

NATIONAL GMDSS IMPLEMENTATION TASK FORCE

Newsletter and Summary Record of 29 September 2010 Meeting

The Summary Record. This summary record is provided for information and will be posted on the Task Force portion of the Coast Guard web site **Note the new address:** www.navcen.uscg.gov/?pageName=MaritimeTelecomms (click GMDSS, then GMDSS Task Force). The summary record is also distributed to all Task Force members to serve as a Newsletter summarizing GMDSS developments and other issues in marine telecommunications. The GMDSS Task Force met on 29 September 2010 at the Sheraton Hotel in Seattle, Washington during the NMEA Annual Meeting. The documents listed below were distributed and are available on request:

USCG Marine Safety Alert No. 7-10 on AIS Operating Channels

USCG News Release on closure of last LORAN Transmitting Station

IMSO Paper re Inmarsat Plan to Qualify Fleet Broadband 500 for GMDSS

Marine Electronics Journal Extract by Chuck Husick on VHF-DSC

Marine Electronics Journal Extract by RTCM's Bob Markle on EPIRBs

1. **Recognition of Contributions by Chuck Husick.** The untimely passing of Chuck Husick on 13 September 2011 was noted with deep regret. Chuck was the representative of BOATUS to the Task Force and chair of our Recreational Vessel Task Group. As an active boat operator, his observations regarding operational communications carried special significance. His many authoritative articles in Boating magazines were most helpful to the boating public. For further insight into his remarkable career see www.husick.com/cbh/home.html.

2. **Summary Record of 5 August 2010 Meeting:** The Summary Record of the 5 August 2010 meeting which had been distributed earlier and posted on our website, was noted without change.

3. **Report on Special USA/Canada Meeting on 28 September.** Russ Levin and Russ Renaud of Canada reported on the special meeting held the day before with local mariners from USA and Canada. The following is the summary record of that meeting:

a. VHF Radio. VHF Radio was discussed at some length including congestion on channel 16 which could be improved by Coast Guard operators taking a more active role in managing the channel. Digital Selective Calling (DSC) was not popular with most of the users due to excessive alerting signals on channel 70 as indicated by the apparent slow take up by voluntary vessels. The U.S. Coast Guard hoped that more voluntary vessels would use DSC once their plan to develop a Class D handheld with integral GPS was realized. The Task Force repeated its concern that many voluntary vessels were using DSC capable radios but had failed to register for MMSI numbers and connect GPS. It was suggested that MMSI databases should be reviewed to ensure that information contained therein was up-to-date. The proper method to connect GPS to a DSC radio was discussed and a 'how to' paper was distributed. All participants agreed that VHF

radio was clearly better than cell phones for distress alerting but that cell phones were here to stay and their use was expanding in the maritime arena. Some vessels are beginning to use external antennas and bi-directional amplifiers to extend cell phone range. A suggestion was made to consider exempting VHF-equipped pleasure craft from the requirement to carry flares.

b. MF/HF Radio. MF/HF usage was discussed briefly. MF appears to be more useful in the Pacific Northwest than in areas of higher noise levels. The group noted the U.S. plan to maintain MF-DSC and fill gaps to the extent possible but not declare Sea Area A2. The widespread use of the HF channel 4125 kHz by the fishing fleet was also noted along with the fact that Kodiak Communication Station monitors the channel through 6 remote sites even though it is not a prescribed watch frequency for fishing vessels. The U.S. Coast Guard clarified that their automatic response to HF radio checks only functioned on the 4MHz DSC calling channel and that traffic was heavy in view of the daily testing rule.

c. Fishing Vessel Communications. The U.S. noted that the Coast Guard was pursuing a Notice of Proposed Rule Making on Fishing Vessel Safety and that the U.S. National Transportation Safety Board (NTSB) has scheduled a forum on Fishing Vessel Safety. The NTSB has separately recommended that vessels required to carry EPIRBs be required to carry EPIRBs with GPS for faster position fixing. The Vessel Monitoring System (VMS) used by both countries was discussed briefly with the observation that VMS systems should accommodate both law enforcement and safety functions.

