

NATIONAL GMDSS IMPLEMENTATION TASK FORCE

Newsletter and Summary Record of 28 September 2011 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 28 September 2011 at the Sanibel Harbor Resort in Fort Myers, Florida during the NMEA Annual Conference. The documents listed below were distributed and are available on request:

Coast Guard Marine Safety Alert No. 04-11 on VHF-DSC Radios
Draft Task Force response to Coast Guard on Towing Vessel NPRM
Current Radio and Navigation Requirements for Small Passenger Vessels
ITU Recommendation on Identities for AIS SART, MOB, and EPIRB-AIS

1. Presentation on Planned Deployment of LightSquared Satellite and Terrestrial Mobile Network and the Potential Interference to GPS Receivers. Mr. Geoff Stearn, Vice President Spectrum Development, LightSquared LLC gave a presentation on LightSquared's anticipated Ancillary Terrestrial Component and their views on the impact on GPS service. I have copied liberally from Bob Markle's excellent summary of the same presentation Mr. Stearn gave to the RTCM Board of Directors earlier.

Mr. Stearn's presentation included a company background. The company has two 1996 legacy satellites from its predecessors Mobile Satellite Ventures and SkyTerra. It also has one new generation satellite, SkyTerra 1 launched in 2010. This satellite is designed to integrate with the terrestrial network. It provides 500 spot beams and covers up to 200 miles offshore. User devices will be integrated for satellite/terrestrial service at the chipset level. LightSquared has a wholesale business model and has agreements with about 15 different providers so far.

He said that in 2002, LightSquared agreed to operate with out-of-band emissions less than the level required by the FCC. The GPS industry supported LightSquared at the time. In 2005, the FCC lifted the 10,000 base station limit through a public process. In 2009, Harbinger Capital Partners provided the needed capital for build-out. The FCC then required coverage for 260 million potential customers.

The first overload concern from the GPS industry arose in the fall of 2010. In November of that year, LightSquared applied for a waiver to allow the use of terrestrial-only handsets, which would not affect the requirement for dual-mode handsets. The objection of the GPS industry is overload interference, not out-of-band emissions. The problem arises because of the wideband reception characteristic of GPS receivers that "look" into the L-band spectrum.

LightSquared has agreed to initially operate only on the lower of the two bands it has just below the GPS band, and at one-tenth authorized maximum power. This would

leave 99% of GPS users unaffected. Avionics are resistant to operations in this lower band. LightSquared has promised to work with the GPS industry to develop filter technology for high-precision users – they are committed to a solution and believe that both services can co-exist.

Mr Stearn took questions during his presentation but shortly after 10:00 the briefing was ended so the Task Force could proceed with its agenda. He provided contact information and invited those interested to contact him directly. Some members moved to another room to continue the discussion with Mr. Stearn. Mr. Stern was thanked for his very interesting contribution to the meeting. Anyone desiring his contact information or a copy of his presentation should contact Jack Fuechsel.

2. The Coast Guard Reports: Several of the planned Coast Guard reports were not available due to withdrawal of travel funds late in the fiscal year. The following updates were provided by Russ Levin and others:

a. Rescue 21 Upgrade of VHF Coastal Watch for DSC and Direction Finding. Russ Levin reported for Gene Lockhart who had sent an email update with the following highlights:

1.) Project status: Rescue 21 is operational on the entire east, west and gulf coasts and three sectors of the Great Lakes (Detroit, Sault Ste Marie, & Buffalo). By the end of the year, the Great Lakes will be fully covered with the addition of Sector Lake Michigan (scheduled for late November). The remaining projects outside the Conus and their target dates are Sector Honolulu (January 2012), Sector San Juan (April 2012), and Sector Guam (June 2012). Alaska is a special case with expected coverage in Southeast Alaska, Anchorage, Kodiak and other locations with a concentration of maritime activity. Inland coverage on the Western Rivers is another special case with planned upgrades not including all services provided in the coastal zones.

