Input paper: [1] VTS54-9.1.3

Input paper for the following Committee(s):			Purpose of paper:
□ ARM	□ ENG	□ PAP	**X** Input
□ DTEC	**X** VTS		□ Information

Agenda item[2]	9.1
Technical Domain / Task Number[2]	2.5.2
Author(s) / Submitter(s)	China Maritime Safety Administration

Proposals on the New Task of "Developing Technical Service Specifications for Digital Data Exchange between VTS and Other Entities - Primarily Ships"

1 SUMMARY

The VTS committee task register for 2023-2027 raises the task of developing technical service specifications for digital data exchange between VTS and other entities - primarily ships (item 2.5.2).

On the basis of comparing to the MS1: VTS (IMO NCSR 10-7-1) and work paper for VTS Traffic Clearance Service Specification_0.23, etc, this document proposes to improve task of developing technical service specifications for digital data exchange between VTS and other entities - primarily ships.

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 technical service specifications for digital data exchange between VTS and other entities - primarily ships.

1.2 Related documents

[1] IALA VTS53-12.1.2 New VTS Task Register 2023-2027（October 2022）;

1Input document number, to be assigned by the Committee Secretary

2Leave open if uncertain

[2] IMO NCSR 10-7-1 - Proposals for new and updated Maritime Services descriptions by IALA (December 2022)

[3] IALA Work paper for VTS Traffic Clearance Service Specification_0.23(March 2023)

[4] IALA VTS53-6.3.2 Development of technical service specifications for digital data exchange between VTS and other entities - primarily ships（September 2022 ）

[5] IALA VTS53-13.1 Report of VTS53(December 2022)

[6] IHO WWNWS14_2-1-1-4 Work paper for "Technical Specification for the Provision of Navigational Warnings to End-users"（ September 2022）

2 BACKGROUND

2.1 The VTS Task Plan 2023-2027 raises the task "Develop technical service specifications for digital data exchange between VTS and other entities - primarily ships (item 2.5.2)", plans to identify VTS Traffic Clearance Service and VTS area information, which are the "pioneer" services and VTS "exclusive,". At the VTS inter-sessional meetings held on 13-15 March 2023, the task group updated the Work paper for VTS Traffic Clearance Service Specification draft version from 0.07 to 0.23.

2.2 IALA submitted proposals for new and updated Maritime Services descriptions to IMO NCSR10 in December 2022, and listed ten initial suite of associated technical services are the ones listed in the description of Maritime Service 1 - Vessel Traffic Service.

3 PROPOSALS

3.1 Proposals on Improving VTS Traffic Clearance Service Specification

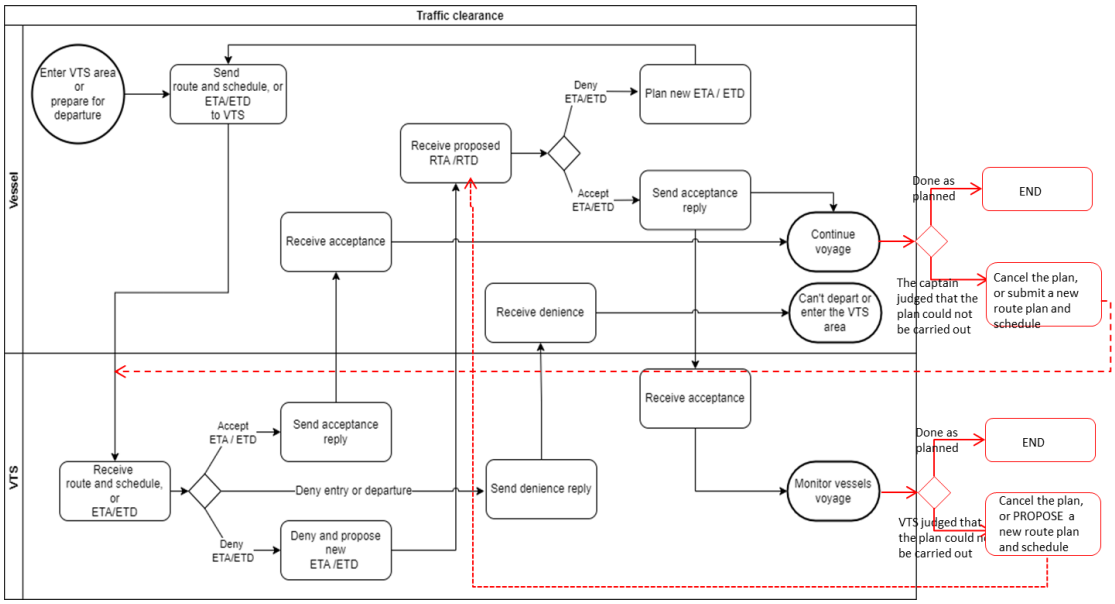
3.1.1 Recommendations for improving traffic clearance use cases and data flow

The Work paper for VTS Traffic Clearance Service Specification Draft 0.23 stated that, traffic clearance refers to the process of ensuring that there is sufficient space and time for vessels to navigate safely through an area. Considering:

1. Due to vessels' own reasons, such as main navigation equipment failure, traffic accidents, crew injuries, changes in navigation plan, etc., the confirmed navigation plan cannot be executed;
2. Changes in the navigation environment, such as extreme weather conditions, new obstacles to navigation, emergency actions, etc., result in the confirmed navigation plan being unable to be executed;

Therefore, it is recommended to add "Due to various reasons, if the vessel believes that it is unable to execute the navigation plan（route plan, with schedule） confirmed with VTS, it should promptly notify VTS and cancel or change the navigation plan after confirmation by VTS." To the 3.2 USE CASE section to replenish a traffic clearance cancellation or change process of the

VTS Traffic Clearance Service Specification Draft 0.23, and make corresponding modifications and improvements to the Traffic clearance data flow.



