**Paper for Consideration by S-100TSM**

**Update on S-100 Registry interface and Test operation**

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| *Submitted by:* | Republic of Korea (KHOA) |
| *Executive Summary:* | This paper reports on the results of update on S-100 GI Registry. |
| *Related Documents:* | S-100, S-99, S-100WG1-9.1A |
| *Related Projects:* | IHO S-100/S-101 Test Bed Project |

**Introduction / Background**

This paper is a report of S-100 GI Registry improvements and future plans following the request of last S-100WG 1st Tokyo meeting.

**Analysis**

**Summary of S-100 GI Registry Improvements**

The KHOA has been developing NEW interface and Database for the GI registry which are 5 types of Registers such as Feature Concept Dictionary(FCD), Portrayal, Metadata Register, Product Specification, Agency Code) and it's management tools according to the S-99 standard.

The progress of the registry improvement are briefly described in the following tables. In the meanwhile, the improvement has only been focused on the FCD and Portrayal Register.

1. Registry management tools

| No. | Category | Task | Status | Remark |
|---|---|---|---|---|
| 1 | Content | Main & introduction pages | Done | Updated |
| 2 | User | detailed classification of my work page for each member rank | Done | Improved |
| 3 | Function | Auto e-mail notification system to member following process | Done | Improved |
| 4 | | Auto e-mail notification system for new member sign | Done | New function |

2. FCD register

| No. | Category | Task | Status | Remark |
|---|---|---|---|---|
| 1 | DB | Create tables for S-99 procedures | Done | |
| 2 | | Create tables for Management tools | Done | |
| 3 | Interface | Submit process for add/clarify/supersede/retire | Done | |
| 4 | | Function of sub attribute's valid, proposed filter on proposal process | Done | |
| 5 | | Interlock with Registry DB(recommended attributes, distinguishing features) | Done | |
| 6 | | Appeal process | Done | |
| 7 | | Create Sand Box functions and DB tables | Done | |
| 8 | FCB | Connection to FCB | Done | |

3. Portrayal register(only for Point, Line Style, Area Fill, Colour, Font)

| No. | Category | Task | Status | Remark |
|---|---|---|---|---|
| 1 | Interface | Proposal process | In progress | |
| 2 | | Approval process | In progress | |

The new registry interface can be accessed at http://registry.iho.int. and the FCB connection to the registry has been fixed as well.



Figure 1. Improved  S-100 GI Registry

**Analysis on Portrayal Register DB**

The KHOA analysed Portrayal DB from IHB including Portrayal Register Model_2.1.0 of IHO and Interface Design Document from NOAA. Results of analysis are as following.

- Only 5 types of items(Point, Line Style, Area Fill, Colour, Font) are available in Interface Design Document.
- Portrayal DB has 19 types of items, but Portrayal Register Model_2.1.0 of IHO has only 18 items except pixmap.
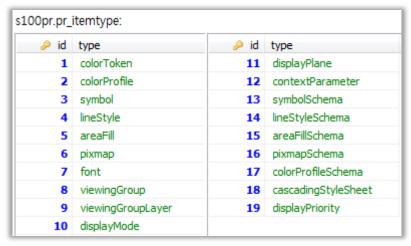


Figure 2. Portrayal DB of CARIS

It is requested to provide the remaining interface guide for 14 items and DB structures. It will be discussed in conjunction with other S-100 TSM portrayal agenda.

**Discussion/Conclusions**

While the improvement of the registry, there were some issues for the FCD and Portrayal register DB as described below;

- FCD register
    1) INT1 and S4: There was no Data for INT1 and S4 in the DB but the old registry had hard corded. It should be made into the DB. Therefore, it is required to discuss "How" and "Who" will do this and also update methodology.

2) S-32 hydrographic dictionary: it is needed to improve the information with connection to S-32 DB or website which are developing by the HDWG.

3) Recommended Attributes: There was some Data for Recommended Attributes in the DB but some parts of data were not matched index of FCD Register. Therefore, it is required to discuss "Where" will do this and also update methodology.

- Portrayal register
    1) INT1 and S4: There was no Data for INT1 and S4 in the DB but the old registry had hard corded. It should be made into the DB. Therefore, it is required to discuss "How" and "Who" will do this and also update methodology.

    2) During the analysis of the portrayal DB, it is requested to clarify for the interface development on the following;
        - visualItem
            - itemSchema
        - registerItem
            - itemStatus
        - pr_font
            - fontProportion
            - fontReference
            - Only *ttf* extension used with fontType for fontFile?
        - managementinfo
            - decision
            - decisionStatus
            - controlBodyNotes
        - pr_schemaview


## Future Plan
Since the last S-100 WG meeting in Tokyo, the new interface had been scheduled to open in April 2016. However it was postponed because of the complexity on the user interface, updates of Registry DB and access to Registry server etc.

The following are timetables to the improvement so far;
- Develop user interface and appeal process: 16 Mar. - 4 Apr. 2016
- Enhance DB structure of the registry and apply the newest IHO DB: 23 Jan. - 16 Feb. 2016
- Analysis of Portrayal register DB and NOAA's Interface Design Document: 1 Jul. - 4 Aug. 2016
- Develop portrayal register process(proposal, approval): 5 Aug. - 12 Aug. 2016
- Update main, introduction pages as IHO WG meeting results: 12 Aug. - 18 Aug. 2016
- Develop new functions(security, e-mail notice, my page): 19 Mar. - 28 Aug. 2016
- Connection S-100 GI Registry with IHO Registry domain: 29 Aug. - 2 Sep. 2016

In the meanwhile, the KHOA has been cooperating with IHO for S-100 GI Registry improvements and also will support it in a row.

A list of additional improvement items for 2016 are as following;
- Update user interface and function on Management detail in the FCD.
- Enhance FCD Register
- Enhance Portrayal Register


## Action Required of S-100TSM
The S-100TSM4 is invited to:
   a.    Note the progress reported in this paper
   b.    Needs for Interface Design Document of Portrayal Register with another 14 items
   c.    Need to Discussion subject in this paper