Input paper: [[1]](#footnote-1) VTS52-10.3.1

Input paper for the following Committee(s): Purpose of paper:

**□**ARM **□**ENG **□**PAP **X** Input

**□**ENAV **X** VTS **□** Information

Agenda item[[2]](#footnote-2) 10.3

Technical Domain / Task Number2 2.3.1

Author(s) / Submitter(s) China Maritime Safety Administration

Proposal on Draft of VTS Digital Information Service

Product Specification V 0.6.4

# Summary

The VTS Task Plan 2018-2023 raises the task of Developing VTS Product Specifications Based on the S-100 Framework (item 2.3.1). On the basis of comparing to the new IMO Resolution – Guidelines for Vessel Traffic Services, the update to Guideline 1089，IHO S-100: IHO General Hydrographic Data Model, IMO S-Mode, this document proposes to improve the VTS Digital Information Service Product Specifications (Version 0.6.4).

**1.1 Purpose of the document**

The purpose of this document is to provide input document for the VTS committee to promote the task of developing VTS product specifications based on the S-100 framework.

## Related documents

The relevant documents of this proposal are as follows：

IMO A32/12/Add.1, annex11 Guidelines for Vessel Traffic Services (January 2022)；

IALA VTS51-13.3.0.1 G1089: “Provision of Vessel Traffic Services” ( August 2020)；

IALA VTS51-10.3.4 WP VTS Digital Information Service product specification V0.6.4 (August 2021)；

IALA VTS51-13.3.0.1：VTS Task Plan 2018-2023\_Rev6（January 2022)；

IALA VTS51-13.3.1.1 draft description of Maritime Service 1- VTS( January 2022)；

IALA VTS51-13.3.1.3 WP Appendix 1 MS1-3 (VTS51-9.1.6.1 )( January 2022)；

IHO S100WG6\_2022\_4.24\_EN\_Proposal for Enhancing Multilingual Support in the S-100 XML Components (January 2022) ；

IHO S100WG6\_2022\_4.7\_EN\_Covering Paper Realtime clean(January 2022) ；

IHO S100WG6\_2022\_4.15\_EN\_Part 10a unknown attribute values(January 2022) ；

IMO Resolution MSC.466 (101) Amendments to the Performance Standards for the presentation of navigation-related information on shipborne navigational display (June 2019) ；

IMO SN.1/Circ.243/Rev.2 Amended Guidelines for the Presentation of navigation-related symbols, terms and abbreviations (June 2019).

# background

The backgrounds of this proposal are as follows:

**2.1**  The VTS Task Plan 2018-2023 raises the task “Develop a Product Specification under the S-100 framework for VTS”, and states that the expected outcome of this task is a VTS Product Specification, which will assist authorities to better implement VTS. On VTS49, the name of the expected outcome was adjusted to “VTS Digital Information Service Product Specification”.

**2.2**  IMO Assembly 32 approved the new IMO Resolution – Guidelines for Vessel Traffic Services, which was scheduled to be released in the first quarter of 2022. The update to Guideline 1089 was completed at VTS49 and Guideline G1089 - Provision of a VTS was approved at Council meeting C72 for issue on adoption of the new resolution by the IMO Assembly. VTS51 had merged MS1-3 into new MS1: VTS as PAP recommended.

# PROPOSAL

## 3.1 Update S-212 to aligning with the new IMO Resolution on VTS.

**3.1.1 Proposal on updating the overview of the new IMO Resolution –Guidelines for Vessel Traffic Services and G1089's introduction in Chapter 1**

The introduction to the new IMO Resolution –Guidelines for Vessel Traffic Services and G1089 in Chapter 1 of S-212 is recommended to be updated with the following wording:

IMO Resolution A.XXX(XX) states that:

“The purpose of VTS is to contribute to the safety of life at sea, improve the safety and efficiency of navigation and support the protection of the environment within a VTS area by mitigating the development of unsafe situations through:

1. providing timely and relevant information on factors that may influence ship movements and assist onboard decision-making.
2. monitoring and managing ship traffic to ensure the safety and efficiency of ship movements.
3. responding to developing unsafe situations.

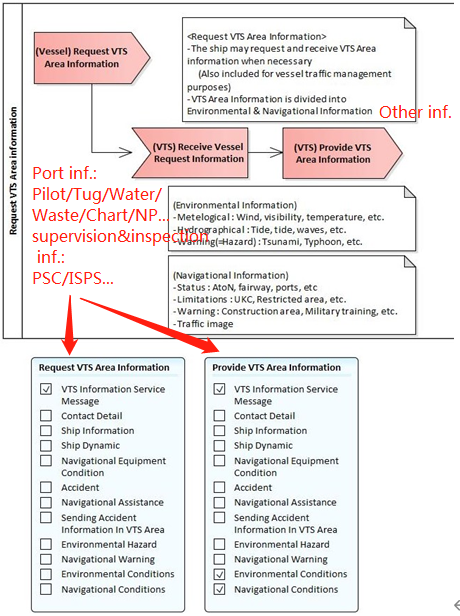
The IALA Guideline G1089 “Provision of Vessel Traffic Services (VTS)” provides guidance for the provision of VTS to participating ships in a harmonized manner in accordance with internationally approved guidelines and IALA Standards.

