

## NATIONAL GMDSS TASK FORCE

### Newsletter and Summary Record of 5 January 2017 Meeting

1. **The Task Force Meeting.** This Newsletter reports on the recent meeting of the Global Maritime Distress and Safety System (GMDSS) Task Force sponsored by the U.S. Coast Guard and dedicated to monitoring the success and shortcomings of the GMDSS. The Task Force is also active in current efforts to modernize the GMDSS and monitors related developments in maritime radio and electronic navigation (e-navigation). The Task Force advocates voluntary use of radio safety equipment by all vessels and makes recommendations to government authorities to improve safety at sea regulations for vessels subject to those regulations.
2. **Task Force membership.** Membership is open to individuals associated with commercial vessel operations, recreational vessel interests, training institutions, service agents, manufacturers, government authorities and any interested person or organization and there is no fee for participation. New members are welcome, to join, send your name, organization (if any), email address, and telephone number (optional) to [gmdss@comcast.net](mailto:gmdss@comcast.net). Members who are unable to attend Task Force meetings are invited to participate by email and to connect with Task Force meetings by conference call. This Newsletter goes out to about 5000 members after each quarterly meeting. The Task Force also maintains a website at: <https://www.navcen.uscg.mil/?pageName=MaritimeTelecomms> (click GMDSS/TF)
3. **The summary record.** This record of the meeting is provided for information and will be posted on the Task Force portion of the Coast Guard web site. The GMDSS Task Force met on 5 January 2017 at the RTCM Headquarters in Arlington, Virginia
4. **Distribution of Information Papers:** The following Papers of interest were distributed:
  - NSBC's Public Safety Booklet "Saved By the Beacon"
  - USCG Letter of 29 Dec. 2016 Denying Petition on Small Passenger Vessels
  - Inmarsat Maritime Safety Systems Flyer
  - Hersey 9/26 Email describing new ITU numbering scheme for VHF channel
  - FCC Notice DA 16-1423 inviting comments on Kongsberg Waiver Request
  - FCC Further NPRM of 30 Dec 2016 on Accounting Authorities
  - NTSB VTS Safety Recommendations to the Coast Guard
  - Cospas-Sarsat Letter of 20 Dec. Projecting MEOSAR Enhancements
5. **The Coast Guard Reports:** Russ Levin reported with the following highlights:
  - a. **Status of the Task Force Petition to Upgrade Radio Safety Equipment on Small Passenger Vessels.** The Coast Guard letter dated 29 December 2016 was distributed at the meeting and will be placed on the web site. The Coast Guard indicated that after extensive evaluation of casualties they were unable to find any that supported the Task Force recommendations for change. For this reason our Petition was denied. This is not too surprising since many of the Task Force recommendations were based on current best practices and to

relieve these vessels of the need to watch 2 MHz channels which the Coast Guard no longer guards.

**b. The Task Force Petition to Require Emergency Beacons on Recreational Vessels Offshore.** There were no new developments according to the report from the Office of Boating Safety at this meeting. This issue has been pending for several years now and it is difficult to expect many new regulations early in a new Administration until budget uncertainties have been resolved.

**c. NTSB Study of the Effectiveness of Coast Guard VTS Operations Produces Many Recommendations.** The National Transportation Safety Board (NTSB) announced completion of a comprehensive study of Coast Guard Vessel Traffic System (VTS) operations. The NTSB analyzed collisions, groundings and allisions with bridges and piers over the period 2010-2014 and studied VTS operations to see if improvements could be recommended. The study resulted in numerous recommendations to the Coast Guard, a few to the Pilots and one the RTCM. The study is NTSB #SS1601 (<https://www.nts.gov/safety/safety-studies/Pages/SafetyStudies.aspx>) dated 13 September 2016. We plan to have an in depth briefing at the next meeting.

**d. ITU WARC 12 and 15 Requires New Four Digit Channel Numbers for Simplex Use of Duplex VHF Channels.** The new numbering system is displayed on a new posting on the Coast Guard website (<http://www.navcen.uscg.gov/?pageName=mtVhf>). The Coast Guard has requested the assistance of the NMEA and the Task Force to help in understanding when and how manufacturers implement this change and help in preparing users for this four digit channel numbering change.

**e. COSPAS-SARSAT Letter of 20 December 2016 Projects MEOSAR Operational Enhancements.** In a letter dated 20 December 2016 to 'stakeholders', COSPAS-SARSAT noted that the continuing development of the MEOSAR system was demonstrating quantifiable benefits and invited participating agencies to develop ground systems needed before Full Operational Capability can be declared. The LEOSAR and GEOSAR components remain active and in the long term the GEOSAR component is envisioned as remaining complementary to the LEOSAR system.