2.) Project Capabilities: The system has been involved in 31665 SAR cases to date and the number is increasing by an average rate of 500 cases per month. The Direction Finding capability is proving quite valuable, especially with so few distress cases providing a good location. The D/F capability works on both channel 16 and channel 70. The automated test call facility is operational at all Rescue 21 sites. Mariners with the proper software in their DSC radios can utilize the test facility by making a DSC call to MMSI Number 003669999. Note that all class D VHF-DSC radios are now required to have this capability but it may need to be retrofitted into older models with a software upgrade.

b. Marine Safety Alert No. 04-11 of 1 September 2011. This Safety Alert was issued at the Task Force request and announces that “**Mariner’s Safety Endangered**” when VHF Radio Distress Alerts by DSC lack location and identification Information. The Alert notes that 90% of the VHF-DSC alerts received by the Coast Guard do not contain position information and that 60% do not contain a registered identity. The Alert goes on to remind mariners that the VHF-DSC radio must be registered to receive a MMSI which must be embedded in the radio and identifies the FCC and its designees as

the source for MMSI numbers. The Alert then notes the importance of connecting a GPS receiver and cites the Coast Guard website www.navcen.uscg.gov/?pageName=mtDsc for further assistance in making the hookup with help from NMEA documentation.

c. Coast Guard Notice of Proposed Rulemaking (NPRM) on Towing Vessels.

The Task Force had made an earlier commitment to comment to the Coast Guard on proposed standards for safety radio and navigation capability on towing vessels subject to the proposed new regulations. The Working Group composed of volunteers had developed a draft comment which was presented at the meeting and discussed. The comment makes recommendations for short and long range communications, emergency alerting capability, receipt of maritime safety information, and electronic navigation capability including radar and automatic identification systems and also emergency power to ensure the availability of these services. Since most of the Working Group members were present, it was decided to hold a further session that afternoon which resulted in a further markup. Comments are due to be submitted by 9 December this year.

d. U.S. SOLAS Working Group to Prepare for IMO COMSAR 16.

Russ Levin repeated his previous announcement that meetings of the group would take place at the FCC HQ or the Coast Guard Headquarters Annex in Washington DC. Russ indicated that he might be able to arrange parking for those requiring it. Call Russ at 202-475-3555 or email him at russell.s.levin@uscg.mil. The dates selected for the meetings are as follows:

13 October 2011	FCC South Conf. Room; 445 12 th St. SW
17 November 2011	(same)
15 December 2011	USCG HQ Jemal Bldg Rm 10-1420; 1900 Half St. SW
12 January 2012	(same)

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

a. Extension to allow sale of Class D VHF radios without test call capability or restricted channel switching options until 21 March 2012. The previous announcement that sale of non-compliant class D VHF-DSC radios in the U.S. would terminate on 21 March 2011 was appealed by some manufacturers who needed more time to comply and citing confusing inconsistencies in the regulation. Under the circumstances, the Coast Guard agreed with the FCC to support a waiver until 21 March 2012.

b. Further Part 80 Rule Making.. There are numerous issues which are being held up because of the inability of the FCC to get them published in the Federal Register in a timely manner. Until they are published no effective date is established. In addition, there are petitions from RTCM and the Task Force which have already been through the public comment phase and are ready for approval but are being held to be consolidated with a new Petition expected from the Coast Guard this fall. The various actions being held up for these reasons include the following:

- 1.) Eliminate INMARSAT-E EPIRBs
- 2.) Require small passenger vessels without reserve power to carry VHF handhelds and that those handhelds include integral GPS
- 3.) RTCM petition to enable the VHF-FM Digital Small Message Services
- 4.) Task Force Petition to permit use of marine VHF handhelds ashore
- 5.) Revision of Part 80 to incorporate by reference the latest IEC standards for radar and other equipment.
- 6.) Clarify that vessels subject to GMDSS must test radiotelephone equipment daily
- 7.) Require vessels with mandatory EPIRBs to upgrade to EPIRBs with Integral GPS

c. FCC Decision on the Riverside, California Petition to Use Marine VHF Channels for Land Mobile Applications. The FCC has still not announced a decision in this case.

4. Reports and Issues, Service Agents and Manufacturers Task Group. Ralph Sponar reported for his group with the following highlights:

a. Standard Color Coding for GPS/Radio hookups. The NMEA ad hoc group recommendation for a standard color coding has been approved and included in the NMEA 0183 standard. The NMEA will now 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 NMEA, Coast Guard, and Task Force websites along with a matrix showing existing color codes for various radios and GPS receivers to facilitate interconnection. The USCG is updating the radio-GPS wiring connection spreadsheet which can be found at http://www.navcen.uscg.gov/pdf/marcomms/dsc/DSC_VHF_GPS_Install_Final.pdf

b. 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. A final version of a new check list for vessels on the Great Lakes was made available at the May 2011 Task Force meeting and is now on the NMEA and FCC websites along with the Check Lists for GMDSS and Small Passenger Vessel inspections. The three Inspection Check Lists on the FCC website are linked to the Task Force website.

