

# NATIONAL GMDSS TASK FORCE

## Newsletter and Summary Record of 11 May 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 11 May 2017 at the Duval Conference Center in Clearwater Beach, Florida during the RTCM Annual Assembly.

4. **Distribution of Information Papers:** The following Papers of interest were distributed:

13<sup>th</sup> District MSIB 01-17 on GMDSS guidance to commercial F/V  
Coast Guard Maritime Blog on Vessel Identification Verification Service  
Task Force letter of 13 January 2017 supporting IMEA Grant Application

5. **The Coast Guard Reports:** Russ Levin and others reported with the following highlights:

**a. MMSI Management and Assignment Policy Issues.** Joe Hersey moderated this discussion noting that the pending changes to the FCC's Part 80 included a number of improvements in MMSI management. Since the failure to properly register for an MMSI number is greatest among recreational vessels, the Task Force is working with the Coast Guard Office of Boating Safety to modify the latter's check list for voluntary inspections. The intent is not to collect more data but to open a dialog between the inspector and boat operators on the importance of following proper registration procedures and the need to connect GPS receivers.

Another Task Force initiative is to enable boat owners to change MMSI numbers more readily by encouraging manufacturers to make it easier for a radio owner to get a code to enable

the change without sending in the radio. George Hallenbeck reported that Standard Horizon and one other manufacturer have done this and hopes that other will follow suit. Icom does not plan to do so having just being fined by the FCC for a different non-compliance regarding DSC radios. Joe Hersey noted that the U.S. was submitting a paper to the IMO/ITU Experts Group meeting this July addressing easing of restrictions on entering own ship MMSI in Digital Selective calling-equipped radios, The same MMSI numbers are used in AIS equipment but compliance is better due to close monitoring of AIS operations by the Coast Guard.

**b. Vessel Information Verification Service (VIVS).** Joe Hersey explained this new service that was also described in one of the handouts. This voluntary, self-help web based service enables owners and operators of AIS equipped vessels to ascertain whether their AIS static data in in compliance with AIS data mandates. The on-line search program includes vessel name and call sign, vessel type, MMSI Number, length and beam. For more information visit the Coast Guard Navigation Center Website.

**c. The Task Force Petition to Require Emergency Beacons on Recreational Vessels Offshore.** There were no new developments on this Petition and no new report from the Office of Boating Safety at this meeting. This issue has been pending for several years now but it is difficult to expect many new regulations early in this new Administration. Meanwhile, the Task Force continues to advocate voluntary carriage of some version of satellite emergency beacon by all vessels going more that 20 miles offshore and carriage of VHF radios, preferably with DSC within 20 miles of the coast.

**d. John Dodd of Inmarsat Provided an update on their Distress and Safety services to the RTCM Assembly earlier in the week.** He was available at the Task Force meeting to expand on those remarks and respond to any questions. He and Chris Janus of NGA were able to explain the new SafetyNET II, a data base holding all broadcast SafetyNET message which could be accessed by ships through the internet.

**e. 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. Since there were no cognizant officials available to brief at this meeting, the briefing is now scheduled for the July 2017 meeting.

**f. 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. While GMDSS radio manufacturers have indicated they have adopted a four digit channel capability in new radio models, IMO's Navigation, Communications and Search &

Rescue (NCSR) Subcommittee agreed at its 4th session earlier this year to delay four channel implementation in SOLAS ships until after 2024."

**g. 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 a study with the Institute for Telecommunication Sciences in Boulder CO but results won't be available for some time. Bob Achatz, who is performing the study, briefed RTCM SC112 on the approach for the study. So far there have been no reports of actual interference between these different radar types and Hugh Lupo reported that he knew of no case of interference between the two types of radar if they had been properly installed.

**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. Operators whose terminals were commissioned using FCC as international accounting authority (US01) will need to make other arrangements for payment, and recommission their terminal, otherwise they will find their terminal barred by Inmarsat once FCC's role as accounting authority ends and a call is attempted. A barred Inmarsat C terminal can still be used for distress alerting and will receive SafetyNET messages but cannot be used for Long Range Identification and Tracking (LRIT) or Ship Security Alert System (SSAS) including piracy alerts via SSAS. The comment period ended 14 March 2017 and we await the FCC's decision.

