

Input paper for the following Committee(s): check as appropriate

- ☐ ARM ☐ ENG ☐ PAP
☐ ENAV ☒ VTS

Purpose of paper:

- ☒ Input
☐ Information

Agenda item ² 9.3

Technical Domain / Task Number ² VTS Task 2.5.2 / Task 2.8.1

Author(s) / Submitter(s) Intersessional meeting

Intersessional on S-210 and S-212

1 SUMMARY

The intersessional on S-100 product specification development was held from 29th of January to 2nd of February in Québec City (Canada).

The arrangements for the intersessional, made by the Canadian Coast Guard (CCG), were excellent. All of the participants are very grateful for the support provided.

The task group learned from CCG expertise on S-100 product specification development. Setting the participants up for a better understanding of the steps needed to develop S-210, S-212 and related technical services.

The task group reviewed existing guidelines and procedures and proposed recommended revisions to encompass lessons learned in the more recent past. Among those lessons is the necessity of clearly defining the systems and stakeholders involved, including recognizing that ECDIS is not the only system in e-navigation consuming S-100 data.

1.1 Purpose of the document

The intersessional task groups request that the VTS Committee note the outcomes as specified in ANNEX 1 and take action as specified in Chapter 4 of the document.

1.2 Related documents

Data model (application schema) for S-210 was drafted. See the data model report in the attachment.

2 DISCUSSION

The task group learned the detailed explanation of S-97, S-100 and GI Registry with its infrastructure regarding the creation of a Product Specification.

The intersessional task group elaborated on the topics that were explained and discussed their relation and impact on the features and structure of S-210 and S-212.

¹ Input document number, to be assigned by the Committee Secretary

² Leave open if uncertain

The IALA guidelines, G1088 and G1106, offer introductory insights and guidance on developing product specifications. However, these documents need to be updated. Therefore, it's imperative to update these guidelines to ensure their relevance together with ARM.

Regarding the readiness levels of the S-21x series product specifications, the VTS Committee should review the guidance in S-97 and define appropriate readiness levels for the S-21x series.

IALA should encourage the national members to start the work on establishing national MRN management and prepare for implementation

Product Specification tests and validation is crucial. Given that the existing S-200 testbed is not equipped to handle S-210 and S-212, an upgrade is necessary. Call all interested members to contact the Secretariat for potential contributions.

It is necessary to provide training to members of IALA to increase their expertise regarding S-100 product specification development. The IALA Secretariat informed the task group that a first S-100 readiness training will be conducted shortly by the WWA. The task group is very supportive and welcomed this news; the syllabus was reviewed and some suggestions were made to the program.

3 REFERENCES

- [1] S-97, ed 1.1, IHO Guidelines for creating S-100 PS
- [2] S-100, ed. 5.1 IHO Universal Hydrographic Data Model
- [3] R0145, Inter-VTS Exchange Format Service
- [4] IALA website page on S-200 pages, <https://www.iala-aism.org/technical/data-modelling/>
- [5] G-1128, ed 4.1, The Technical Service Specification
- [6] PS S-212, ed 0.7, VTS digital information service

4 ACTION REQUESTED OF THE COMMITTEE

The Committee is requested to:

- 1 Review and consider the need for amendments in the timelines of task 2.5.2 and task 2.8.1 based on the output of this intersessional.
- 2 Work with the Secretariat to expand the IALA S-200 testbed to include S-210 and S-212.
- 3 Invite the Secretariat to investigate methods to effectively promote and share the work of the working groups on S-200 series documentation among members.