d. The Automatic Identification System (AIS). AIS also came in for discussion noting that many voluntary vessels are using AIS (about 1700 in the U.S.) and finding it useful for safety purposes. Operators need to be reminded that when the vessel is sold, the AIS (and the Radio) must be re-registered to the new owner. The U.S. monitors the AIS channel along the coast and follows up on vessels transmitting inaccurate information. AIS is finding new applications such as the optional AIS SART with significantly better detection range than the Radar SART. Another very promising AIS application is to replace the 121.5 MHz homer in EPIRBs but this has not yet been accepted by IMO.

e. Operator Training. Minimal training was often cited as a problem leading to congestion on channel 16 and excessive false alerts in the GMDSS. Canada requires that operators of voluntary vessels take an 8 hour boating safety course given by the Canadian Power & Sail Squadron (CPS) which issues the pleasure craft Radio Operator Certificate (ROC-M) on behalf of Industry Canada. The ROC-M can also be issued with a GMDSS endorsement. The states of Washington and Oregon have similar requirements. As for the required training for GMDSS operators, instructors consider the 70 hour course too short and in the U.S. Operator Licenses are now issued for the life of the operator without refresher training requirements. Andy Anderson distributed a paper pointing out that the maritime community needs standardized front panels on GMDSS equipment so that training can be independent of the manufacturer's design. This is a difficult challenge but has long been common practice in the aviation community.

4. The Coast Guard Reports:

a. Developments on E-Navigation and AIS/ECDIS Regulations. Jorge Arroyo reported for the Office of Waterways Management with the following highlights:

1.) The continuing NPRM extending AIS carriage to other categories of vessels is still moving ahead and further developments can be anticipated in the near future. The rulemaking on Electronic Chart Display Systems (ECDIS) is moving more slowly since international standards for the display system have not yet been completed.

2.) With respect to e-navigation, there are many International organizations involved and the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) has taken a lead role in harmonizing requirements. Additional spectrum is being sought for the many new services associated with the e-navigation concept.

3.) IMO's Maritime Safety Committee approved an amendment to SOLAS Chapter V, Regulation 18 imposing an annual AIS inspection requirement, we anticipate its adoption at the next IMO Maritime Safety Committee meeting which would enable the new requirement to come into effect in 2012.

4.) Jorge explained that a recent unintended channel management transmission along the mid Atlantic coast had shifted vessels in range to an alternate AIS channel. It took some time to discover the error and take corrective action. A Safety Alert was issued to help get ships back to the correct channel. In retrospect, everything worked as intended but will probably result in some changes to the specifications. The Class B AIS units do not shift channels and were unable to receive the data from the shifted Class A units. There are about 1700 Class B AIS units in service in the U.S. Use of the Rescue 21 Network to broadcast channel management messages is relatively new in the U.S. whereas Canada has been transmitting such messages since 2004

b. Developments on Long Range Tracking and Identification. Robert Wilmore summarized the status of the LRIT Program with the following highlights:

1.) The system is operational and was used in the Haitian earthquake to manage vessels operating in the area. Although the system is available for Search and Rescue (SAR), RCCs have yet to request a Surface Picture for SAR purposes.

2.) In response to a question about AMVER, it was noted that the AMVER database is separate from LRIT and they are not cross linked. AMVER continues to enjoy a large volume of voluntary participation.

3) The United States is still operating the Interim International Data Exchange (IDE) but that role is being taken over by the European Union which is constructing a new IDE in Portugal.

