9th COMMISSION ON THE PROMULGATION OF RADIO NAVIGATIONAL WARNINGS MEETING
IHB, Monaco
11 - 14 September 2007

SUMMARY REPORT

Note: Paragraph numbering is the same as in the agenda (Annex A).

1 OPENING REMARKS AND ADMINISTRATIVE ARRANGEMENTS

1.1 Opening Remarks and Introductions

The Chairman of the Commission (Mr. Peter Doherty, United States (NGA)) opened the 9th CPRNW Meeting at 0930 hours on Tuesday 11 Sep 2007. Representatives of 13 IHO Member States, the IHB, and four Ex-Officio members (IMO, WMO, IMSO, and Inmarsat) were in attendance. Of the 13 Member States represented, 11 were NAVAREA Coordinators and 1 was a Sub-Area Coordinator. The list of participants at the meeting is given in Annex B.

The Chairman then noted recent historic events with a direct connection to the World-Wide Navigational Warning Service (WWNWS) and the CPRNW. He noted that a "Century of Service" celebration was held last month in the United States to recognize 100 years of broadcasting messages to vessels at sea as on 19 August 1907, the U.S.A. transmitted its first message as part of the US Navy Broadcast System.

He also noted the successful 8th meeting of the CPRNW that was held last year for the first time outside of Monaco in Argentina (NAVAREA VI). He again thanked Argentina for its excellent support and hospitality during the meeting.

The Chairman then recognized Mr. Gordon Mackie who has recently retired and his WMO leadership position now being officially passed to Mr. Henri Savina. On behalf of the IHO and the CPRNW, he expressed grateful thanks for Gordon's dedication, contribution, and outstanding support to the CPRNW and all member states over the past 30 years in the implementation and operation of the WWNWS.

In closing his opening remarks he highlighted that the most historic change is still ahead of us with regards to the expansion of the WWNWS into the Arctic Ocean region. Significant progress has been made in the past couple of years and he individually welcomed Norway and Canada to this CPRNW meeting as newly designated NAVAREA Coordinators in this area.

1.2 Welcome by the IHB

The Chairman called on the President of the IHB, Vice Admiral Alexandros Maratos, to address the meeting.

After welcoming all participants, the President noted that the CPRNW has always been one of the most important bodies of the IHO and extended his appreciation to all delegates for the cooperation displayed over the past years between the IMO, WMO, IMSO and all member states. He then highlighted three important issues in the agenda for this meeting that

are of particular interest to the advancement of maritime safety and the CPRNW. The first issue identified was that there are still areas of the world that are not covered by MSI broadcasts with either SafetyNET or NAVTEX and of note some of these areas are in the Caribbean Sea. The second issue deals with a paper that was submitted by the IHB for this meeting and identifies E-navigation strategies which will be implemented. The third issue is the IHO Capacity Building Committee (CBC) and the initial MSI training course that have been completed in the Caribbean Sea region and scheduled for the future in Mozambique, the Red Sea, and Mediterranean Sea. He thanked the Chairman, the UKHO, and the USA for providing personnel to support this training effort and noted that the IHB does provide financial support for software and training but currently can not for hardware purchases.

He concluded his comments by wishing everyone a successful meeting.

1.3 Working Arrangements

Mr. Steve Shipman, Professional Assistant for Hydrography of the IHB, covered some of the working arrangements regarding the meeting with regards to start and end times each day, coffee breaks, and time allocated for lunch.

1.4 Administrative Arrangements

Mr. Steve Shipman, Professional Assistant for Hydrography of the IHB, covered some of the administrative arrangements regarding the evening social reception by the IHB, a group dinner for all delegates and official delegation photograph arrangements.

He noted that all conference documents had been printed and are made available at the side table here to include the latest agenda that was modified yesterday afternoon. He also indicated that each participant was provided with a listing of the current CPRNW membership, a listing of all delegates attending this meeting, and a copy of S53 ANNEX I which contains a listing of all NAVAREA Coordinators. He requested that all delegates review these three documents, make any necessary changes and pass them back to him to update.

He also reported that he was contacted by a representative from Iridium and that they would be in attendance to provide a presentation on their capabilities and capacity to promulgate broadcast warnings in the Arctic Region as part of the agenda for this meeting.

He finally stressed that the staff of the IHB was available and more than willing to assist the delegates at any time in any matter.

1.5 Adoption of the Agenda

The Chairman stated that the updated meeting agenda was very full and encouraged active participation by all delegates in the discussion of key items where their individual knowledge, experience, and expertise would be valuable to that particular agenda item. He also identified that in order to complete each item on the agenda that it would be beneficial to all delegates if everyone would keep their comments concise and pertinent to the issue being discussed.

The Commission adopted the agenda. A copy of the meeting agenda and a listing of all the papers submitted are located at Annexes A and C respectively.

1.6 Election of Chairman

As per paragraph 2.4 of the Terms of Reference for the CPRNW, the Chairman is to be elected by the Commission from its membership at the first meeting after each ordinary session of the International Hydrographic Conference.

The NAVAREA I Coordinator nominated Mr. Peter Doherty of the United States and current CPRNW Chairman to continue in this capacity. This nomination was seconded by the NAVAREA X Coordinator and then unanimously supported by all. The election of a Vice-Chairman was then discussed and resolved that this position was not necessary until the new CPRNW Terms of Reference come into effect.

1.7 Review of Action Items from the 8th CPRNW Meeting

The Chairman reviewed each individual action item from the last meeting of the CPRNW and briefly discussed the current status of each and identified if it would be addressed further as part of the agenda for this meeting. The complete listing of all actions from the 7th, 8th, and 9th meetings of the CPRNW along with noted comments and their current status are contained in Annex D.

1.8 Report of the XVIIth International Hydrographic Conference

The Chairman noted that the XVIIth International Hydrographic Conference was held in Monaco this past May and at this meeting member states approved the re-organization of the Committee structure of the IHO with the revised structure to come into force no later than 01 January 2009. The IHO will now have two main committees: The Hydrographic Services and Standards Committee (HSSC) and the Inter Regional Co-ordination Committee (IRCC). The CPRNW will come under the IRCC and be designated as a sub-committee. As part of the agenda there will be discussion at a later time as to a name change for this body.

