

Paper for Consideration by ENCWG6

Addendum – Proposed new check for ER files that change the extent of M_COVR = 1

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Executive Summary:	This paper is an addendum to ENCWG6-5.2, “Proposed new check for ER files that change the extent of M_COVR = 1”
Related Documents:	S-57 Appendix B.1 Annex A Use of the Object Catalogue for ENC.

Introduction / Background

This paper provide an alternate wording for the proposed S-58 check 1024c.

Discussion

The current draft of check 1024c triggers when the extents of an M_COVR feature (CATCOV = 1) of an update is “not EQUAL” to the M_COVR feature of the base cell. Assuming a tolerance based on COMF, and a COMF value of 10^7 , the check would trigger if a part of the M_COVR feature has moved by as little as 1 cm in ground units. The chain node topology model of S-57 has the consequence that many line and area features will intersect the boundary of an M_COVR, and the connected nodes at the points of intersection are shared between the features. So, adding, removing (and sometimes modifying) features that intersect an M_COVR boundary will modify the geometry of the M_COVR by a small amount, perhaps, in some instances, larger than 1 cm in ground units, hence triggering the check.

We want the check to trigger when the M_COVR geometry has changed by a *significant* amount. We need to define what we mean by significant. The UOC 2.1.8, *Seamless ENC coverage*, provides a precedence. It states that, “a 5 metre overlapping buffer zone may be used” between adjoining cells. With this in mind, we can reword check 1024c as follows:

For each M_COVR feature object where CATCOV is Equal to 1 (coverage available) in an update file where any part of the M_COVR boundary has moved by more than 5 metres.

The tolerance doesn’t necessarily need not be 5 metres, but it is consistent with UOC 2.1.8, and, therefore, seems to be a logical candidate. Alternatively, a scale dependent tolerance could be chosen, e.g. ... has moved by more than 0.25 mm at compilation scale.

Action Required of ENC WG

- a) Discuss the revised wording of check 1024c.
- b) Discuss and decide what a meaningful tolerance for this check is.
- c) Agree on a final wording of check 1024c and approve for inclusion in S-58.