**Input paper:** DTEC3-5.2.3.9

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

(Select as appropriate)

ARM  ENG  PAP  Input

DTEC VTS  Information

**Agenda item** 5.2

**Technical domain/ Task number** 6.3.11

**Author(s)/Submitter(s)** China MSA

Proposal On the Amendments to R0124 The AIS Service

# Summary

At DTEC1, it was proposed that a new guideline for VDES service and infrastructure is needed to integrate the contents of the Recommendation R0124. NSONESOFT drafted an initial index on the proposed contents of the guideline at DTEC2, and the members were requested to assist the drafting of the guideline. China has drafted a proposal on the amendments to R0124 for further consideration at DTEC3.

## Purpose of the document

The purpose of this document is to propose a working draft for the new guideline of VDES service and infrastructure, and request DTEC3 WG3 members to discuss about it.

## Related documents

[1] R0124 Ed2.2, The AIS Service, *December 2012*

[2] ITU-R M.2092-1, Technical characteristics for a VHF data exchange system in the VHF maritime mobile band, *February 2022*

[3] R1007 Ed1.1, The VHF Data Exchange System (VDES) for Shore Infrastructure, *June 2017*

[4] G1117 Ed3.0, VHF Data Exchange System (VDES) Overview, *December 2022*

# Background

At DTEC1, it was proposed that a new guideline for VDES service and infrastructure should be developed. The new guideline shall integrate and revise the contents of the Recommendation R0124.

At DTEC2, NSONESOFT drafted an initial index on the proposed contents of the guideline, and the members of the working group were requested to assist the drafting of the guideline.

At the 11st session of the IMO NCSR in June 2024, VDES has been recognized as shipborne radiocommunication equipment, and accordingly, VDES shore-based equipment needs to be matched to support the safety of ship navigation.

# Discussion

Figure 1 shows a typical VDES Service with end-users and providers of VDES Data.

Figure 1

1. The VDES Service Management (VDES-SM)

VDES-SM acts as a management entity for the whole of the VDES shore-based service which will in most cases comprise more than one VDES-LSS and VDES-PCU. It can respond to incoming commands from the Resource Coordination Unit (RCU). The VEDS-SM is capable of the following configuration operations:

* invokes, initializes, configures and terminates arbitrary VDES-LSS, VDES-PCU and RCU at runtime;
* determines the network communication relationship between a VDES-PCU and its associated LSS at runtime;
* determines the connectivity relationship between a VDES-LSS and its associated application at runtime;
* responds to commands entered from the RCU at runtime.

The VDES-SM manages the VDES shore-based services by controlling the data flow and configuring the different entities.

1. Resource Coordination Unit (RCU)

RCU focuses on dynamic management of VDES shore-based VDL resources, including service area management, physical channel management, logical channel management, in order to improve the utilization of VDL resources and avoid conflicts.

1. Interoperability Gateway (IG)

IG realizes interconnection and interoperability operation with VDES satellite services and other VDES shore-based services. The IG is capable of the following functions:

* authentication and authorization of inter-network users;
* query of inter-network mobile user location and service area;
* network protocol conversion and data transmission;
* network data security processing (firewall function).

# References

[1] R0124 Ed2.2, The AIS Service, *December 2012*

[2] ITU-R M.2092-1, Technical characteristics for a VHF data exchange system in the VHF maritime mobile band, *February 2022*

[3] R1007 Ed1.1, The VHF Data Exchange System (VDES) for Shore Infrastructure, *June 2017*

[4] G1117 Ed3.0, VHF Data Exchange System (VDES) Overview, *December 2022*

# Action requested of the Committee

The Committee is requested to consider the proposal and take actions as appropriate.