

IMO/IHO HARMONIZATION GROUP ON  
DATA MODELLING  
Agenda item 2

HGDM 1/2/1  
6 October 2017  
ENGLISH ONLY

**CONSIDERATION OF THE REPORTS OF NCSR 4 AND MSC 98 AND  
ANY RELATED MATTERS EMANATING FROM IMO MEETINGS**

**Comments on clarification on the scope and content of work of the  
IMO/IHO Harmonization Group on Data Modelling (HGDM)**

**Submitted by Australia, Canada, Denmark and Republic of Korea**

**SUMMARY**

<b>Executive summary:</b>	This document provides information on the overarching objectives noted by IMO Secretariat and possible responses to the six questions posed in HGDM 1/2
<b>Action to be taken:</b>	Paragraph 9
<b>Related documents:</b>	NAV 57/6, NCSR 1/28 and HGDM 1/2

**BACKGROUND**

1 This document is submitted in accordance with paragraph 6.12.5 of the *Guidelines on the organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5). This document is prepared for the discussion on document HGDM 1/2 "Clarification on the scope and content of work of the IMO/IHO Harmonization Group on Data Modelling (HGDM)" noted by the IMO Secretariat. The questions posed by the IMO Secretariat:

- .1 *Is the Common Maritime Data Structure (CMDS) a solution for MSPs only or for all data under the e-navigation architecture?*
- .2 *Should the CMDS work be commenced by the HGDM as part of the work on the output "Develop guidance on definition and harmonization of the format and structure of Maritime Service Portfolios (MSPs)"? In this case the terms of reference need to reflect it, or a new output may be needed.*

- .3 *Is a CMDS possible to be developed for all MSPs, given that the type of information for different MSPs can vary significantly (e.g. free text, geographical coordinates, distances, courses, medical terminology, and weather information)?*
- .4 *Depending on the course of action in response to question 3, should the guidance on the format and structure be augmented by specifics for each of the 16 identified MSP in the SIP? Or is the guidance of general nature and applicable to all MSPs (including the 16 MSPs in the SIP and any future MSP)?*
- .5 *Is the S-100 data model to be applied exclusively, or may there be certain MSPs that contain information/data that may not follow the S-100 regime?*
- .6 *Should the Guidance on the format and structure of MSPs include preferences on the method of communication (e.g. VHF-DSC, AIS Application Specific Message)?"*

## DISCUSSION

2 The possible answers for the questions could be briefly derived from the agreed e-navigation strategy, e-navigation Strategy Implementation Plan (SIP) (NCSR 1/28, annex 7) and other supporting material.

3 *"Is the Common Maritime Data Structure (CMDS) a solution for MSPs only or for all data under the e-navigation architecture?"*

- 3.1 According to IMO e-navigation SIP, Common Maritime Data Structure (CMDS) is proposed as a basis of e-navigation data exchange. It is not confined to MSP only, as can be seen in the e-navigation overarching architecture below (Figure 1, NCSR 1/9):

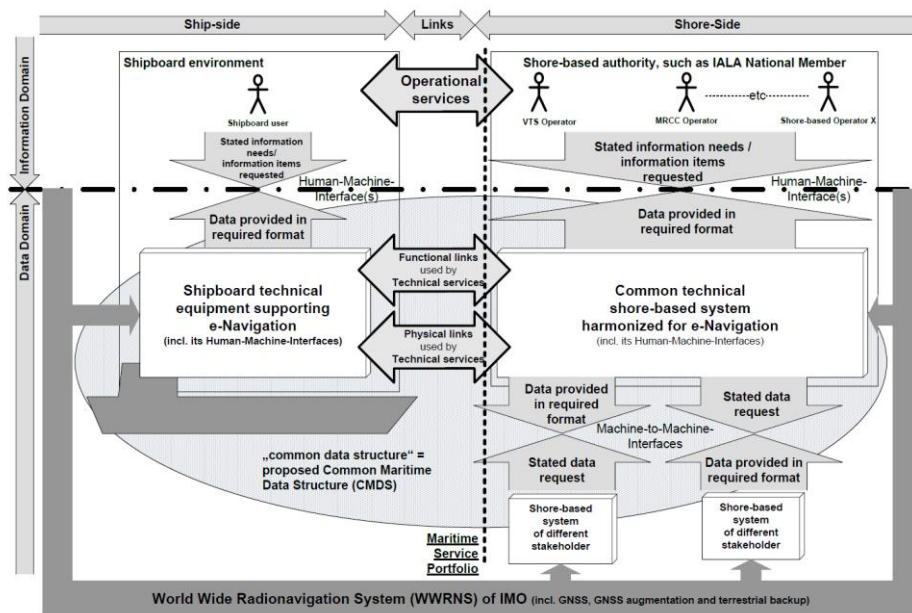


Figure 1: Overarching Architecture of e-navigation (NCSR 1/9)

- 3.2 As agreed at NAV 57, the CMDS is also proposed to cover all data relevant to e-navigation, as set out below:

*"The CMDS will serve as a common reference for all implementers of e-navigation and thereby accommodate for a certain degree of harmonization. (NAV 57/6)"*

4 *"Should the CMDS work be commenced by the HGDM as part of the work on the output "Develop guidance on definition and harmonization of the format and structure of Maritime Service Portfolios (MSPs)"? In this case the terms of reference need to reflect it, or a new output may be needed."*

- 4.1 COMSAR 15 agreed to adopt S-100, the Geospatial Information Standard for Hydrographic Data of the International Hydrographic Organization (IHO), as the basic structure in developing the data and information access framework for e-navigation.

- 4.2 S-100 product specifications, as basic components of the CMDS, are now being developed by relevant organizations (IHO, IALA, WMO, etc.), and hence the development of individual product specifications is not the task of HGDM. The IMO guidelines on MSPs will only refer to the standards (product specifications for one or more e-navigation technical services within a MSP).

5 *"Is a CMDS possible to be developed for all MSPs, given that the type of information for different MSPs can vary significantly (e.g. free text, geographical coordinates, distances, courses, medical terminology, and weather information)?"*

- 5.1 The relationship between S-100 based product specifications and MSPs is not exclusive; one S-100 product specification could support several MSPs and also several S-100 product specifications could support one MSP. It depends only on the scope and operational concept of each MSP.

6 *"Depending on the course of action in response to question 3, should the guidance on the format and structure be augmented by specifics for each of the 16 identified MSP in the SIP? Or is the guidance of general nature and applicable to all MSPs (including the 16 MSPs in the SIP and any future MSP)?"*

- 6.1 The general guidance to be developed by the HGDM on the format and structure should cover all MSP. In this regard, the guidance should also describe the general nature of MSPs including the role of each stakeholder, relevant data format and standards, and list of supporting communication systems.

7 *"Is the S-100 data model to be applied exclusively, or may there be certain MSPs that contain information/data that may not follow the S-100 regime?"*

- 7.1 Ideally, all data used within MSPs should be based on an S-100 data model. S-100 data models are becoming the predominant standard to cover maritime data used on board and especially in navigation systems (e.g. INS).

8 *"Should the Guidance on the format and structure of MSPs include preferences on the method of communication (e.g. VHF-DSC, AIS Application Specific Message)?"*

8.1 According to the method of communication, the e-navigation SIP describes that "any communications systems used must be able to deliver appropriate MSPs in the 6 areas defined..."

8.2 Possible communication systems specific to each MSP could be listed as a guide and without restricting other options, as mentioned in the e-navigation SIP.

**ACTION REQUESTED OF THE HGDM**

9 The HGDM is invited to consider the above comments.

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