

Paper for Consideration by TSMAD

Use of the attribute TECSOU on the object M_QUAL

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Executive Summary: To clarify the use of the attribute TECSOU on the object M_QUAL, to amend the Use of the Object Catalogue and amend S-58 check 1531

Related Documents:

S-57 Appendix A – Ch2,

S-57 UOC edition 3.0,

S-58 edition 4.2,

S-101, DCEG

Related Projects: N/A

Introduction

We have found discrepancies between CATZOC definition and UOC.

This document highlights these discrepancies, requests clarification and changes to the referenced documents.

Analysis / discussion

1. Number of values allowed for TECSOU.

According to the CATZOC definition (see table S-57 Appendix A – Ch2 – Attribute catalogue – p2.107), the value ZOC = A2 means "a survey using a modern survey echosounder and a sonar or a mechanical sweep system".

This is in contradiction with the UOC §2.2.3.1:

When the M_QUAL area contains soundings of two or more different techniques, the attribute TECSOU must not be used.

So, while the attribute TECSOU is of type list and the definition of CATZOC specifies that an area can be surveyed using combined techniques, the UOC forbids the use more than one value for TECSOU

Proposal 1: Allow the use of several values for the attribute TECSOU in deleting this rule from the UOC.

There is no impact on S-58.

2. Values for TECSOU

Check 1531 of S-58 verifies that "no M_QUAL object has attribute values for POSACC, SOUACC, QUASOU or TECSOU which are equivalent to or degrade the accuracy indicated by the attribute value of CATZOC."

This check is related to the following rules in UOC:

- POSACC must not be used on a M_QUAL object, except to specify a higher positional accuracy of the depths than the CATZOC category indicates.

- *SOUACC must not be used on a M_QUAL object, except to specify a higher accuracy of the depths than the CATZOC category indicates.*

QUASOU is not an allowable attribute for M_QUAL and, in all cases, must be removed from the check.

POSACC, SOUACC are numerical attributes. It is thus easy to check if they degrade the accuracy or not.

As TECSOU is a qualitative attribute, it is more difficult to compare. In addition, there is no particular rule in UOC defining the possible values of TECSOU consistent with a given CATZOC value. So, validation software often trigger (as Error) for encodings which seem logical and acceptable.

Either check 1531 is not relevant for TECSOU and this attribute should be removed, or this rule also applies to TECSOU in which case, it would be necessary to precise which values degrade the CATZOC category.

Moreover, for TECSOU, we can use a large combination of values for a given CATZOC. As the object M_SREL is not populated with TECSOU, the information provided by the source survey diagram can only be encoded in the object M_QUAL. To provide more quality information to the mariners, it should be possible to encode the values of TECSOU equivalent or better than the CATZOC category indicates (after having determined which equivalence exists between CATZOC and TECSOU).

Proposal 2: Extend the existing rule for POSACC and SOUACC to TECSOU in

a) adding in UOC the following rule :

TECSOU must not be used on a M_QUAL object to specify a lower quality than the CATZOC category indicates.

b) modifying in S-58 Ed 5.0.0 the check 1531 to read:

Check that no M_QUAL object has attribute values for POSACC or SOUACC, which are equivalent to or degrade the accuracy indicated by the attribute value of CATZOC.

c) Adding the following check (categorized as Warning) in S-58 Ed 5.0.0:

Check that no M_QUAL object has attribute values for TECSOU which degrades the quality indicated by the attribute value of CATZOC.

The check creates an error if:

CATZOC	TECSOU is populated using
1 (A1)	one of these values: 5, 7, 10, 11, 14 a unique value of the following list: 1, 2, 4, 6, 8, 9, 12, 13
2 (A2)	one of these values: 5, 7, 10, 11, 14 a unique value of the following list: 1, 2, 4, 6, 8, 9, 12, 13
3 (B)	one of these values: 5, 7, 10, 11, 14 a unique value of the following list: 2, 4, 6, 8, 9, 12, 13
4 (C)	a unique value of the following list: 2, 4, 6, 8, 9, 12, 13
5 (D)	a unique value of the following list: 2, 4, 6, 8, 9, 12, 13
6 (U)	any value

Justification and Impacts

France feels that since S-58 will be modified based on the decision of HSSC3, it would be the right time to clarify the rule in the UOC and S-58.

Action Required of TSMAD

The TSMAD is invited to:

- a. Clarify the rule about the use of attributes TECSOU for M_QUAL and amend accordingly UOC and S-58.
- b. Take into account the decision for the S101.