NATIONAL GMDSS TASK FORCE

Newsletter and Summary Record of 21 September 2016 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.

At the start of the meeting, NMEA President Mark Reedenauer welcomed the group and the Task Force expressed its appreciation that NMEA continues to host a Task Force meeting at their Annual Convention and Exposition.

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. 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: www.navcen.uscg.gov/?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 21 September 2016 at the Naples Grande Beach Resort in Naples, Florida during the annual Conference of the National Marine Electronics Association (NMEA).

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

FCC 16-119 R&O Accepting certain RTCM and Task Force Petitions
FCC Public Notice To Permit Class D vs Class A VHF-DSC on Non-SOLAS Vessels
NOAA Announcement of new FTPMail Service for Tropical & Tsunami Warnings
Coast Guard Blog on Cyber Risk Management
Coast Guard Flyer on Mobile App for Smart Phones

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

a. FCC Report and Order 16-119 Accepts Certain RTCM and Task Force Petitions as follows:

1.) Require EPIRBs when activated to broadcast position information
2.) Update equipment standards for Personal Locator Beacons (PLBs)

3.) Require Satellite Emergency Notification Devices (SEND) meet RTCM standards
4.) Permit Maritime Survivor Locating Devices (MSLDs) meeting RTCM standards
5.) Provide for use of AIS-SARTs that comply with International Standards
6.) Clarify Rules on ship radar equipment and delete obsolete standard
7.) Permit limited use of VHF portables ashore to support associated vessel needs
8.) Permit VHF Digital Small Message Services (VDSMS) on maritime VHF
9.) Allow assignment or transfer of Ship Station Licenses
10.) Requires GNSS positioning capability in VHF Handhelds
11.) Requires VHF Handhelds with positioning on vessels without reserve power
12.) Editorial changes to correct typos and erroneous cross-references

b. FCC Public Notice Accepting Coast Guard Proposal to Permit Class D vs Class A VHF for certain Non-SOLAS mandatory vessels. This resolves the massive request for vessel waivers following the declaration of Sea Area A1 by the Coast Guard. It also relieves the petitioners of the $160.00 fee for requesting waivers.

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

d. 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.

e. Action on the Task Force Petition regarding Small Passenger Vessels. The FCC issued a Public Notice (Report No. 3006, RM No. 11726) inviting interested persons to file statements opposing or supporting the petition for Rulemaking. Responses to the Notice were generally positive and the FCC has been in discussion with the Coast Guard to coordinate their positions. The FCC plans to integrate the Small Passenger Vessel recommendations with the larger RTCM Petition now being considered. The FCC has been granting waivers to non-SOLAS vessels to use satellite phone systems in lieu of MF-DSC provided they operate within the satellite coverage area, the satellite system is manned to respond 24x7 and an external antenna is used to assure connectivity.

6. **<u>The Coast Guard Reports</u>:** Russ Levin reported with the following highlights:

a. The Task Force Petition to Require Emergency Beacons on Recreational Vessels Offshore. There was no report from the Office of Boating Safety at this meeting but it was reported in July that The Marine Safety and Security Council (MSSC) approved a regulatory project that will propose allowing certain emergency locator beacons to be carried in lieu of visual distress signals. This is a positive step but well short of the Task Force objective.

b. Status of the Task Force Petition to Upgrade Radio Safety Equipment on Small Passenger Vessels. There were no new developments on this petition but there is some indication that Coast Guard authorities have reservations regarding changes to their regulations. Most of the recommendations that deal with the FCC regulations on the other hand have apparently been well received.

c. MMSI Problems and suggested solutions. At recent Task Force meetings, MMSI management issues have dominated the discussions. Joe Hersey's Table outlining MMSI problems and the FCC's recent Enforcement Advisory are good steps toward improving the situation. At this meeting the Power Squadrons renewed their request that "checking the MMSI number" be added to the voluntary inspection Checklists they use which should lead to a discussion of proper MMSI management with the boat operator being inspected. At the July meeting it was suggested that the National Association of State Boating Law Administrators (NASBLA) be approached with the goal of adding MMSI numbers to State registration forms. This proposal will likely not resolve the problem since most NASBLA projects calling for action by individual states are voluntary. One issue that still needs resolution is how to issue MMSIs to divers for use on boats other than their own.

d. 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.

7. 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. Steve Spitzer reported at an earlier meeting that RTCM Special Committee 112 on Radar standards will use the new standard along with NMEA 0183 and NMEA 2000. International Agencies are also expected to take up the new "One Net' standard. Beta resting of the standard was to commence on 1 October 2016.

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 few if any reports of actual interference between these different radar types.

d. There Seems to be no Standard Response by VHF Radios when Queried for current position. Hugh has been following up on a report that some VHF Radios will respond automatically when queried for position and others will not. In some cases manufacturers have made this a selectable choice but there is no standard. Some operators would like to enable friends to automatically track their position while others, like fishermen, would prefer to inhibit competitors from tracking their position. One possible solution would be for the radio to default to providing position automatically following a declaration of Distress by that vessel.