5. Reports and Issues: The Recreational Vessel Group Report. Jack Fuechsel reported for this group on the main issues including:

a. ad hoc Group to Promote Proper Use of VHF-DSC Radios Including Registration for MMSI and Connection to GPS Receiver. There has been continuing progress on this broad based effort to encourage boaters to responsibly configure their VHF-DSC radios to maximize the Coast Guard's ability to respond to their distress alerts. The following are highlights of reported activity:

1). The Coast Guard issued Marine Safety Alert 04-11 in direct response to this program. See para 2.b above.

2.) Gene Danko reported by email that the USPS continues to teach GMDSS through their courses and the VHF-DSC-GPS principles have now been written into the revised Cruise Planning course which contains information on sailing to foreign ports; current FCC rules and applicable GMDSS protocols. We have put word out through our district and local squadrons to stress the Obtain/Program/Connect message for DSC-GPS functionality. We will continue to send the message out through monthly email blasts to the membership and public instructors. We discussed adding DSC familiarity to the task list of our Vessel Safety Examiner group and the leadership supports this; now we must obtain VSE committee buy-in and establish procedures for the VSE team.

3). The Coast Guard Office of Law Enforcement confirmed that they would be unable to require boarding officers to check VHF-DSC status during operational boardings because compliance is voluntary.

b. Coast Guard Authorization Act of 2010 Enabling Mandate of EPIRBs for Recreational Vessels Offshore. There were no new developments on the Task Force recommendation to the Coast Guard that they draft regulations to implement this new regulatory authority. This issue is being worked by the Coast Guard Office of Boating Safety which was unable to send a representative to the meeting.

c. NBF Trifold Handout Emphasizing Benefits of DSC/MMSI/GPS Project. The National Boating Federation (NBF) has developed an excellent brochure promoting our ad hoc group project. Advance copies were distributed at the Task Force meeting in May and were enthusiastically received by the members. Although Coast Guard grant funding has not been made available it has been reported that an alternative funding source has been identified.

6. Reports and Issues, Commercial Vessel Task Group. Jack Fuechsel reported for the Commercial Group with the following highlights:

a. New Coast Guard NPRM on Proposed Towing Vessel Regulations. See para. 2.c. above for the progress of the Working Group which is developing the Task Force comments on the NPRM.

b. Review of the Standards for Safety Equipment on Small Passenger Vessels. One of the handouts at this meeting was a copy of the two page Memorandum of Understanding between the Coast Guard and the FCC of 10 July 1984. 47 U.S.C. 381 requires any passenger vessel of the U.S. carrying more than 6 passengers for hire in the open sea or tidewater to be equipped with an efficient radiotelephone. The principal role of the FCC is to make inspections to confirm compliance. The FCC is authorized to

delegate testing to the Coast Guard. The MOU deals with VHF and MF radio and applies to:

- 1.) Vessels of less than 100 tons certificated by the Coast Guard to carry more than 6 Passengers in the open sea
- 2.) Passenger Vessels of more than 100 tons certificated to operate only in inland waters and
- 3.) Passenger Vessels of more than 100 tons which hold an FCC exemption from other radio requirements providing they comply with these provisions.

The Task Force felt that it was time that these requirements were updated and agreed to form a Working Group of interested parties to recommend changes. The initial membership of the Working Group is Nino Martini, Hugh Lupo, Rich Beattie, Ralph Sponar Jr, Larry Yarbrough, Russ Levin, Larry Solomon, Ed Brady, Bob Markle, LCDR David Webb, Peter Lauridsen of the Small Passenger Vessel Association and Jack Fuechsel. The group plans to work primarily by email.

c. MMSI Special Formats for Selected Vessels and Handhelds. Working Party 5B of the ITU has just adopted recommended MMSI formats for special devices making use of the MMSI for identification. The recommendation is as follows:

970XXYYYY	AIS SARTS
972XXYYYY	Man Overboard Devices of all kinds
974XXYYYY	EPIRBs with AIS

Code XX is Manufacturer ID 01 to 99; YYYY is sequence number 0000 to 9999

In addition, an optional format for VHF handhelds was adopted: 8(MID)XXXXX

7. Reports and Issues: Training Task Group. Owen Anderson reported by email that his ad hoc group to update the GMDSS Question Pools had sent out revision 9 of the GOC pool for final review of the first 50 questions. The last half of the GOC pool should go out in a week or two. Element-9, Section B on MF/HF/DSC/NBDP was also sent out for final review which brings Element 9 to 44% completion. Work has commenced on Section C, satellite systems. The ROC update project will follow.

