

Paper for Consideration by ENCWG 7

RCID Reuse Clarification

Submitted by:	IC-ENC
Executive Summary:	IC-ENC has identified that a limited number of ECDIS systems do not load ENC data where RCIDs have been reused in subsequent updates. The paper proposes raising awareness with OEMs and expanding S-58 test data to make this interpretation clear to all.
Related Documents:	S-58 7.0.0
Related Projects:	S-101

Introduction / Background

1. IC-ENC has received S-57 ENC data where RCID values have been reused in subsequent updates. This was reported by IC-ENC to an ENCWG VTC held in February 2021 ([ENCWGVTC3-9 e](#)) the notes of this meeting show that the proposal to expand the test cases in S-58 test datasets to include positive and negative cases was accepted. It is currently understood that this change has not yet been applied to these test datasets.
2. IC-ENC has also received feedback on a number of occasions where an ECDIS system from one manufacturer fails to load data where RCIDs have been reused.
3. IC-ENC continues to release data as its validation tools do not identify such instances. We interpret S-58 check 3 to mean that RCIDs must be unique within a specific S-57 file and therefore updates produced after a base cell could reuse RCID values that have been affected by preceding updates. IC-ENC considers that this interpretation needs to be confirmed and made more explicit for all parties so that data and systems can interoperate as intended. The relevant content from published IHO standards is relevant to this point.

S-58 7.0.0 Check 3

3 VALIDATION CHECKS					
3.1 Checks Relating to S-57 Data Structure					
No	Check description	Check message	Check solution	Conformity to:	Cat
1	For each edge which is COINCIDENT with another edge.	Partially duplicated edges.	Remove duplication, add nodes and edit edges as required.	Part 2 (2.2.1.2)	E
2	For each edge which does not have a beginning or end node.	VE edge missing beginning or end node.	Add nodes as required.	Part 2 (2.2.1.2)	C
3	For each record where the record identifier NAME (concatenation of the RCNM & RCID subfields) is not unique within the file.	Record identifier NAME is not unique.	Amend Record identifier NAME to be unique.	Part 3 (2.2)	C
4	For each RCNM where the value is not in table 2.2 of	Invalid value of RCNM	Amend RCNM value	Part 3 (2.2.1)	C

S-57 3.1 Part 3 2.2

“Records are grouped into files (see clause 1.1). The concatenation of the RCNM and RCID subfields must, at least, be unique within the file in which the record is contained.”

Recommendation

4. IC-ENC invites the ENCWG to consider these items to ensure that guidance for ENC production is clear and that ECDIS manufacturers ensure that their systems load ENC data where RCIDs have been reused in subsequent updates.

Action Required of ENC WG

The ENCWG is invited to:

- a. Noting the publication of S-58 7.0.0 expand the S-58 test dataset for check 3 to include positive and negative cases reflecting this scenario.
- b. Communicate with ECDIS manufacturers to remind them that this data is a valid encoding and systems should load updates in this scenario.
- c. Consider whether the inclusion of test data in S-64 to cover this case is necessary.