NATIONAL GMDSS TASK FORCE

Newsletter and Summary Record of 23 July 2015 Meeting

 1.   **The Task Force Meeting.** This Newsletter reports on the recent meeting of the Global Maritime Distress and Safety System (GMDSS) Task Force, a group 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 makes recommendations to government authorities to improve safety at sea.

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 webcast or conference call. This Newsletter goes out to over 5000 members after each quarterly meeting.

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: 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 23 July 2015 at the RTCM Headquarters in Arlington, Virginia. The documents listed below were distributed and are available on request:

　　Task Force comment to DOT of 22 May 2015 endorsing the e-Loran concept
　　Flyer on BOATUS/USPS New Course n VHF Radio
　　Coast Guard R&D Project to Assure Transfer Integrity of Next Generation 911 Calls
　　 Garrett's Slide Show: How Emergency Beacons Have/Could Have Aided Survival
　　 Kelly Spaulding's Slide Show Describing the VMS F/V Monitoring System

 4.   **The Coast Guard Reports:** The following presentations were made by the persons indicated:

　　a. Overview Report from Captain Glen Hernandez, Chief of Telecommunications and Cybersecurity:

　　　1). Coast Guard MSI NAVTEX Broadcasts. Because the Coast Guard Messaging System was becoming unsupportable, a decision was made to transition to the Navy C2OIX Messaging System in August 2015. Transition planning revealed a compatibility issue with the Automated Broadcast Scheduler, a key service enabling NAVTEX, SITOR, and other MSI Broadcasts. There had been concern that it might be necessary to discontinue NAVTEX broadcasts until the compatibility issue was resolved but it now appears that a solution has been

found which will avoid interrupting the broadcasts. In the course of resolving this problem, it was decided to undertake a review of Coast Guard broadcast commitments with a goal of optimizing the infrastructure to meet current obligations and plan for possible new obligations arising from GMDSS Modernization.

2). New Coast Guard Communications Command. The Coast Guard has established a new Communications Command at the CAMSLANT Station near Portsmouth, Virginia. From this location it will continue to remotely operate the HF stations on the east coast and will begin remotely operating the Pacific area HF stations at Point Reyes (formerly CAMSPAC), Hawaii, Guam, and probably Kodiak as well.

3). Cybersecurity is becoming a Major Issue in the Maritime Community. The Commandant of the Coast Guard has promulgated his Cybersecurity Policy and the IMO has begun to address the issue. In the commercial sector, the RTCM, BIMCO and CIRM are developing plans for recommended action. The Task Force has added a new Cybersecurity item to its work program and will monitor developments to report to the membership.

b. The Coast Guard Report on Task Force Petition to Require Emergency Beacons on Recreational Vessels Offshore. Joe Carro reported that the Office of Boating Safety had largely completed the data analysis and was now moving into the regulatory phase that starts with a request to the Coast Guard's Marine Safety and Security Council to authorize project origination.

c. Automatic Identification System (AIS) and Electronic Charting Issues: Jorge Arroyo provided an update to the AIS Rulemaking, which will become effective in March of 2016. A new AIS Coding Guide has been posted on the Coast Guard's Navigation Center website. ECS and ECDIS electronic charting rules are moving forward with a new Policy Statement under development. New Radar Standards from the RTCM Special Committee are expected soon.

d. Coast Guard Integrity Evaluation of Cell Phone Call Data Via Next Generation 911 Call Centers (NG911). Tim Strickland reported on behalf of Val Arris of the Research and Development Center with the following highlights:

1) Scope of the Project. The project was created to validate the accuracy of position and other data transferred from cell phone mariners through NG911 Operators to the Coast Guard. The project was begun in recognition that an increasing percentage of near shore distress calls are coming from cell phones, many with embedded position information. In 2010 about 40% of SAR cases originated from cellphone calls while in 2014 the percentage had increased to 65%. Preliminary results seem to indicate that in 80% of cellular calls position data is available. The validation testing was scheduled for the Maine coast since that state has fully implemented the new standards for NG911 Call Centers.