4.) LRIT participation is not required by vessels which remain within Sea Area A1 (or in the U.S. within 20 miles of the coast) since AIS covers that area

5.) The transition of U.S. Application Provider from Pole Star to CLS America is complete. The following LRIT units are approved for U.S. ships:

Thrane & Thrane	TT-3000 LRIT
EMA	Blue Traker LRIT
Japan Radio Co.	JUE95 LT
Skyway Mobile Comms.	DMR 800LRIT
CLS America	Thorium TST 100

6.) The following statistics were are for the month of September 2010:

No. of U.S. flag vessels reporting:	533
No. of reports from U.S. flag vessels:	51935
No. of foreign vessels reporting:	6507
No. of reports from these foreign vessels:	283138

c. Results of the Joint IMO/ITU Group of Experts Meeting. Bill Kautz attended the joint experts meeting which dealt with issues of common interest including GMDSS Modernization. The following are highlights:

1.) The Group considered the reports of Comsar 14, Nav 56, and MSC 87 for background and noted the issue of MMSI numbering for handheld radios but did not make a recommendation.

2.) The Group discussed the probable designation of the frequency 160.9 MHz for use in 'man overboard' devices and recommended use of the marine band at 500 kHz for Port Security broadcasting while noting that the Amateurs Service was looking at the same spectrum.

3.) The Group discussed Maritime Domain Awareness (MDA) and special messages for use in the AIS system. The special messages recommended did not include Distress Alerts.

4.) With respect to GMDSS Modernization, the group used the U.S. input paper based on the RTCM Modernization Workshop but consolidated it to the most important points. They recommended that there was no need to redesign GMDSS and that new technology could be introduced during the review. They also urged consideration of non-SOLAS vessel needs and felt that GMDSS should be flexible and scalable. It was recommended that the effort needs to be advanced through intercessional meetings or a correspondence group and the U.S. offered the assistance of the RTCM and the U.S. GMDSS Task Force

5. **The FCC Reports:** Ghassan Khalek reported for the FCC, the following are highlights of his report:

a. Further Part 80 Rule Making. Further Part 80 Rule Making. A new FCC Report and Order was released in June, The rules have not yet been published in the Federal Register, and until they are, no effective date is established. The rules do the following:

1.) Prohibit the certification, manufacture, importation, sale, installation, or continued use of INMARSAT-E Emergency Position Indicating Radiobeacons (EPIRBs).

2.) Conclude that VHF-DSC handheld radiotelephones should include integrated Global Positioning System (GPS) capability, but defer adopting such a requirement until RTCM completes work on GPS performance standards for handheld radios

3.) Require that any small passenger vessel that does not have a reserve power supply carry at least one VHF handheld marine radio transceiver

4.) The Commission declined at this time to provide additional spectrum for ship station facsimile communications or to permit the transmission of data on maritime voice channels. Footnote 46 indicates that the commission will consider RTCM's petition to permit VHF-FM Digital Small Message Services in accordance with RTCM 12301.1 in a separate proceeding.

5.) Eliminate the limits on the number of frequencies that can be assigned to a private coast station or marine utility station.

6.) Revise the Part 80 rules to incorporate by reference the latest IEC standards for radar and other equipment. Note that this revision removes the RTCM radar standards from FCC regulations. The RTCM radar standards remain for now in U.S. Coast Guard regulations affecting towing vessels.

7.) Clarify that vessels subject to Global Maritime Distress and Safety System (GMDSS) requirements are required to test their radiotelephone equipment on a daily basis.

b. Task Force Petition to Authorize Use of Marine Handheld Radios ashore in Maritime Areas. In June 2009, the FCC published the Task Force Petition requesting authority to use VHF handheld radios ashore in maritime areas allowing 30 days for comment. The public comment period ended with no responses either pro or con. This item was not included in the new Part 80 Rulemaking but will be part of a new Rulemaking to include additionally the following two items.

c. RTCM Petition to Authorize Small Message Data Services on VHF

Frequencies. The RTCM petitioned the FCC to accept its recommendations for a small message service on VHF frequencies using data techniques. The Petition was published by the FCC and Public Comment closed 15 October 2009. There were 28 comments, all favorable. This item was also not included in the new Part 80 rulemaking (Para 5.a.) but will be part of the new Rulemaking mentioned in b. above.