**f. MMSI Problems and suggested solutions.** At this meeting there was a continued discussion of the desire to modify the check list for voluntary inspections with the intent of starting a discussion between the inspector and the boat operator regarding such safety features as EPIRBs and PLBs and whether the vessel had a properly registered VHF-DSC radio. The Office of Boating Safety produces that form and is agreeable to working with the Task Force to add some of those items with an explanation that they would not be added merely to record data such as MMSI numbers but with the intent to have a discussion of the proper registration procedures.

**g. U.S. input paper to IMO-NCSR planned to Enable AIS Homing on EPIRBs.** The U.S. intends to submit a paper to the next NCSR Subcommittee meeting to propose accepting AIS as an alternative homing signal for EPIRBs. This action is based on earlier evaluation of the AIS SART as compared to the Radar SART. It is apparent that as an EPIRB homing signal, AIS

would significantly outperform VHF-AM homing on 121.5 MHz.

**6. The FCC Reports:** Ghassan Khalek reported with the following highlights:

**a. FCC Second Further NPRM of 30 December 2016 Proposing that FCC No Longer Perform International Accounting Authority Role for U.S.** Ghassan noted that the concept of International Accounting Authorities was largely rendered moot by the disappearance of Marine Operators who used to place phone calls on VHF/MF & HF referred to as Public Correspondence. In today's world, most of such activity is by cell phone for which payment is managed by the service providers. A major exception is Inmarsat-C terminals since in most cases there has not been a contract with Inmarsat for payment of charges for transmissions. Operators who use their terminals for chargeable traffic other than receipt of SafetyNET broadcasts or LRIT participation should make sure that payment is arranged, otherwise they might find their terminal barred by Inmarsat or non-payment of charges. The comment period ends 14 March 2017 and the issue will be explored further at the next meeting of the Task Force.

**b. FCC Public Notice DA 16-1423 of 21 December 2016 Seeks Comment on a Waiver Request by Kongsberg Seatex to Permit Certification and Use of Maritime Broadband Radio (MBR).** The MBR is a real-time phased array digital radio that operates in the 5 GHz band and offers high speed reliable data transfer between vessels and structures at sea. Comments are due 20 January 2017 and reply comments 3 February 2017.

**c. Progress on the RTCM Petition to Update the FCC Rules.** This very sizeable Petition would not only update the Rules but would reformat them in a more logical manner and incorporate all references to standards which have been approved. The Petition was put out for Public Comment that closed 31 May 2016. The public responses have been generally positive and early action is anticipated. More recently it was reported that several sections had been adopted. **[get more data here]**

**d. Action on the Task Force Petition regarding Small Passenger Vessels.** The FCC plans to integrate the Small Passenger Vessel recommendations with the larger RTCM Petition now being considered.

**7. Reports and Issues, Recreational Vessel Group:** David Kennedy moderated the discussion on Recreational Vessels with the following highlights:

**a. Rachel Johnson of the National Safe Boating Council Distributed Copies of their New Brochure "Saved By the Beacon".** Rachel noted that the Brochure had been funded by a Grant from the Coast Guard's Boating Safety Office and that copies were available on request including bulk quantities available to organizations for distribution to their members. She acknowledged assistance by the Task Force's Gordy Garrett who culled Rescue Operations to select examples of saves due to beacon availability and cases where availability of a beacon would have made the difference between success and failure. See the NSBC website to order copies ([www.safeboatingcouncil.org](http://www.safeboatingcouncil.org)).

**b. Management of MMSI Numbers Being Assigned by Agents:** The FCC and the Coast Guard have entered into Memoranda of Understanding (MOU) with several private sector agencies to issue MMSIs to vessels not requiring a Station License. Those MOUs are being revised but the new format has still not been accepted by one or more of the designated agents. These assignment agents are also known as Licensed By Rule (LBR) agents. The Power Squadrons reported that they would soon need a new block of MMSI numbers.

**8. Reports and Issues of the Service Agents and Manufacturers Group:** Hugh Lupo moderated the discussion with the following highlights

**a. IMEA “One Net” Standard nearly ready for release.** Hugh reported that Beta testing of the standard is underway and likely to take about a year to complete.

**b. IMEA has strong Interest in building a Master Website for MMSI Numbers:** The NMEA and the IMEA are quite interested in developing a master on-line database of all U.S. issued MMSI Numbers. The current proposal is to have the initiative sponsored by the International Marine Electronics Alliance (IMEA) an international affiliate of the NMEA. If grant funding for the project can be obtained, it could be operational as early as 2017. While the initial goal was to create a database of U.S. issued MMSI numbers, the IMEA may wish to expand the goal to an international database. This would provide a source for MMSI numbers assigned by LBR agencies that are currently only available to Coast Guard personnel.

