

Paper for Consideration by TSMAD and DIPWG

Multiple DataCoverages in a Single dataset for S-101

Submitted by:	United States
Executive Summary:	The United States would like TSMAD to reconsider the use of multiple datacoverages in a single dataset for S-101 – in order to simplify the data loading and unloading strategy.
Related Documents:	S-101
Related Projects:	S-101

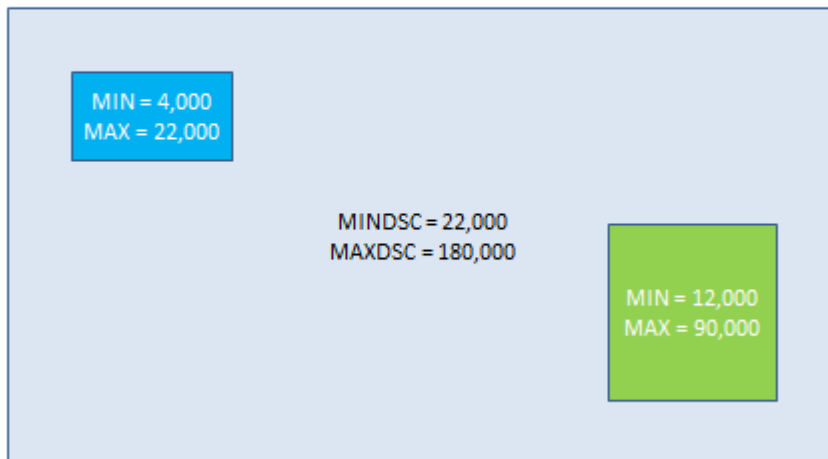
Introduction / Background

In reviewing, the latest draft of S-101, the United States noted that there was an inconsistency between the existing definition of dataCoverage and the data loading and unloading algorithm. Currently, S-101 allows for multiple dataCoverages within a single dataset and the algorithm for data loading and unloading does not take into account this particular rule – which may lead to inconsistencies in how data is loaded in an S-101 ECDIS.

Analysis/Discussion

At one point in S-101 the concept of a dataset only included a single dataCoverage, however, sometime in the past two years; it was amended that a dataset can have multiple dataCoverages. The United States feels that this rule is based on the current principle of paper chart scheming, where it is possible to have an inset of a different scale that is embedded in the smaller scale paper chart. In addition, this concept was carried over in S-57 with the use of the meta feature M_CSCL. The following graphic shows the current concept of dataCoverage realized in S-101.

S-101 Data Coverage



This methodology keeps S-101 tied to paper chart type scheming and will continue to make it difficult for data to be loaded and unloaded properly within an ECDIS. Even though, the multiple dataCoverages are catalogued in the dataset metadata, the ECDIS will still need to make decisions on how to deal with these insets of larger or smaller scale data when it is not covered by the current algorithm specified in S-101.

The United States proposes that S-101 revert back to the concept of having a single dataCoverage for each dataset for the following reasons:

1. It would simplify data loading and unloading of the ENC if the ECDIS only had to worry about a single dataCoverage within the dataset
2. In S-101 Hydrographic Offices still have to assign the appropriate scale range to the dataset and create a new ENC. It is relatively simple to extract the inset data and create a separate ENC.
3. It will allow S-101 to no longer be tied to paper charts.
4. It would simplify one of the more complicated aspects of an ECDIS where they have to account for embedded M_CSCL features and display them properly.
5. This would align with ISO. The concept of a dataset within a dataset (what is in S-101) is inconsistent with ISO Geographic Information standards, including ISO 19115. In having this concept, TSMAD is moving away from the ISO approach and is inconsistent with the goals of S-100 being aligned with ISO.
6. It makes metadata more complex as it is not supported by ISO 19915 and therefore S-100 would have to be extended to handle this approach.

It should be noted that convertor will have to eventually be modified to take existing M_CSCL features within an ENC and create a separate product. This will require some funding to accomplish this.

If TSMAD agrees to removing multiple dataCoverages within a dataset, the TSMAD work item leader will amend S-101.

Recommendations

The United States is recommending that TSMAD reconsider its use of multiple dataCoverages within a dataset based on the reasons stated above.

Action Required of TSMAD and DIPWG

The TSMAD and DIPWG is invited to:

- a. discuss the United States proposal
- b. agree to removing multiple dataCoverages within a dataset for S-101