2.) Phase 3 Execution. Phase 3 was conducted 19 June 2015 along the coast of Maine. The test calls were received at the State of Maine Test Center Hub and transmitted via Voice Over IP (VOIP) Protocol via a dedicated circuit to USCG OSC Martinsburg. The

Metadata transferred includes 5-meter position, call back number of the originating cellphone and images if available. The final phase demonstrated the ability of the NG911 networks to successfully transfer the full data set that will greatly improve SAR response but it will take some time before all coastal call centers have fully implemented NG911. A side benefit of this new system will be improved ability to track the origination of Hoax calls.

c. Status of the Task Force Petition to Upgrade Radio Safety Equipment on Small Passenger Vessels. Russ Levin reported that the Petition was moving ahead and would soon be presented to the Coast Guard's Merchant Marine Safety and Security Council for permission to initiate regulatory action. It appears that most of the Task Force recommendations have been accepted at this stage with the possible exception of the proposal to require small uninspected passenger vessels carrying 6 or fewer passengers to carry satellite emergency beacons.

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

a. Comments on Docket 14-36, NPRM on changes to Part 80: The FCC has reviewed the comments received and still plans to make adjustments to the Rules on all of the issues reported in the last Newsletter.

b. 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. The FCC has been in discussion with the Coast Guard and plans to initiate regulatory proceedings as appropriate.

c. Management of MMSI Numbers Being Assigned by Agents: The FCC and the Coast Guard have entered into Memoranda Of Understandings (MOU)s with several private sector agencies to issue MMSIs to vessels not requiring a Station License. Those MOUs are being revised and the new format has not yet been published but is being coordinated with those agencies.

d. End to FCC Waivers for VHF-DSC and Class A VHF for non-SOLAS Vessels. Ghassan noted that the waiver of VHF-DSC capability for mandatory non-SOLAS vessels provided by the Rules would be ending effective 20 January 2016, the one year anniversary of the Coast Guard's declaration of Sea Area A1. He also noted that the FCC had been in discussion with the Coast Guard on granting waivers to non-SOLAS mandatory vessels to use Class D VHF Radios in lieu of the Class A VHF Radios. They plan to incorporate this change in the FCC Rules to avoid acting on numerous waiver requests.

e. Waiver Request for PLB with Iridium in Lieu of 121.5 Homing. This waiver request is still pending but it appears to have merit. The ability to establish two-way communications seems to be a great improvement to the one-way alerting that PLBs do so well.

6.   Reports and Issues, Recreational Vessel Group: David Kennedy led the discussion on Recreational Vessels with the following highlights:

a. New Coast Guard Mobile Phone App Getting Good Reviews. The new Coast Guard App for Mobile Phones was released on 16 May after the last Task Force meeting but was reported in the Newsletter. Since that time there have been a number of enthusiastic reviews in the trade press.

b. Issue of MMSI Numbers by Registration Agents. It was reported that BOATUS has issued about 143,000 numbers to boats not requiring Station Licenses and the U.S. Power Squadrons has issued about 5000. Sea Tow's numbers were not available but it was reported that they have temporarily stopped issuing MMSIs and are referring their customers to the Power Squadrons. As reported in Para. 5.c. above, the FCC and the Coast Guard are working on a new MOU governing the way these Registration Agents issue MMSI Numbers.

c. Gordy Garrett's Power Point Presentation of Survival Principles and Selected SAR Cases. Gordy continues to do a fantastic job of tracking SAR cases for the Task Force and his work will prove very beneficial to the NSBC Campaign. His presentation began with a recounting of the four principles of survival: Distress Alerting to SAR authorities; Position Indicating; Active Signaling for on-scene locating; and Survival Awaiting Rescue through flotation and protective clothing. Goody's selected SAR cases included both successful outcomes and outright failures. Several Task Force members in attendance asked for copies of the slides for use in promoting safety on the water. This version of his PowerPoint slides are more inclusive that earlier editions and will be placed on the Task Force website. They are also available by email to any Task Force member on request to Jack Fuechsel at gmdss@comcast.net.