The Chairman also noted that there are now 80 IHO member states and that the United States won 1st place at the IHC Cartographic Exhibition with a combined US Hydrographic Exhibit that celebrated 200 Years of Hydrography. Finally, the Chairman informed all members that he had the opportunity at this IHC to personally brief HSH Prince Albert of Monaco on the WWNWS expansion into the Arctic region during his tour of the cartographic exhibits.

In 2005 it was decided to establish the 2 Committees based upon the proposal by the Strategic Planning Working Group (SPWG) and in 2007 member states approved the TOR and rules of procedure and what bodies will be included in each. Recent discussions have identified the need to harmonize the documents for each Committee and when finalized it is the intention that they will be sent to member states for two-thirds approval. He emphasized that the name change of this body to a sub-committee under the new IHO structure does not change the stature or the work of this group.

Mr. Steve Shipman, Professional Assistant for Hydrography of the IHB, then noted that also at the XVIIth IHC was the election of the new Directing Committee. He informed all that Vice Admiral Maratos was elected to another term as the President of the Directing Committee, that CAPT Hugo Gorziglia (Chile) was elected as Director 1, and that CAPT Robert Ward (Australia) was elected as Director 2 to replace the outgoing Director Admiral Ken Barber (USA). They all assumed their posts on 03 September 2007 and CAPT Gorziglia will be assigned as Director of the IRCC within the new IHO structure and under which this body will fall.

The NAVAREA X Coordinator inquired if that the CPRNW is now a sub-committee if that meant that any report would go to the IRCC before it goes to the IMO. The Chairman confirmed that this will be the new process flow and the President of the IHB verified this and noted that this has come up in discussions and the report of the sub-committee will be passed to the committee that will meet once a year with attendance of all sub-committee chairs and there they will discuss these items and approve them and then report to IMO or pass to member states for approval if necessary. It was noted in further discussion that when the CPRNW meets may have to be adjusted in order to occur prior to the IRCC meeting and in time for a report to go to the next subsequent COMSAR meeting. The President of the IHB informed everyone that the Directors are currently discussing a timetable for meetings of committees and sub-committees to allow sufficient time and that he would personally ensure that the IMO COMSAR meeting date would be met in developing the schedule. In addition, for this year (2007) and next year (2008) and even in 2009 (as a transitional year) that the current procedure of CPRNW reporting directly to IMO COMSAR will be the normal business as usual.

2 MATTERS RELATING TO THE GMDSS MASTER PLAN

The Chairman recognized the fact that the IMO representative would not be arriving until tomorrow and further matters that require IMO advice would wait until later on in the agenda.

2.1 IMO Update

The Chairman noted that the GMDSS Master Plan was available on the IMO website and that all NAVAREA Coordinators should review and ensure that the correct information is in the document. Edits can be submitted directly to the IMO or passed to the Chairman and he will see that the IMO receives the updated information. The Chairman noted that of particular interest is the section that identifies scheduled broadcast times for each NAVAREA.

3 PROMULGATION OF MARITIME SAFETY INFORMATION (MSI)

3.1 Results from the 11th Session of the International Maritime Organization's Sub-Committee on Communications and Search and Rescue

3.1.1 Joint IMO/IHO/WMO Correspondence Group on Arctic MSI Services

The Chairman informed the delegates that he provided a summary of the activities of the IHO CPRNW at the 11th session of COMSAR that was held at the Royal Horticultural Halls in London from 19-23 February 2007. He noted that in addition to himself, the President of the IHB, and the Professional Assistant for Hydrography of the IHB attending this meeting that the following NAVAREA Coordinators were also present: NAVAREA I (UK), NAVAREA II (France), NAVAREA III (Spain), and NAVAREA IV and XII (USA) and new members for the pending Arctic NAVAREA's XVII and XVIII (Canada) and NAVAREA XIX (Norway).

At COMSAR 11, it was agreed that the five new NAVAREAS should be established and should extend to 90°N, that they should operate on a 24/7 basis and that Canada should be the Coordinator for NAVAREAs XVII and XVIII, Norway for NAVAREA XIX and the

Russian Federation for NAVAREAs XX and XXI. The detailed descriptions of the boundaries between the new NAVAREAs were also developed and agreed to. In addition, COMSAR invited the IHO CPRNW to review and update the WWNWS guidance documentation as necessary and re-established the Joint IMO/IHO/WMO Correspondence Group on Arctic MSI services with new Terms of Reference under the coordination of the IHO (see Annex E).

A more detailed discussion on this subject took place later in the agenda.

3.1.2 Tsunami Update

The Chairman noted that at COMSAR 9 and COMSAR 10 that the general assembly considered the promulgation of warnings for tsunamis and other natural disasters using the existing International SafetyNET and/or NAVTEX systems. At COMSAR 9, the IMO had offered the use of its maritime GMDSS communication facilities, particularly the International SafetyNET system, to distribute warnings from regional centers to both national authorities and vessels at sea (COMSAR/Circ.36, see Annex F). Tsunami warning centers and others wishing to use the International SafetyNET system were invited to register with the IMO International SafetyNET Coordinating Panel to become authorized data providers. To date none have registered. The Chairman noted that there will be a reference in A.706 that Tsunami Warning will be a message type and that we need to come to agreement on the message format for all to follow.

3.1.3 Amendments to IMO Resolution A.888 - Other Satellite Service Providers

The Deputy Director of the IMSO, Mr Andy Fuller, briefed the Commission on progress within the IMO on the revision of IMO Assembly Resolution A.888 (21): Criteria for the provision of Mobile-Satellite Communication Systems in the GMDSS. This IMO Resolution defines the criteria for satellite service providers participating in the GMDSS and was originally drafted specifically for Inmarsat and is now being amended to allow new satellite service providers to participate.

He noted that the revised resolution has now gone to MSC 83 which will meet 3-12 October 2007 in Copenhagen, Denmark for final approval. Once approved there, it will then go to the IMO Assembly which will meet from 19-30 November 2007 in London, UK for final approval. The final adoption of text should occur at the MSC83 meeting as it is unlikely that it would be changed at the IMO Assembly. It is highly expected that there will be no issues and that this revised resolution with be fully approved by the IMO Assembly in November.

