Paper for Consideration by HSSC

[Release plan of KHOA S-100 Viewer]

Submitted by:	KHOA
Executive Summary:	The KHOA S-100 Viewer has been developed to support IHO S-100 development and has been updated considering the technical discussions in the S-100WG and subordinate group. KHOA reports the release plan of S-100 Viewer.
Related Documents:	S-100, S-101, S-1OOP Project
Related Projects:	S-100 Testbed Project

Introduction / Background

KHOA developed the S-100 Viewer aiming to support the development of S-100 and infrastructure and updated it considering the technical discussion in the S-100WG, S-101PT and TSM. As the S-100 series gradually came to completion,, the KHOA S-100 Viewer reached a stable level. KHOA then decided to release the S-100 Viewer for IHO member states and stakeholders. This document describes the key feature and release plan of KHOA S-100 Viewer.

Analysis/Discussion

Progress of KHOA S-100 Viewer development

KHOA was tasked with creating S-101 FC at the HSSC5 in 2013 and started producing S-101 TDS and developing KHOA S-100 Viewer. In particular, XSLT and Lua processing modules were sequentially developed for S-101 portrayal catalogue. The development was done aiming to support the Phase 3 Simple Viewer and Phase 6 shore-based ECDIS. The Viewer module was used for the shore-based ECDIS development in addition to the use of Simple Viewer.

Key features and functions of KHOA S-100 Viewer

Key features of KHOA S-100 Viewer are as follows:
   a) Consideration of latest standard requirement in the S-100 products.
   b) Rapid reflection and update of standard changes and technical issues
   c) Used not only for testing S-101, but also for various data of S-100 series data (vector, grid)
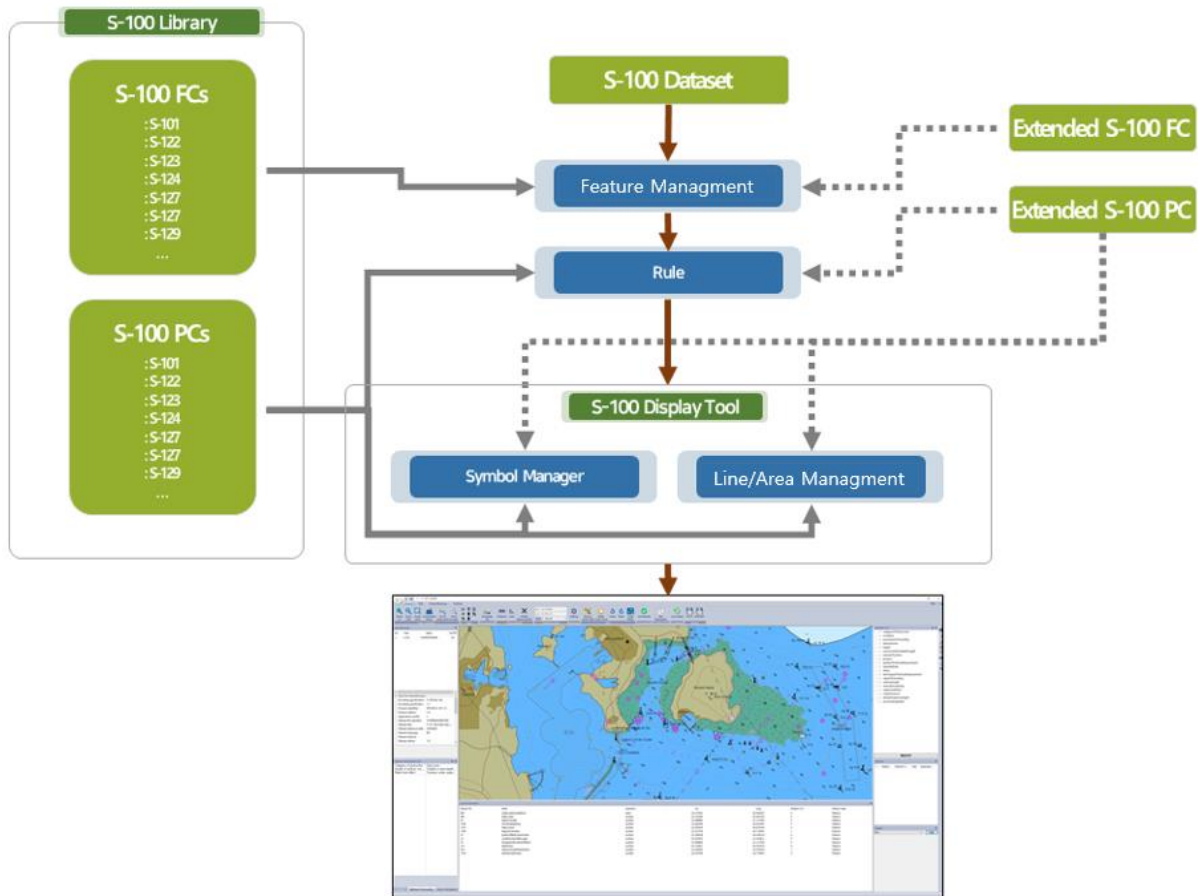   d) Simple editing of S-100 series data for attribute and spatial values

Major functions are summarized as follows:
   a) Management of S-100 catalogues
      - Processing FC/PC based on S-100 4.0.0
   b) Processing and rendering S-100 data
      - Vector encoding (ISO/IEC 8211, GML)
      - Grid encoding (HDF-5)
      - Simple editing and saving of vector format
      - Processing exchange set (Multiple Dataset Loading)
   c) S-100 technical issues
      - Implementation of text placement function
      - Support of XSLT and Lua for portrayal catalogue
      - Application of metadata model
      - Support of other technical issues

Development specification and structure of KHOA S-100 Viewer are as follows:

a) Development specification of S-100 Viewer
   - Development tool: Visual Studio 2017
   - Development environment: MFC (Microsoft Foundation Class Library)
   - Minimum requirement: Windows OS 10, DirectX support

b) Structure of KHOA S-100 Viewer

Release plan of KHOA S-100 Viewer

As the S-100 series gradually came to completion, the S-100 Viewer reached a stable level. KHOA decided to release the S-100 Viewer for IHO member states and stakeholders. The viewer will be released in January 2021. KHOA S-100 viewer will be provided for interested IHO member states and stakeholders. KHOA plans to review the viewer based on the feedbacks of the IHO member states during the testing period for the official release.

Joint/shared development of S-100 Viewer

In order to activate S-100 implementation, it is believed that the open source strategy of S-100 Viewer will support the development of navigation system and various applications without technical barriers for the IHO member states and stakeholders. KHOA is reviewing the open source strategy using KHOA S-100 Viewer and will support IHO member states, academia, and industry interested in the S-100 standard and technology by gradually releasing the modules that make up S-100 Viewer in the near future. Details will be reported to the relevant groups and technical meetings.

Conclusions
As the S-100 series gradually came to completion, the S-100 Viewer reached a stable level. KHOA will release the viewer in January 2021.

Recommendations
It is recommended to provide any comments for the release and open source strategy of KHOA S-100 viewer.

Action Required of [HSSC]
The [HSSC] is invited to:

       a.   note the release plan of KHOA S-100 Viewer and request any comments if needed

       b.   endorse and include this document in the HSSC report to A-2