

Paper for Consideration by TSMAD

S-101 Data Loading and Unloading

<i>Submitted by:</i>	S-101 Work item leader
<i>Executive Summary:</i>	This paper will summarize the S-101 data set loading and unloading discussion from the Google Group site and propose a way forward for TSMAD approval for inclusion into S-101.
<i>Related Documents:</i>	S-101 and Google Group discussion.
<i>Related Projects:</i>	N/A

Introduction / Background

1. While TSMAD has accepted the concept proposed by Sweden regarding ENC loading and unloading, it still needs to fine tune the concepts for S-101. While progress was made at TSAMD 22 – it was decided to try and adjudicate the rest of the concepts using google groups. Although, lively discussion was held over the Google site there did not appear to be any clear decisions in moving forward with finalizing this concept. This paper will attempt to promote further discussion with the end result being verbiage and business rules that will be included in S-101.

Analysis/Discussion

2. In the Google groups discussion several questions were raised regarding this topic.
 - a. Is the current S-101 verbiage clear enough? NOTE that we still need to develop use cases and the encoding guidance
 - b. Do we need to indicate here that the producing agency compilation scale = optimum display scale = value from the defined radar ranges.
 - c. Do we agree that minimum display scale and maximum display scale will also be values from the pick list?
 - d. Do we need to provide anymore specification? If so what?
 - e. Do we need to indicate that for the ECDIS this is the minimum set of scales that must be implemented and for the data producers that this is the only set of scales that can be implemented.
NOTE: I'm only asking this because some ECDIS have user defined scales, or have intermediate scales which we cannot really account for.

3. The following summarizes the responses for each question:

Question 1: Most agreed with the existing verbiage – however the Chair of TSMAD proposed slightly different verbiage regarding OPTDSC, MINDSC, MAXDSC. The verbiage is as follows:

4.6 Display Scales

Display scales are used to indicate a range of scales between which a producer considers the data is safe for use. The smallest scale is defined by the Minimum Display Scale and the largest scale by the Maximum Display Scale. Fixed between these scales is an Optimum Display Scale which the producer considers to be the optimum viewing scale of the dataset.

The display scales are defined as Data Set Attributes in the Feature Catalogue and encoded using the Attribute field (ATTR) of the Data Set Identification field (DSID).

4.6.1 Optimum Display Scale

The Optimum Display Scale is the scale at which the dataset is displayed when first loaded. It shall be set at one of the scales specified in clause 3 (Spatial Resolutions).

4.6.2 Minimum Display Scale

The minimum display scale shall be the smallest scale at which the ENC should be displayed. It shall be set at one of the scales specified in clause 3 (Spatial Resolutions).

4.6.3 Maximum Display Scale

The maximum display scale shall be the largest scale at which the ENC can be displayed without the ECDIS giving an over scale warning. It shall be set at one of the scales specified in clause 3 (Spatial Resolutions).

4.7 Dataset Loading and Unloading

In addition to acting as parameters for viewing data, the three display scales are used as a mechanism to regulate the loading and unloading of datasets or to trigger overscale indicators.

The Optimum Display Scale defines the scale at which data shall be loaded in the ECDIS.

The Minimum Display Scale defines the scale at which this data set shall be unloaded and the data of a smaller scale shall be loaded if available.

The Maximum Display Scale defines the scale at which this data set shall be unloaded and the data of a larger scale shall be loaded if available. If a larger scale data set is not available then overscale indicators shall be displayed.

Action	Does TSMAD agree to this revised verbiage
Action	Do we need to stipulate here that the ATIX, PAIX and ATIN have fixed values and what those values are?

Question 2: Do we need to indicate here that the producing agency compilation scale = optimum display scale = value from the defined radar ranges.

The responses from the discussion indicated that S-101 needed to specify this. The S-101 Work Item leader would like to propose the following verbiage for inclusion in clause 4.6 of S-101:

In order for data to properly display at the indicated scales the compilation scale of the data shall be equal to the optimum display scale which shall be set at one of the scales specified in clause 3 (Spatial Resolutions).

Action	Does TSMAD agree that the above wording shall be added to clause 4.6.
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Question 3: Do we agree that minimum display scale and maximum display scale will also be values from the pick list?

The responses from the Google Group indicated agreement that the minimum and maximum display scale shall be values from the pick list.

Action	Does TSMAD agree to this concept
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Question 4: Do we need to provide anymore specification? If so what?

The responses from the Google Group indicated that we did need more specification. The UKHO provided the following to start the discussion.

If the hydrographic office does not want to assign the MAXDSC and MINDSC for whatever reason then the following guidance shall be used by production systems:

MAXDSC = OPTDSC – One Step

MINDSC = OPTDSC + Two steps

The ECDIS shall use the following as guidance for the overscale indication:

Overscale indication appears OPTDSC –One step

Overscale pattern appears OPTDSC –Two steps

For example;

CSCALE =12000 (S-57 Cell)

HO decides that OPTDSC = 8000

Therefore MAXDSC = 4000 and MINDSC = 22000 Overscale warning appears below 4000 and overscale pattern below 2000

Action	Does TSMAD agree with the basic specification outlined by the UK
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Question 5: Does TSMAD need to indicate to ECDIS that this is the minimum set of scales that must be implemented, but they are not restricted from implementing additional scales.

Action	Does TSMAD agree with this principle? If so does it belong in the spatial resolution section (and associated business rule) or does it belong in the data loading and unloading section?
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NOTE: TSMAD needs to develop a graphic for inclusion into S-101 that depicts whatever scenario is agreed to.

Conclusions

In specifying the parameters needed for data loading and un-loading this will bring consistency to ENC data to data loading on the ECDIS.

Action Required of TSMAD

The TSMAD is invited to:

- a. discuss the following actions outlined in this paper and come to a resolution for inclusion into S-101