He then advised the delegates that the IMSO is working on a number of different fronts to bring new satellite service providers into the GMDSS. At this point in time, the IMSO is not aware of any companies that have shown an interest to participate other than Iridium. This is more than likely due to the high threshold of performance requirements that are mandated by Resolution 888. He explained further that when a satellite service provider is approved to participate in the GMDSS by IMO, they must then sign a contract for oversight process known as a public service agreement (PSA) with IMSO. The original PSA was drafted to support Inmarsat directly as it was the sole provider and over the past 3 years they have worked to make it more generic and asked for participation from both Iridium and GlobalStar. With this, the IMSO has had in depth discussions with Iridium with regards to the whole aspect of coming into the GMDSS arena.

The NAVAREA X Coordinator inquired with a fundamental question of if additional satellite service providers are approved to participate in GMDSS will they be required to cover the world or just the part of the world? He then went on to express a concern that they may only cover part of a NAVAREA. The IMSO representative responded that global coverage is required and that they must provide all the services. The Chairman then noted that each NAVAREA Coordinator would be required to promulgate over both Inmarsat and any new systems if another satellite service provider is approved as some ships may be carrying that system and there would be operational impacts with regards to resources and costs.

3.1.4 Long Range Identification and Tracking (LRIT)

The IMSO representative advised the Commission that the LRIT system is planned to begin a phased implementation on 31st December 2008, by which time the service needs to be available globally. The distance from the coast at which data can begin to be obtained has been agreed to as 1000 nautical miles. The data collected by the system will be available to three levels of organizations; Port State, Coastal State and Flag States. There is likely to be a number of national systems which will form part of an international coordinated network. All the data must pass through an International Data Exchange.

The ship data will be reported and transmitted onshore 4 times per day and the position reporting protocol on Inmarsat-C is the most cost effective method. But it is possible that ships may be able to use any communication method they choose as a specific mandatory communication system has not yet been defined by IMO to date. With regards to shoreside operations, the IMO has had a working group draft technical and operational guidance for the LRIT under the chairmanship of Dr Sam Ryan of Canada which will be submitted for approval at COMSAR 12 in April 2008. In addition, the IMSO has been identified as the LRIT coordinator. A "Request for Proposals" was released by IMSO and only 1 international consortium bid to provide the service. It was noted that although their proposal does meet operational but not all technical elements, they have given a commitment to meet the technical expectations once becoming operational with a positive cash flow.

The IMSO noted that funding of the LRIT system is a serious concern and that the MSC may not be able to go forward with LRIT at all. Many countries have said that as member states of IMO that they do not want to pay for LRIT operations and as flag states that they don't intend for their ships to pay for LRIT position reporting either. At this time there has been no entity that has agreed to pay for the communication costs and a large number of countries are now saying that they would provide LRIT data exchange free of charge so there may potentially not be any revenue from that aspect. Unless there is as shift in stated positions between now and MSC there is not a financial basis for LRIT and the IMO will not be able to meet implementation dates identified in the SOLAS Convention. In addition, Iran has submitted a recommendation that implementation of LRIT be postponed until 2010.

The NAVAREA X Coordinator inquired as to how this issue pertains to the WWNWS and the relevance to be included as an agenda item for this commission. The Chairman responded that the primary reason was due to the fact that Inmarsat-C will potentially be the primary means for LRIT reporting and as NAVAREA Coordinators each delegate should be aware of this initiative. In addition, the NAVAREA I Coordinator pointed out that as per Resolution A.706 that LRIT reporting could fall under the category of "other pertinent safety information" as it basically comes within that definition. Finally, the IMSO noted that these LRIT ship reporting systems will have the potential to provide much better information for ship movements within each NAVAREA so that a Coordinator could know

all SOLAS class vessels in their area of responsibility which could enhance operations. The NAVAREA I Coordinator noted an example of this that is prevalent today is that for underwater pipe-laying and submarine cable laying operations the ship operators will inform when they are starting but not at all times when they are completed. Today, the watchkeepers in NAVAREA I monitor AIS as many ships do use this, and in the future possibly LRIT, in order to enable them to have another means to indicate that these vessels are no longer on station and after contacting the ship to confirm, cancel the broadcast message.

3.2 NAVAREA Assessments of Navigational Warnings Services by Coordinators

Under this agenda item, all NAVAREA Coordinators were asked to submit a Self-Assessment based upon the template provided by the Chairman earlier in the year. These reports were to highlight their experiences, problems and successes in implementing the GMDSS for navigational warnings within their respective service areas.

Acknowledging the fact that these assessments represented valuable operational experiences and in an effort to reduce the size of these meeting minutes, each of the Self-Assessments are posted at the IHO website www.iho.int > Committees > CPRNW and not included as part of this report. The Chairman then offered the opportunity for each representative to present their NAVAREA Self-Assessment.

3.2.1 Individual Assessments

3.2.1.1 NAVAREA I (UNITED KINGDOM)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA I Coordinator presented an overview of his self-assessment paper and had no additional information to add to this report or any specific issues to note with regards to their service. He highlighted that there appears to be a considerable reduction in the amount of NAVAREA warnings promulgated in 2006 and stated that this was not due to the fact of a change in the criteria for promulgating the messages but rather that there was a dramatic decrease in oil and gas development and cable laying exercises during the past year. With regards to operational issues, he noted several new NAVTEX stations and that for NAVAREA I that Annex A provides the current service area diagram for NAVTEX stations, Annex B depicts the proposed new NAVTEX service areas for the Faeroes that have not yet been declared operational and are still in a trial status, Annex C identifies the location of the new NAVTEX station in Reykjavik and the realignment of coverage areas for other stations when it comes into operation, and Annex D shows the proposed realignment of the Malin Head and Portpatrick service areas to enable better NAVTEX reception off the West Coast of Scotland. He reported that the NAVTEX changes that are contained in Annexes A and B and are in alignment with the new boundaries of NAVAREA I and NAVAREA XIX.

He then stated that SafetyNET Services were extremely stable using Stratos as a satellite service provider and that the transfer of services from the Land Earth Station (LES) at Goonhilly to Burum, Netherlands was seamless and transparent to the ships at sea and that those that require to send messages to UK Meteorological Office or to NAVAREA I will still use the O2 message identifier. The only real impact from this shift in operation is that there is no longer a business continuity capability for the LES that is used by the UKHO and

now have to consider what the backup situation is going to be and something that the UK Maritime Authority needs to consider.

