

## NATIONAL GMDSS IMPLEMENTATION TASK FORCE

Newsletter and Summary Record of October 19, 2007 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 at [www.navcen.uscg.gov/marcomms/](http://www.navcen.uscg.gov/marcomms/) (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.

**1. The Task Force Meeting:** The GMDSS Task Force met at the Amelia Island Plantation during the annual Convention of the National Marine Electronics Association (NMEA). NMEA President Dave Hayden welcomed the Task Force and the Director expressed the thanks of the Task Force for NMEA's hospitality and our continuing inclusion in the Annual Convention Agenda. NMEA's 2008 Convention will be held in San Diego at the Town and Country Resort October 1-4, 2008. The documents listed below were distributed and copies of some are available on the website:

Summary Record of the 9 August 2007 Task Force meeting  
Draft Issue Paper on Fishing Vessel Regulations & VMS Rules  
Coast Guard Safety Alert on Programming Marine Radios & AIS  
RTCM Paper on USCG Proposed Rules on Long Range Ident. & Tracking  
FCC Public Notice on Task Force Petition re MMSI Policy  
Draft Task Force response to FCC Public Notice on MMSI Policy  
UK Paper Advocating eLoran  
Coast Guard Press Release on Successful A/C DF on EPIRB 406 MHz  
BOATUS Press Release Supporting Coast Guard Waterway Watch Program

**2. Summary Record of August 9, 2007 Meeting:** The Summary Record of the May 10, 2007 meeting which had been distributed earlier, was noted without correction.

**3. The Coast Guard Reports:**

**a. Upgrade of MF Coastal Network to DSC for Sea Area A2.** Russ Levin reported on the Coast Guard's program to complete the necessary upgrades to the coastal MF watch to enable Digital Selective Calling. Because of the high cost of restoring the MF antenna systems and replacing aging transmitters, a life cycle cost analysis has been undertaken including a review of distress cases which used MF alerting. The preliminary results based on lives saved seem to justify going ahead with further development of the business case but the analysis is not yet complete. Completion of the analysis and seeking approval of top leadership could take up to a year. If the Coast Guard decides to go ahead with the upgrade, the costs involved will likely require new budgetary support.

**b. Automated HF Radio Test Call Facilities and HF Broadcasting.** Russ Levin reported that the Coast Guard has activated an Automated Digital Selective Calling Answering System (ADSCAS) facility for responding to HF-DSC test calls which

answers on 4 MHz only. This project is in response to a determination that 75-80% of the DSC calls received were for test purposes. The HF Test Call Facilities have been installed at 7 locations, the Atlantic Area Master Station at Chesapeake, VA with remotes at Boston, Miami and New Orleans, the Pacific Area Master Station at Pt. Reyes, CA with remote at Honolulu, and at Communications Station Kodiak. With respect to the Coast Guard's public inquiry on the need for continuing the High Frequency broadcasts of Marine Safety Information (MSI), the public response was overwhelmingly favorable. The next step is to complete the analysis of the public response and assuming a decision to maintain the current program, to formulate an acquisition program for the orderly purchase of new high frequency transmitters.

**c. Coast Guard Response to Task Force Recommendations on MMSI Policy.**

The Coast Guard has reviewed the recommendations and plans to make access to the master MMSI database available to the MMSI Registration Agents for validation. There has been no action yet to follow up with the ITU on why they apparently do not publish the expanded vessel descriptive information requested by the IMO to improve Search and Rescue.

**d. Status Report on Rescue 21 VHF-DSC for Sea Area A1.** CDR Al Arsenault of the Rescue 21 Program provided a briefing on the status of new facilities in the Rescue 21 network with the following highlights:

1). The VHF-DSC Test Call facilities will be implemented in all operational sites by late October this year and will be included in all other sites as they become operational. Since the international standards for the Test Call facility were developed recently, many of the VHF-DSC radios on vessels may not yet have the capability to test automatically. Some of the newer radios do have the capability and some manufacturers may be able to provide software updates to activate the capability in older radios.

2). The Rescue 21 system is managed from the new Sector headquarters (generally replacing the old Group Commands). There are some 500 tower sites required of which 80% use leased space on towers owned by others. Upgrade of the sites in Alaska and the Western Rivers has been removed from the General Dynamics contract and will be managed directly by the Coast Guard and utilize mostly existing sites with some reductions to the capabilities at selected sites.