**c. Potential Interference between Digital and Magnetron Radars.** This issue originated with a report from Germany at the NCSR-2 IMO conference. The Coast Guard has contracted for a study but results are not expected for some time. So far there have been no reports of actual interference between these different radar types and Hugh reported that he knew of no case of interference between the two types of radar if they had been properly installed.

**9. Reports and Issues of the Commercial Vessel Task Group.** Rich Beattie reported with the following highlights:

**a. Task Force Petition to the Coast Guard and the FCC relative to Safety Equipment on Small Passenger Vessels.** As noted in paragraph 5.a. above, the Coast Guard has denied their portion of the Petition and as noted in paragraph 6.d. above, the FCC plans to consider their portion as part of the larger RTCM Petition. We remain cautiously optimistic that most of our petition on FCC items will be approved. With respect to an earlier commitment to revise Task Force recommendations to the Coast Guard for towing vessels and fishing vessels, it is now considered that the Coast Guard is less likely to be receptive to items which were not accepted for small passenger vessels and the Task Force has accordingly decided to delay any further recommendations for towing vessels and fishing vessels at this time.

**b. Modified Check Lists to Include MMSI Registrations for GMDSS Inspections.** This item has been accomplished with respect to formal GMDSS Inspections for U.S. SOLAS ships. The Task Force will want to review adding this item to dockside examinations for commercial fishing vessels. With respect to voluntary safety inspections conducted on recreational vessels by the Coast Guard Auxiliary and the U.S. Power Squadrons, see paragraph

5.f. above regarding working with the Coast Guard Office of Boating Safety to revise their official form.

**10. Reports and Issues of the Training Task Group.** Kurt Anderson's Training Group is proceeding with plans to review the Question Pools for GMDSS Operator exams and they welcome input by all GMDSS Training Personnel. The Task Force is inviting the Coast Guard and the FCC to review current GMDSS training criteria in light of recent revisions to the STCW treaty to ensure that the U.S. is fully compliant with international standards and whether there is scope for tightening requirements to ensure better competency among GMDSS Operators and Maintainers.

**11. GMDSS Modernization.** Bob Markle, Chairman of the GMDSS Modernization Correspondence Group reported with the following highlights:

**a. Change in IMO Rules Delays Coming Into Force Until 2024 at Earliest.** The IMO's new Rules require a four-year cycle from final approval to coming into force. This means that if GMDSS Modernization is approved by 2020 which still seems achievable, it will not come into force until 2024.

**b. Revision of IMO Resolution A.1001 Setting Requirements for Satellite Services in the GMDSS.** This Resolution must be revised to address problems found during reviews of Thuraya and Iridium as GMDSS providers. A first draft of the revised Resolution is scheduled for 2018 with approval in 2019.

**c. NAVDAT as a New Program Needs Testing and Demonstration.** It currently appears that draft standards could be developed by 2020 that could lead to approval in 2021.

**12. Update on the Iridium System was Provided by Larry Solomon with the Following Highlights:**

**a. General System Specifications.** There are 66 satellites in 6 north-south polar planes. The satellites are supported by 8 Teleports with 4 Gateways, one of which is government. The next generation satellites are now being launched.

**b. Maritime Users:** There are currently about 50,000 maritime users including 10,000 SOLAS ships and many small commercial and recreational vessels.

**c. Safety and Distress Services.** Iridium has applied for acceptance as a GMDSS service provider and is on course to be approved by 2018 and commence full GMDSS participation by 2020. Iridium already provides safety services for its subscribers and is an approved provider of LRIT and SSAS services.

**13. The RTCM Report:** RTCM President Kate Duffy provided the following updates on the continuing work of the RTCM Special Committees.

**a. RTCM SC-101 on GPS in VHF-DSC Handhelds.** The Committee has completed an edition of its standard on GPS in VHF-DSC handhelds. Incorporation in the FCC regulations is awaited.

**b. RTCM SC-104 on Differential Global Navigation Satellite Systems (GNSS).** The Committee will meet in Monterey, California on February 2 and 3, 2017. The committee met in Portland Oregon in September 2016 to discuss SBAS (satellite-based augmentation system) in the maritime environment, BeiDou Status and Issues, SSR (State Spaces Representation) message analysis, RINEX Working Group Status. It was noted for that many studies have been performed on the potential use of SBAS in the maritime domain. Studies and trials demonstrated that SBAS performance is largely compliant with IMO Res. 1046 requirements in terms of accuracy, system integrity warnings, and continuity for all the navigation phases therein that have been identified. GSA with ESSP are planning to put in place a maritime SBAS service in Europe. A standard needs to be developed to ensure and promote a proper and safe use of SBAS by the maritime applications.