He concluded his comments by stating that NAVAREA I warnings are only available on the UKHO website by accessing the weekly Notice to Mariners, Section 3 (Radio Navigation Warnings) They would like to establish a real time updating of navigational warnings to the website as a function performed by the watchkeeper on duty who could automatically update the website whenever a message is transmitted or cancelled. But as a defense organization he noted that there are security conditions with regards to networks that hinder progress on this.

The NAVAREA X Coordinator inquired if NAVAREA I monitored SafetyNET message broadcasts and if they used a category B code in SafetyNET? The NAVAREA I Coordinator responded yes to both questions and indicated that they were investigating other solutions for repetitive message transmission utilizing a database that would be maintained internal to the UKHO vice at the LES. This concept could potentially work better with regards to the real time updating to the website aspect also. The NAVARE X Coordinator noted that they too use the Category B code to repeat every 12 hours and monitor to ensure that they are broadcast. He advised all delegates that it is important to monitor message traffic as an LES can sometimes lose their database of messages and they are not even aware that they are unable to re-transmit messages. It was noted that in order to do this the suppress function for repeated messages must be disabled at the transceiver in order to receive all broadcasts.

3.2.1.2 NAVAREA I BALTIC SUB-AREA (SWEDEN)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA I Baltic Sub-Area Coordinator presented an overview of his self-assessment paper and no specific issues to note with regards to their service. He highlighted that new equipment has been installed to carry out all of the transmissions across the five NAVTEX stations during the past year and next year they hope to have a database of maritime safety information that may be hosted on the internet also. He noted that every 2nd year there is a BALTICO-meeting where all Baltic Sea states meet to discuss operational matters and the next meeting is scheduled for Spring 2008.

In addition to what was in his report he noted that the Baltic Sea region has no tide but the sea level is affected by meteorological factors . They issue a navigational warning whenever the water level drops 1 meter below mean sea level but in SW Baltic waters when it is 60 cm less than charted depth. He noted that water fluctuation is different in different parts of the Baltic Sea and over the past years there have been very few warnings issued with only an average of about 10 warnings each year. He told that they were going to revise the criterions for issuing warnings to find an appropriate level for each part of the Baltic and he was interested in how it is handled in other areas of the world.

The Chairman thanked the Sub-Area Coordinator for his report and requested that he as the only current person in this capacity in the WWNWS to assist NAVAREA III as appropriate in the establishment of Sub-Areas within that region. The WMO representative then asked in regards to the negative tide sea level navigational warnings if they were based on astronomical tide or due to a storm surge to which the Sub-Area coordinator responded that these were due to meteorological factors. The NAVAREA I Coordinator noted that this was an issue that was discussed at ETMSS and that storm surges and negative storm surges where there is a reduction in the depth of the water for ships to navigate is a potential navigational hazard. He stated that for the Dover Strait and Thames River areas of the United Kingdom that there is no specific figure that directs a message be promulgated but

guidance states that where the sea level is significantly less than the predicted tide and that this is determined by the meteorological organizations and provided to the navigational warning organization for promulgation. The NAVAREA VI Coordinator noted that they too have a large inland waterway system whose water level is greatly affected by meteorological events. They consistently monitor the tidal data and transmit a local warning if necessary between tidal forecasts that are broadcast twice a day. The NAVAREA X Coordinator noted that in the Torres Strait region that tide gauges automatically broadcast to ships in the area in real time and this is published in the Australian Annual Notice to Mariners. If the gauges fail, then they would promulgate navigational warnings. The NAVAREA I Coordinator added that the general lighthouse authorities in the UK are also considering using AIS to broadcast tidal information in real time.

3.2.1.3 NAVAREA II (FRANCE)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA II Coordinator presented an overview of his self-assessment paper and had no additional information to add to this report or any specific issues to note with regards to their service. He highlighted that with regards to NAVTEX coverage there are many stations within this region and they are experiencing difficulty in obtaining a correct point of contact for many stations in Africa other than for Gabon which they recently received names and addresses. He also noted that messages are posted on the SHOM Notice to Mariners website but that they are not in real time and are only posted each week for the new messages that have been promulgated within the past 7 days.

On a final note he advised everyone that, as identified in his report, the document MSC83/INF 19 stated that inconsistent sources of nautical information required for port entry and berth/terminal usage can lead to confusion by the mariner and it was necessary to consider a more efficient and standardized way of making this information available not only to mariners but also publishers of nautical information. He offered to submit a paper on this if deemed necessary by this committee for consideration.

The Chairman noted that a universal policy with regards to port entry information may not be achievable as what may work in one port may not be applicable in another with different services and capacities. He specifically identified contingency plans as a potential issue in this regard as when Hurricane Katrina hit the Gulf Coast of the United States in 2005 that the NAVAREA Coordinator broadcast messages over SafetyNET vice the National Coordinator on NAVTEX as stations were inoperable. He summarized that MSC83/INF 19 may be beyond the scope of this committee but he noted the offer for the submission of a paper on this subject and will make a decision on this matter at a later date after he can do a little more research on the subject. The WMO representative concurred that it is difficult to locate a correct national coordinator point of contact in the African region.

The NAVAREA X Coordinator noted that according to the GMDSS Master Plan that identifies broadcast times that it appears that France only broadcasts once per day which is not in compliance with Resolution A.705. The Chairman responded that there are a number of NAVAREA Coordinators that do not have a scheduled broadcast twice per day and would like to defer discussion on this matter to later in the agenda during the document review section and determine if modifications need to be made with regards to this issue. The NAVAREA I Sub-Area Coordinator noted that in the Baltic region where they also have many NAVTEX stations that they have a backup system for failure of NAVTEX stations where neighboring stations take over responsibilities. The NAVAREA III Coordinator offered assistance to any problems in future with French NAVTEX stations

from Spanish stations in either the Atlantic or Mediterranean regions. The Chairman noted that we all should look collaboratively with each other for solutions such as NAVAREA III broadcasting for NAVAREA II if necessary for whatever reason. He also indicated that the USA has global coverage and could promulgate messages to any Inmarsat satellite region and that NAVAREA IV/XII can assist with any NAVAREA if requested.

