

**Paper for Consideration by ENCWG4  
SCAMIN on Aggregations**

<b>Submitted by:</b>	IC-ENC
<b>Executive Summary:</b>	This paper presents a proposal to add checks to S-58 covering SCAMIN consistency on objects grouped using collections.
<b>Related Documents:</b>	S-58 ENC Validation Checks, Use of the Object Catalogue for ENC (UOC)
<b>Related Projects:</b>	S-101

### Introduction / Background

1. SCAMIN is an S-57 attribute which can be used to improve the display of ENC data in ECDIS. Guidance on SCAMIN has now been included in the Use of the Object Catalogue for ENC (UOC) (2.2.7) and this includes a sample SCAMIN policy. S-58 currently contains a small number of SCAMIN related checks, but this paper proposes two additional checks to improve the consistency of ENC data.

### Analysis/Discussion

2. Section 2.2.7 of the UOC provide some fundamental principles for SCAMIN application these are reflected in S-58 checks 1553, 1554a and 1554b. The sample SCAMIN policy is intentionally open to interpretation by ENC producers however note 4 to table 2.3 states the following;

4. The elements comprising a range system (see clause 10.1.2) must have the same SCAMIN value, which should be the value corresponding to the largest step value of the objects comprising the range system. For instance, for a range system comprising a **NAVLNE**, **RECTRC** and navigation aids, the decision may be not to apply SCAMIN to the navigation aids (in accordance to Note 2 above), in which case the **NAVLNE** and **RECTRC** must also not have SCAMIN applied. Similarly, all objects comprising a routeing measure (see clause 10.2) should have the same SCAMIN value.

3. Given the potential impact of range systems and routeing measures not displaying consistently. IC-ENC suggests checks be considered for inclusion in S-58 in future versions as follows;

No	Check description	Check message	Check solution	Conformity to:	Cat
XXX	For each C_AGGR which references NAVLNE AND RECTRC objects where the value of SCAMIN is not	Range system where SCAMIN values are not the same.	Amend SCAMIN values or remove SCAMIN.	UOC 2.2.7.1 and 10.1.2	W

	identical across all objects referenced.				
XXX	For each C_AGGR which references any of the following objects DWRTCL, DWRTPT, ISTZNE, PRCARE, TSELNE, TSEZNE, TSSBND, TSSCRS, TSSLPT, TSSRON where the value of SCAMIN is not identical across all objects referenced.	Routeing Measure where SCAMIN values are not the same.	Amend SCAMIN values or remove SCAMIN.	UOC 2.2.7.1 and 10.2.3	W

**Recommendation**

4. IC-ENC invites the ENCWG and the S-58 sub group specifically to consider the proposal to add two additional checks to S-58 covering consistency of SCAMIN on objects grouped using Aggregations (C\_AGGR).

**Action Required of ENC WG**

The ENCWG is invited to:

- a) Consider the proposed additional checks for inclusion in S-58.
- b) Consider the impact on the S-101 validation checks which are being developed.