8. Reports and Issues: GMDSS Modernization Group. RADM Ed Gilbert and Bob Markle both attended the IMO/ITU Experts Group meeting in London earlier in September. The Experts Group had been charged with review of the scoping exercise for GMDSS Modernization and will make its report to the COMSAR 16 meeting in March of 2012 along with the report of the Correspondence Group. The Group of Experts also reviewed the initial submission by Bob Markle's Correspondence Group which was limited to the work plan by its Terms of Reference.

9. The RTCM Report: RTCM President Bob Markle reported on the status of Special Committees of interest to the Task Force. His report is summarized here:

a. RTCM SC 101 on GPS in VHF-DSC Handhelds. The Committee completed a first draft edition of its standard on GPS in handhelds. They decided to align it with a new European standard, and hope to have a published RTCM standard by early 2012.

b. RTCM SC 104 on Global Navigation Satellite Systems (GNSS). This Committee is working on incorporating Galileo and Glonass into the standards which have been developed for GPS.

c. RTCM SC 109 on Electronic Charting. The Committee is working on a new version of the standard and plans to include provisions for Voyage Data Recorder (VDR) functionality in Electronic Charting Systems.

d. RTCM SC 110 on Emergency Beacons. The Committee is working on a new EPIRB standard with accompanying test standards for EPIRBs with GPS. They are also working on standards for a new generation of EPIRBs that will take advantage of certain characteristics of the next generation of Search and Rescue satellites. Existing EPIRBs will be compatible with the new satellite system.

e. RTCM SC-119 on Maritime Survivor Locating Devices. This Committee was reactivated to consider man overboard AIS applications and other relevant technologies.

f. 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 such as those used in harbors and at locks.

g. RTCM SC-123 on Data over VHF Channels. 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.

h. RTCM SC 127 on Enhanced Loran. The work of this Committee is now centered in the United Kingdom which provides the chairman.

i. RTCM SC-128 on Satellite Emergency Notification Devices. 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 its new standard. The FCC will be petitioned to include the new standard in its Rules.

j. RTCM SC 129 on Portrayal of Nav-Related Information on Shipboard Displays. This Committee is just beginning its work.

k. RTCM SC 130 on Electro-Optical Imaging Systems (EOIS). The work of this Committee deals primarily with night vision systems.

I. Other RTCM Announcements of Interest. The 2012 RTCM Assembly including a Task Force meeting will be held concurrently with the NMEA International Marine Electronics Conference and Exposition at Lowes Royal Pacific Hotel in Orlando, Florida the week of 23-29 September 2012. It is expected that this joint meeting including a combined exhibit will prove popular with members of both organizations.

10. Summary Record of 19 May 2011 Meeting: The Summary Record of the 3 August 2011 meeting which had been distributed earlier and posted on our website, was noted without change.

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 Wednesday morning 11 January 2012 at the **New RTCM Headquarters in Arlington, Virginia at 1611 North Kent Street, Suite 605.** The follow-on meeting will be held tentatively on Thursday morning 17 May 2012, at the RTCM Headquarters in Arlington, Virginia.

GMDSS TASK FORCE CONTINUING WORK LIST

28 September 2011

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. Advocate voluntary carriage of VHF or 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 GPIRBs for U.S. Vessels Required to Carry EPIRBs (TF)
- 14. Advocate mandatory Distress Beacons on R/V more than 3 miles offshore (TF)**
- 15. Review GMDSS concepts and make modernization recommendations (MOD)**
16. Advocate intership calling on HF GMDSS channels (CV)
17. Recommend Safety Radio and VMS Requirements for Small Fishing Vessels (CV)
- 18. Recommend Safety Radio & Navigation Requirements for Towing Vessels (CV)**
- 19. Recommend Safety Radio & Nav. Outfit for Small Passenger Vessels (CV)**
20. Recommend training programs for non-mandatory users of GMDSS systems (RV)
21. Encourage GMDSS handbooks and Internet and video training aids (RV)
- 22. Encourage users of VHF-DSC Register for MMSI and connect GPS (RV)**
23. Advocate FCC let R/Vs keep existing MMSI when applying for Station Lic. (RV)
24. Encourage Mfgs. to upgrade GMDSS explanations in equipment manuals (SA)
25. Monitor guidelines for GMDSS equipment maintenance & maintainer standards (SA)

- 26. Recommend proper interconnection of GPS receivers with DSC Radios (SA)
- 27. Advocate better FCC & USCG management of annual GMDSS inspections (SA)
- 28. Develop Inspection Guidelines and Check Lists for selected vessel types (SA)**
- 29. 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
 (MOD) Modernization Task Group

Attachment: Draft Agenda for Task Force Meeting 11 January 2012 in Arlington, Virginia at the **New RTCM Headquarters; 1611 North Kent Street, Suite 605.**

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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