3.2.1.4 NAVAREA III (SPAIN)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA III Coordinator presented an overview of his self-assessment paper and had no additional information to add to this report or any specific issues to note with regards to their service. He then provided a very extensive explanation of the current and planned status of NAVTEX services in the Mediterranean Sea, which were all agreed to during the very successful NAVAREA III meeting that was held at the IHB in Monaco in January of 2006. In addition, it was reported that with regards to the establishment of a new Sub-Area in the Black Sea, that the NAVAREA III Coordinator has contacted the countries in this region with regards to the establishment of this Sub-Area and which country should serve as the Sub-Area Coordinator which was directed at the last CPRNW meeting. In response, they received answers from Turkey, Russia, and Romania that all agree with the need for a Sub-Area covering the Black Sea region and that Turkey should serve as the Sub-Area Coordinator. The Ukraine responded that they did not agree that there is a need for a Sub-Area in the Black Sea region. In addition, the NAVAREA III Coordinator noted that he did contact Turkish authorities and invited them to attend this meeting and present capabilities, capacity, and operational concepts, but they could not attend.

The NAVAREA III Coordinator also stated that they have taken some steps in a systematic approach to establishing NAVTEX service and a Sub-Area for the Caspian Sea region with the Russian Federation and Iran. He noted that there currently is only 1 NAVTEX station that is broadcasting MSI on the northern coast of this body of water and in addition Iran has 1 station on the southern coast that is not fully operational yet.

Finally, the NAVAREA III Coordinator stated that he has made attempts to contact Albania and Libyan authorities with regards to establishing a new NAVTEX station to fill the only gap in coverage area in the Mediterranean Sea. He stated that he has found it difficult to contact the proper person and has not received a response from either country to date on this issue. He advised that at the upcoming Mediterranean and Black Seas Hydrographic Commission meeting he was hopeful that representatives from Libya and Albania would attend so that he could discuss this issue with them directly.

The Chairman of the Commission congratulated the NAVAREA III Coordinator on the efforts made in this region. The Chairman further noted that both Turkey and Iran were extended invitations to attend this meeting but were unable to do so. In addition, he stated that the NAVAREA XIII Self-Assessment (Russian Federation) did endorse Turkey, but also stated that if no other country would accept responsibilities, that they would be willing to be Sub-Area Coordinator for both the Black and Caspian Seas.

The Chairman then noted that at CPRNW 8 the Commission agreed that all updates to Inmarsat System Definition Manual should be done at the same time and in turn that was taken forward to COMSAR 11. In order to move forward with the implementation of the new Arctic NAVAREAs in a timely manner, the Chairman proposed that the update to the Inmarsat System Definition Manual include these new Sub-Areas but that they are not made active until all issues with regards to each one is resolved. He further noted that the Inmarsat representative had stated in previous meetings that this was a viable option and course of action to pursue. The IMSO representative concurred and noted that there may be

political issues that need to be resolved in defining the actual limits of these new Sub-Areas. In addition he inquired as to what the process should be with regards to the implementation and approval of modifications to the Inmarsat System Definition Manual. The Chairman stated that changes may require IMO and WMO approval, but this committee should propose and go forward with recommendations.

The President of the IHB stated that in order to clear any confusion that this is an IHO commission and it will continue to cooperate with the IMO in all matters. The CPRNW can not ignore the IMO and WMO and will work together to reach a decision on all matters and not decide on anything independently. The Chairman concurred and noted that this has been the historical business practice and that it will stay the same in the future. With respect to the Inmarsat System Definition Manual, we should not impede the implementation of service into the Arctic areas due to Black Sea and Caspian Sea concerns. Based on the current procedural processes it will realistically take two to four years to achieve approval and implementation of changes that we would agree to today and that we need to establish limits to these new areas as soon as possible.

3.2.1.5 NAVAREA IV & XII (UNITED STATES)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA IV and XII Coordinator presented an overview of his self-assessment paper and had no additional information to add to this report or any specific issues to note with regards to their service. He highlighted that the reduction in message traffic from 2005 to 2006 over NAVAREA IV was due to the fact that in 2005 there was Hurricane Katrina and other major hurricanes that impacted the United States. He also noted that all broadcast messages that are promulgated during the previous 24 hours are posted to a website each day. He stated that NAVAREA IV and XII does have a true business continuity plan as there is a secondary site that is manned and from which messages are promulgated on a routine basis totally transparent to the shipboard user. He also highlighted the utilization of Google Earth technology for a visual presentation of message content that is used for a validation and quality assurance practice and internal watchstander use only today. He then further noted that hopefully it will in the future become a more dynamic web interface for external users. He then reported on capacity building efforts underway at the IHO and that the USA has fully supported during the past year. On 18-21 June, NAVAREA IV and NAVAREA I lead a Maritime Safety Information (MSI) Training Course at the Caribbean Maritime Institute (CMI) in Kingston, Jamaica to benefit countries in the area of influence of the Meso-American and Caribbean Hydrographic Commission region. This course was organized on the behalf of the IHO Capacity Building Committee (CBC) and Commission for the Promulgation of Radio Navigational Warnings (CPRNW).

The NAVAREA I Coordinator inquired as to if there had been a notable increase in the amount of source information received from member states within the Caribbean Sea region following the MSI training course offered in Jamaica. The Chairman responded that there had been a gradual increase in the amount of information received from these countries and that the following countries had all begun to provide information for promulgation by NAVAREA IV: Mexico, Guatemala, Colombia, Barbados, Belize, St. Kitts and the Netherland Antilles. He then emphasized the point that the training course was very successful in large part due to the main fact that that the right people attended to include operational watch standers or port authority personnel. In addition to providing instruction on MSI, the training course also broke down communication barriers and established a network of personal relationships where a phone call is all that is required which doesn't need any expensive equipment to utilize.

The NAVAREA X Coordinator inquired if the content of the training course was available for all to use. The Chairman noted that it would be available, but that any course should be coordinated through the IHO CBC as they are working with an established schedule of classes that should be requested through the regional hydrographic commissions. He stated that the NAVAREA Coordinator in those respective regions should be directly involved in the training and this will be the case for the NAVAREA VII Coordinator with the next training course that is scheduled for Maputo, Mozambique. The Secretary of the NAVTEX Coordinating Panel who was an instructor at the course held in Jamaica noted that the exercises were specifically designed for that region and that this was not a generic course that could be given to any group of students. But the course does have a specific structure that could be followed in any region with the actual content tailored to those attending.