d. FCC Response to the NTSB Recommendation that FCC (and USCG)

Require GPIRBs on Vessels Currently Required to Carry EPIRBs. The National Transportation Safety Board recently recommended that the FCC require GPS enhanced EPIRBs commonly known as GPIRBs on vessels required by regulation to carry EPIRBs. This recommendation also applies to the Coast Guard for vessels which they regulate. The recommendation was made since early alerting in Distress cases gives survivors a better chance of being rescued and GPIRBs provide a location immediately on reception without waiting for position to be determined by doppler techniques. The FCC plans to include this issue in the next Rulemaking along with items b and c above.

e. Task Force Petition Urging Improved MMSI Management.

The FCC denied the Task Force petition earlier but now hopes to implement many of the Task Force recommendations by creating a new database rather than attempting to upgrade the Universal Licensing System (ULS) as reported earlier. No date was suggested for the new database but it is emphasized that the most important improvement needed is periodic revalidation of the MMSI database in a fashion similar to NOAA's revalidation of the EPIRB/PLB database. The FCC also reported that new FCC MMSI assignments were now being received by the Coast Guard regularly for incorporation in the MISLE database.

f. FCC Decision of the Riverside, California Petition to Use Marine VHF

Channels for Land Mobile Applications. The FCC has still not announced a decision in this case.

g. Ship and Operator License Statistics.

The following statistics were furnished for the various operator licenses in 2009 as well as ship station licenses in 2007 and 2009.

<u>Type of License</u>	<u>Sept 2009</u>
General Radio Operator	289806
GMDSS Operator	17139
GMDSS Maintainer	1423
GMDSS Maintainer & Operator	1863
Marine Radio Operator	33011
Restricted Radiotelephone Operator	67286

<u>Type of Ship Station License</u>	<u>Sept 2007</u>	<u>Sept 2009</u>
SA Active Recreational Vessel	54910	38220
SB Active Compulsory Vessel	20533	18480

SA with MMSI	29908	34408
SB with MMSI	13977	17273

h. New Issue Regarding Certification of Qualified U.S. GMDSS Inspectors to IMO for Information of Foreign Port State Inspectors. A new issue was raised in that some U.S. vessels undergoing Port State Inspections in a foreign country have encountered difficulty because the U.S. does not furnish the IMO with a list of qualified GMDSS inspectors as required by the IMO. This is complicated by the fact that the FCC does not conduct the U.S. inspections by government inspectors but delegates the function to any or the 3286 holders of the GMDSS Maintainers License. Many of the U.S. flag inspections are done by qualified representatives of the Classification Societies. This issue will be revisited at the next meeting

6. The RTCM Report: RTCM President Bob Markle reported on the status of Special Committees of interest to the Task Force are as follows:

a. RTCM SC 101/110 on Incorporating GPS in VHF Handhelds. The combined Special Committee continues to work on recommended specifications for a VHF DSC handheld with integral GPS and hopes to complete its specification by the end of the year. The continuing work of SC 110 on EPIRB specifications will be to incorporate some of the same revisions for testing integral GPS processors as were adopted for Personal Locator Beacons (PLB). The Committee will also be taking into account the planned shift of the COSPAS-SARSAT satellite constellation from Low Earth Orbit (LEO) weather satellites to Medium Earth Orbit (MEO) navigation satellites. They will also consider whether the next generation of EPIRBs should have a return link to acknowledge receipt of the Alert which is tentatively planned in the Galileo system.

b. RTCM SC-109 on Electronic Charts. This Committee is working on special U.S. requirements along with SC-112 (Ship Radar) and new SC-129 (Presentation of Navigational Information).

c. RTCM SC-119 on Maritime Survivor Locating Devices. This Committee was reactivated to consider man overboard AIS applications and other relevant technologies. The committee is considering whether these devices should continue to be required to operate in a closed loop with the parent ship or a group of ships, or be allowed to generate an all-ships distress call (open loop) under certain conditions. The Committee met in Seattle 1 October 2010

d. RTCM SC-121 on Automatic Identification Systems (AIS). This Committee continues work on AIS messaging and has a Working Group addressing AIS Application Specific Messages.

