not present in the original data set.

Note that the use of mandatory has been removed. Effectively, S-101 is stating that there cannot be an unknown attribute value. However, in order to deal with potential issues where there may be a case where a mandatory attribute is unknown there will need to be additional enumerates added to the Feature Catalogue for unknown.

### Conclusions

In conclusion, during the Feature Catalogue and Portrayal catalogue construction, careful attention should be paid to the reduction of ?.

The following discussion items are needed by TSMAD/DIPWG:

1. How can S-101 reduce the use of ?
2. Is the current clause for Unknown attribute values sufficient or does it need additional information.
3. Can some mandatory attributes be eliminated if they are not used for portrayal?
  - a. For example, Beacon's require a Colour, however, the S-52 Lookup table does not use Colour as part of the portrayal mechanism.

**Action Required of TSMAD/DIPWG**

The TSMAD/DIPWG is invited to:

- a. Discuss the above questions and develop a way forward to reduce the use of ?