**b. ICOM AMERICA Inc. Request for Waiver to Permit Manufacture, Importation, Sale, and installation of Class E Digital Selective Calling Radio.** Ghassan explained that ITU R M. 493-13, Annex 4 establishes new requirements which are not met by the Icom M802 radio commonly used by vessels needing an HF/DSC radio. Icom has applied for a waiver to continue selling this popular radio to non-SOLAS vessels. The ensuing discussions are summarized as follows: The Icom M802 is the only known DSC-equipped HF maritime radio designed for smaller vessels not required to comply with the International Maritime Organization - mandated Global Maritime Distress and Safety System (GMDSS), and thus sold at a significantly lower cost than Class A GMDSS HF DSC radios. US Coast Guard Communication Stations keep an effective watch over HF DSC distress channels so a vessel equipped with a HF/DSC radio is much more likely to have its distress alert received by the Coast Guard than a vessel with an HF radio not equipped with DSC. Icom's failure to meet a portion of the Annex 4 requirement would have no impact on the ability of a ship to contact the Coast Guard or any internationally recognized maritime rescue coordination center. The Task Force agreed to support the request for a waiver. Those wishing to submit a comment on the waiver request can simply do so [https://www.fcc.gov/ecfs/search/filings?proceedings\\_name=17-122&sort=date\\_disseminated,DESC](https://www.fcc.gov/ecfs/search/filings?proceedings_name=17-122&sort=date_disseminated,DESC) and use "Express" on the left side to submit a simple text message. Comments end on June 8th and reply comments end June 23rd.

**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 a few sections had been adopted through action on other proceedings. It is hoped that the new Administration's move to minimize new regulations does not impede adoption of this overdue clarification.

**d. Action on the Task Force Petition regarding Small Passenger Vessels.** The FCC has included their portion of the Small Passenger Vessel recommendations with the larger RTCM Petition now awaiting adoption.

**e. Canadian Management of Inspections of Passenger Vessels on the Great Lakes.** Alexandre Lavoie of Transport Canada reported on how Canada administers the periodic inspections of their passenger vessels as required by the Great Lakes Agreement. They have about 650 such vessels and have interpreted the Agreement as permitting some relaxation in the scheduled annual (13 months) inspections when the vessel operates only in sheltered waters. Their current practice is to inspect those vessels (approx. 12-15 of the 650 total) once in 4 years. Adoption of a similar practice on the U.S. side of the Great Lakes might afford some relief to both inspectors and vessels operators.

**7. Reports and Issues of the Service Agents and Manufacturers Group:** Steve Spitzer moderated the discussion with the following highlights

**a. NMEA "One Net" Standard nearly ready for release.** Steve 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. 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. The IMEA applied for grant funding for the project endorsed by the Task Force letter of 13 January but were not successful. The thrust of the request for grant funding was to support a project to facilitate the connection of GPS receivers to DSC radios, long a key Task Force goal.

**8. Reports and Issues of the Commercial Vessel Task Group.** Jack Fuechsel reported with the following highlights:

**a. Task Force Petition to the FCC relative to Safety Equipment on Small Passenger Vessels.** As noted in paragraph 6.d. above, the FCC has included their portion as part of the larger RTCM Petition.

**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 plans to add 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.a. above regarding working with the Coast Guard Office of Boating Safety to revise their official form.

**9. Reports and Issues, Recreational Vessel Group:** George Hallenbeck moderated the discussion on Recreational Vessels with the following highlights:

**a. 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.

**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 to the RTCM Assembly earlier and Ed Gilbert augmented his report to the Task Force 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 to the RTCM Assembly by Larry Solomon and opened for questions at the Task Force meeting 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 met 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 were 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 met 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 were 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 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.** RTCM SC-132 on Electronic Visual Distress Signaling Devices (eVDSDs) met January 10, March 21, and June 13, 2017. The Coast Guard R&D Center completed field testing in May on alternative characteristics for signals with a report expected to be available prior to the next meeting scheduled for August 15th. Any proposed draft standard specification changes will consider applicable findings in the USCG test report, together with the paper posted on a proposed sampling method to assure minimum uniform light intensity of the eVDSD. A revised draft standard is expected to be completed for voting by early Fall 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 2018 Assembly.** The RTCM Board of Directors has approved an invitation to join with the NMEA in September of 2018 for a Joint meeting in West Palm Beach, Florida. Further details will be forthcoming as planning progresses.

**14. Next Meeting of the GMDSS Task Force:** The next Task Force meeting will be held at the RTCM Headquarters in Arlington, Virginia on Thursday, 27 July 2017. The follow-on meeting will be held at the Bellevue Hilton in Bellevue, Washington on 27 September 2017 during the annual Conference and Expo of the National Marine Electronics Association (NMEA). There was discussion at the Task Force meeting of the desirability to broaden the scope of field meetings to perhaps include a meeting in New Orleans, Louisiana during the Workboat Show November 29 – December 1, 2017. If approved, there would still be four Task Force meetings during fiscal year 2018. Incorporating a GMDSS Task Force meeting during the Workboat show will be pursued with the organizers.

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

11 May 2017

1. Monitor IMO 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 703-963-3747 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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