Paper for Consideration by TSM3

Update of S-100 Simple Viewer

Submitted by:	Republic of Korea (KHOA)
Executive Summary:	This paper outlines the update of S-100 Simple Viewer
Related Documents:	S-100, S-100 Test Framework
Related Projects:	IHO S-100/S-101 Test Bed Project

Introduction / Background

ROK has been promoting a R&D project on S-100 simple viewer development to support S-100/S-101 test bed of the IHO. Phase 3 of the S-100 test framework will be extended so that it can be applied to S-10X. With regard to that, we plan to apply S-100 Simple Viewer not only to 8211 format but also to GML and HDF5.

KHOA participated in NIPWG and SCWG and introduced current status of the S-100 Simple Viewer development. KHOA also has been testing data for each working group. This document would introduce updates of the S-100 Simple Viewer.

Analysis/Discussion

2014 Portrayal Catalogue(PC)- Based S-101 Simple Viewer

Since the TSM2 held in 2014, DIPWG provided KHOA with the partial draft version of S-101 Portrayal Catalogue. Among S-101 Portrayal Catalogue contents, 162 rules file as XSL format and 533 SVG symbol files were used to develop S-101 simple viewer.

In particular, as rules and point SVG symbols were only available in the 2014 version of S-101 portrayal catalogue, it was decided to adopt hybrid method using S-101 Portrayal catalogue and S-52 Presentation Library 4.0 as below:

- Rules / Look-up table: S-101 PC Rules
- Point Symbol: S-101 SVG Symbol
- Line Symbol: S-52 PL 4.0
- Pattern Symbol: S-52 PL 4.0
- Conditional Symbol: S-52 PL 4.0

Fig. 1 is the S-101 Simple Viewer which displays S-101 ENCs based on Portrayal Catalogue, the results of this research was reported in the last TSMAD meeting in Ottawa, Canada.
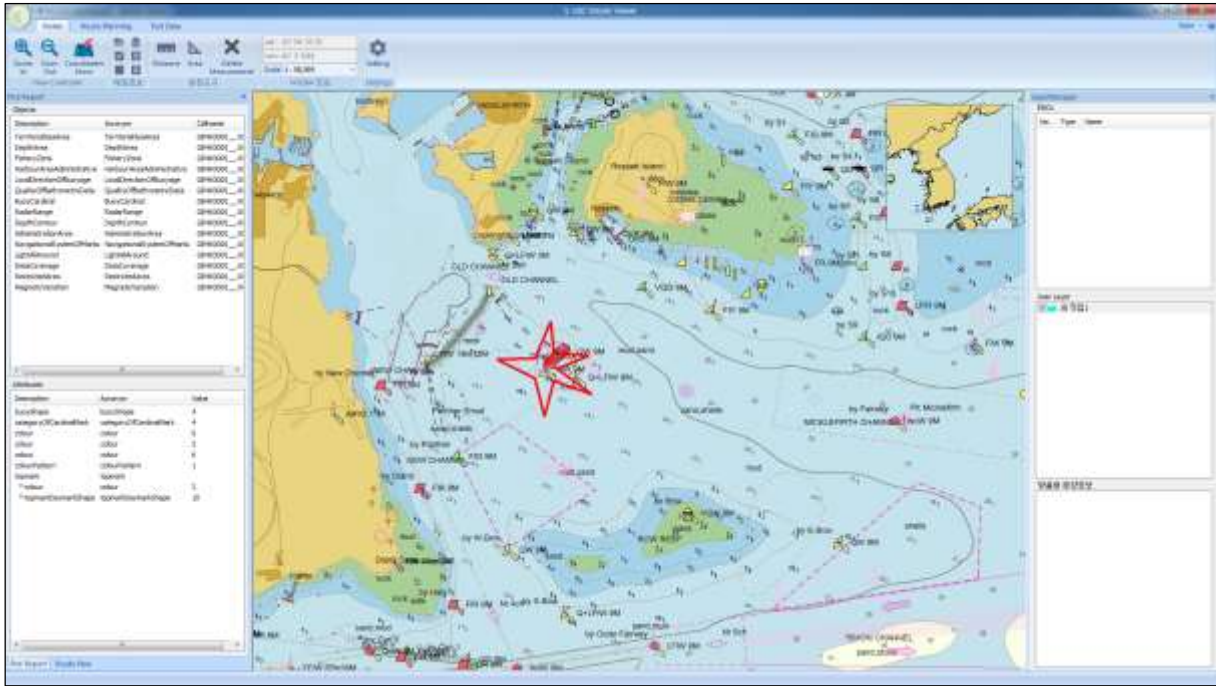
Fig. 1 The draft of S-101 Simple Viewer based on PC (2014)

