



# **ENAV COMMITTEE**

## **WORKING GROUPS**

### **TERMS OF REFERENCE**

## Document Revision

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

Date	Page / Section Revised	Requirement for Revision
DD October 2019	New Document	Format consistent with other Committees and merged one document with revised previous ToR of WGs

## Table of Contents

1. Purpose of this Document .....	3
2. Introduction .....	3
3. Committee Domain .....	3
4. Committee Structure .....	4
5. Terms of Reference for the Digital Information System Working Group (WG1) .....	5
6. Terms of Reference for the Emerging Digital Technologies Working Group (WG2)) .....	6
7. Terms of Reference for the Digital Communication System Working Group (WG3).....	7

## 1. Purpose of this Document

The purpose of this document is to maintain a register of ENAV Committee Working Groups Terms of Reference for 2018-22.

## 2. Introduction

Clause 1.3 in the Policy and Procedures section of the IALA Basic Documents states that a Committee should carry out its work in accordance with the following Terms of Reference.

1. The purpose of a Committee is to create draft Documents, for example draft standards, recommendations, guidelines, and manuals.
2. These documents should be directed to meeting the Goals of the Strategic Vision, with effort concentrated on documents required by the content of the Priorities for the period 2018-2022 in the Strategic Vision.
3. The Committee should work to a Work Programme which has been agreed by the PAP (Policy Advisory Panel), and this Work Programme should clearly show the deliverables as the draft documents indicated in (1) and (2) above.
4. The Committee's progress with its work and achievement of its deliverables should be reported to PAP and Council at regular intervals.

The following sets out the particular terms of reference for the ENAV Committee for the work period 2018-2022.

## 3. Committee Domain

According to the work programme 2018-2022, ENAV Committee's domain of standards and work areas are as follows:

1. Standard 1050 Training and Certification
  - Training and assessment
  - Capacity building
2. Standard 1060 Digital Communication Technologies
  - Harmonized maritime connectivity framework (CMDS)
  - Maritime Internet of Things (Intelligent sensors, AtoN monitoring)
  - Wide/Medium bandwidth systems (AIS & VDES)
  - Narrow bandwidth systems (NAVDAT, MF beacons)
3. Standard 1070 Information Services
  - Data models and data encoding (IVEF, S-100, S-200, ASM)
  - Data exchange system (Traffic Information)
  - Technology, symbology and portrayal

#### 4. Committee Structure

The e-Navigation Information Services and Communications (ENAV) Committee is structured into three Working Groups to deliver the 2018 – 2022 work plan. They are:

- WG1 – Digital Information System;
- WG2 – Emerging Digital Technologies;
- WG3 – Digital Communication System;

## 5. Terms of Reference for the Digital Information System Working Group (WG1)

### Introduction

IMO's definition of e-navigation requires the harmonized exchange of information between ship and shore in a digital format as maritime services. Over the last e-navigation IALA sessions, operational requirements for maritime services have been identified. Although these requirements still need to be refined, specifications of associated technical services should be developed in order to implement these maritime services.

IMO e-navigation implementation strategy covers five different solutions (S1 to S5) while this working group focusing on S5. The fifth solution S5 makes sure that the shore-based information from ports, VTSs and other service providers to ships is harmonised and standardized around the world. This includes inter alia a set of maritime services providing information between ships and shore, common maritime data structure, Maritime Resource Name (MRN).

The harmonization of e-navigation technical services was previously carried out by the Harmonization Technical Working Group. Following the restructuring of the E-navigation Committee, the new Digital Information System Working Group is aimed to continue the harmonization of e-navigation and recommendations and guidelines for digital information systems for e-navigation and other purposes; and, further harmonize the efforts with other ENAV working groups as well as with all IALA Committees in order to meet the stakeholders' operational requirements.