3). Rescue 21 includes 4 disaster recovery mobile systems which can be deployed to replace sites which have been destroyed by hurricanes etc. The system is networked on the Coast Guard's backbone network and the Coast Guard Operational Systems Center in West Virginia can take temporary control of any failed Sector. New Sectors which became operational recently include Delaware Bay, and Long Island Sound. Sector New York will be operational early in November 2007.

4). The Coast Guard success in Direction Finding (DF) from Coast Guard aircraft on the EPIRB 406 MHz alerting signal has greatly improved the range of detection over that provided by the 121.5 MHz homing signal. That success is now being evaluated for

possible addition of the 406 MHz DF to the Rescue 21 system to improve near coastal EPIRB detection.

**e. Current Status of Automatic Identification Systems (AIS).** Jorge Arroyo reported on the status of AIS implementation. The following are highlights:

1). The long awaited promulgation of regulations providing for expansion of AIS carriage to over 17,000 additional vessels is still pending but should be forthcoming in the fall or winter of 2007 with a revised timeline.

2). Increment 1 of the Nationwide AIS (NAIS) acquisition is in full swing with the deployment of a shore-side network of receivers at 30 major ports and critical waterways. The Coast Guard anticipates having 190 receive only sites in the network. A Request for Proposals (RFP) for Increment 2 in the AIS procurement with the capability to transmit messages as well as receive them is on schedule for a November release.

3). The Coast Guard has type approved 5 Class B AIS units to date. Final certification by the FCC is required prior to their sale. The FCC has received permission to waive their Rules to enable prompt Class B certification which can be expected by early November.

4). The AIS Search and Rescue Transponder (SART) has been approved by the International Maritime Organization (IMO) as an alternative to the Radar SART required for the GMDSS. In addition, the AIS SART provides a performance 10 times better than a conventional RACON. FCC certification will be required to use the AIS SART on U.S. ships.

**f. America's Waterway Watch.** LT John Taylor introduced this new program which encourages mariners of all types to be on the alert for suspicious activity and report any such activity to the Coast Guard. This program is endorsed by the Department of Homeland Security and is managed by the Coast Guard's new initiative in Maritime Domain Awareness (MDA). Other highlights include the following:

1). The program is being supported by principal boating organizations including the National Marine Fisheries Service (NMFS), State Vessel Licensing authorities, BOATUS, Sea Tow, the Coast Guard Auxiliary, and the U.S. Power Squadrons

2). Local reports can be made to the 911 Operator who should connect the caller to the local Coast Guard Station. Other means of contact include the following:

Call the Coast Guard's National Response Center on 1-800-424-9902

Call the Coast Guard on 1-877-24WATCH

Call the DHS National Reporting Center on 1-866-347-2423

Call the Coast Guard on channel 16 VHF or channel 70 VHF-DSC

Use the Coast Guard Universal MMSI 003669999 on DSC or AIS

**4. The FCC Reports:** Ghassan Khalek reported for the FCC, the following are

highlights of his report:

**a. Pending FCC Rulemaking Issues.** There have been no new Reports or Notices of Further Rulemaking on Part 80 released since the last meeting but some are still awaiting clearance at the Federal Register for the better part of a year.

**b. Pending approval of AIS Class B Units.** The Coast Guard has approved 5 AIS Class B Units. Final certification by the FCC is required prior to their sale. The FCC has just received permission to waive their Rules to enable prompt Class B certification which can be expected by early November.

**c. FCC Response to Task Force Petition and Recommendations on MMSI Policy.** On 11 October, the FCC issued Public Notice DA 07-4212 under WT Docket No. 07-230 inviting public comments on the Task Force Petition. Responses are to be received by 13 November 2007. **Task Force members are urged to respond** since numbers count. The full petition is on the Task Force website and essentially asks the FCC to modify their Universal Licensing System to permit boaters to keep an MMSI assigned by a registration agent such as BOATUS or Sea Tow when they apply for a Station License to go international; the petition also seeks to allow the boater to keep an FCC issued MMSI if they plan to drop the FCC Station License. Changing MMSI numbers can be expensive to the boater and often leads to duplication. For ease in commenting by email see below:

