Paper for Consideration by the S-101 Project Team

Summary of Outstanding Issues

Submitted by:	SPAWAR Atlantic
Executive Summary:	Summary of outstanding issues affecting test bed development
Related Documents:	S-100, S-101
Related Projects:	IHO S-100/S-101 Test Bed Project

Introduction / Background

This paper summarises issues which have yet to be addressed which are affecting development of the simple viewer and Shore Based ECDIS. Each issue is listed along with its affect on the development. While many of these issues have been presented previously, they are included again here for completeness.

Analysis / Discussion

Issues are presented separately as they relate to the data converter, feature catalogue, and portrayal catalogue.

	Data Converter Issue	Affect
1	Field tree layout for the curve record set to CRID/SEGH/C2IT instead of CRID/SEGH/C2IL	Coded special case
2	values. Problem noted with dataset KR5G3B33000, DataCoverage	Unable to correctly determine scale for an area. No work-around, awaiting resolution.

	Feature Catalogue Issue	Affect
3	RoleCode "ModifiedToSupportQualityOfBathymetricData" is invalid.	Modified local copy of feature catalogue
4	To comply with S-100, S100_FC_ComplexAttribute needs to be an extension of S100_FC_Attribute. Currently S100_FC_ComplexAttribute extends S100_FC_Item.	Modified local copy of feature catalogue
5	Soundings should have a primitive type of pointSet vice point	Primitive type is shown as point in feature catalogue browser (see separate paper)
6	DepthNoBottomFound should have a primitive type of pointSet vice point	Primitive type is shown as point in feature catalogue browser (see separate paper)
7	Diacritical marks within the catalogue are missing, for instance see line 6814 "moiré" is encoded as "moir?"	Diacritical marks are not present in feature catalogue browser.
8	VisuallyConspicuous attribute valueType encoded as "Boolean", should be "enumeration" (line 6663).	Results in error messages when loading data if the value is encoded as a "2" in the dataset.

9	negative. The unit of measure is defined in the DUNI subfield of the DSPM	Presents misleading information to user. Recommend review of remarks for accuracy.
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	Portrayal Catalogue Issue	Affect
10	It is not clear how color palettes other than day should be implemented by the ECDIS when drawing SVG symbols. Each SVG symbol file contains a reference to SVGStyle.css, which can only define a single palette.	Can't implement dusk and night color profiles
11	colorProfile.xml only contains the day color profile	Can't implement dusk and night color profiles
12	colorProfile.xml line 250 contains a duplicate color token CHBLK which should be CHGRD.	Modified local copy of colorProfile.xml. Without this change no feature using CHGRD would be drawn correctly.
13	colorProfile.xml line 978 contains a duplicate color token UIAFF which should be OUTLW.	Modified local copy of colorProfile.xml. Without this change no feature using OUTLW would be drawn correctly.
14	There is not a valid way to treat viewing groups and text groups as separate entities.	Can't implement viewing groups and text groups
15	Text group layers are not defined in portrayal_catalogue.xml, therefore the ECDIS can not present selectors as specified in IEC 61174 Table M.2. Text group layers need to be formally defined by the portrayal, and associations need to be added similar to the "viewingGroupLayer" / "viewingGroup" associations.	Can't implement text groups
16	The current use of "TopLevelTemplate" does not provide the ECDIS the necessary context to associate selection of the top-level XSLT files with the various selectors required by IEC 61174, such as "Simplified symbols", "Symbolized boundaries", etc.	Can't implement meaningful product-defined selectors (see separate paper).
17	Point land area (LNDARE01) outputs an extraneous line instruction.	Coded special case to ignore incorrect output.
18	Obstructions shoaler than one meter are not symbolized properly.	Portrayal is incorrect.
19	QualityOfBathymetricData feature is incorrectly symbolized with a 2mm wide line.	Portrayal is incorrect.
20	Some XSLT portrayal rules are using S-57 attribute codes instead of S-101 attribute codes.	Coded workaround.
21	Masked edges are not implemented.	Can't implement masked edges.
22	9-A-1 input schema does not allow for unique reference to a point which is part of a multiPoint (e.g. soundings)	Can't code workaround for soundings
23	XSLT for soundings incorrectly assumes each sounding is encoded as a single point.	Portrayal doesn't draw soundings
24	Safety contour implementation is incomplete and currently generates an incorrect portrayal.	Portrayal of safety contour is incorrect.
25	XSLT for features unique to S-101 can not be validated until native S-101 data is available – e.g. ArchipelagicSeaLane.	Can't evaluate portrayal of new S-101 feature types.

26	Electronic versions of the following XML schema definitions are not currently provided: 9-A-1, 9-A-2, 9-A-2-1, 9-A-3, 9-A-5, and 9-A-6. Currently, one must create them by copying text from the S-100 document.	Process is prone to error, and schema provided in documents is incomplete.
27	S-100 9-12.2.2 scaleMinimum / scaleMaximum are not implemented.	Can't implement SCAMIN / SCAMAX.
28	The "viewingGroup" elements in the portrayal catalog contain empty descriptions. This, for instance, makes it impossible for the ECDIS to inform the mariner what "21010" means.	Will affect user interface development of shore based ECDIS.
29	The association of "viewingGroupLayer" elements with "viewingGroup" elements is incomplete and incorrect; therefore implementing a selector for "displayMode" (base,) would produce an incomplete / incorrect portrayal.	Unable to implement displayMode selector (Base / Standard / Other)
30	"context" element of the portrayal catalog is incomplete. Currently, the following selectors are not implemented (see IEC 61174 Table 3, and Table E.1): Accuracy, Contour label, Chart boundary, Date dependent objects (date / date range), Full light lines, Highlight date dependent, Highlight info, Highlight document, National Language, Simplified symbols, Symbolized boundaries, Safe depths shown, Scale min, Unknown	Unable to implement functionality based on missing selectors
31	Use of XSLT 1.0 makes conditional symbology implementation more difficult and error-prone. For instance, implementation of DEPARE03 requires evaluation of shared geometry (DEPCNT, DEPARE, DRGARE, LNDARE, etc) - the required sorting and grouping would be simplified by XSLT 2.0	Increases time required to analyze XSLT when errors are encountered. Increases development time for missing / incomplete XSLT processing.
32	Coordinated portrayal of multiple product types is currently restricted to "stacking" products above or below each other.	Will be increasingly difficult to add / modify later

Recommendations

Provide direction and time lines for resolution of the identified issues.

Action Required of S-101 PT The S-101 project team is invited to:

- note the paper a.
- agree with the recommendations b.
- provide a tracking mechanism for these issues C.