Two demonstrations were then provided by the Chairman with assistance from Mr. Guy Beale of the UKHO. The first was of the Telenor web-based satellite message interface to the LES that is used in NAVAREA IV and XII that highlighted the ease of use and was designed at no cost to the USA. The second was a Google Earth demonstration of graphical depictions of the US HYDROLANT and HYDROPAC messages that are used by the watch standers staffing the broadcast watch desk of NAVAREA IV and XII. It was noted that the US Anti-Shipping Activity Message (ASAM) and Mobile Offshore Drilling Units (MODU) databases have also been prototyped and displayed using this technology. This today is a very useful tool for administrators and in the future when bandwidth and cost issues are resolved it will also be for mariners at sea.

3.2.1.6 NAVAREA V (BRAZIL)

Self-Assessment Report submitted and posted at the IHB website.

The NAVAREA V Coordinator briefed his self assessment report utilizing a PowerPoint presentation and provided an in-depth overview of the four different methods used to disseminate maritime safety information to include: SafetyNET service for NAVAREA warnings; HF radio broadcast of NAVAREA, Coastal, and Local warnings; Internet access to all NAVAREA, Coastal and Local warnings; and the inclusion of messages in the Brazil Notice to Mariners. He stated that NAVAREA V broadcasts messages twice a day at scheduled broadcast times and since 01 August 2007 have been broadcasting Coastal Warnings separately from NAVAREA Warnings. Operational Issues highlighted included the message categories being defined as NAVAREA (60nm), Coastal Warning (3 to 60 nm), and Local Warning (inside 3nm) and the designated labeling of NAVAREA messages as North, East, South, Amazon Basin, Foreign, and General based on where the affected area lies. Message numbering is based on year and is done consecutively. All warnings are identified by area of interest code, message number, and then 2 digit code of year (ex. N0072/07).

The NAVAREA V Coordinator then requested the CPRNW to give guidance as to how to proceed in requesting the IMO to allocate the B1 code (letter A) to be used on codification of SafetyNET messages for Coastal Warnings. After discussion on this issue it was agreed that they should coordinate with the IMO SafetyNET and NAVTEX Coordinating Panels with regards to this matter. The Chairman also stated that the establishment of new coastal warning areas needs to be communicated to the mariner at sea so that they are aware. The NAVAREA V Coordinator responded that the change was broadcast via a navigational warning message that effective on 01 August 2007 that there were changes in the structure of SafetyNET messages being broadcast as NAVAREA and Coastal Warnings within this area. The Chairman suggested that they also publish this

information in the Notice to Mariners as mariners would not be aware of these changes unless they were a ship that was transiting the area and already in these waters. The NAVAREA X Coordinator concurred and noted that the mariner needs this advance information before entering these waters in order to configure their systems.

The NAVAREA V Coordinator then noted that there are no NAVTEX stations in NAVAREA V and that they prefer to broadcast these Coastal Warnings as unique messages to emulate the NAVTEX service as closely as they can. Discussion then followed with regards to appropriate numbering and lettering for these Coastal Warning area messages that is in compliance to established message codification standards and not confusing to the mariner at sea. It was decided to establish three new Coastal Warning Areas of North, East, and South and go forward with that recommendation recognizing the need to update appropriate publications and issuance of notification via Notice to Mariners with an effective date of 01 January 2008. The NAVAREA II Coordinator agreed to assist the NAVAREA V Coordinator with the template for this notification. The NAVAREA X Coordinator noted also that NAVAREA V is covered by both the AOR-E and AOR-W satellite footprint and should consider broadcasting over both satellites in order to avoid any problems with mariners.

On a final issue, the NAVAREA V Coordinator noted a discrepancy with regards to the portrayed limit of the NAVAREA V and NAVAREA IV boundary. The Chairman noted the concern and identified that limits to all NAVAREAs will be addressed and clarified in the Inmarsat System Definition Manual update process which will be discussed further later in the agenda.

3.2.1.7 NAVAREA VI (ARGENTINA)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA VI Coordinator presented an overview of his self-assessment paper and had no additional information to add to this report or any specific issues to note with regards to their service. He highlighted that due to geographic features of different waterway systems that three different types of local warnings are broadcast by NAVTEX and DSC stations. In addition, he noted the NAVTEX coverage within his NAVAREA and that effective on 01 February 2007 that the National NAVTEX Service on 490 kHz began Spanish language transmissions. Finally, he pointed out that they had participated in IALA Working Group meetings and supported NAV53 during the past year. The NAVAREA VI Coordinator informed the meeting that navigational warnings are currently posted on the Hydrographic Office website and are updated daily, with a disclaimer that they are not real time and should not be relied upon due to possible corruption.

3.2.1.8 NAVAREA VII (SOUTH AFRICA)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA VII Coordinator was not present but the Chairman emphasized the following points from the report submitted. With regards to NAVTEX Stations, NAVAREA VII notes concern that there is a lack of appropriate coverage along the coast of Africa north of the South Africa national border. The Chairman asked if the NAVAREA II Coordinator (which is the adjacent area to the north of NAVAREA VII) and the Chairman of the IMO NAVTEX Coordinating Panel could assist them in this issue. They both responded that they would work directly with the NAVAREA VII Coordinator on this

coverage issue and NAVAREA II indicated that they would include NAVAREA VII on any email or correspondence related to this issue in the future.

The Chairman also noted how proactive that this NAVAREA has been with regards to capacity building in their region and involvement in the SAIHC. In addition, the next CPRNW MSI Training Course will be held in Maputo, Mozambique in November 2007 with the NAVAREA VII Coordinator participating. The noted issue within the report of network training will be addressed then. Finally, the Chairman noted that the report also indicated a need for GMDSS training for landlocked states and proposed consideration of inclusion these inland water areas into existing NAVAREAs. He noted that the SOLAS Convention only applies to vessels greater than 500 gross tons and on an international voyage which may apply with more than one country sharing a large inland body of water. The IMO representative stated that he would inquire as to an official ruling on this matter from the legal office at IMO and that a decision on this matter should be deferred until a response from them is received.

3.2.1.9 NAVAREA VIII (INDIA)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA VIII Coordinator presented an overview of his self-assessment paper and had no additional information to add to this report or any specific issues to note with regards to their service. He did highlight that they have been proactively involved in capacity building initiatives and during the past year have hosted 2 representatives from Oman and provided training and instruction on how to draft messages and promulgate maritime safety information. In addition, he noted that messages are posted to their website twice each day, once in the morning and once in the evening.