Log onto FCC website [www.fcc.gov](http://www.fcc.gov)  
Click the "ECFS" box on lower left margin  
Click "ECFS Home" on upper left margin  
Click "Submit a Filing" under ECF Main Links on top right  
Fill out the Cover sheet. Use Proceeding "07-230" not WT 07-230 or DA 07-4212  
Type in comment or attach comment in pre-formatted file  
You should get an immediate response that the filing is accepted

**d. FCC License Statistics.** Ghassan Khalek provided the following Statistics:

Total Ship Station Licenses:	70,903 (down from 198,000 in 2005)
Compulsory Ships:	20,533 (13,997 have MMSI)
Recreational Vessels:	54,910 (29,908 have MMSI)
Total Operator Licenses:	64,787 (issued for life)
General Operator Licenses:	61,465
GMDSS Operator/Maintainer	1,379
GMDSS Maintainer	528
Total Coast Station Licenses:	5,932

**5. The RTCM Report:** RTCM President Bob Markle reported on several issues as follows:

**a. IMO Initiative for Long Range Identification and Tracking (LRIT).** There were few new actions taken by IMO's Maritime Safety Committee at its last session but

the U.S. Coast Guard has released proposed Rules to implement LRIT for U.S. vessels and other vessels arriving at U.S. ports as a means of implementing the International LRIT system if IMO is able to bring it on line by their target date of January 2009. This international implementation date is considered fragile however since the IMO has not yet been able to come up with the funding necessary to implement LRIT on schedule. In this event, the new Coast Guard proposed Rulemaking paves the way for the U.S. to proceed unilaterally with implementation in the approaches to U.S. ports.

**NOTE:** After the meeting, it was learned that the IMO Maritime Safety Committee (MSC) accepted a proposal by the United States to operate an interim International Data Exchange (IDE). MSC determined that an International Data Center (IDC) would not be required. This clears the way for the LRIT system to start operations on 1 January 2009. The start of the system had been in doubt since the designated LRIT coordinator (the International Mobile Satellite Organization – IMSO) had not been able to secure adequate funding to establish the IDE and the IDC. The Russian Federation has offered to operate a backup IDE.

**b. RTCM Special Committee Studying GPS in VHF-DSC Handhelds.** RTCM SC-110 with SC-101 has held one meeting aimed at developing specifications for incorporating GPS in VHF-DSC handheld radios. They plan to have a first draft of a new standard by November 2007. It appears likely that the work will require new ITU classifications for such handhelds. There are many issues to be resolved such as whether the GPS would be activated from a cold start or kept warmed up with attendant battery drain.

**c. RTCM Special Committee Studying eLoran.** RTCM Special Committee 127 has been established to develop standards for Enhanced Loran also known as eLoran. The concept of eLoran is a modernized system which provides improved accuracy and reduced operating costs. The eLoran system includes a data channel for delivery of Loran corrections and integrity and can meet the accuracy requirements for harbor approach and entrance. The primary reason for advocating eLoran is to back up GPS for Navigation and Precise Timing. The known vulnerabilities of GPS call for a non-satellite backup by a terrestrial system and Loran is the only system which can meet the requirement. SC-127 has had an initial meeting and plans to develop two standards, one for the signal structure and one for the receiver. The application foreseen is for a combined eLoran/GNSS receiver.

**d. RTCM Special Committee Studying MSI Applications of AIS.** A Working Group of RTCM Special Committee 121 on AIS will examine the “Expanded Use of AIS within VTS”. This effort is directed towards potential uses of AIS transmit/broadcast of Maritime Safety Information (MSI) messages as part of an expanded Vessel Traffic Service (VTS). The Working Group will recommend new or expanded standards suitable for national and international implementation.

**e. 2008 RTCM Annual Assembly will meet in San Diego, California.** The 2008 RTCM Annual Assembly is scheduled for May 4-10 at the Catamaran Hotel in San

Diego. The 2009 Annual Assembly will return to Saint Pete Beach, Florida 3-9 May 2009 at the Tradewinds Hotel.