e. RTCM SC-123 on Data over VHF Channels. As reported earlier, RTCM has petitioned the FCC to adopt RTCM Standard 12301.1 for transmitting data on VHF channels. The comment period closed with all comments favorable to the proposal. Early

approval action by the FCC was expected but is still pending. The Committee is expanding its work to include data messaging on MF and HF channels.

f. RTCM SC-127 on Enhanced Loran. This Committee continues to meet and work on specifications for a combined Loran/GPS receiver despite the recent termination of Loran service in the U.S. The U.K. organization Trinity House has taken over the chairmanship of the Committee and the lead in advocating Enhanced Loran.

g. RTCM SC-128 on Satellite Emergency Notification Devices. This Committee was chartered at the request of the Coast Guard to develop performance standards for new systems such as SPOT which are being advertised for emergency or life saving applications with the goal of enhancing reliability and consumer protection. A working group of the National Search and Rescue Committee has been working with this RTCM Special Committee.

h. RTCM SC-129 on Presentation of Navigation Information. This Committee was chartered to harmonize the various inputs to navigation display systems

i. RTCM Invited to Take Over Work of the “ProTECTS Alliance”. The ProTECTS Alliance (Promotion of Two way Emergency Communications and Tracking Systems) is a group started by the Iridium Satellite Corp. to promote the responsible use of satellite technology for emergency services. The Alliance has recently invited RTCM to take over sponsorship of the Group. The RTCM Board of Directors approved the proposal at its meeting on 19 August.

j. Other RTCM Announcements of Interest. The 2011 RTCM Assembly including a Task Force meeting will be held at the Tradewinds Hotel in St. Pete Beach, Florida May 15-20, 2011.

7. Reports and Issues: the GMDSS Service Agents & Manufacturers Group. Ralph Sponar’s Group is following several initiatives through an ad hoc group working with NMEA representatives as follows:

a. Better Definition of “Qualified” Technical Support. The FCC Rules relating to Class B AIS call for installation by a qualified technician and NMEA has formed an ad hoc group to better define ‘qualified’. Recent progress indicates that the NMEA’s CMET certification will likely be accepted by the FCC as qualifying for the AIS installation and perhaps other requirements such as conducting GMDSS inspections and the newly required AIS inspections. The next step is a Petition to the FCC.

b. Standard Color Coding for GPS/Radio hookups. The NMEA ad hoc group recommendation for a standard color coding has been approved for inclusion in the NMEA 0183 standard. The NMEA will then recommend this revised standard to manufacturers of both GPS receivers and the various marine equipments to which the navigation receivers should be connected. The revised five page standard has been posted

on the Task Force website along with a two page discussion document on wiring and installation using the NMEA 0183 guidelines.

c. Standardized Inspection Check Lists. The Group has worked with the Coast Guard, the FCC, and Classification Society inspectors to update check lists for mandatory inspections of selected vessel types. They are currently updating a check list for vessels on the Great Lakes. When complete the Check Lists will be linked to the Task Force website.

d. Standardized Guidelines for a Small Vessel VHF-DSC Installation. Ralph distributed a two page paper outlining the steps in interfacing of a VHF-DSC radio with a navigation receiver. This paper is a second draft and when completed will be posted on the Task Force website.

e. Recommendation that GMDSS Equipment Accept USB Interface Connections. The NMEA ad hoc group will also examine this proposal but any recommended solution will have to be submitted to IMO which manages the functional requirements for GMDSS equipment. In the past there has been reluctance on the part of IMO to permit use of the computers dedicated to GMDSS equipment for any other purpose.

