

SCAMIN and the improvement of ENC consistency

1. BACKGROUND

Smaller scale ENC coverage is not always available for the purpose of overview and route planning. In that case, an ECDIS loads ENCs compiled for larger scales and displays them at much smaller scales, e.g. an ENC compiled at 1:25,000 may be displayed at a scale of 1:100,000 or even smaller. The larger scale ENCs, however, normally contain many details/objects in close proximity that would not usually be portrayed on a small compilation scale ENC of the area. Consequently, those objects will produce much display clutter during zoom out making the display details unreadable. In order to avoid this effect, the use of the S-57 SCAMIN attribute (i.e.: the minimum scale at which the object may be used for ECDIS presentation) is appropriate for those objects whose visualisation should be suppressed from a particular, pre-determined value of a display scale smaller than the ENC's compilation scale.

Also called the “poor man’s generalization tool”¹, the SCAMIN attribute aims at reducing clutter. It also opposes, hopefully for the best, two conflicting vision of hydrography.

On one hand, there is a commercial desire to act fast to meet the mounting demand of the maritime world complaining against inconsistencies and lack of harmonization, on the other hand there are cartographers preoccupied by their responsibility towards mariners, which is very much the result of rigorous application of standardised principles under the guidance of the IHO.

The SCAMIN issue which has been under scrutiny for many years (see IHO CL 108/2007 of 21 November 2007) will be debated again at TSMAD 16 in May 2008 (cf. document TSMAD16-5.1_SCAMIN_FR_Rev1) because it is the right forum to do so.

In preparation of the TSMAD meeting and in the context of the forthcoming NAV54 meeting, France thinks it is important to raise the awareness of NSHC members on this important issue.

The point here is to explain SHOM doubts on a policy decision that might have a significant negative impact on the global ENC portfolio consistency, and further slow down the provision of an adequate ENC coverage. One major example is of interest for NSHC: whilst harmonised cells with no SCAMIN were preserved in the Channel/La Manche, thanks to the long and fair debate that had taken place between cartographers on both sides of the Channel/La Manche until now, the recent UKHO decision to apply its own SCAMIN rules against SHOM advices, will be creating inconsistencies.

¹ Gary M. Rogan – US National Geospatial Intelligence Agency.

2. DISCUSSION

As illustrated in the PowerPoint presentation prepared for this 28th NSHC conference, there is a need to analyze further the application of SCAMIN on ENC's, due to the following reasons:

- the validity and usefulness of the SCAMIN concept in its present state of development are not demonstrated;
- there is still a need to evaluate whether or not global SCAMIN consistency can be achieved by using display functionalities (controlled by IHO via S-52) rather than data encoding; the acknowledgment that S-52 requires major revision (IHO CL 26/2008 of 14 March 2008) should be taken into account;
- there is still a need for a detailed workable IHO strategy on the application of any SCAMIN updating of already produced ENC's taking into account its impact on new ENC production;
- there is still a need to clarify the use of SCAMIN on ECDIS (compared to the use of existing display mode functionalities), including the opportunity of indicating to the mariner that the display of SCAMINed ENC's might not be fully suitable for safe navigation.

3. PROPOSALS

Until TSMAD can provide sound guidance on this issue, NSHC members are invited to proceed with caution and favour cost/effective solutions.

In order to avoid a counter-productive effect on IHO, especially before NAV54, it is highly recommended within Region D to put on hold the application of SCAMIN on all ENC's and to preserve these areas where ENC consistency has already been achieved (in particular those with no SCAMIN).