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| IALA Recommendation  (Normative) |

R1007

The VHF Data Exchange System (VDES) for Shore Infrastructure

Edition 1.1

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

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| 16 June 2017 | 1st issue | Council session 64 |
| September 2020 | Edition 1.1 Editorial corrections. |  |
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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 the 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) and ASM terrestrial (reception and transmission) and ASM satellite reception.
2. The World Radiocommunication Conference 2019 (WRC-19) allocated frequencies for VDE satellite (reception and transmission).
3. IALA GuidelineG1117 *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 under development.

**CONSIDERING** the advice of the e-Navigation Committee provided to 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 providing 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 of 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 IALA DTEC Committee or such other committee as the Council may direct to keep the Recommendation under review and to propose amendments as necessary.