ENAV15 Input paper

Agenda item

Task Number

Author(s) / Submitter(s) DMWG

**Report of the IALA inter-sessional Meeting of the Data Modelling WG held at the IALA HQ,** **25 – 27 February, 2014**

# Summary

* 11 people attended this meeting;
* The meeting progressed by a succession of plenary and drafting group sessions;
* The meeting produced:
  + A report and Annex;
  + A Liaison note to the DSG with an Annex;
  + A Working document; draft IALA contribution for a S-100 Appendix 4A-E addition

## Purpose of the document

To inform the committee about the inter-sessional meeting.

# Background

At the workshop on Developing S-100 Product Specification for e-Navigation held in June 2013 it was recognized that the IHO S-100 registry concept is mainly suited for exchange of data sets. It was also recognized that for e-Navigation purposes in the IALA Domain the IHO GI-Registry should support exchange by data streaming. At the Workshop the IHO/TSMAD experts suggested that IALA should prepare a high level proposal for the implementation of data streaming under S-100.

At e-NAV14 this proposal could not be completed and it was recognized that expert input from IHO/TSMAD was needed. Since a committee meeting is not the right setting for this inter-organisational meeting an Inter-sessional was found to be needed.

# Progress made

At the meeting IHO experts were present to assist in the development of the proposal.

The concept of streaming was discussed and agreed that the more general concept of data services should be used. It was agreed that data services needs to be addressed. The Working Group reviewed and identified limitations in S-100 on the use of data services. Based on this review it was concluded that IALA could contribute to the extension of the standard.

As an Annex to the report the Working group drafted a document explaining the rationale for data services and the foreseen handling of metadata for that. Furthermore the following recommendation was stated:

*IALA ENAV DMWG will provide TSMAD with proposed changes to IHO S-100 Universal Hydrographic Data Model. It is recommended that the work involved in revising the IHO S-100 Universal Hydrographic Data Model is carried out in close collaboration between the two organizations; IHO and IALA.* This is reflected in the action items for the DMWG.

The goal for the inter-sessional meeting was to have a finished proposal for TSMAD. However, it appeared that because of the extent of the changes in S-100 which need to be made to facilitate data services this could not be achieved at the meeting. The goal therefore was adjusted to define data services, start on the proposed changes to S-100 and raise the need for this change to support e-Navigation. With this regard good progress was made.

It was noted that IALA participation at TSMAD would be beneficial to the process.

With special thanks to the attendees from IHO for their guidance and contribution the chairman closed the meeting.

# New action items for the DMWG:

1. *Prepare the contribution to IHO on the integration of data services in S-100;*
2. *Organize a joint inter-sessional meeting to discuss the proposed changes to S-100 with TSMAD.*
3. *Raise the need with the national representatives at IMO for the approved IMO/IHO Harmonization Group on Data Modelling (HGDM) to be established.*

# Action for the ENAV Committee chairman

*The Committee Chair is requested to forward the liaison note and Annex to the DSG.*

**Participation**

|  |  |  |
| --- | --- | --- |
|  | **Members** | **Organization / Country** |
|  | Eivind Mong | Jeppesen also representing TSMAD |
|  | René Hogendoorn | SAAB |
|  | Jarle Hauge | Norwegian Coastal Administration |
|  | Dave Lewald | U.S. Coast Guard – Navigation Systems |
|  | Siddi Wouters | Kongsberg |
|  | Nick Ward | GLA |
|  | Edward Hosken | UK Hydrographic Office also representing IHO |
|  | Su Marks | UK Hydrographic Office also representing TSMAD |
|  | Peter Hooijmans | Rijkswaterstaat, Dutch ministry of Infrastructure and the Environment |
|  | Bill Cairns | U.S. Coast Guard |
|  | Ole Borup | Danish Maritime Authority |

**ANNEX TO THE REPORT OF THE INTER-SESSONAL MEETING OF THE DMWG**

**METADATA AND DATA SERVICES**

Introduction

This document highlights changes necessary in S-100 to facilitate data services as anticipated in e-Navigation.

e-Navigation is foreseen to be based on the provision of services, such as ENC services, ship reporting and improved shore services, etc. founded on user needs. In order to have a common understanding of the services provided in a given region, the concept of a Maritime Service Portfolio (MSP) was developed. The MSP consists of a collection of standardized Operational Services. These Operational Services are delivered through Technical Services some of which are data services implemented according to a product specification.

Data services are electronic data delivery mechanisms, using a data link e.g. internet as opposed to physical data delivery, e.g. DVD. Data services transfer one or more messages between a service provider and one or more service consumers. The exchange of data is done in a service session that is established at a certain point in time, and ended at a later point in time. Examples of existing services include:

* Geo services, such as WMS service as defined by OGC
* Data provided through a Web service, such as ENCs
* Virtual AtoN

For data services, metadata needs to be treated differently. There are some types of metadata that only apply or apply differently to services such as:

* service discovery metadata
* service session metadata
* message metadata
* feature metadata

High-level change request

The current version of S-100 focuses on datasets that are delivered as standalone entities containing all data and metadata. In that sense S-100 is dataset centric and needs some modifications to allow specification of service oriented data exchange.

IALA proposes that the S-100 document is made more generic in general by removing terms like dataset and file identifier where applicable; e-Navigation services may transfer data that is not geographical in nature, such as ship reporting. In particular, Part 4 requires revision to improve the support for the concept of e-Navigation, such as services metadata and a new appendix is required for data services.

Recommendation

IALA ENAV DMWG will provide TSMAD with proposed changes to IHO S-100 Universal Hydrographic Data Model. It is recommended that the work involved in revising the IHO S-100 Universal Hydrographic Data Model is carried out in close collaboration between the two organizations; IHO and IALA.