**6. GMDSS Modernization Initiative.** RADM Ed Gilbert has been leading the Task Force initiative aimed at modernizing the GMDSS. His group works largely by email since there is rarely time at the meetings to discuss the various subsystems in detail. Members wishing to contribute suggestions or willing to join Ed's ad hoc group can reach him by email at [gilbinc@aol.com](mailto:gilbinc@aol.com). The following are highlights of this initiative:

**a. Several GMDSS Modernization Successes since 1999.** There have been several successes since implementation of the GMDSS in 1999. These include adoption of paperless Navtex receivers for SOLAS ships, acceptance of the AIS SART for use in survival craft as an alternative to the Radar SART, and widespread adoption of GPS enhanced EPIRBs. In addition, FCC Rulemaking is tending toward recognition of several domestic satellite services as acceptable alternatives to Inmarsat, the only satellite system currently recognized internationally for GMDSS. Recognition of domestic satellite alternatives by the U.S. is seen as a first step toward international recognition by IMO.

**b. GMDSS Sub Systems Targeted for Modernization.** There are several other GMDSS systems which are under review for replacement or upgrading including the following:

1). The International Navtex system is old technology operating at very slow speed and U.S. broadcasts typically exceed their assigned time slots on the single shared broadcast channel. The International SafetyNET system over Inmarsat operates efficiently for dissemination of high seas warnings but may not have the capacity to take over the coastal warnings broadcast by Navtex. There is also a need to create a database of MSI broadcasts and warnings which could be accessed by ships import or at sea.

2). The IMO has stated goals of developing an alternative to the GMDSS use of Narrow Band Direct Printing (NBDP). The value of record traffic is recognized to provide a permanent record and to overcome language difficulties but NBDP appears to be rarely used except when exchanging record traffic on HF channels. The recognized Inmarsat systems have their own printers for record traffic but suffer from an inability to certify computers for use with Inmarsat in a timely fashion as new models are introduced.

3). Another international goal shared by the U.S. is providing internet access for ships at sea. This could be a suitable replacement for NBDP but the cost of installing and using systems capable of accessing the internet while at sea currently seem out of reach except for large cruise ships and other special purpose vessels.

**c. Review of GMDSS Functional Requirements.** The Task Force is continuing to take a fresh look at the functional requirements adopted for GMDSS noting that those requirements were established 25 years ago and that some of the requirements such as MF and VHF Public Correspondence are no longer available.

**d. Task Force will Monitor Developments in E Navigation.** A new initiative which the Task Force is following closely is termed “E Navigation” and encompasses a variety of integrated digital applications including electronic chart displays and an enhanced Loran service termed eLoran. See the report on eLoran in para 5.c above. There are other aspects of E Navigation including several non GMDSS systems such as AIS and LRIT

**7. Reports and Issues: the GMDSS Commercial Vessel Group:** There was one subject of interest to this group as follows:

**a. Task Force to Review Radio Safety Requirements for Small Fishing Vessels.** The Task Force was invited to consider whether to undertake an initiative to review the carriage requirements of safety radio equipment for small fishing vessels. Fishing vessels over 300 tons are regulated by the FCC which requires full GMDSS compliance. Fishing vessels below 300 tons are regulated by the Coast Guard and the safety radio requirements appear to be in need of review. A draft Issue Paper was distributed outlining the scope of the issue including an objective to harmonize government requirements to meet the needs of the National Marine Fisheries Service (NMFS) presently embodied in their Vessel Monitoring Service (VMS) and also the vessel’s safety radio requirements as viewed by the Coast Guard. The Task Force decided to convene an ad hoc group to develop an agenda for this initiative and interested parties are invited to contact Jack Fuechsel by email at [gmdss@comcast.net](mailto:gmdss@comcast.net) if they desire to participate.

**8. Reports and Issues: The Recreational Vessel Group Report.** Chuck Husick led the discussion for the Recreational Vessel Group which included the following highlights:

**a. Coast Guard Issues Safety Alert on Programming Marine Radio and AIS.** The Press Release approved by the Task Force at the August meeting was expanded by the Coast Guard to include AIS and issued as a Safety Alert. It emphasizes the need to register DSC capable radios for an identifying MMSI and connect a navigation receiver to enable the enhanced capabilities of DSC.

**b. A National MMSI Number Suggested for Reporting Suspicious Activity.** One suggestion at earlier meetings was to set up a special national Coast Guard MMSI number for submitting such reports. It appears that such a universal MMSI is already available (see paragraph 3.f.2 above) including telephone contact numbers.

