IALA RECOMMENDATION (NORMATIVE)

R1007
THE VHF DATA EXCHANGE SYSTEM (VDES) FOR SHORE INFRASTRUCTURE

Edition 2.0
June 2024

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DOCUMENT REVISION

Revisions to this document are to be noted in the table prior to the issue of a revised document.

Date	Details	Approval
16 June 2017	1st issue	Council 64
September 2020	Edition 1.1 Editorial corrections.	
June 2024	Edition 2.0 Overall update following the VDES development.	Council 80

THE COUNCIL

RECALLING:

1   The function of IALA with respect to Safety of Navigation, the efficiency of maritime transport and the protection of the environment.

2   Article 8 of the IALA Constitution regarding the authority, duties and functions of the Council.

3   The work of IALA in defining and implementing the Automatic Identification System (AIS).

4   the VHF Data Exchange System (VDES) includes functions for AIS, Application Specific Messages (ASM), and VHF data exchange (VDE).

NOTING that:

1   The World Radiocommunication Conference 2015 (WRC-15) allocated frequencies for VDE terrestrial (reception and transmission), ASM terrestrial (reception and transmission) and ASM satellite reception.

2   The World Radiocommunication Conference 2019 (WRC-19) allocated frequencies for the VDE satellite (reception and transmission).

3   IALA Guideline G1117 *VHF Data Exchange System (VDES) Overview* describes VDES and its future role in digital marine connectivity for safety of navigation.

4   IALA Guideline G1158 *VDES R-Mode* describes the VDES R-mode.

5   IALA Guideline G1181 *VDES VHF Data Link (VDL) Integrity Monitoring* provides an overview of the source of VDES VDL vulnerability and proposes methods to detect and mitigate the effects of invalid VDL transmissions.

6   ITU has developed Recommendation ITU-R M.2092 on *Technical characteristics for a VHF data exchange system in the VHF maritime mobile band*.

RECOGNIZING that:

1   the VDES is an emerging communications system which is being coordinated by IALA in consultation with the International Telecommunication Union (ITU), the International Maritime Organization (IMO) and the International Electrotechnical Commission (IEC),

2   the VDES has a wide range of applications,

3   it is desirable to continuously explore the use cases and applications in enabling maritime services, and

4   VDES R-Mode is a radio navigation system that is under development.

CONSIDERING the advice of the e-Navigation Committee, now the Digital Technologies Committee (DTEC), provided to the Council at its 64th Session,

ADOPTS Recommendation R1007, the VDES for Shore Infrastructure,

INVITES Members and marine aids to navigation authorities worldwide to implement the provisions of the Recommendation,

RECOMMENDS that IALA national members and other appropriate authorities provide Marine Aids to Navigation services:

1   Should establish a plan to upgrade existing AIS shore infrastructure to VDES shore infrastructure, thereby enhancing digital connectivity.

2   Should consider implementing VDES shore infrastructure in case there is no existing AIS shore infrastructure.

3   Should consider using existing shore infrastructure as much as possible for VDES R-Mode.

4   Should consider implementing VDES data integrity monitoring at the VDES link level.

5   Should consider that the expansion of VDES application scope requires coordination and resource sharing from multiple parties.

6   Should consider paying attention to network security issues.

REQUESTS the DTEC Committee or such other committee as the Council may direct to keep the Recommendation under review and to propose amendments as necessary.