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

a. Continuing Issue – Relaxing the "3 Strikes Rule." The Task Force, RTCM and NMEA all released their versions of the Notice to Manufacturers urging a simplified way to reprogram DSC radios without returning them to the Manufacturers. It appears that on most new radios, a service agent can reprogram the MMSI with a code from the manufacturer. Handhelds may have to go back to the manufacturer.

b. New ITU Recommendation 585 on Handheld Radios With GPS Allows New Format for MMSI on a Radio Not Associated with a Vessel. This new ITU Recommendation that is likely to be adopted offers a solution to Diver Radios and other problems but needs to be authorized by the Administration. The new optional format would use the digit '8' in lieu of the 3-digit country code. There was extensive discussion as to whether the Task Force should urge the U.S. to authorize the new format in the U.S. A few interested parties will pursue this issue off line and make a recommendation at the next meeting.

c. Discontinuance of Fleet Licenses by the FCC is Causing Problems for Fleet Operators. Under the old Fleet Licensing concept the Operator used a single MMSI number for all vessels in the fleet. Discontinuing the Fleet License requires an individual Station License for each vessel in order to get separate MMSI numbers.

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

a. IEC/TC80 Group on the Integrated Communication System (ICS). Joe Hersey provided an update on the work of IEC/TC80 to which the U.S. had provided an input paper as reported at the last meeting. The following changes are under study and likely to be adopted:

1.) Routing Distress Alerts direct to the responsible RCC rather than to an MRCC associated with a designated Coast Earth Station. This would function in a manner similar to cell phone alerts to a 911 Call Center.

2.) Displaying distress alerts, maritime safety information (e.g. SafetyNET and NAVTEX), AIS safety-related messages and application specific messages (in accordance with 61174 Ed4 ECDIS and 62288 Ed2 navigation displays)

3.) Further review of the Bridge Alert Management System

4.) Implementing MSC.1/Circ.1389 Guidance on procedures for updating shipborne navigation and communication equipment as done in the ECDIS case

5.) Further review of the Digital Selective Calling (DSC) standard

6.) Cybersecurity standards

b. Update Report on NOAA's Vessel Monitoring System (VMS). Kelly Spaulding of NOAA's National Marine Fisheries Service provided an update on the VMS with the following highlights:

1). NMFS administers VMS through its 5 Regions, each with VMS staff and vTrack manages day to day monitoring under contract

2). About 4100 fishing vessels were being monitored as of July 2015

3). Systems authorized for monitoring include Skymate, Boatracks, Faria, CLS, and Network Innovations

4). Data reported includes position, gear type, fish caught, Dealer used, Pre-landing notice, and days at sea

5). Other users of data collected include the Coast Guard, Coastal States, and approved scientific study programs

c. Update Report on Progress of Iridium Bid to Qualify as a GMDSS Provider. Larry Solomon of Iridium noted that the IMO's Maritime Safety Committee (MSC) had approved the performance standards and that NCSR-3 meeting in March would review the 'generic' standards for satellite systems participating in the GMDSS. This review can be treated as an urgent item

that would enable MCS-96 meeting in May 2016 to consider them. IMSO has conducted the review with a panel of experts including experts from Russia and China but the new Director General of IMSO wanted more input and Andy Fuller, recently retired from IMSO, will become a special advisor in the further review with a 27 November 2015 deadline to file the IMSO report.

9. **Reports and Issues of the Training Task Group.** Kurt Anderson reported on his Group's activity that includes reopening review of the Question Pools for GMDSS Operator exams. Some of the issues being watched are the role of SITOR which is rarely used but accounts for about 8% of the questions, display of Navtex and SafetyNET Marine Safety Information (MSI) on various integrated display devices and Inmarsat-C which appears destined to become the only GMDSS qualified Inmarsat system once Inmarsat-B is terminated at the end of 2016. He will contact all of the schools teaching GMDSS courses and offer to accept input from their instructors.

10. **GMDSS Modernization.** Bob Markle, chairman of the International GMDSS Modernization Correspondence Group provided the following report:

a. Framework and Progress to Date. Bob explained the Modernization framework that included a High Level Review of major issues followed by a Detailed Review. The schedule for the project has been extended for one year. The Correspondence Group will prepare a final draft of the Detailed Review that will go to the IMO/ITU Experts Group meeting in October of this year and then to the NCSR-3 in March 2016. The Correspondence Group prepares the input for these reviews and it seems safe to say that there are few dramatic changes in prospect except for the pending application of Iridium to become a GMDSS service provider. In general, most of the review activity has taken place in the Experts Group because the newly merged NCSR group has a huge agenda for a one-week meeting.

