

TSMAD20 / DIPWG2
3 to 7 May 2010 (Rostock, Germany)

Paper for Consideration by TSMAD/DIPWG

Other S-101 Discussion Items

<i>Submitted by:</i>	S-101 Work Item
<i>Executive Summary:</i>	This paper outlines outstanding issues/questions that need to be answered by stakeholders for incorporation into phase 1 of S-101.
<i>Related Documents:</i>	S-101 Action item log, S-101 draft 0.1
<i>Related Projects:</i>	Any related projects that may impact upon considerations

S-101 Section	S-101 Section Header	S-101 Text and/or Issue	S-101 Questions
4.3.4	Aggregated Feature Types	<p>Features with a use type of aggregated can have multiple associations to other feature types. They also are defined in the Feature Catalogue.</p> <p>All association or aggregation relationships using collection features are assumed to be peer to peer. The "Relationship Indicator" [RIND] subfield of these collection feature records must be {3} = peer.</p> <p>The use of these named aggregations is described in the Data Capture and Classification Guide.</p>	At TSMAD 19 – It was pointed out that the highlighted portion is not correct. What is correct for this section?
4.6	ENC Data Set	An ENC data set is a collection of geo-referenced cells containing geographic features that are used to fully describe the physical marine environment for the safe passage of vessels.	Is this clause needed? As S-101 is more specific in clause 11.3.1 Datasets?
4.7	Cells	Features with the geometric properties of point or line coincident with the border of two cells within the same layer and with the same display scale must be part of only one cell.	What is the intent of the phrase "within the same layer?" Can this be removed?
4.9	Geometry	The following is currently stated in S-101:	Is this also valid for soundings? If so, TSMAD needs

		The underlying geometry of an ENC will be constrained to S-100 level 3a which supports 0, 1 and 2 dimensional objects (points, curves and surfaces). The third dimension is expressed as an attribute of a feature.	to explicitly state this.
4.9	Geometry	Despite the saving in data volume offered by the use of arcs/curves, the disadvantages are such (e.g. during updating, generating warnings/alarms) that they must not be used for ENC.	How does this fit in with the use of GM_Curve in the Figure and "curves" in the previous issue above? S-101 Work Item Leader recommendation: Remove this paragraph as S-101 is only to state what is allowed, but need to explain the use of GM_Curve.
5.4	Units of Measure	Units to be used in an ENC: <ul style="list-style-type: none"> • Position: latitude and longitude in decimal degrees (converted into integer values). • Depth: metres. • Height: metres. • Positional accuracy: metres. • Distance: nautical miles or metres. • Time: seconds. • Bearings: decimal degrees. 	Is this correct? What about angular measure?
5.4.1	Positions	Positions are in WGS84 and coordinates are held in the Data Set Structure Information field under coordinate multiplication factor for X, Y and Z coordinate. Coordinates must be held in ENC production systems at a resolution of 0.0000001 (10 ⁻⁷) and the coordinate multiplication factor value should be set to 10000000 (10 ⁷) for all cells. EXAMPLE A longitude = 34.5678E is converted into X = longitude * COMF = 34.5678 * 10000000 = 345678000.	This is what is currently in S-101. COMF has been divided into three fields for X,Y and Z. The question is where does S-101 specify the resolution: <ol style="list-style-type: none"> In the main body of the product spec In the 8211 In addition, is the spatial resolution the same for X,Y, and Z?
5.4.2	Depths	Depths are converted from decimal meters to integers by means of the 3-D (Sounding) Multiplication Factor. Soundings are never encoded with a resolution greater than one decimetre, so the value of sounding multiplication factor must be 10. For update cells, 'Coordinate Multiplication Factor' [X], [Y] and the '3-D (Sounding) Multiplication Factor'	How do we state this for Depths as the second paragraph is no longer a valid statement. COMF has been split into CMFX, CMFY, and CMFZ.

		[Z] will not be present. In this case, the values from the original base cell should be used.	
8	Data Maintenance	Is what is in this section enough, does TSMAD need to add more. How do S-58 validation checks fit into S-101?	
11.1	Implementation	The binary implementation of S-101 must be used for ENC. Therefore, the "Implementation" [IMPL] subfield of the "Catalogue Directory" [CATD] field must be set to "BIN" for the data set files.	Where is this actually set? Is this still needed? If so, is it needed in the 8211 or in the main part of the PS.
11.3.3	ENC cell naming	What needs to go into the cell name? Does TSMAD need to limit it to 8 characters?	At the S-101 Stakeholders meeting there was thought to including the display scale in the name for cataloguing purposes?
11.3.4	New Editions and Updates	<p>This section describes how the standard encoding defines updating methodologies for ENC cells. In order to ensure that feature type updates are incorporated into an ECDIS in the correct sequence without any omission, the file extension and a number of other parameters encoded in the data are used in the following way:</p> <p>file extension every new data set or new edition must have a .000 extension as per the translation from EDTN to the file extension. For update cell files the extension is the value of the UPDN field, ranging from .001 to .999. These numbers must be used sequentially, without omission. Number .001 is the first update after a new data set or a new edition.</p> <p>edition number when a data set is initially created, the edition number 1 is assigned to it. The edition number is increased by 1 at each new edition.</p> <p>update number update number 0 is assigned to a new data set. The first update cell file associated with this new data set must have update number 1. The update number must be increased by one for each consecutive update, until a new edition is released. The new edition must have update number 0. In the case of an update cell file the file extension is the same as the update number.</p> <p>update comment comment for describing the change introduced by an update.</p> <p>issue date date up to which the data producer has incorporated all applicable changes.</p> <p>In order to cancel a data set, an update cell file is created for which the edition number must be set to 0. This message is only used to cancel a base cell file. Where a cell is cancelled and its name is re used at a later date, the issue date must be greater than the issue date of the cancelled cell.</p> <p>Maintenance of support files is described in S-100.</p>	<p>In this section, a small workgroup added the update comment field that describes the change added by the update.</p> <p>There are also outstanding issues on how to update support files that need to be discussed.</p>