**3.1.2 Proposal on reclassification S-212 Scenarios**

The new IMO Resolution –Guidelines for Vessel Traffic Services proposes 19 typical application scenarios in three aspects. The new G1089 and the revising MS1: VTS give users application examples according to the above three aspects. It is recommended that the six present scenarios of S-212 7.2 to be reclassified according to the above three aspects. Adjust and expand if necessary.

## 3.2 Proposal on facilitating vessels to obtain effective information in time within VTS area

One of the main purposes of VTS is to contribute to the safety of life at sea, improve the safety and efficiency of navigation and support the protection of the environment within a VTS area. The main measures that can be taken include providing timely and relevant information on factors that may influence ship movements and assist onboard decision-making. In order to improve the service quality of VTS and facilitate ships to obtain information in time, and to be in line with the new VTS Guidelines and the new G1089, it is recommended to add the other information, such as the fuel/fresh water supply, garbage/oil sewage reception, pilotage, tugboat, medical health, nautical charts, nautical publications and other port service information. And PSC, ISPS related supervision and inspection information as well in the scenarios of vessel within VTS area.



## 3.3 Proposals based on the S-100 standards and related documents:

**3.3.1 Proposal on enhancing multilingual support in the S-100 XML Components**

The present S-212 only supports the national language input in the complex attribute of the feature name. The S-100 5.0 supports encoding some of the feature catalog elements in the national language in addition to English, to improve data usability within their national user communities. That is to use XML components to achieve an open architecture to promote the application of multilingual product specifications. It is suggested that 7.4 Feature Catalogue, 12. Data Product Format, 16. Language, and Appendix D Feature Catalogue of S-212 should be updated accordingly.

**3.3.2 Proposal on updating "unknown" attribute**

S-100 5.0.0 chapter 10. Data Product format (encoding) standardizes and unifies how to code when attribute code exists, but the attribute value is unknown, that is, "An attribute value is unknown whenever the attribute code is present but the attribute value is missing. ", so as to avoid each product specification is inconsistent.

S-212 is strict on unknown attributes. It is recommended to update chapter 12.5 according to the wording of S-100 above. It is recommended to add the "unknown" attribute option to more than 20 enumeration and code list data types in 7.3.1.3, and pay attention to the difference between "other" and "unknown".

**3.3.3 Proposal on updating "temporal reference system"**

ISO 19108 5.4.4 only includes three types: calendar date, clock time, calendar date with clock time, and cannot effectively support some simple time attributes such as S100\_TruncatedDate, S100\_IndeterminateDate, and time-sensitive features such as meteorological information. S-100 5.0.0 had updated metadata temporal attributes to better support representation of time-sensitive features and attributes under the ISO 19108 framework, such as period, temporal coordinate system, temporal feature association, etc.

The product specifications such as S-104/111/129/411/412/413/414 related to S-212 include time-sensitive features and attributes, so it is recommended to update temporal reference system, fully citing ISO 19108. In the future, it is necessary to update GFM. In addition, the latest version of ISO 19108 is ISO 19108:2002/Cor 1:2006.

**3.3.4 Proposal on updating " S-100 General Feature Model”**

Amendments to the Performance Standards for the presentation of navigation-related information on shipborne navigational display（MSC.466(101)） and Amended Guidelines For The Presentation Of Navigation-Related Symbols Terms And Abbreviations（SN.1-Circ.243-Rev.2) recommend governments to ensure that, shipborne navigational displays on the bridge of a ship for radar equipment, electronic chart display and information system (ECDIS) and integrated navigation systems (INS) installed on or after 1 January 2024;all other navigational displays on the bridge of a ship installed on or after 1 July 2025. The 13th meeting of the IHO Hydrographic Services and Standards Committee (HSSC13) in May 2021 required that the S-10X product specifications should be based on at least S-100 5.0.0 to comply with IMO S-Mode requirements.

Considering that the Chapter 4 product specification metadata of S-212 had updated the S-100 version to 5.0.0, it is recommended to update and the “S100\_V4.0” prefix of “S100\_GF\_ObjectType,S100\_GF\_InformationType and S100\_GF\_FeatureType” should be updated to "S100\_V5.0" in Figure 7-1, in order to keep the full text consistent and finally meet the IMO S-Mode requirements.

**3.4 Three editorial changes**

**3.4.1 Proposal on updating "INS" to "DIS"**

In order to avoid confusion with the information service ("INS") of the original G1089, VTS49 agreed to change "INS" in the S-212 product specification and data set name to "DIS". A total of 5 "INS"(1.1,3.2, Figures 7-1, 8.2, 15), in the latest draft of S-212 (VTS51-10.3.4), need to be updated to "DIS" to keep the text consistent.

**3.4.2**  **Proposal on updating “7.6 The requirements of the portrayal of information ashore and the presentation of information on board”**

According to the VTS51 output documents, "VTS48-8.2.2.1 WP Appendix 1 MS 1-3\_merged revised WG 1 (VTS47-13.3.10.1)" in 7.6.1 and 7.6.2 should be updated to "VTS51-13.3.1.3 WP Appendix 1 MS1-3 (VTS51-9.1.6.1)”. Since the document has not yet been finalized, it is recommended to pay close attention to the updates of subsequent versions of the document.

**3.4.3 Proposal on updating " 10. Data Classification and Coding "**

Chapter 10 "Data Capture and Classification (DCEG)" is proposed to be changed to "Data Classification and Encoding Guide" for consistency with Appendix A.

# ACTION REQUESTED OF THE COMMITTEE

The Committee is requested to consider the above proposals.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Leave open if uncertain [↑](#footnote-ref-2)