

UNITED STATES OF AMERICA
DRAFT PRELIMINARY VIEWS FOR WRC-15

Agenda Item 1.16: to consider regulatory provisions and spectrum allocations to enable possible new Automatic Identification System (AIS) technology applications and possible new applications to improve maritime radiocommunication in accordance with **Resolution 360 (WRC-12)**

BACKGROUND: Automatic Identification System (AIS) is a maritime communication and safety of navigation system operating in the VHF band and is used for vessel collision avoidance as well as the delivery of information about specific details of the vessel. Further, consequential to the introduction of the AIS-SART for search and rescue operations, the AIS channels were added to Appendix 15 of the International Radio Regulations.

With increasing demand for maritime VHF data communications, AIS has become heavily used for maritime safety, maritime situational awareness and port security. As a result, overloading of AIS1 and AIS2 has created a need for additional AIS channels. International Maritime Organization (IMO) Resolution MSC 74(69) required that AIS, "...improve the safety of navigation by assisting in the efficient navigation of ships, protection of the environment, and operation of Vessel Traffic Services (VTS), by satisfying the following functional requirements: 1) in a ship-to-ship mode for collision avoidance; 2) as a means for littoral States to obtain information about a ship and its cargo; and 3) as a VTS tool, i.e. ship-to-shore (traffic management)". The International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) has advised in its Maritime Radio Communication Plan (MRCP) that additional AIS channels are required for ship-to-ship and ship-to-shore maritime safety information (MSI) and general data communications (i.e. Area Warnings, Meteorological and Hydrological Data, Channel Management of AIS, future VHF Digital Data Channels, and Ship-shore Data Exchange).

Although satellite detection of AIS on AIS 1 and AIS 2 was proven to be possible, its effectiveness was determined to be unacceptably limited where VDL loading is high. The need for a separate dedicated service on separate dedicated channels was confirmed by WRC-12 and two additional channels were designated. While this new designation solves the problem for satellite detection, AIS VDL loading remains a serious issue to an increasing degree in many parts of the world due to the proliferation of AIS applications, message types, services and equipment types plus the unanticipated increase in user volume. To solve this problem and protect the integrity of the AIS VDL, AIS subject matter experts in IALA are considering a revision to the AIS system which would move Application Specific Messages (ASM) to two additional AIS channels. WRC-12 acknowledged this concept in its revision of Appendix 18 and provided four candidate channels on an experimental basis for this evaluation.

There is a need for studies to address potential terrestrial and satellite communication systems, which can provide additional Distress and Safety communication links, in the remote GMDSS Sea Area A4.

The United States also notes the progress at the “Workshop on International Standardization of Next Generation AIS” (Tokyo, Japan 2012). That workshop recommended that the Next Generation AIS should be comprised of an integrated AIS + VDE (VHF Data Exchange) and that this new hybrid should be named VHF Data Exchange System (VDES).

U.S. VIEW: The United States supports studies to address potential terrestrial and satellite communication systems and also supports the completion of studies and the development of an international standard for the prospective new VDES.