3.2.1.10 NAVAREA IX (PAKISTAN)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA IX Coordinator presented an overview of his self-assessment paper and had no additional information to add to this report or any specific issues to note with regards to their service. He informed the meeting that they are currently transmitting messages for the 16 countries in the region. Navigational Warnings are promulgated via SafetyNET and NAVTEX with all warnings in force being included in the Notice to Mariners which is published once per week. They access their LES via the internet and all SafetyNET broadcasts are monitored. Because of concerns about the reception of MSI from certain NAVTEX stations in the region, all Coastal Warnings are also re-transmitted via SafetyNET as well.

The Chairman informed the Commission that he had recently seen documents with MENAS identifying themselves as Sub-Area Coordinator for NAVAREA IX. The Chairman stated that IMO COM 40 and COMSAR 1 referred to disagreements between the countries within the region over who will act in the capacity of NAVAREA IX Sub-Area Coordinator. COMSAR 1 referred the discussion back to the countries within the region and requested that they come up with an acceptable solution as to who will act as NAVAREA IX Sub-Area Coordinator and to present it at COMSAR 2 for discussion and approval. At this time, there has been no formal request or approval made to COMSAR on the designation of Sub-Area Coordinator within NAVAREA IX and until such time, there is no approved Sub-Area Coordinator for this NAVAREA.

3.2.1.11 NAVAREA X (AUSTRALIA)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA X Coordinator presented an overview of his self-assessment paper and had no additional information to add to this report or any specific issues to note with regards to their service. The NAVAREA X Coordinator highlighted the fact that they broadcast all messages twice a day on scheduled broadcast to both the IOR and POR satellites to ensure complete coverage. He also noted that NAVAREA X monitors the time it takes to broadcast a message from receipt of source information as a regular function and that he was not aware of any other NAVAREA Coordinator that did this. They perform this activity in order to ensure that they meet the 30 minute requirement for message promulgation and to evaluate performance of watchstander and for quality management metrics.

Under the category of operational issues he noted that the availability of service over the past year had been very stable using the Perth LES and they achieved a combined 99.46% availability of IOR and POR service. He advised that in September of 2006 that there was a test of the Inmarsat prime satellite contingency whereby messages were exchanged with the SafetyNET hub at Inmarsat headquarters in London and inquired if this testing was to take place on an annual basis. In addition, he noted the inclusion of a graphic in his report that indicates shipping traffic around Australia in response to discussions that were held at CPRNW 8 where it was mentioned that it would be useful to have an indication as to what maritime routes are routinely taken by ships.

With regards to capacity building, he noted that they have been providing assistance to Papua New Guinea with regards to their SAR and MSI needs.

He also noted that a major upgrade of the RCC Australia system took place during the past year and the entire MSI broadcasting system has been replaced by a system called Nexus. He pointed to Attachment 1 of his report that shows an example of the SafetyNET operator interface with this new system and that every message in stored in a database and when a source report is received it automatically depicts a graphical picture and proposed message text using an automated routine that follows the message template. Consistent and recognized wording is also programmed (such as unlit, off station, etc) so that no matter who is on watch you have a consistent message text output. He next directed attention to Attachment 2 of his report that depicts how they monitor every broadcast and how the system alerts the operator to potential errors utilizing stoplight graphics.

He concluded his report by stating that the NAVAREA website is updated almost in real time with all messages promulgated (within 30 minutes) and that as requested in the self-assessment template, the number of hits to this website are also included in the report.

The Chairman thanked the NAVAREA X for his comprehensive report and noted that the review of shipping routes that was discussed at CPRNW 8 was in reference to those areas covered by the new Arctic NAVAREAs to determine navigable waters but that this information is also valuable to each NAVAREA coordinator to know. The NAVAREA I Coordinator concurred and specifically stated that the guidance for the promulgation of some messages indicate that they only need to be promulgated if they are “in or near shipping lanes” and how does one determine this if you don’t have this information. The Chairman also stated that he did request to add in more information on websites to the self assessment report but will make the statistical portion an optional section as it may not be allowed to be released by law in certain countries. With regards to contingency plans and the Inmarsat testing question, the Chairman noted that this would be discussed later in the agenda as a specific agenda item and appreciated the fact that Australia does such a thorough job in monitoring message traffic and ensuring that the LES is operational and that

each NAVAREA Coordinator should be as proactive in this as the NAVAREA X Coordinator is.

The IMSO representative noted that it is evident now that there is more than one way to monitor messages. Guidance was originally written as the only way to monitor messages was to read actual message promulgated and received over the air. He suggested that at a future session and as part of the document review that wording doesn't preclude different methods of monitoring message traffic in the future. The Chairman concurred and indicated that this would be considered in the updates to Resolution A.706.

The NAVAREA I Coordinator noted the mention of NAVAREA X monitoring the time to issue messages within 30 minutes of receipt of source information. He noted too that the UKHO also uses this as a prime performance measure but that they focus on when they don't meet the criteria as opposed to how many minutes it takes to get each individual message promulgated. He noted that this is due to the fact that only a proportion of messages are required to be transmitted as an immediate message and meet the 30 minute limit as the rest are only promulgated at the next scheduled broadcast time. The NAVAREA X Coordinator concurred with these remarks and noted that this issue was also raised at a navigation symposium with regards to how a NAVAREA Coordinator determines how quickly a message needs to be transmitted and should it be based on an IALA aids category. He stated that there are about five of these categories and asked if the committee should consider these as a new method to determine baselines as to how urgently a message should be transmitted. The Chairman stated that he was not aware of IALA aids categories and that he would like to obtain a copy of the IALA publication that contains this information for distribution and consideration by all. He then stated that SafetyNET scheduled broadcasts are still required twice a day as per current wording in WWNWS guidance documents. This means that a routine message may not be promulgated and transmitted to a ship at sea for a period of up to 12 hours or for those countries that are only broadcasting once per day up to 24 hours from the receipt of information. He noted that this requires further discussion at a later date. The IMSO representative concurred and stated that in discussions with IALA representatives and broadcasting via AIS, that it may be time to respond to this issue and consider that scheduled broadcasts are no longer required with technology today and the immediate needs for communication now a standard practice.