3.1.2 Recommendations for adding a new traffic clearance use case

The Work paper for VTS Traffic Clearance Service Specification Draft 0.23 put forward three scenarios (3.2 USE CASE section), which do not cover the "commencing a manoeuvre that may be detrimental to safe navigation" mentioned in section 3.1, such as anchoring in restricted waters, correcting compass, etc. we Proposed to add a new use case: commencing a manoeuvre that may be detrimental to safe navigation.

Use Case 4 - Commencing a manoeuvre that may be detrimental to safe navigation

1. The vessel wants to commence a manoeuvre that may be detrimental to safe navigation
2. The vessel sends route plan, with schedule through its system to the service and requests traffic clearance to commence a manoeuvre
3. If vessel's planned route and schedule is suitable, then VTS send acknowledgement
4. If vessel's planned route or schedule is not suitable, VTS sends new recommended schedule to the vessel through the service
5. The vessel acknowledges revised schedule and sends response to the VTS
6. New route plan and schedule is acknowledged by the VTS

3.1.3 Proposals on updating the relevant industry standards

3.41 “Relevant Industry Standard” of draft VTS Traffic Clearance service specification 0.23 mentioned a table of applicable industrial standards needs to be added soon.

By comparing with the latest work paper for “Technical Specification for the Provision of Navigational Warnings to End-users” （WWNWS14_2-1-1-4）in 2022 and the relevant annexes of this task proposal(IALA VTS53-6.3.2), a detailed table of relevant industry standards is proposed as follows:

Nr.	Standards	Version	Reference
[1]	IALA Guideline G1128	ED 1.4 December 2021	The Specification of E-navigation Technical Services
[2]	IALA Recommendation R1023	ED 1.0 June 2022	Maritime Resource Names
[3]	IALA Guideline G1143	ED 3.1 June 2021	Unique identifiers for maritime resources (MRN)
[4]	IALA Guideline G1157	ED 2.0 December 2022	Web Service Based S-100 Data Exchange
[5]	IALA Guideline G1161	ED 1.1 June 2021	Evaluation-of-Platforms-for-the-Provision-of-Maritime-Services
[6]	IHO Standard S-100	ED 5.0.0 December 2022	IHO Universal Hydrographic Data Model https://iho.int/uploads/user/pubs/standards/s-100/S-100_5.0.0_Final_Clean_Web.pdf
[7]	IEC 63173-2:2022	ED 1.0 May-2022	Maritime navigation and radiocommunication equipment and systems – Data interfaces – Part 2: Secure communication between ship and shore (SECOM)
[8]	IALA S-211	ED 1.0 January 2018	IALA Port Call Message Product Specification
[9]	IEC S-421	ED 1.0	Route Plan based on S-100 (IEC 63173)
[10]	IALA Guideline G1141	ED 2.2 January 2022	Operational Procedures for Delivering VTS
[11]	IALA Guideline G1089	ED 2.0 January 2022	Provision of a VTS
[12]	IALA Recommendation R0127	ED 3.2 January 2022	VTS Operations
[13]	IALA Recommendation R0145	ED 1.1 June 2011	The Inter-VTS Exchange Format Service (V-145)
[14]	IALA Guideline G1159	ED 2.0 December 2022	Ship Reporting from a Shore-based Perspective
[15]	IMO Compendium	Approved by FAL47 in October 2022	The IMO Compendium on Facilitation and Electronic Business
[16]	ISO/IEC 25010:2011	ED 1.0	Systems and software engineering — Systems and

Nr.	Standards	Version	Reference
		March 2011	software Quality Requirements and Evaluation (SQuaRE) — System and software quality models

3.2 Proposals on Adjusting the Development of VTS Pioneer Technical Service Specifications

IALA submitted proposals for new and updated Maritime Services descriptions to IMO NCSR10 in December 2022, and listed ten initial suite of associated technical services (IMO NCSR 10-7-1).
In addition to the "VTS Traffic Clearance Service" being developed by the task group, there are also voyage information service, route information service, slot management service, anchorage assignment service and AtoN information service to be standardized by IALA. It does not include the VTS Area Information Service which proposed in the new task "Developing technical service Specifications for VTS Data Interchange - priority to ship" (VTS53-6.3.2).
Considering that the new MS1:VTS maritime Service description has been silently approved and submitted to IMO NCSR 10 by IALA, and VTS area information service has some business overlap with the other five initial associated technical services of MS1:VTS Maritime Service, developing the pioneer technical service specification of VTS area information may lead to the adjustment of the other five ones proposed by IALA. The task group is recommended to take the five associated technical services into consideration, and adjust the development priority and content of VTS exclusive pioneer technical service specifications.

4 ACTION REQUESTED OF THE COMMITTEE

The Committee is requested to consider the proposals provided in this document and take actions as appropriate.