Development of Portrayal Process which applies Portrayal Catalogue Baseline.

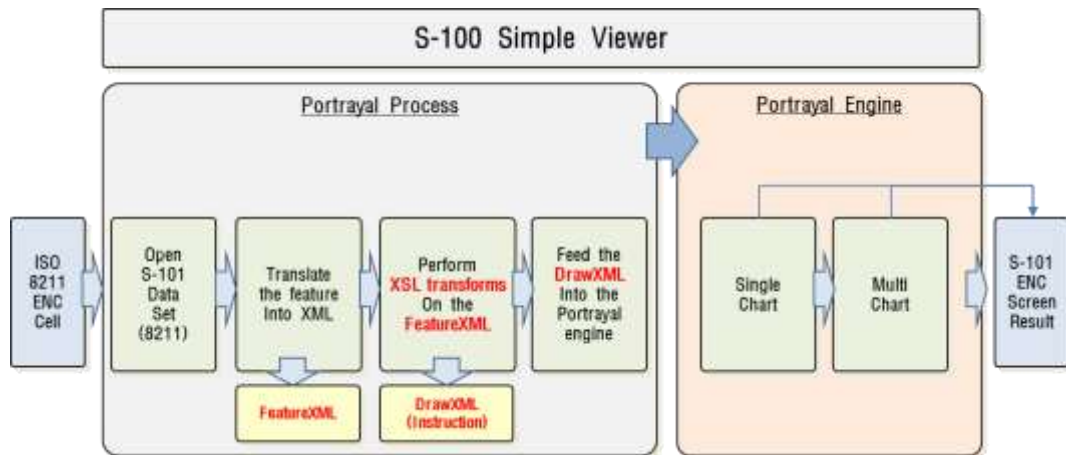Fig. 2 below shows Portrayal Process included in Portrayal part of the S-101 2.0.

Fig. 2 Portrayal process for S-100 Simple Viewer

ROK was provided updated S-101 PC and conducted analysis tasks for application. This initial or sample portrayal catalogue is mostly derived from S-52 content with some manual additions for new S-101 content. It does not completely cover the latest S-101 content but it is enough to use for developing and testing a portrayal implementation.

In particular, we identified the structure as shown below with regard to Rules file.

In the new portrayal catalogue these groups were arranged into 3 possible presentations.
1. 'main_PaperChart.xsl' – includes all the COMMON entries plus PAPER_CHART symbols and SYMBOLIZED_BOUNDARIES.

2. 'main_SimpleSymbols' – includes all the COMMON entries plus SIMPLIFIED symbols and SYMBOLIZED _BOUNDARIES.

3. 'main_Simplified.xsl'– includes all the COMMON entries plus SIMPLIFIED symbols and PLAIN_BOUNDARIES.

ROK analysed the new version of the S-101 and developed Portrayal process. Developed Portrayal Process was applied to the S-101 Simple Viewer development.

Current status of the S-101 Simple Viewer

Various kinds of files were updated regarding the S-100 test bed in the S-100 WG. S-101 converter was updated into S-101 converter version 0.8.12, and S-101 test data was prepared using this converter. Feature catalogue utilized baseline 0.8.8 version, and S-101 PC used Initial version.

