Paper for Consideration by S-100WG Focus Group

S-100 Portrayal Register Interfaces

Submitted by:	S100WG Chair
Executive Summary:	Update on the Portrayal Register and associated proposal interfaces
Related Documents:	S-100 Part 2b Portrayal Register Model. Draft Interface Design Document for the Portrayal Register.
Related Projects:	S100 Register Rebuild

Introduction / Background

While much of the infrastructure focus has been operationalizing the IHO Feature Concept Dictionary, there is another major component to the S-100 Registry – the Portrayal Registry and Portrayal Catalogue Builder. This paper outlines the current status, future plans and requires the focus group to prioritize which functions of the Portrayal Register should come online first.

Analysis/Discussion

In 2015, under contract from the IHB, Caris prepared a Portrayal Register Database that reflected the S-100 Part 2 register model so that the concepts needed for the portrayal of different product specifications can be properly registered and persist over time. The funding was limited to just the database model and structure and did not include interfaces for the management of the content.

As part of their continued assistance in support of the S-100 Register, the ROK has agreed to develop the interfaces for the Portrayal Register. However, because the scope of work is quite large it is proposed that a modular approach be taken and that high priority functions be developed first and then other function be developed over time. In addition, it may be noted that some of the functions in the register may not require a full interface for the proposal and management, but may be a look up table function as it may be determined that the information is static in nature and is unlikely to change over time.

The PRDB will include persistence for registration of the following concepts and symbols as register items. Register items are derived from S100_RE_RegisterItem. All register items will carry a name, definition, remarks, admin info (status, date accepted, date amended) and a relationship to a register.

Following is a list of register item types supported by the model:

1. **colorToken** – an individual color token label with an RGB value used only for preview purposes.

2. **colorProfile** – a color profile which is handled as an XML document (carried as TEXT) and which contains the color definitions in CIE or sRGB. The format of the file is defined using an XML schema definition as per S-100 Part 9 Appendix A.1.4.1 S-100 Color Profile.

3. **symbo**l – An XML document (stored as TEXT) containing a symbol encoded as per the S-100 Part 9 SVG profile (currently in draft as proposed by CARIS). Each symbol record will include a symbol identifier and available storage for a preview image (e.g. jpg) and an engineering image with layout information. A symbol also has relationships to color tokens that are used in the symbol.

4. **lineStyle** - An XML document (stored as TEXT) containing a linestyle encoded as per the S-100 Part 9. Each lineStyle record will include an identifier and available storage for a preview image (e.g. jpg) and an engineering image with layout information. A lineStyle also has relationships to color tokens and symbols that it uses.

5. **areaFill** - An XML document (stored as TEXT) containing an areaFill encoded as per the S-100 Part 9. Each areaFill record will include an identifier and available storage for a preview image (e.g. jpg) and an engineering image with layout information. An areaFill also has relationships to color tokens, linestyles, pixmaps and symbols that it uses.

6. **Pixmap** - An XML document (stored as TEXT) containing a Pixmap encoded as per the S-100 Part 9. Each Pixmap record will include an identifier and available storage for a preview image (e.g. jpg) and an engineering image with layout information. A Pixmap also has relationships to color tokens that it uses.

7. **Font** – A ttf file stored as a BLOB

8. **viewingGroup** – concept as per S-100 Part 9

9. **viewingGroupLayer** – concept as per S-100 Part 9 with relationships to a collection of viewingGroups.

10. **displayMode** - concept as per S-100 Part 9

11. **displayPlane** - concept as per S-100 Part 9

12. **contextParameter** - concept as per S-100 Part 9

13. **symbolSchema** – storage for an xml schema definition document stored as type TEXT and linked to the symbol items which comply with that schema definition. Note: this is intended for future use as presently there is no S-100 SVG schema definition available.

14. **lineStyleSchema** - storage for an xml schema definition document stored as type TEXT and linked to the lineStyle items which comply with that schema definition.

15. **areaFillSchema** - storage for an xml schema definition document stored as type TEXT and linked to the areaFill items which comply with that schema definition.

16. **pixmapSchema** - storage for an xml schema definition document stored as type TEXT and linked to the pixmap items which comply with that schema definition.

17. **colorProfileSchema** - storage for an xml schema definition document stored as type TEXT and linked to the colorProfile items which comply with that schema definition.

18. **cascadingStyleSheet** - storage for an xml document stored as type TEXT and linked to the color profile which it represents for use with an SVG symbol.

The following table provides a starting point for the Portrayal Register priorities for consideration by the focus group.

Portrayal Register Item	Priority	Comment
colorToken	Medium	We already have the ones that are used in S-52. Would there be any reason to add others for non-navigation applications
colorProfile	High	
Symbol	High	
lineStyle	High	
areaFill	High	
Pixmap	Low	
Font	Low	
viewingGroup	Medium	Can be visible using lookup tables for the time being.
viewingGroupLayer	Medium	Can be visible using lookup tables for the time being.
displayMode	Medium	Can be visible using lookup tables for the time being.
displayPlane	Medium	Can be visible using lookup tables for the time being.
contextParameter	Low	

symbolSchema	Low	
lineStyleSchema	Low	
areaFillSchema	Low	
pixmapSchema	Low	
colorProfileSchema	Low	
cascadingStyleSheet	Low	

NOTE: It should be noted that the portrayal register does not have a mechanism to store the XSLT rules needed for the CSPs for S-101. The author is unsure of where these are stored other than as part of the portrayal catalogue.

Recommendations

If each of the types of items requires a full mechanism for clarification, supersession and addition that would require 54 different interfaces – while much of the core design can be re-used – it still requires a considerable effort. Therefore, it is recommended that a priority be given to each item, and the portrayal register functionality be delivered in stages. So it is for the consideration of the focus group to establish the major priorities so that work may commence.

It is recommended that the Focus Group determine which of the items should be designed initially and then prioritize the remaining items.

Action Required of S100 TSM4

The TSM4 is invited to:

      a.   discuss the way forward on the Portrayal Register interfaces