1 ANNEX 1

1.1 Program of the week

- How to build a PS and it's relation to a technical service
- Data modelling
- Data dictionary
- Meta data
- Data delivery
- Input for Committee

1.2 Outcome for S-210

Next steps:

- Define and document scope and boundaries with other S-21x series Product Specifications (existing and under development)
- Define and document use case(s)
 - E.g. define if there is a need for a portrayal
 - Liaise with the operational working group (WG1)
- System architecture derived from the use cases
- Define technical service specification(s) and data model derived from the use cases
- Finalize data model
 - Clean up names and definitions of data model elements harmonizing with the GI registry
- Create S-100 Product Specification and technical service specification edition 1.0
- Revise R0145 and create a guideline for the use of S-210
- Test phase with global invitations to organize and participate in testbeds
 - Use testbed outcomes and feedback in iterative review and revision of the product specification
- Review and publish guideline and recommendation on IVEF when edition 2.0 of S-210 is published

1.3 Outcome for S-212

Next steps:

- Define and document scope and boundaries with other S-21x series Product Specifications (existing and under development)
- Review the data model
 - Create an abstract generic message class, from which every specific message is derived
 - For every message needed to support VTS digital information exchange a separate feature class must be developed in the data model
- Finalize data model
 - Clean up names and definitions of data model elements harmonizing with GI registry

- Create S-100 Product Specification and technical service specification edition 1.0
- Review guideline on VTS digital communications when edition 1.0 of S-212 is published
- Test phase with global invitations to organize and participate in testbeds
 - Use testbed outcomes and feedback in iterative review and revision of the product specification
- Review guideline on VTS digital communications when edition 2.0 of S-212 is published

1.4 Notes for S-210

Background:

In VTS54, the S-210 Task Group completed extracting Data elements used in the existing IVEF, clarifying their definitions while comparing them with the GI Registry. Additionally, work commenced constructing a Data model from the defined Data elements.

Intersessional Meeting Proceedings:

Key implications:

Before proceeding with the registration of the attributes used in the Data model of S-210 in the GI Registry's Data dictionary, it is crucial to clarify the data model and its attributes to be used. Therefore, defining a Data model in line with the S-100 Series, referring to existing IVEF XML, is important.

Regarding the Application Schema, a draft version was created during the Intersessional meeting. Note that Enterprise Architect is recommended for software creation in S-97 B-7.6.5, available as a perpetual license.

As per the information in Annex 1.2, it has been confirmed that there is a need to create documentation for the scope and Use case to establish the framework for discussions. Following this, the recommended process is to proceed with creating the Data model and Technical Specification.

Other implications:

- S-100 is expected to be revised in June 2024, with V 5.2 coming into effect.
- S-97 may not align perfectly with S-100 because S-100 has been updated.
- S-210 is anticipated to have no User interface and is unrelated to ECDIS. Careful consideration is needed when designing the following, especially since the existing S-100 Series may not be applicable:
 - Metadata
 - Exchange Set Catalogue Structure (The figure in page 33 of S-124 NAVIGATIONAL WARNINGS has been shown in the meeting)
 - Language pack (S-100 Part 18)
- Registration of the Data Dictionary should be done using the prescribed format, creating input paper from WG to the VTS Committee.
- Concerning the Application schema of S-210, the upper layers above Object data in existing XML should be detailed in the Technical Specification, involving redefinition of the layers below Object data.
- Reference files for Application schema can be verified at the following link:

<https://schemas.s100dev.net/>

2 ANNEX 2

Participants of the intersessional

Name	Organization	Participation
Jean-François Coutu	Canadian Coast Guard	physical
Eivind Mong	Canadian Coast Guard	physical
Ryan Dargavel	Canadian Coast Guard	physical
Richard Aase	Norwegian Coastal Administration	physical
Minsu Jeon	IALA Secretariat	physical
Takuya Fukuda	Tokyo Keiki Inc	physical
Lukas Kussel	German Federal Waterways and Shipping Administration	physical
Wim Smets	Agency For Maritime And Coastal Services – Flemish government	physical
Michael Strandberg	Danish Maritime Authority	physical
Juho Pitkanen	Fintraffic VTS	online
Dimitry Rostopshin	DiNav Marine	online
Jenni Linteri	Solita	online