**c. Response to the FCC on Task Force Petition re MMSI Policy.** Both BOAT US and Sea Tow indicated that they planned to contact their members who had registered for MMSI numbers to encourage response to the FCC’s Public Notice on the Task Force Petition submitted earlier. See paragraph 4.c above for details of how to respond.

**9. Reports and Issues: the GMDSS Service Agents & Manufacturers Group:** Ralph Sponar reported on the following issues of interest to this group:

**a. Reports of incompatibility between SC-101 Radios and other VHF-DSC Radios.** There have been some reports of incompatibility between VHF-DSC Radios adhering to the international standard and those built to the RTCM SC-101 domestic standard. The problem is due to international frequency stability standards adopted after the RTCM 101 specification was developed. At least one manufacturer of SC-101 Radios, Uniden, has announced that free software updates are available for their radios by calling 1-800-648-4923 or sending an email to [SC101upgrade@uniden.com](mailto:SC101upgrade@uniden.com). An informal query of other manufacturers of SC-101 radios indicated that they were not aware of any incompatibility problem that needed to be fixed

**b. Availability of Automated Test Call Capability in VHF-DSC Radios.** As noted in item 3.d.1) above, There is considerable interest in being able to test VHF-DSC radios with a new automated Test Call facility being retrofitted into all Rescue 21 sites. Since the standard (ITU 493-12) has only recently been developed, many older VHF-DSC radios will lack the capability. An informal survey of manufacturers indicated that most are planning to incorporate the test call capability in new models but that so far, none had a definitive plan to offer a software upgrade for older radios.

**c. New Issue: Need to update obsolete FCC forms used for GMDSS Inspections.** Rich Beattie of Radio Holland USA noted that his firm does about 1000 inspections each year and that the forms provided by the FCC for annual GMDSS inspections were obsolete and far inferior to those routinely used by the Classification Societies for that purpose. At the suggestion of the FCC, it was agreed to establish an ad hoc group to outline the problem and make a detailed recommendation to improve the forms and management of the program. Jack Fuechsel will be the nominal convener of the group and all members interested in participating should notify him by email at [gmdss@comcast.net](mailto:gmdss@comcast.net).

**d. Review of Recommendations for Further Changes the VHF Class D Specifications.** This issue was opened for discussion since some European countries have proposed further changes to the VHF Class D Radio specification. There was no support from the members for further changes to the Class D specification and the U.S. Coast Guard is known to advocate no further changes.

**10. Reports and Issues: the GMDSS Training Group:** There were no issues of interest to this group discussed at this meeting.

**11. The Next Meeting of the GMDSS Task Force:** The Task Force agreed to meet next at the RTCM headquarters in Arlington, Virginia on the afternoon of Wednesday 9 January 2008 at 1:00 pm. This meeting will follow a morning meeting of the U.S. SOLAS Working Group preparing for the next IMO/COMSAR meeting. Members are invited to attend both meetings if desired. A Draft Agenda for the January meeting is attached.

## GMDSS TASK FORCE CONTINUING WORK LIST

19 October 2007

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 regulatory action to require VHF or EPIRBs for 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. Advocate intership calling on HF GMDSS channels (CV)
13. Review safety radio and VMS requirements for small Fishing Vessels (CV)
14. Recommend training programs for non-mandatory users of GMDSS systems (RV)
15. Encourage GMDSS handbooks and Internet and video training aids (RV)
16. Recommend Class 'D' VHF-DSC as superior to RTCM SC-101 format (RV)
17. Advocate FCC enable R/Vs keep existing MMSI when applying for Station Lic. (RV)
18. Encourage Mfgs. to upgrade GMDSS explanations in equipment manuals (SA)
19. Monitor guidelines for GMDSS equipment maintenance & maintainer standards (SA)
20. Recommend proper interconnection of GPS receivers with DSC Radios (SA)
21. Recommend to FCC updating of forms used for annual GMDSS inspections (SA)
22. 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 9 January 2008 in Arlington VA

**Please refer questions and proposals to Captain Jack Fuechsel at 703-527-0484 or [gmdss@comcast.net](mailto:gmdss@comcast.net) If you have an Internet server with spam filters, please authorize receipt of messages from [gmdss@comcast.net](mailto:gmdss@comcast.net)**

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