



PAP33-18.6

## IALA STANDARD

1060

DIGITAL COMMUNICATION TECHNOLOGIES

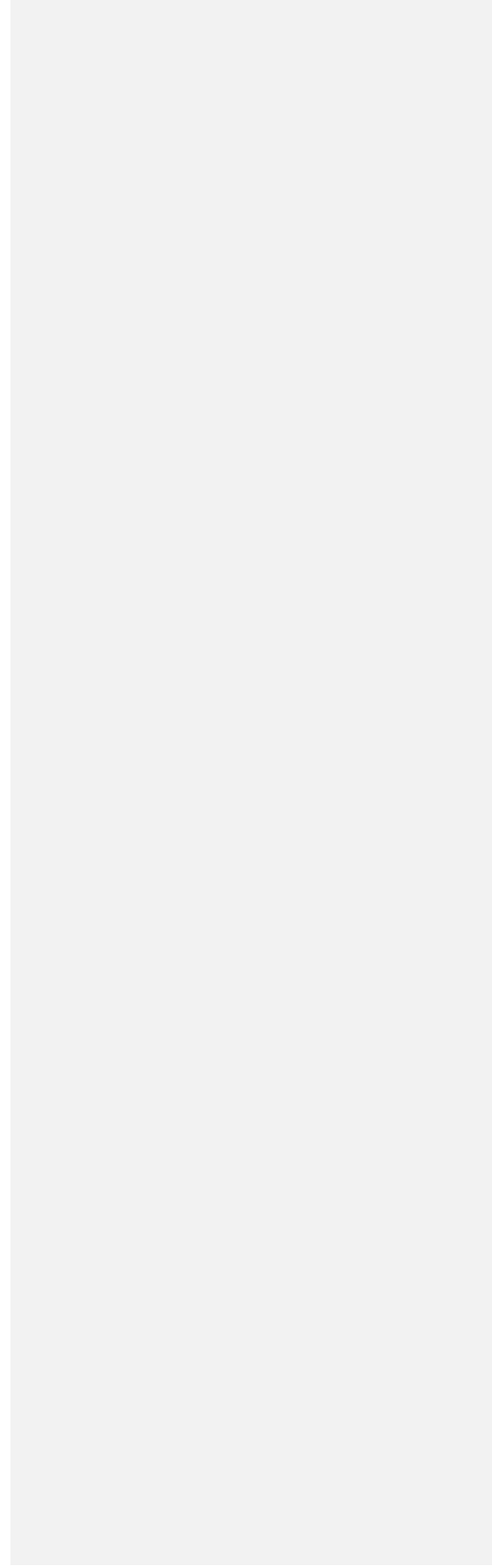
**Edition 1.0**

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International Association of Marine Aids to Navigation and Lighthouse Authorities  
Association Internationale de Signalisation Maritime

DRAFT



## THE GENERAL ASSEMBLY

**BEARING IN MIND** the provisions of the United Nations Convention on the Law of the Sea (UNCLOS) and the Convention on the Safety of Life at Sea (SOLAS)

**RECOGNIZING** that the aim of IALA is to foster the safe, economic and efficient movement of vessels, through improvement and harmonisation of aids to navigation world-wide,

**RECALLING** Article 7 of the IALA Constitution regarding the authority, duties and functions of the General Assembly,

**RECALLING ALSO** *[insert brief background text related to the Standard]*

**HAVING CONSIDERED** the advice of the Council provided to General Assembly at its 13th Session

**APPROVES** the IALA Standard 1060 Digital Communication Technologies, and

**INVITES** Members and Marine Aids to Navigation Authorities world-wide to undertake to implement the provisions of the Standard.

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## 1. INTRODUCTION

The International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) is a specialized organization for world-wide improvement and harmonization of Marine Aids to Navigation.

The term “Marine Aid to Navigation” referred to in the Constitution of IALA, should be understood to be device, system or service, external to vessels, designed and operated to enhance safe and efficient navigation of individual vessels and/or vessel traffic. For the purposes of IALA this definition includes Vessel Traffic Services.

IALA publishes Standards, Recommendations, and Guidelines, defined as follows.

Document	Definition
<b>IALA Standards</b>	IALA Standards form a framework, implementation of which by all coastal states will harmonize marine aids to navigation worldwide. IALA standards cover technology and services and are non-mandatory.
<b>IALA Recommendations</b>	IALA Recommendations specify what practices shall be carried out in order to comply with a Recommendation, and may be referenced, in full or in part, in an IALA Standard.
<b>IALA Guidelines</b>	IALA Guidelines describe how to implement practices normally specified in a Recommendation.

