Input paper: DTEC4-6.2.0.13

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

**□** ARM **□** ENG **□** PAP X Input

X DTEC **□** VTS **□** Information

Agenda item 6.2

Technical Domain / Task Number 2 -

Author(s) / Submitter(s) Secretariat

Outputs from the WWA Seminar on VDES

# 1 Summary

IALA WWA, Singapore MPA and the Japan Coast Guard co-hosted the Seminar on VHF Data Exchange System on 17 February 2025 to address

* To share the progress and best practice,
* to encourage the investment and development of future maritime radionavigation and radio communication systems
* to contribute to discussions on the operational requirements of VDES services for future maritime radionavigation and radiocommunication systems
* to identify and facilitate discussion on the technical and operational challenges for the use of VDES for current and future maritime operations.

The technical programme was built as follow:

|  |  |  |
| --- | --- | --- |
| **Time** | **Activity** |  |
| 08:30 – 09:00 | Coffee and registration |  |
| 08:30 – 09:00 | Steering Committee Meet - Session Chairs & Rapporteurs |  |
| **09:00 – 10:00** | **Session 1 – Welcome and introductions** | **Chair – Carmel Cheng** |
| 09:00 – 09:05 | Opening remarks | Captain M. Segar – MPA |
| 09:05 – 09:10 | Welcome from IALA | Omar Erikson – IALA |
| 09:10 – 09:30 | Overview of VDES (Terrestrial and satellite) | Jan Safar – GRAD |
| 09:30 – 09:50 | VDES from IMO perspective | Hideki Noguchi – JCG |
| **09:50 – 10:50** | **Session 2 – Uses cases for VDES – Regional & International Perspectives** | **Chair – Jaime Alvarez** |
| 09:50 – 10:05 | VDES: Paving the Way for Smarter, Safer Maritime Navigation | Vince Tan – MPA |
| 10:05 – 10:20 | Use of VDES for safe maritime traffic | Koichi Yoshida - Sasakawa Peace Foundation |
| 10:20 – 10:35 | International perspective of VDES | Jillian Carson-Jackson - JCJ Consulting |
| **10:35– 10:45** | Session 2 Q&A |  |
| **10:45 – 11:00** | **Break** | |
| **11:00 - 12:30** | **Session 3 – Communication and navigation operational requirements** | **Chair – Mayumi Arita** |
| 11:00 – 11:15 | Industry view | Stefan Pielmeier – Albatros-Tech ApS |
| 11:15 – 11:30 | Evolution of the space segment | Magnus Nyberg – SAAB |
| 11:30 – 11:45 | Shore infrastructure for terrestrial VDES | Claire Na - All4Land |
| 11:45 – 12:00 | Demonstration of Satellite VDES for Maritime Search and Rescue | Terence See Shie Ping - A\*Star |
| **12:00 – 12:05** | Session 3 Q&A |  |
| **12:05 – 12:15** | Closing remarks | Rear Admiral Tsuguo Awai – JCG |

## 2 Executive summary

The seminar was attended by 187 delegates, representing 50 countries and 2 sister organizations. It featured presentations on relevant topics, with conclusions agreed upon the same day. The full report is annexed to this input paper titled DTEC4-6.2.0.13.1 Report on the Seminar on VDES.

The seminar resulted in the following remarks:

**VDES Overview and Functionality**

* VDES is a next-generation maritime digital radio communication system designed to overcome the limitations of AIS and enhance data exchange capabilities for e‑Navigation.
* It includes AIS functionality without degrading its performance and provides additional channels for Application-Specific Messages (ASM) and higher-capacity VHF Data Exchange (VDE).
* VDES integrates both terrestrial and satellite components to provide global coverage. It is ready for use, with successful testbeds demonstrating both terrestrial and satellite operations.
* VDES is one of several digital communication technologies supporting maritime data transfer.
* VDES can enhance AIS security by providing authentication, as referenced in G1117 and upcoming guidelines.

**VDES and GMDSS**

* VDES is not currently classified as GMDSS equipment.
* While GMDSS modernization has been completed, full digitalization remains outstanding.
* Future amendments to SOLAS and the Radio Regulations (RR) will be required to achieve full maritime radiocommunication digitalization.

**Integration and Regulatory Considerations**

* VDES is a publicly controlled system based on open standards, ensuring free access to public services without reliance on commercial providers.
* The role of VDES within emerging IP-based maritime communication needs to be clearly defined.
* Discussions are required on whether VDES communication equipment should be certified for shore infrastructure.
* The designation of a service platform operator and coordination of satellite data sharing among nations need to be determined.

**Development and Implementation**

* Timely reviews and decisions are necessary to finalize VDES guidelines.
* Increased participation is needed to develop VDES shore infrastructure guidelines.
* Administrations are encouraged to support inputs on VDES and SECOM/MMS at NCSR12

Attendees enjoyed an ice breaker reception on the first day.

# 3 Action requested of the Committee

The Committee is requested to note and consider the outcomes of the Seminar on VDES.