Reference : Paper "*S-101PT5-11 - Navigational purposes*", presented by NIWC.

Introduction

After having analyzed paper "S-101PT5-11 - Navigational purposes", Shom and Geomod do not share the same understanding than NIWC on the possible lacks in S-101Product Specification (S-101 PS). Our view is that only few minor changes in the S-101 PS and DCEG are enough to produce and correctly display S-101 ENC in a coherent way (and even with less approximations than with S-57 ENCs) on an ECDIS.

The aim of this paper is to help clarifying the situation. We may have misunderstood some elements, in which case there is probably a need to improve the S-101 PS. We think that ECDIS manufacturers advice could be helpful to solve this issue.

Our comments on the paper

Page 1: « 2. The maximum display scale [of the data coverage] is considered to be the equivalent of the compilation scale of the data. »

➔ This is actually quoted in the S-101PS (§ 4.5.3, ietm 7). We consider this is an error (applying such a rule would lead to displaying the ENC with an overscale). The maximum display scale should be the nearest largest scale value in the available scales table as compared to the scale of the source paper chart. This is confirmed at § 3.4.1 of the DCEG. We suggest to delete this sentence in the PS.

« Issue 1: NULL encoding of minimumDisplayScale »:

➔ We agree with the recommendation.

« Issue 2: Graphical Index of Navigational Purpose »:

➔ We do not have the same view. As quoted in the PS § 4.7, « the concept of navigation purpose is restricted for use in presenting ENCs in a visual catalogue and must not be used for determining which dataset should be displayed ». There is no need for compilation scale value. The navigational purpose (spacificUsage) is at the level of the dataset (metadata). If a dataset contains several data coverage features with different Maximum Display Scales, our view is that the navigational purpose of the dataset

should be determined in accordance with the smallest value of the Maximumdisplayscales.

« Issue 3 and 4: S-101 Dataset Loading Algorithm / S-52 Seamless Presentation »

➔ We do not agree with the recommendation to incorporate navigation purpose into the loading strategy. Maximum and Minimum display scales are sufficient to implement the loading strategy.

The light sector issue in Figure 6 already existed in S-57/S-52. It comes from the fact that US4VA12M covers the 2 other datasets and that US5VA19M comes out too early. The scales automatically assigned by the dataset converter are OK. But : the compilation scale of US5VA19M being 20 000, the Minimumdisplayscale should have been set to 45 000. The problem will then disappear.

The converter is one thing, but the final Minimumdisplayscales and Maximumdisplayscales must be set by the data producer, taking into account the global coverage in the area.

Page 8 : « This issue is not strictly a converter issue: all data producers will need to manage 15 different seamless coverage portfolios to ensure the proper portrayal of datasets. »

➔ We do not agree. As Jeff Wootton pointed out during the meeting, HO wil not have to systematically all the scale ranges available. And we think this is a very good point in S-101 : the data producer will organize his portfolio so that there will be no ambiguity in terms of loadind and display. One data coverage can extend on several scale ranges.

Page 8 and 10 : Test #2

➔ As mentionned above, in such a case, the Minimumdisplayscales and Maximumdisplayscales must be set by the data producer, out of the data converter so that US3NY01M uses a larger scale range than US2EC4M.

Issue 6: Dual Fuel challenges

➔ The concept of Dual Fuel ECDIS capabilities is explained in paper *HSSC12_2020_05.1F_EN_Dual Fuel ECDIS v4.pdf* which seems to be a good base for us.

The DCEG § 2.5.1 asks to split objects at the boundaries of the data coverage meta objects.