### Terms of Reference

The Working Group, taking into account the work carried out by the IMO, IHO, the Harmonization Working Group and the ENAV Services Working Group of the previous e-Navigation Committee, the input papers submitted to the Committee and the comments made and decisions taken in plenary, is instructed to:

1. provide technical guidance on the description of "Maritime Services in the Context e-Navigation" (MS);
2. provide harmonization in the development of data models, technical services and platforms within IALA and international organizations in agile ways, and that includes Marine Resource Naming (MRN) for identity management as required;
3. develop draft IALA documents and specifications on the principles of common maritime data structure (CMDs), maritime services, e-navigation technical services and platforms;
4. review and maintain existing IALA documents on data structure, e-Navigation maritime services, technical services and platforms as well as MRN and update if necessary;
5. support the development of S-2xx Product Specifications which are relevant to the work of the committee and harmonized with other domain coordinating bodies;
6. provide guidance on cyber security within the implementation of Maritime Services (MS);
7. organize workshops, seminars in support on these matters, as necessary;
8. work with other Working Groups and liaise with other committees, when necessary; and
9. submit a written report to plenary at the end of each session.

## 6. Terms of Reference for the Emerging Digital Technologies Working Group (WG2)

### Introduction

The development of digital technologies such Maritime Autonomous Surface Ships (MASS) continues to be rapid and it impacts on almost all aspects of the maritime industry, including maritime communications, aids to navigation, and VTS. Digital technologies deal with the creation and practical use of digital or computerised information using devices, methods or systems. (Source <http://www.dictionary.com>)

Therefore, it is important to evaluate emerging digital technologies in consideration of user requirements and needs of IALA membership. The evaluation will be a preliminary, high level, desktop study. It will identify the key features and capabilities advantages/disadvantages, limitations and application to aids to navigation, VTS and services and systems within the context of e-navigation.

For this purpose, a new working group, named 'Emerging Digital Technologies' has been established for the 2018-22 period. The working group contributes to IALA's encouragement to adopt the use of new technologies.

The working group, where appropriate, will work closely with the other working groups of the ENAV Committee, and other Committees.

### Terms of Reference

Taking into account rapporteur reports, papers submitted to the Committee and presentations, comments, discussions and decisions of plenary, the Working Group is instructed to:

1. monitor the technological environment and identify possible technologies and systems to be evaluated;
2. invite representatives of candidate technologies to provide information to the working group;
3. develop draft IALA documents on evaluation methods for identifying possible technologies that contributes to the consideration of IALA members
4. evaluate selected emerging digital technologies at a high level, and identify their advantages, limitations and applicability in consideration of user requirements and needs of IALA membership.
5. provide internal advice on emerging digital technologies and inform other working groups and IALA Committees on matters of relevance to their work;
6. review existing IALA documents on marine digital communication systems and update if necessary;
7. organise workshops, seminars or other events on digital technologies, as necessary; and
8. submit a written report to the plenary at the end of each meeting.;

## 7. Terms of Reference for the Digital Communication System Working Group (WG3)

### Introduction

The use of digital communication is slowly being introduced in the maritime environment. This is due to various limitations such as the transmission range, data speeds and access costs. In the coming years a cost effective, redundant, fair and reasonable maritime digital communication system is expected. The Telecommunication Technical Working Group (WG3) of the previous e-Navigation Committee had significantly contributed to the development of maritime digital communication system such as VDES and will continue this work. The Digital Communication System Working Group takes over the work of the Telecommunication Technical Working Group and continues the development of maritime digital communication system.

### Terms of Reference

The Working Group, taking into account the work carried out by the Telecommunication Technical Working Group of the previous e-Navigation Committee, the input papers submitted to the Committee and the comments made and decisions taken in plenary, is instructed to:

1. develop draft IALA documents on maritime digital communication system such as VDES and NAVDAT from the technical view point;
2. contribute to the development of maritime digital communication system conducted by other international bodies, especially ITU, IMO, IEC and RTCM;
3. assist and coordinate the work of other Committees using digital communication technology such as AIS, AMRD, R-mode;
4. review existing IALA documents on marine digital communication system and update if necessary;
5. organize Workshops, Seminars and other events on maritime digital communication system if necessary;
6. submit a written report to the plenary at the end of each session and following all intersessional meetings that are held.