INTERNATIONAL MARITIME ORGANIZATION

INTERNATIONAL HYDROGRAPHIC ORGANIZATION

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IMO/IHO HARMONIZATION GROUP ON DATA MODELLING
Agenda item 5

HGDM 1/5/3
5 October 2017
ENGLISH ONLY

DEVELOPMENT OF A DEFINITION FOR MSPs AND CONSIDERATION FOR THE HARMONIZATION OF THE FORMAT AND STRUCTURE OF MSPs

Comments on document HGDM 1/5/2 - Standardised data element ID structure

Submitted by BIMCO

SUMMARY	
Executive summary:	This document provides comments on the document HGDM 1/5/2 and informs about ongoing developments, which can be used to standardize the data elements' identity (ID) of the Maritime Service Portfolios (MSPs)
Action to be taken:	Paragraph 19
Related documents:	HGDM 1/5/2

Introduction

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). The document provides comments on the guidance on the definition and harmonization of the format and structure of the data elements' ID of Maritime Service Portfolios (MSPs), as set out in document HGDM 1/5/2.

2 The particulars mentioned in this document represent parts of the outcome of a European project EfficienSea2, for which BIMCO is a work package leader. The three-year project started in May 2015.

3 Ship-to-port and port-to-ship communication needs to be standardized and precise to contribute to safe and efficient coordination of port calls. Better communication and coordination is expected to reduce administrative burdens on board as well as ashore.

4 The administrative burden on seafarers has been recognized as a significant problem by IMO, and ways to reduce the burden are frequently being discussed among shipowners, who are members of BIMCO. The ship's mandatory reporting obligations in relation to port calls represent a significant part of the administrative burden.

5 IMO has agreed that automation and standardisation of reporting procedures is an important step in reducing this burden. Thus, providing means for standardized and automatic reporting represents one of the prioritized solutions in the e-navigation Strategic Implementation Plan (SIP).

6 When establishing the Common Maritime Data Structure (CMDS), BIMCO found it was very important to develop a common definition of the individual data element identities (IDs). Example: the data element "ship name" could be assigned with data element ID "ShipID.ShipName", which is used in the software code to ensure proper and correct exchange of that specific information.

7 The data element IDs help to ensure proper and practical implementation of machine-to-machine (M2M) solutions. Currently there are several international standards that use different IDs for the same data element. This makes it difficult, if not impossible, to develop standardised M2M solutions.

8 The table below exemplifies the use of different IDs for the same data element by the following few selected entities: EMSA National Single Window, ISO 28005 on electronic port clearance (EPC), SafeSeaNet, WCO ID and IACS Recommendation 75.

Data element	Description	Data element ID's				
		EMSA NSW	ISO 28005	SafeSeaNet	WCO ID	IACS R.75
Ship name	Given name of the ship in the ship registry	ShipID.ShipName	ShipID.ShipName	ship.name	T005	SHIP_Name
Call sign	Call sign for the ship. Sequence of letters and numbers, unique to each ship by which ships can be identified usually in radio communications.	ShipID.CallSign	ShipID.CallSign	ship.callSign	Type (253)	SHIP_Call_Sign
IMO number	Unique ship identification number assigned by Lloyd's Register – Fairplay in accordance with IMO resolution A.600(15).	ShipID.IMONumber	ShipID.IMONumber	ship.imo	T006	SHIP_IMO_Number
MMSI number	Identifier used by maritime digital selective calling (DSC), automatic identification systems (AIS) and certain other equipment to uniquely identify a ship or a coast radio station.	ShipID.MMSINumber	ShipID.MMSINumber	ship.mmsi	Type (253)	-
Comments	Any other information related to ship identity	ShipID.Comment	ShipID.Comment	-	-	-
….						

9 The list could be longer as it does not contain data element IDs from e.g. IALA MSP8 Vessel Shore Reporting, Electronic Product Code Information Services (EPCIS), the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), Ship Message Design Group (SMDG), Port Message Design Group (PROTECT) or DNV-GL Navigator.

10 The differences in the use of non-standardised IDs are not trivial. The longer we wait to establish a global standard of the data elements' ID used for communicating between the ship and the shore, the more difficult it will be to implement a common practice, which can support a M2M interface in the maritime industry.

11 Although the data elements' ID are not part of a normal service specification, they are absolutely essential to establish standardized and automatic reporting and the implementation of e-navigation.

12 A lack of coordination in the provision of information related to maritime services and among organisations responsible for the provision of services, may lead to the duplication of efforts, the development of regional solutions, use of different communication systems, non-standardised displays on board, and the provision of superfluous or non-interoperable information.

13 Standardisation of information is key to ensure a common understanding of transferred data. If, for example, data is submitted from a computer, the computer at the receiving stakeholder has to recognise the type and format of the data in order to be able to translate it into information that can be understood by humans.

14 A lack of standardised use of data elements' ID will mean that a service used between two stakeholders cannot be forwarded in an understandable format. It will, therefore, remove the flexibility of automated reporting because the data needs to be translated before it can be sent to a third stakeholder. On the other hand, if the data element' IDs are standardised, all service providers can standardise their M2M solutions, thus enabling computers to communicate between multiple stakeholders.

15 Some of the data elements may be dynamic and change over time; while some are static in nature. For example, the next port of call, crew lists, and cargo lists are dynamic and change frequently. Whereas port information like pilot boarding area, VTS service and allowed under keel clearance (UKC) in a port are more static. In all cases, required details on the data elements will have to be developed to facilitate a trustworthy and agile exchange of information.

16 Under the auspices of the Facilitation Committee a voluntary expert group consisting of representatives from WCO, UNECE and ISO, have started to develop a common set of data element IDs for the different message standards found in the WCO Data Model, the UN/EDIFACT Data Model and the ISO 28005 Data Model. This work seems only to cover data elements that are required to implement the reporting requirements set out in the Convention of Facilitation of International Maritime Traffic (FAL Convention). Unfortunately, this only represents a fraction of the information, which is exchanged between the ship and shore.

Proposal

17 BIMCO has identified more than 1500 different data elements, which need to have standardised data element IDs in order to be used as M2M communication. The elements have been listed in an inventory which can be made available to the harmonization group. The inventory of data element IDs covers most situations during a port call and therefore goes beyond data elements required to implement the FAL Convention reporting requirements.

18 BIMCO proposes to develop common data element IDs as part of the IMO/IHO HGDM taking into consideration the work done by the FAL expert group as mentioned in paragraph 16.

Action requested of the HGDM

19 The HGDM is invited to note the information contained in this document and take action as deemed appropriate.