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

a. Coast Guard Posture on Cyber Security. A Coast Guard Blog on Cybersecurity was distributed for information (http://mariners.coastguard.dodlive.mil/2016/09/01). In this case Coast Guard representatives met with the National Academies of Science, Engineering and Medicine's Forum on Cyber Resilience for an open discussion regarding cyber risk management in the marine transportation system.

b. Modification of Vessel Inspection Check Lists to Include MMSI Compliance. In support of the broad effort to deal with MMSI problems, inspection check lists will be reviewed to include this item. SOLAS vessels are for the most part in compliance but more data is needed on the state of compliance on non-SOLAS commercial vessels subject to inspection. The most pressing need is compliance by R/Vs and adding MMSI compliance to the voluntary inspection check lists used by the Coast Guard Auxiliary and U.S. Power Squadrons will assist in this effort.

c. Coast Guard Marine Inspectors are Requesting Clarification of GMDSS Rules Affecting Alaskan Fishing Vessels. Shortly before the July Task Force meeting, a request was received seeking clarification of GMDSS Rules as applied to Alaska commercial F/V. This request originated from Coast Guard inspectors in Seattle where a large number of these F/V are inspected. The Task Force was quite willing to provide advice but felt that the guidance to government inspectors should properly come from the government regulatory authorities. We will continue to monitor this dialog and provide any new guidance that evolves for the information of private sector inspectors.

9. Reports and Issues, Recreational Vessel Group: Jack Fuechsel moderated the discussion on Recreational Vessels with the following highlights:

a. Chris Born"s Presentation on the New Coast Guard Mobile Phone App. The new Coast Guard App for Mobile Phones was designed by Basta Ya of PR as a memorial to the son of Optivon Corp. founder, Luis Romero. The App can be downloaded free of charge from **www.**uscg.mil/mobile**.** The following are highlights of the presentation:

1.) The project consumed 13,000 man hours and half a million dollars and was presented to the Coast Guard during Safe Boating week in 2015 without charge. The Department of Justice and the FBI cited Romero for the development of "SentiGuard" a similar product that greatly enhanced collaboration between citizens and law enforcement agencies.

2.) In addition to requesting emergency assistance, users can choose 911 or a direct call to the nearest Coast Guard facility. Other choices are File a Float Plan: Request a Safety Check; Report a hazard, pollution or suspicious activity; Find the nearest NOAA Weather Buoy; Review Safety Equipment and the latest safety regulations; Verify Rules of the Road; and obtain State Boating Information. Position information is transmitted if available but no personal information stored in the phone.

3.) This has undoubtedly been of great service to the Coast Guard considering that about 65% of alerts from R/Vs come from cell phones and there have already been hundreds of thousands of downloads of the Mobile App.

b. The Licensed By Rule (LBR) Registration Agents are awaiting the new MOU that will govern their registration procedures. The registration agents are eager to finalize the new MOU since it has a strong impact on their operations.

10. <u>Reports and Issues of the Training Task Group.</u> 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. One possible new initiative surfaced at this meeting when the overall competence of GMDSS licensed operators was being discussed. It was suggested by some that the FCC policy of issuing GMDSS licenses (along with others) for life was counterproductive noting that some Administrations require periodic GMDSS refresher training. It was also suggested that publishing the GMDSS Question Pool and answers made it too easy for candidates to study the list and easily pass the exams that use questions randomly drawn from the question pool. 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 insure 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. Jack Fuechsel reported that there had been little change since this item was updated at the July meeting. On 30 September, Bob Markle, Chairman of the GMDSS Modernization Correspondence Group released a status report containing a new draft of the GMDSS Modernization Plan to be submitted to the HTW and NCSR-4 Subcommittees for review as recommended by the IMO/ITU Panel of Experts. Since there is a deadline to get the revised plan to the IMO by 28 October, anyone desiring further information should contact Jack Fuechsel.

12. <u>The RTCM Report:</u> 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 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. BDS RTCM IOD issue is being addressed with the China Satellite Navigation Office (CSNO). The CSNO released a statement on 9 September, 2016 about the definition of the TOC and TOE in BDS-SOS-ICD (see RTCM Paper 178-2016-SC104-968). The new ICD will be released by the end of September with the RTCM recommendations included. The SSR WG is working on developing a separate implementation guide document within the WG to address at a lower level the meaning and use of the data fields with appropriate references, different use cases, additional formulae, relevance and description of optional user corrections (like site displacements for example), etc. RINEX 3.03 was released in July, 2016 supporting GPS, GLO, GAL, QZSS, BDS, SBAS and IRNSS. Ken has found a couple of typographic errors. There will be a minor update with minor corrections. The RINEX 3.03 file naming convention has been adopted by the IGS. IGS will support both R2 and R3 file formats and naming conventions for a transition period of undetermined amount of time.

c. RTCM SC-109 on Electronic Charting Technology. The committee has completed and published a new version of the standard (RTCM 10900.6), including provisions for Voyage Data Recorder (VDR) functionality in Electronic Charting Systems. SC-109 met again at RTCM Headquarters the 18th of August 2016.

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 Headquarters on 15 August 2016.

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 Committee met again during the 2016 RTCM Assembly and a revised standard is expected to be out for vote soon.

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. As noted in paragraph 5.a. above, the FCC has now accepted the MSLD Standard.

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 will be sent out to RTCM members for a 60 days review and vote. Next meeting is scheduled for 12 Dec 2016.

j. RTCM SC-128 on Satellite Emergency Notification Devices (SEND). This Committee was chartered at the request of the Coast Guard to develop performance standards for emergency notification systems using private satellite systems such as SPOT. The Committee has completed and approved a clarifying amendment to this standard. The FCC initially declined to include the revised standard in its Rules, but as noted in paragraph 5.a. above has now accepted the new SEND standard.

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 next SC-131 meeting will be on 13 December.

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 is 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 and there was a presentation on their new standard during the 2016 RTCM Assembly. That standard is presently out for vote.

14. Next Meeting of the GMDSS Task Force: The next Task Force meeting will be held on Thursday morning 5 January 2017 at the RTCM Headquarters in Arlington, Virginia. The follow-on 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).

GMDSS TASK FORCE CONTINUING WORK LIST

21 September 2016

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 Mfgrs. 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. If you have an Internet server with spam filters, please authorize receipt of messages from gmdss@comcast.net

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