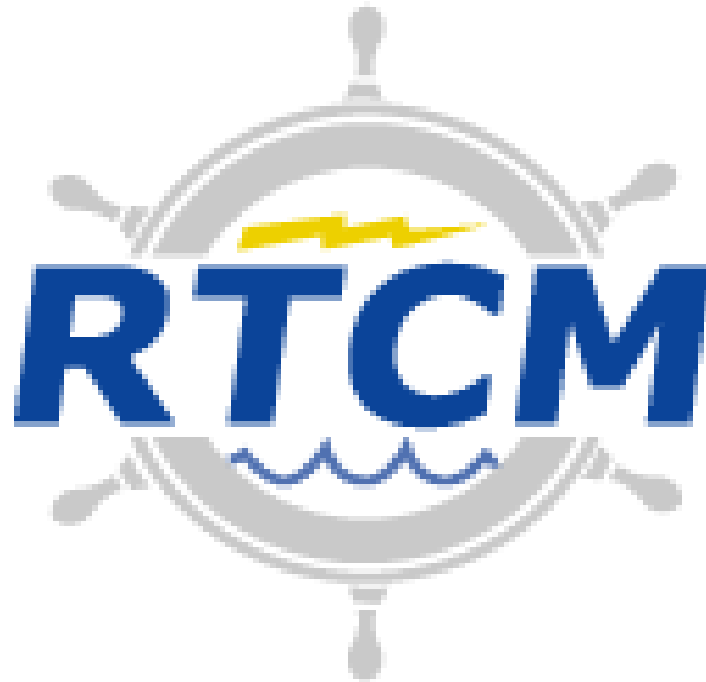


Radio Technical Commission for Maritime Services (RTCM)



IALA 2017

ITU and IEC

- ▶ International Telecommunications Union (ITU – www.itu.int)
 - UN Agency for information and communications technology
 - Coordinates the shared use of the radio spectrum (radars, Racons, AIS etc.) and satellite orbits through regional Transmission Regulatory Authorities
- ▶ International Electrotechnical Commission (IEC – www.iec.ch)
 - Sets international standards for all electrical and electronic technologies including telecommunications
 - Standardizes terminology and symbols
 - IALA Industrial Members must comply



RTCM Overview



- ▶ Established in 1947 as a U.S. government advisory body
- ▶ Currently an independent non-profit scientific, professional and educational organization
 - 501.3(c)
- ▶ Members are governmental and industry/public
- ▶ Headquartered in Arlington VA (Washington DC)

RTCM Main Activities



- ▶ RTCMs main area of activity is related to commercial shipping and navigation and radiocommunications systems for these vessels
- ▶ It also works in other areas when requested such as Differential GPS and Terrestrial Satellite Distress Alerting
- ▶ RTCMs main role is in developing standards, but it also plays a major part in national and international committees, information dissemination to its members and advising on legislation and regulatory changes

RTCM Special Committees (16)



- ▶ 101 on Digital Selective Calling (DSC)
 - ▶ 104 on Differential Global Navigation Satellite Systems (DGNSS)
 - ▶ 109 on Electronic Charting Technology
 - ▶ 110 on Emergency Beacons (EPIRBs and PLBs)
 - ▶ 112 on Ship Radar
 - ▶ 117 on Maritime VHF Interference
 - ▶ 119 on Maritime Survivor Locator Devices
 - ▶ 121 on Automatic Identification Systems (AIS) and Digital Messaging
 - ▶ 123 on Digital Message Services over Maritime Frequencies
 - ▶ 127 on Enhanced Loran (eLoran)
 - ▶ 128 on Satellite Emergency Notification Devices (SEND)
 - ▶ 129 on Portrayal of Nav-Related Information on Shipboard Displays
 - ▶ 130 on Electro-Optical Imaging Systems
 - ▶ 131 on Multi-system Shipborne Navigation Receivers
 - ▶ 132 on Electronic Visual Distress Signalling Devices
 - ▶ 133 on Data Exchange for Nav-Related Applications for Mobile Devices
- *ENAV Steering Comm. (B.Cairns, Chair)*
 - *Dormant*

RTCM Recently Published Standards



- ▶ RTCM 12800 Satellite Emergency Notification Device (SENDs) updated Amendment 2 in Sept 2016
- ▶ RTCM 12700 Minimum Performance Standards for (eLORAN) Receiving Equipment was published in Jan 2017
- ▶ RTCM 10900.7 Electronic Charting (ECS) Technology has completed review/voting process and will be released shortly.



Standards Under Development

- **RTCM 10403 Differential Global Navigation Satellite Systems** is under review for updating
- Additionally, SC104 creation (SBAS) Interoperability work group as directed by the RTCM Board of Directors

Standards under Development



- ▶ **RTCM 12100 Automatic Identification Systems (AIS) and Digital Messaging** standard is nearly ready for final submission.
 - Drafting guideline on Application Specific Messages (ASM)
 - 3 Application Specific Messages (ASM) messages currently compliant and under testing in USA.
 - Environmental (met/hydro) message
 - Area message
 - Waterway management message

Standards Under Development



- ▶ **RTCM 11201.0 Ship Radar** has been released to the committee members for vote and review.
 - Expect comment adjudication to take place at the RTCM Annual Assembly in May

- ▶ **RTCM EPIRB Standard 11000.4**
 - Proposals for the development of an RTCM SGB EPIRB standard
 - GPS Scenarios update
 - Spectracom Simulator Scenario Proposals

- ▶ **RTCM PLB Standard 11010.2**
 - Updated proposals for testing of PLBs on lifejackets
 - Operational and Regulatory Issues related to PLBs with AIS/DSC – Feedback from the FCC and USCG
 - Proposals for the development of an RTCM SGB PLB standard

Standards Under Development



- ▶ RTCM 13100 Multi-system Shipborne Navigation Receivers
 - Combines GPS, GLONASS, Galileo in one receiver
 - Provides for terrestrial system (eLoran) backup where available
 - To be replaced eventually by IMO & IEC standards
 - Developing draft guidance for the implementation of SBAS in Shipboard receivers
 - Developing the RTCM SC131 Adjacent Band Interference Mask for the Shipboard Multi-System GNSS receiver
 - Will be meeting with the SC 104 committee in Clearwater FL at the AAM Meeting 12 May

Standards Under Development



- ▶ **RTCM 13200 Electronic Visual Distress Signaling Devices**
 - Additional testing will occur in June of 2017 to look at additional color options
 - Manufacturer proposed additional color testing
 - Clarifying the distance requirements for a daytime eVDSD



Standards Under Development

- ▶ SC 133 Data Exchange for Navigation–
Related Applications for Mobile Devices
 - “Smart Phone” applications –
 - Provide AIS–like information for small vessels
(but not for navigation due to latency)
 - Provide Maritime Safety Information
 - Other value–added information
 - Will be presenting update of the draft development
at the RTCM AAM in May
 - Main issues were whether the server requirements were
adequately addressed (specifically security)



RTCM makes a difference
your contributions and inputs do this

Thank you

For further information on RTCM and membership visit

www.rtcn.org

or register for RTCM Annual Assembly in Clearwater FL

7-12 May

<http://www.rtcn.org/annual-meeting.html>