## 2. PURPOSE

The IALA Strategic Vision for the period 2014-2026, adopted by the General Assembly in 2014, includes the Goal to

“Ensure that aids to navigation systems and related services, including e-Navigation, Vessel Traffic Services, and emerging technologies, are harmonized through international cooperation and the provision of standards.”

IALA Standards are suitable for direct citation by States in the interest of an efficient and harmonised global network of Marine Aids to Navigation and services.

## 3. APPLICATION

This Standard is suitable for implementation by all Marine Aids to Navigation authorities.

## 4. SCOPE

IALA Standards may contain normative and informative provisions.

Normative provisions are those with which it is necessary to conform in order to claim compliance to the Standard.

Informative provisions are those which specify additional desirable practices but with which it is not necessary to conform in order to claim compliance to the Standard.

This Standard references normative and informative provisions, detailed in the listed IALA Recommendations, covering the following scope.

- Wide and Medium Bandwidth systems (AIS and VDES)
- Narrow Bandwidth systems (NAVDAT, MF beacons)



- Maritime Internet of Things (Intelligent sensors, AtoN monitoring)

## 5. REFERENCED DOCUMENTS

In this Standard, any reference to a Recommendation is to the most recent version approved by the IALA Council.

In this Standard the word 'shall' is used to indicate that a provision is normative and is to be followed in order to comply with the Standard. The word 'should' introduces informative provisions.

The following Recommendations are **normative** provisions, and **shall** be observed if compliance with this Standard is claimed.

Scope	Number	Title
Wide and Medium Bandwidth systems (AIS and VDES)	1060-R1007	VDES for shore infrastructure
	1060-R0123(A-123)	The Provision of the Shore Based Automatic Identification System (AIS)

**Commenté [JD1]:** PAP33-10.2 – New VDES Recommendation required

The following Recommendations are **informative** provisions and **should** be observed if compliance with this Standard is claimed.

Scope	Number	Title
Wide and Medium Bandwidth systems (AIS and VDES)	1060-R1008	The AIS Service
	A-124	
	A-124 APPENDIX 0	References, Glossary of terms and Abbreviations
	A-124 APPENDIX 1	Basic AIS Services, AIS Data Model and AIS Service specific MDEF sentences
	A-124 APPENDIX 3	Distribution model
	A-124 APPENDIX 4	Interaction and Data Flow Model of the AIS service
	A-124 APPENDIX 5	Interfacing model of the AIS Service
	A-124 APPENDICES 9/10/11	Functional Description of the AIS Service components (AIS-PCU, AIS-LSS & AIS-SM)
	A-124 APPENDIX 12	Co-location issues at AIS Physical Shore Stations (AIS-PSS) and on-site infrastructure considerations
	A-124 APPENDIX 14	FATDMA Planning and Operation of an AIS Service
	A-124 APPENDIX 16	DGNSS Broadcasts from an AIS Service
	A-124 APPENDIX 17	Channel Management by an AIS Service
	A-124 APPENDIX 18	VDL Load Management
	A-124 APPENDIX 19	Satellite AIS Considerations

**Commenté [JD2]:** PAP33-10.2 - Move recommendation information to new VDES Recommendation and remainder of information to a new Guideline



Scope	Number	Title
Data exchange systems (Traffic Information)	<del>E-142</del>	<del>Maritime Data Sharing 'IALA-NET'</del> <del>Not applicable MOVE TO I010</del>
Harmonised maritime connectivity framework (Common Marine Data Structure)	<del>R0140</del> <del>e-NAV 140</del>	The Architecture for Shore-based Infrastructure 'fit for e-Navigation'
	<del>R0148</del> <del>e-NAV 148</del>	The Need to Implement Regional e-Navigation Solutions Based on International Standards

**Commenté [JD3]:** PAP33-10.2 - Moved to IALA1010 – Risk Management

**Commenté [JD4]:** PAP31-10.2 - Suggests this could be changed to Informative

**Commenté [JD5]:** PAP31-10.2 - Suggests this could be changed to Informative

**Mis en forme :** Anglais (États-Unis)

## 6. SUPPLEMENTARY ELEMENTS

There are no supplementary elements to this Standard.

## 7. ADOPTION OF AND AMENDMENT OF STANDARDS

IALA Standards may be adopted or amended by a majority vote at a General Assembly of National members.

## 8. DOCUMENT HISTORY

Date	Details	Approval
2018-05-29	First issue	General Assembly Resolution, Incheon, Republic of Korea, May 2018.