Input paper: VTS57-9.2.1

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

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

**□** DTEC **X** VTS **□** Information

Agenda item 9.2

Technical Domain / Task Number 2.6.1

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

Proposal on the Amendment of “G1111-1 Producing Requirements for The Core VTS System”

# summary

“G1111-1 Producing Requirements for The Core VTS System” is a guidance for the function and performance standards of the core VTS system. With the development of VTS, the VTS-MIS system has become an important component of VTS core system. To better exert the effectiveness of VTS-MIS system and promote the coordinated development of VTS in the world, the VTS authorities have reached an agreement on the formulation of a unified standard for the function and performance requirements of VTS-MIS system. The VTS 56 revised the relevant contents of "MIS" in G1111-1 and formed a working paper. The discussion and revision in this proposal is based on the working paper for discussion at the VTS 57.

## Purpose of the document

The purpose of this document is to:

* Present the revising ideas for the working paper of Task 2.6.1 of VTS 56 meeting.
* Provide a drafted revision to G1111-1 Producing Requirements for The Core VTS System.

## Related document

VTS51-7.3.4 Task register proposal 2022-2026-G1111-10 producing requirement for VTS-MIS systems

VTS51-7.3.4.1 Producing Requirement for VTS-MIS Systems (Draft Framework)

VTS52-7.3.4 Proposal for Producing Functional and Performance Requirements for Management Information System

VTS53-6.3.5 Proposal for the Development of an Independent G1111 Sub-guideline for VTS-MIS

PAP49-7.2.1 IALA Committee Work Programme 2023-2027

VTS54-9.1.2 Proposal on Updating G1111-1 to Include Guidance on VTS Management Information Systems.

VTS54-9.1.2.1 Annex\_G1111-1 Producing Requirements for Core VTS Systems and Equipment.

VTS55-9.2.1 Feedback on Suggestions for Revised Draft Guideline (Vts54-9.1.2.1) Of G1111-1 Producing Requirements for The Core VTS System

VTS56-9.2.1 Drafted Revision to G1111-1 Producing Requirements for The Core VTS System

# background

Since the VTS 51, China MSA has been committed to the formulation of VTS-MIS system standards, and has carried out plenty of work including task register, opinion collection, guideline drafting, and submitted a series of proposals related to it. The task "Consider Updating G1111-1 to Include Guidance on VTS Management Information Systems" bas been officially launched at the VTS 56. The participants took the draft guideline submitted by China MSA as a blueprint, and formed a working paper.

This document is based on the working paper of the VTS 56, combined with the opinions of the participating experts in cyber security, system redundancy and future VTS, improved the working paper and submitted to the VTS 57 for further consideration.

# REVISION IDEAS

## Improve the content on cyber security

Cyber security is a critical support for the smooth operation of VTS core system. IALA G1182 Cyber Security Specifics from an IALA Perspective provides guidance on mitigating cyber security risks in the IALA-domain by referencing existing standards, best practices, and other guidelines on IALA-specific topics. It is recommended to refer to the G1182 and supplement the content related to cyber security of the VTS core system in 5.5.3 DATA SECURITY AND CONFIDENTIALITY.

## Supplement content on system redundancy

System redundancy is not only a critical support to ensure business continuity management, but also an essential component of risk management in the VTS core system. Each subsystem of VTS core system should make system redundancy according to function and performance requirements. The working paper of the VTS 56 only considered system redundancy in modules related to sensors. It is recommended to supplement 5.5.7 System Redundancy under 5.5 Data Management Considerations to provide guidelines for system redundancy from the VTS core system.

## Considering the impact of future VTS

It is recommended that the Committee consider the application of VHF data exchange system (VDES)in future VTS. China notes that VDES was discussed at the NCSR 11. Considering that VDES is compatible with AIS, it could address current AIS congestion and some problems in security and data integrity of AIS, and support a wider range of E-NAV application.

It is recommended that the Committee consider the application of "voice recognition and location of ships" in future VTS. Traditional radio direction finder (RDF) has significant errors, especially when multiple ships are calling VTS simultaneously. RDF cannot provide accurate identification and location, which hinders the working efficiency of VTS personnel. AI technology can help achieve "voice recognition and location of ships", thereby reducing the workload of VTS personnel, especially in high traffic density areas, who can devote more attention to the management of ship anomalies.

It is recommended that the Committee consider the development and needs of MIS system in future VTS. In the future development of VTS, MIS will not only support VTS operators' daily decision-making and data management, but also serve as a key hub for information exchange and traffic management, to support traditional vessels, MASS, remote control centers (RCCS)and other stakeholders. It is recommended to supplement content related to data type, data analysis and data management in "2.3.2 Management Information System".

## Responding to the suggestions of the participating experts

At VTS 56, Chair of the VTS Committee and participating experts proposed revision suggestions to the working paper by annotations. This document responds to those suggestions and revises the working paper.

Details are provided in the Draft Guideline.

# references

1. Vessel Traffic Services Manual (Edition 8.3)
2. IMO Resolutions A.1158(32) GUIDELINES FOR VESSEL TRAFFIC SERVICES
3. G1111 Series Guidelines
4. R1024 Cyber security for the IALA-domain
5. G1182 Cyber security specifics from an IALA perspective

# Action requested of the Committee

The Committee is requested to consider the above proposals and take appropriate action.