Input paper: [[1]](#footnote-1) VTS 51-10.3.3

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 V0.6.4

# Summary

The 2018-2022 Work Plan of VTS Committee of the IALA puts forward the task of Developing VTS Product Specifications Based on the S-100 Framework (item 2.3.1). On the basis of comparing IHO S-100: IHO General Hydrographic Data Model, S-98: S-100 Interoperability Specification, IALA G1088: Introduction-to-Preparing-S-100-Product-Specifications and S-97: Guidelines for Creating S-100 Product Specifications , and the requirements for digitization of maritime services, 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:

IHO S-53: IMO/IHO/WMO Joint Maritime Safety Information Manual (January 2016)；

IHO S-124: Draft of Navigational Warning Product Specification (October 2018)；

IHO S-100 TSM8-4.2:S-98 Appendix C: S-98-Annex C HARMONISED PORTRAYAL FOR ECDIS AND INS Redline Edition (January 2021) ；

IHO S-100 TSM8-4.4: IHO S-100 Part 16A: S-100-Part 16A HARMONISED PORTRAYAL OF S-100 PRODUCTS Red Line Edition (January 2021);

IHO S-97: S-100 Product Specification Compilation Guide (Version 2.0)；

IHO S-98: S-100 Interoperability Specification(1.0.0 red line edition，January 2021);

VTS50-10.3.1: VTS Digital Information Service Product Specification (version 0.6.4)；

ALA G1088: Guidelines for S-200 Product Specifications (December 2012)；

IALA VTS49-7.1.1: 2018-2022 Work Plan ofVTS Committee (October 10, 2019);

*IALA G1089: Provision of Vessel Traffic Services (Revised in August 2020)；*

IMO Resolution A.857(20): VTS Guidelines (version reviewed and approved at the MSC 102).

# background

The relevant research background of this proposal is as follows:

**2.1** The 2018-2022 Work Plan of VTS Committee of the IALA officially listed Developing VTS Product Specifications Based on the S-100 Framework as a task (task number 2.3.1), and expects to produce a VTS product specification in order to better implement VTS for the VTS principal organs. At the 49th meeting of VTS, the working group adjusted the name of the VTS Product Specification to VTS Digital Information Service Product Specification.

**2.2** VTS Digital Information Service Product Specification is closely related to IHO S-98：S-100 Interoperability Specification, IHO S-97： S-100 Product Specification Compilation Guide, IALA G1088：Guidelines for S-200 Product Specifications and other documents. At present, IHO S-97 and IALA G1088 have been officially released, and IHO S-98 has also formed a revised draft. The working group should refer to it.

**2.3** According to the current plan, the coverage of the VTS Digital Information Service Product Specification will be further expanded, and the involved application scope should also be further revised. In particular, consideration should be given to improving the navigation assistance service process and adding the function of canceling false alarms to meet the actual needs of ship-shore interaction; increasing related information of port service and setting up a list of valid messages to facilitate ships to obtain effective information in time.

# PROPOSAL

## 3.1 Two improvement suggestions on the application scopes of VTS Digital Information Services

### **3.1.1 Improve the navigation assistance service process**

In contrast to the currently valid G1089 guidelines, the existing model lacks the link between the ship and the VTS to confirm the start and end of the navigation assistance service implementation process, and it is recommended to supplement and improve it.



### **3.1.2 Add the function of canceling false alarms**

According to the Amendment of SOLAS Convention 1988, all passenger ships and cargo ships of 300 gross tonnage or more engaged in international voyages should be equipped with various equipment in accordance with the requirements of GMDSS. The GMDSS system has the functions of automatic sending and receiving of distress alarms, which greatly improves the speed, effectiveness and reliability of ship distress alarm communications. However, due to the crew's unfamiliarity with equipment operations, illegal operations or misoperations, the false alarm rate of the GMDSS system remains high, which interferes with the normal operation of the search and rescue system, and sometimes causes waste of resources and economic losses for search and rescue forces.

Therefore, in order to transmit false alarm information in time and reduce or eliminate adverse effects, it is recommended to add the function of canceling false alarms in the model.



## 3.2 Proposals to facilitate ships to obtain effective information in time

### **3.2.1 Add the function of port service information display**

The purpose of VTS is to reduce the development of unsafe conditions, thereby promoting the safety of life at sea, the safety and efficiency of navigation, and the protection of the environment in the VTS area. The main measures that can be taken include providing relevant information that may affect ship movement and support ship decision-making. In order to improve the service quality of VTS and facilitate ships to obtain information in time, it is recommended to add the function of port information display to the model, displaying the port service information such as fuel/fresh water supply, garbage/oil sewage reception, pilotage, tugboat, medical treatment, nautical chart, navigation publishers and navigation aid in the form of a list or chart, with a search function.

### **3.2.2 Add the effective message list display function**

Consider that some navigational warnings and navigational notices have strong regional restrictions, such as hydraulic information; consider that some navigational warnings and navigational notices have strong timeliness, such as meteorological information; also consider that there are changes and revocations in navigational warnings and navigational notices, etc. In order to reduce the burden on the crew and send necessary information in timely and accurate manner, it is recommended to add an effective message list display function that meets the requirements of region and time in the model.

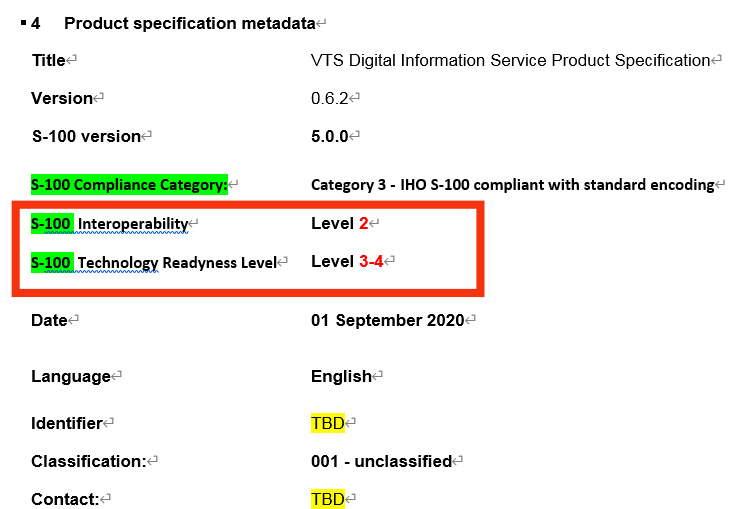
## 3.3 Proposals based on the S-100 standard and related documents:

**3.3.1 Interoperability**

In order to solve the problems of element redundancy, inconsistency, and duplication of icons that may occur when displaying different data products and radar information in the S-100 standard electronic chart or other shore-based application systems, S-100 defines a total of 0-4 Five levels of interoperability. At present, the latest interoperability specification version of S-100 is IHO S-98, which will take effect in October 2021. It is recommended to add interoperability level to the Product Specification Metadata in this model referring to the specification.

**3.3.2**  **Technology readiness level**

S-97 "S-100 Product Specification Development Guide" adopts the concept of technology readiness level to evaluate the operational maturity of each S-100 product specificationobjectively. It is recommended to add technical readiness level to the Product Specification Metadata in this model referring to the specification.



**3.3.4 References**

It is recommended that S-98：S-100 Interoperability Specification and IALA G1088：Guidelines for S-200 Product Specifications and other documents be included in the references.

# 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)