- S-101 Converter 0.8.12
- S-101 Converted ENC data set
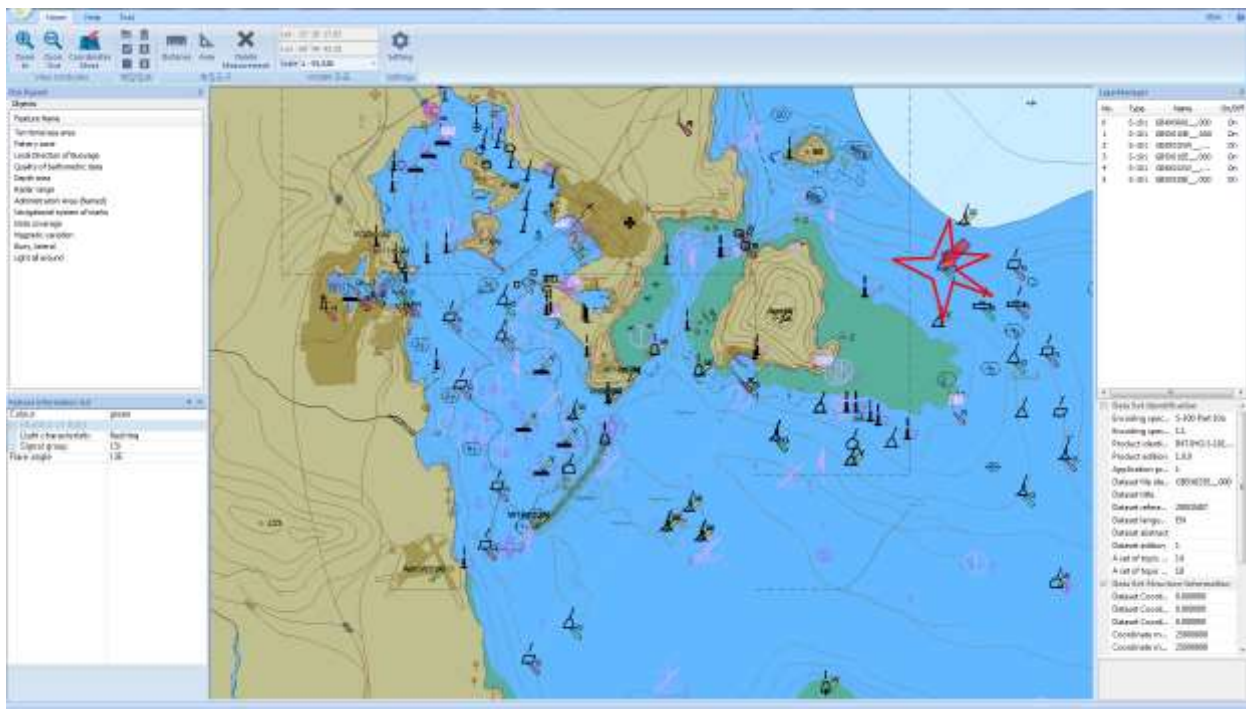- S-101 Feature Catalogue 0.8.8
- S-101 Initial Portrayal Catalogue

Fig. 3 Status of S-101 Simple Viewer by KHOA

With regard to S-101 ENCs display which applied Portrayal Process, we are in the process of testing and improving Conditional Procedures.

Activities related to GML, HDF5

Phase 3 of the S-100/S-101 test program was segmented to include GML and HDF-5. With regard to that process, KHOA has been developing functions to test surface current data of HDF5 format for SCWG and MPA data of GML format for NIPWG to include them in the S-100 Simple Viewer, participating in SCWG and NIPWG

Fig 4 Research and Development to apply HDF format

KHOA plans to support test bed research based on ENCs for SCWG and NIPWG through this research, and we expect the results of research to be applied to Phase 3B and 3C of the S-100/S-101 test program.

Action Required of TSM3

The TSM3 is invited to:

    a.   note the progress reported in this paper.