**c. RTCM SC-109 on Electronic Charting Technology.** The new standard is out for review and votes are due by 28 February 2017.

**d. RTCM SC-110 on Emergency Beacons.** Current work is on beacons that will be optimized for the new Second Generation MEOSAR Satellite System. Existing beacons will also work with the new satellite system. A new standard is being developed to allow homing on both 121.5 MHz and AIS in the same EPIRB. A new PLB standard has been approved which includes integral GNSS. This is not expected to be a problem because virtually all PLBs on the market already include GNSS receivers. The Committee will meet again at RTCM on 23 February 2017.

**e. RTCM SC-112 on Marine Radar Standards.** This Committee is developing language for this and other standards to require the use of “NMEA Network” messages, worded in such a way that NMEA OneNet can be used when it is ready along with NMEA 2000 and NMEA 0183. The new standard is out for review and votes are due 28 February 2017.

**f. RTCM SC-119 on Maritime Survivor Locating Devices (MSLD).** This Committee amended the man overboard standard to accept either closed or open loop networks. The Committee voted approval prior to the 2015 RTCM Assembly and the amendment is now published.

**g. RTCM SC-121 on Automatic Identification Systems (AIS) and Digital Messaging.** This Committee has completed the standard that establishes the process for developing Application Specific Messages (ASM). The new standard is expected to be out for Committee vote soon.

**h. RTCM SC-123 on Digital Small Messaging Services on Maritime Frequencies.** In response to an RTCM petition, the FCC has adopted RTCM Standard 12301.1 for transmitting data on VHF channels. The Committee may expand its work to include data messaging on MF and HF channels as well as Encrypted AIS (EAIS).

**i. RTCM SC-127 on E-Loran.** This Committee is developing an eLoran standard in connection with the eLoran demonstration project that took place in the United Kingdom under the General Lighthouse Authorities. The RTCM and the GMDSS Task Force commented on the DOT Notice seeking comments on e-Loran as a back up for GPS that closed on 22 May 2015. SC-127 met again during the 2016 RTCM Assembly. The latest version of SC-127 MPS V2.09 was sent out to RTCM members for vote and has been approved.

**j. RTCM SC-128 on Satellite Emergency Notification Devices (SEND).** This Committee was chartered at the request of the Coast Guard and the ProTECTS Alliance to develop performance standards for emergency notification systems using private satellite systems such as SPOT and InReach. The Committee has completed and approved a clarifying amendment to this standard. The ProTECTS Alliance was sponsored and chaired by Iridium which supported development of the standard. The ProTECTS Alliance was effectively absorbed by SC128, and Iridium subsequently opposed the mandatory adoption of the RTCM standard by the FCC. The FCC has now prohibited the use of the SEND acronym for devices that do not meet the RTCM standard, but the Commission has not made the use of the standard mandatory.

**k. RTCM SC-129 on Portrayal of Nav-Related Information on Shipboard Displays.** This Committee has completed a first draft of the portrayal standard but the issues are very complex. Additional input will likely be required from SC-112. SC-129 met again during the 2016 RTCM Assembly.

**l. RTCM SC-130 on Electro-Optical Imaging Systems (EOIS).** The work of this Committee deals primarily with night vision systems but the Committee work has been suspended pending industry resources to support it.

**m. RTCM SC-131 on Multi System Shipborne Navigation Receivers.** This new Special Committee has been approved by the RTCM Board to develop a standard incorporating space based and terrestrial navigation systems, and to possibly include inertial systems as well. The standard will include provisions for resistance to interference, spoofing, and jamming. In cooperation with IALA, RTCM has been developing an IMO performance standard and will begin work on an IEC technical standard. The SC-131 meeting scheduled for 13 December 2016 was delayed.

**n. RTCM SC-132 on Electronic Visual Distress Signaling Devices.** SC132 met with 15 members on 1 November to discuss the way forward in resolution of comments on the committee draft standard. While the draft standard didn't pass on the first vote last August, valid recommendations for improvement are being followed-up. A meeting at Coast Guard Headquarters on October 5th, with USCG stakeholders, confirmed USCG support for consideration of modified signal characteristics which will be assessed in partnership with the Coast Guard RDT&E Center to address manufacturing concerns for LED colors, power/signal duration, and an optimized light intensity test procedure. The next meeting was scheduled for January 10, 2017.

