

Paper for Consideration by TSMAD

Producer Agency Codes and S-101

Submitted by:	UK
Executive Summary:	This paper discusses how producer agency code information can be provided for S-101. It outlines a number of options for further discussion by TSMAD.
Related Documents:	a) S-101 b) S-62 c) IEC 61174 2008
Related Projects:	1. S-100

Introduction / Background

1. Within S-57 ENC producer agency codes are provided within IHO standard S-62. These provide the official agency codes and IEC 61174 references this standard which is also referenced within S-64. ECDIS software must implement the standard and be updated as it changes. Within an S-100 ECDIS and more specifically, S-101, TSMAD can leverage other approaches to the need to determine official data producers. This paper outlines some different options for discussion by TSMAD.

Analysis/Discussion

2. Within ECDIS there is a requirement to be able to visually differentiate non-official ENC data and this is reflected within IEC 61174 within the following text;

a) Load a data cell whose source identification indicates that the data is non-official (by the inclusion of a producer code, which indicates a source other than the official producers listed in Annex A to S-57 appendix A). Check that when the area of this cell is displayed, the boundary of the area, or the edge of the display if the boundary is off-screen, is marked using the appropriate symbology as defined in the presentation library. The warning "No ENC available" shall appear.

Note: S-62 was previously Annex A to S-57 appendix A.

Therefore the need for producer agency codes within ECDIS is solely to support ENC symbology and a visual indication in ECDIS.

The following options exist for addressing this in S-101;

a) A radical but simple approach would be to define that the S-101 ENC product specification may only be used by official ENC producers. With this approach other S-100 based product specifications could be used for non-official 'ENC' data. This approach would require that S-101 include a rule constraining the producer agency codes used to the values of an enumerated attribute (dataset attribute) which could be defined within the S-101 Feature Catalogue. Use of any other values would mean that a dataset does not conform to S-101. S-101 portrayal would then simply display ENC data without the pattern. This approach would make it entirely clear to users that S-101 data equals official ENC.

b) Within the S-101 Feature Catalogue a dataset attribute for producer agency code could be used to provide the list of official producer agency codes. This would then be reflected within the S-101 portrayal catalogue and the dataset attribute could drive the portrayal logic.

c) An alternative approach would be to provide an XML catalogue of official producer codes. However this would need to be defined using an XML schema and ingested by the ECDIS system. This also requires the supply of another catalogue file which would add complexity although the list would not change very frequently based on experience.

3. The following table summarizes the options;

Approach	Outline	Advantages	Disadvantages
a)	Specify that S-101 is for official ENC only.	<ul style="list-style-type: none"> • Technically simple • Makes it clear that S-101 is official ENC 	<ul style="list-style-type: none"> • Another product specification would be required for other data
b)	Use a dataset attribute to carry the producer code.	<ul style="list-style-type: none"> • Technically simple as these attributes are already required. 	-
c)	Provision of a producer agency code catalogue.	-	<ul style="list-style-type: none"> • Technically more complex .

Annexe A provides fictitious scenarios to clarify the proposed approaches.

Conclusion

4. This paper outlines options for how something which is covered within S-57 ENC by S-62 can be done more efficiently within S-101 and maintain the flexibility to adapt to change. All options proposed address the limitation of the current approach but offer different advantages and disadvantages.

Action Required of TSMAD

- Consider the options proposed in this paper and decide which approach to take for S-101

Annexe A

Sample Scenarios

The following scenarios seek to clarify the issue that this paper addresses. They use fictional names to avoid confusion.

Current situation (S-57 ENC)

For various reasons the new state of Jussland is formed the state becomes an IHO member state and is assigned a producer code in the S-100 Producer Agency Code register S-62 therefore includes the code as it is generated from the register itself. However ENC data produced by the Jussland authority displays as unofficial in ECDIS systems until they are updated by a software upgrade to reflect the latest version of S-62.

Option a)

For various reasons the new state of Jussland is formed the state becomes an IHO member state and is assigned a producer code in the S-100 Producer Agency Code register. The producer code is also added as an attribute value and included in a revised S-101 Feature Catalogue. Data produced using this feature catalogue can be issued with the Jussland code and by conforming to the S-101 product specification will be accepted and displayed as an official ENC.

Option b)

For various reasons the new state of Jussland is formed the state becomes an IHO member state and is assigned a producer code in the S-100 Producer Agency Code register. The producer code is also added as an attribute value and included in a revised S-101 Feature Catalogue. Data produced using this feature catalogue can be issued with the Jussland code and by conforming to the S-101 product specification will be accepted and will display as an official ENC based on the portrayal rules in the S-101 portrayal catalogue.

Option c)

For various reasons the new state of Jussland is formed the state becomes an IHO member state and is assigned a producer code in the S-100 Producer Agency Code register. A new version of the producer code catalogue is issued and distributed. When ECDIS systems receive the new catalogue Jussland data displays as official ENC.