a. Modernization Decisions Tentatively Agreed. Earlier reviews have accepted the functional requirements with only minor adjustment and have endorsed the changes proposed to Chapter IV of SOLAS. The Sea Area A3 definition (and consequently the meaning of Sea Area A4) will be changed to account for entry of satellite systems other that Inmarsat for GMDSS service

b. Modernization Issues still to be decided. There are still a number of issues of concern that should be dealt with and may be included in the Detailed Review. The following is a partial list:

> 1.) The need for higher data speeds to accommodate e-Nav and MSI
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> 2.) The dwindling number of HF Coast Stations still available for service
>
> 3.) Are all functional requirements needed for non-SOLAS vessels?
>
> 4.) Incorporate functional requirements for Man Overboard devices

5.) Should PLB's (or another kind of device) be required for/or packaged with survival craft?

6.) Interoperability among shore facilities in the GMDSS

7.) Include the new NAVDAT service? (MSI broadcast on 500 kHz)

8.) Include the new VHF Digital Exchange Service (VDES)?

9.) Role of AIS in GMDSS, if any?

10.) Government's reluctance to pay for duplicate satellite broadcasting of MSI?

11.) The role of text messaging in GMDSS, if any?

11. **The RTCM Report:** RTCM President Bob Markle provided the following updates on the continuing work of the RTCM Special Committees. The following are highlights:

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). This Committee is working on incorporating new differential GNSS messages to accommodate new global and regional systems such as the Chinese BeiDou System (BDS) and the Japanese QZSS System into its standards that were originally developed for GPS. The committee met in Tampa in September 2014 and considered promulgation of differential corrections by AIS broadcast and Internet broadcast. The May 2015 meeting was in Xi'an, China, which emphasized the committee's commitment to include all operating GNSS systems.

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.

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 since virtually all PLBs on the market already include GNSS receivers. The Committee met again during the RTCM Assembly.

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 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 RTCM Assembly and the amendment is now published. The group was advised that Australia has accepted the RTCM 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 proposed to adopt 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 taking 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.

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 RTCM has asked for reconsideration.

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.

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 Committee met during the RTCM Assembly.

n. RTCM SC-132 on Visual Emergency Signaling Devices. This new Committee was chartered at the request of the Coast Guard to review devices that might be used to replace flares on vessels. In addition to safety factors, it has been reported that in 87% of reported flare

sightings, no distressed vessel was found. The U.S. Coast Guard Research and Development Center is studying the most effective light characteristics for this purpose.

o. RTCM Workshop on Updating the FCC Rules. Following the Main Task Force meeting a second Workshop was convened to continue the process of updating an earlier Coast Guard effort to compile extensive revisions to the FCC Rules to bring them up to date an make them easier to understand. For various reasons the earlier update was never sent to the FCC officially. The RTCM has now undertaken to sponsor the earlier effort and Joe Hersey has agreed to chair the group. Copies of the earlier effort were made available to the volunteer group that attended the afternoon session and the work continues by email. The Task Force is fully supporting the effort and most members of the Working Group are also Task Force members. The latest version of the modified Rules are available on the website www.joecel.com. Joe summarized those parts of the Rules for which more work was still needed as follows:

a. Electronic Radio Log Keeping

b. Frequency of equipment testing prior to departure

c. How to make references to Inmarsat more Generic

d. Documents to be carried on board

e. Move all references to Standards to one Section

f. Create a new Section on MMSIs and passwords

g. Watchkeeping on 2182 kHz

h. Hi Speed Craft

The work of updating the Proposed Rules is now fairly well along. We will continue to edit based on inputs from members and ask for members to review updated versions. A further meeting after the next Task Force meeting in Baltimore could be arranged if needed but so far has not been scheduled. Anyone desiring to be added to the group should contact Jack Fuechsel at gmdss@comcast.net.

12. **Next Meeting of the GMDSS Task Force:** The next Task Force meeting will be held on Wednesday 30 September 2015 at the Sheraton Inner Harbor Hotel in Baltimore, Maryland during the International Conference and Expo of the National Marine Electronics Association (NMEA). The follow-on meeting will be held at the RTCM Headquarters on a date to be determined in January 2016.

GMDSS TASK FORCE CONTINUING WORK LIST

23 July 2015

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 (File: TFSR-82.doc)