**o. RTCM SC-133 on Data Exchange for Navigation-Related Applications for Mobile Devices.** SC-133 met at RTCM 11 February 2016 and there was a presentation on their new standard during the 2016 RTCM Assembly. That standard is presently out for vote.

**p. Planning for the RTCM 2017 Assembly.** As noted in the following Task Force meeting notice, The RTCM has agreed to return to Clearwater Beach, Florida 7-12 May 2017. The Task Force hosted a planning session for the next Assembly following the Task Force meeting on January 5<sup>th</sup>. Task Force members who wish to participate in the Program or who have suggestions for topics to be presented should contact RTCM President, Kate Duffy ([kduffy@rtcm.org](mailto:kduffy@rtcm.org)) or Jack Fuechsel ([gmdss@comcast.net](mailto:gmdss@comcast.net)).

**14. Next Meeting of the GMDSS Task Force:** The next Task Force meeting will be held on Thursday 11 May 2017 at the Duval Conference Center in Clearwater Beach, Florida during the Annual Assembly of the RTCM (7-12 May 2017). The follow-on meeting will be held at the RTCM Headquarters in Arlington, Virginia on Thursday, 27 July 2017 (to be confirmed).

#### **GMDSS TASK FORCE CONTINUING WORK LIST**

5 January 2017

1. Monitor FCC continuing action to update GMDSS Rules (TF)
2. Recommend actions to reduce false alerts in GMDSS systems (TF)
3. Monitor Coast Guard Port State GMDSS inspection program (TF)
4. Monitor MSI broadcasting programs for compliance with GMDSS Standards (TF)
5. Review GMDSS Internet Web Sites and update Task Force portion of USCG site (TF)
6. Support SOLAS Working Group planning for IMO NAVCOMSAR meetings (TF)
7. Advocate Canadian coordination to extend GMDSS services to the Great Lakes (TF)
8. Advocate voluntary carriage of VHF and EPIRB/PLBs by all vessels offshore (TF)
9. Advocate overhaul of FCC policy and practice on MMSI assignments (TF)
10. Monitor non-GMDSS systems: AIS, LRIT, SSAS, VDR, VMS, & E-Navigation (TF)
11. Recommend updates for Coast Guard NVIC on GMDSS Requirements (TF)
12. Recommend means to facilitate Distress Alerts by Cell Phone & Internet (TF)
13. Advocate GNSS for U.S. EPIRB and PLB Standards (TF)
14. Advocate mandatory Distress Beacons on R/V more than 3 miles offshore (TF)
15. Advocate use of the Alaska AIS Monitor Network for VHF Distress Guard (TF)
16. Monitor Developments in Cybersecurity and advise membership (TF)
17. Review GMDSS concepts and make modernization recommendations (MOD)
18. Advocate intership calling on HF GMDSS channels (CV)
19. Recommend Safety Radio and VMS Requirements for Small Fishing Vessels (CV)
20. Recommend Safety Radio & Navigation Requirements for Towing Vessels (CV)
21. Recommend Safety Radio & Nav. Outfit for Small Passenger Vessels (CV)
22. Advocate applications for new MF/HF Digital Communications Service (CV)
23. Advocate voluntary training programs for users of GMDSS systems (RV)
24. Encourage GMDSS handbooks and Internet and video training aids (RV)
25. Encourage users of VHF-DSC to Register for MMSI and connect GPS (RV)

26. Advocate FCC let R/Vs retain existing MMSI when applying for Station Lic. (RV)
27. Encourage Mfgs. to upgrade GMDSS explanations in equipment manuals (SA)
28. Recommend proper interconnection of GPS receivers with DSC Radios (SA)
29. Advocate better FCC & USCG management of annual GMDSS inspections (SA)
30. Maintain Inspection Guidelines and Check Lists for selected vessel types (SA)
31. Recommend Certification Path For GMDSS Maintainer (SA) and (TR)
32. Maintain GMDSS Question Pools for FCC and Coast Guard Examinations (TR)
33. Advocate 5 Year USCG Recertification Training of GMDSS Operators (TR)

Key to cognizant groups:

- (TF) Task Force
- (CV) Commercial Vessel Task Group
- (RV) Recreational Vessel Task Group
- (SA) Service Agents and Manufacturers Task Group
- (TR) Training Task Group
- (MOD) Modernization Task Group

**Please refer questions and proposals to Captain Jack Fuechsel at 703-527-0484 or [gmdss@comcast.net](mailto:gmdss@comcast.net). If you have an Internet server with spam filters, please authorize receipt of messages from [gmdss@comcast.net](mailto:gmdss@comcast.net)**

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