8. Reports and Issues: the GMDSS Training Group: Andy Anderson reported for the Training Group with the following highlights:

a. Update the Question Pool for GMDSS Maintainer License. An issue was raised earlier that some of the questions on the Test for the GMDSS Maintainer License appeared to be out of date. Andy plans to start this in the fall with the ad hoc group that has updated the pools in the past. Anyone desiring to work with the ad hoc group should contact Andy at owen_anderson@comcast.net.

b. Standardized Front Panel for GMDSS Equipment. Andy distributed a paper presenting his concern that lack of a standardized front panel on GMDSS equipment made it difficult to teach students since schools could not afford to train on several different versions of each equipment. Furthermore, when the students go aboard ship they often encounter equipment different from the type they were trained on, another inducement to false alerts. It is very late in the game to correct this problem but its worth trying. The IMO sets functional requirements, one of which could be for a standardized front panel to be designed by the IEC or the ITU. The aviation community has benefitted from standardized front panel specifications for years.

c. Visit to the PMI GMDSS School. Andy and his son, Kurt, generously invited all participants to visit their GMDSS Training Center at Pacific Maritime Institute (PMI). A large number made the visit and were very impressed with the GMDSS training facilities and the bridge simulator.

9. Reports and Issues: the Commercial Vessel Group. Jack Fuechsel reported for the Commercial Vessel Group that we are still looking for information on a reported AIS/VMS combination device encouraged by the government of Turkey. We will also report the conclusions of the NTSB Fishing Vessel Safety Forum when available.

10. Reports and Issues: The Recreational Vessel Group Report. Jack Fuechsel reported for the Recreation Vessel Group on unfinished business from the last meeting. A copy of The Rules of the Road are required to be readily available to operators of all vessels over 12 meters. The question was whether it was acceptable to have them in an electronic format or whether paper copies were required. Clarification was provided by Jorge Arroyo who indicated that electronic copies were acceptable provided that they were readily available. He asked to be notified if any operators had been cited for not having a paper copy available.

11. Other Business and the Next Meeting of the GMDSS Task Force: The next Task Force meeting will be held at 9:30 a.m. on Thursday morning 6 January 3011 at the RTCM Headquarters in Arlington, Virginia. The follow-on meeting will be held on Thursday 19 May 2011 at the Tradewinds Hotel in St. Pete Beach, Florida during the RTCM Annual assembly.

GMDSS TASK FORCE CONTINUING WORK LIST

29 September 2010

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 COMSAR meetings (TF)
7. Advocate Canadian coordination to extend GMDSS services to the Great Lakes (TF)
8. Review GMDSS concepts and make modernization recommendations (TF)
9. Advocate voluntary carriage of VHF or EPIRB/PLBs by all vessels offshore (TF)
10. Advocate overhaul of FCC policy and practice on MMSI assignments (TF)
11. Monitor non-GMDSS systems: AIS, LRIT, SSAS, VDR, VMS, & E-Navigation (TF)
12. Recommend updates for Coast Guard NVIC on GMDSS Requirements (TF)
13. Recommend means to facilitate Distress Alerts by Cell Phone & Internet (TF)
14. Advocate intership calling on HF GMDSS channels (CV)
15. Review Safety Radio and VMS Requirements for Small Fishing Vessels (CV)
16. Recommend training programs for non-mandatory users of GMDSS systems (RV)
17. Encourage GMDSS handbooks and Internet and video training aids (RV)
18. Encourage voluntary users of VHF-DSC Register for MMSI and connect GPS (RV)
19. Advocate FCC let R/Vs keep existing MMSI when applying for Station Lic. (RV)
20. Encourage Mfgs. to upgrade GMDSS explanations in equipment manuals (SA)
21. Monitor guidelines for GMDSS equipment maintenance & maintainer standards (SA)
22. Recommend proper interconnection of GPS receivers with DSC Radios (SA)

- 23. Advocate better FCC & USCG management of annual GMDSS inspections (SA)
- 24. Maintain GMDSS Question Pools for FCC and Coast Guard Examinations (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

Attachment: Draft Agenda for Task Force Meeting 6 January 2011 at the RTCM Headquarters in Arlington, Virginia.

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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