Terms of Reference

for the

Communications and Information Systems WG

**Introduction**

Communications was recognised as one of the three fundamental components required for e-Navigation to succeed (together with ENCs and redundant position-fixing). Since 1995, IALA has had an important role in the development and implementation of AIS. The work has been organized in different ways over time and since 2006 has been performed in a WG of the e-Navigation Committee. The integration of the AIS TWG in the e-Navigation Committee underlines the importance of AIS in the e-Navigation concept and allows the user needs to guide the further development of AIS. The work of the group is directed by the developing e-Navigation Strategy within IMO.

The e-Navigations Committe decided to change the title of the WWRCP and in December 2009 approved the document as the Maritime Radio Communications Plan (MRCP).Recognising that AIS is one of the most important communication systems in e-Navigation, the AIS and Communications groups have now been merged to form this new working group.**Scope**

Initial discussion concerned radio-communications, however this was later broadened to include information systems and now encompasses AIS. This extension will make close coordination with the other working groups, in particular Strategy & Operations and the Architecture TWG. Maritime Information Systems are to become part of the remit of WG1 and there will be a need for liaison on those matters.

**Objective**

The objective of the CIS WG is to support the e-Navigation Committee by studying existing and developing communication technologies, including AIS and assist in securing the necessary spectrum for e-Navigation and GMDSS Modernization. The IALA Maritime Radio Communications Plan (MRCP), will be modified as necessary, to consider new systems or technologies for e-Nav or maritime communications. In addition, removing any obsolete systems that are no longer being considered for e-Nav or are no longer used for maritime communications.

To contribute to the development of AIS as a component in the e-navigation concept and to produce the relevant documentation to support a successful implementation.

**Terms of Reference**

1. Study operational and technical requirements (to 2020+) for communications and information systems in e-Navigation (incl. GMDSS, Maritime Information Systems, ship to ship & shore, shore to shore & ship).
2. Identify radio communication services and consider spectrum management approaches (including the possible effect of spectrum pricing) and provide options for different scenarios.
3. Evaluate the potential development of communication channels within other frequency bands, including the IALA MF DGNSS beacon system and e-Loran.
4. Take account of the output of WG1 (Strategy & Operations), in particular the concepts: 'common maritime information data structure' and 'automated and standard reporting functions', including a consideration of legal and commercial restrictions when 'polling' information from ships.
5. Work on questions relating to spectrum requirements for AIS.
6. Work with the Architecture TWG on ship-shore and shore-shore radio link requirements and the proposed MIS WG on user-requirements for maritime information.
7. Take account of the developing e-Navigation Strategy within IMO and parallel studies, in particular those carried out for ICAO on future communications for aviation.
8. Prepare an action plan for obtaining international agreement on requirements, frequency assignments and technical characteristics.
9. Update, as necessary, the IALA Maritime Radio Communications Plan (MRCP) and submit for consideration by the e-NAV Committee.
10. Draw from that plan any submissions needed by national administrations to WRC-15 and WRC-18.
11. Liaison with IMO and ITU WP5B, as necessary, to share study information in support of eNav and GMDSS communications requirements.
12. Review and update the relevant IALA documentation on AIS, including adaption to the e-Navigation documentation terminology and structure.
13. Coordinate input to IMO, ITU, IEC and RTCM regarding AIS, taking into account the future roll of AIS in e-Navigation
14. Monitor and contribute to the development of AIS, including the next generation of AIS.
15. Monitor developments in the technical definition of AIS stations at IEC, satellite detection of AIS and terrestrial long range AIS.
16. Continuously update and publish the Technical Clarifications to ITU Technical Characteristics on AIS (ITU-R M.1371)

Monitor the use of AIS in Polar Regions (e.g. AIS AtoN)**Deliverables**

IALA Members to influence their national inputs to the anticipated WRC-15 agenda items for GMDSS Modernization and e-Navigation. Updates to the Maritime Radio Communication Plan and relevant AIS guidelines and recommendations.

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