3.2.1.12 NAVAREA XI (JAPAN)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA XI Coordinator was not present but the Chairman emphasized the following point from the report submitted. With regards to operational issues, NAVAREA XI has developed an automated message generator program for navigational warnings about earthquakes and tsunamis. The program obtains information in coded form and automatically compiles a draft message according to rule sets. The Chairman asked the WMO representative to investigate this development further and provide an update from the meteorological perspective at the next meeting.

The Chairman also noted that during the past year that NAVAREA XI had asked NAVAREA XII for assistance with message promulgation during a period of time that they were unable to transmit. He reminded all delegates that we need to consider each other partners in this global operation and be cooperative and assist each other especially where the NAVAREAs are adjacent to each other or transmit over the same satellite ocean region.

3.2.1.13 NAVAREA XIII (RUSSIAN FEDERATION)

Self-Assessment Report submitted and available at the IHB Website.

The NAVAREA XIII Coordinator was not present but the Chairman emphasized the following point from the report submitted. With regards to the possibility of the Caspian and Black Seas becoming Sub-Area regions within NAVAREA III, the Russian Federation is supportive and willing to accept Turkey as the new Sub-Area Coordinator for the Black Sea. In addition, it is also stated that if necessary, they are willing to accept these responsibilities in the Black Sea if Turkey can not for any reason, and also as the Sub-Area Coordinator for the Caspian Sea if no other country offers.

The Chairman noted that he has made attempts to contact the NAVAREA XIII Coordinator several times in recent months without success and asked the IMO and IHB to assist.

3.2.1.14 NAVAREA XIV (NEW ZEALAND)

Self-Assessment Report not submitted and NAVAREA XIV Coordinator not present.

3.2.1.15 NAVAREA XV (CHILE)

Self-Assessment Report not submitted and NAVAREA XV Coordinator not present.

3.2.1.16 NAVAREA XVI (PERU)

Self-Assessment Report not submitted and NAVAREA XVI Coordinator not present.

At the conclusion of all reports, the Chairman reminded the delegates that it is very important that member states and NAVAREA Coordinators attend these meetings and be proactively involved in WWNWS operations and issues. He then asked the IMO and IHB to send messages to those countries not present asking them to attend future meetings and at the minimum to provide a country self assessment paper.

3.3 Broadcast Systems and Services

3.3.1 Report of the IMO NAVTEX Coordinating Panel

The Chairman invited the Chairman of the IMO NAVTEX Coordinating Panel to provide a status of NAVTEX services. See the complete report in Annex G.

The Chairman of the IMO NAVTEX Coordinating Panel noted that it had been quite a busy year with all the countries that participated in establishing NAVTEX service around the world listed in the full report. He noted that the Panel has continued with its policy of requesting assistance from the relevant NAVAREA Coordinators on issues of local co-ordination within specific NAVAREAs and expressed his appreciation to all those concerned who have cooperated in this process over the past year.

He noted that with regards to Argentina, that a complete overhaul of Argentina's NAVTEX services took place in February 2007. Their entire national service in Spanish language transmissions, which were previously being broadcast every 8 hours on 518 kHz, was successfully migrated to a new National NAVTEX Service on 490 kHz. All five of Argentina's NAVTEX stations now conform fully with COMSAR/Circ.28 and due to the increase in cruise ship activity in the region, the Panel considered that this development significantly enhances the safety of life at sea by ensuring that mariners are able to receive messages in English & Spanish every 4 hours, for the whole of the Argentine coastline.

He then noted that in the Africa region that the Cape Verde station is now fully operational in the both the 518 kHz and 490 kHz services. In addition, with coordination from the NAVAREA II Coordinator, discussion for proposed new NAVTEX services in Senegal, Mauritania and Ghana are ongoing with no substantial developments to report at this date.

Next he informed the delegates that Columbia had made an initial enquiry to the NAVAREA IV Coordinator with regards to possibly establishing a NAVTEX station on the San Andres archipelago which would cover the Caribbean Sea approaches to the Panama Canal as well as the northern coast of Colombia. It was reported that further discussions took place during the IHO MSI Training Course in Jamaica during and Colombia has confirmed that they were ready to progress to the next stage of site surveys and tendering within the next year.

With regards to current NAVTEX Service Area operational issues, he highlighted the NAVAREA III Coordinator Self-Assessment discussion earlier in the agenda and that the goal for dividing up the Mediterranean Sea has not been to establish an asset for a country, but to establish a coordinated service from a perspective of the mariner that is not confusing. He noted also that a number of Self-Assessments showed coverage arcs for each individual country and did not show that it was divided up into service areas. He urged all NAVAREA Coordinators to coordinate the issue of MSI promulgation in their respective NAVAREAs and to make very attempt to get countries together and reach agreement to service area limits. This will make it easier for the mariner to understand.

He pointed out one further item of note from the report that he represented the IHO at the second session of the Expert Team on Maritime Safety Services (ETMSS) of the Joint IOC/WMO Commission for Oceanography & Marine Meteorology (JCOMM) from 24 to 27 January 2007 in Brazil. A report was forwarded to the IHB and the chairman of CPRNW after the meeting.

The Chairman noted that with respect to the new proposed Columbia NAVTEX station within NAVAREA IV that he met with representatives from this country and they indicated that they requested technical assistance and funding to establish the station. The Chairman asked if anyone knew if there was any available way for funding to be provided to them for this. The Chairman of the IMO NAVTEX Coordinating Panel suggested that a possible submission to the World Bank may be an option under the premise of providing maritime safety information in a strategic strait and vital shipping choke point area adjacent to the Panama Canal as they did fund the marine electronic highway. If the case was made for the Malacca Straits, then it seemed logical that a similar argument could be made for the Panama Canal. The IMO representative proposed that the country concerned should draft up a proposal and associated paper and then submit it to the IMO technical services division. The request would then be forwarded with endorsement from the IMO and would carry more weight when it went to the World Bank.

The IHO President noted that as he stated prior in this meeting that the IHO can provide funding to assist with MSI training course as part of the Capacity Building Committee, but that it can not purchase any equipment. This is the same IHO policy with regards to Electronic Navigational Charts (ENCs) in that they can provide funding assistance for training to produce the data, but can not provide funding to purchase equipment to do so. He then noted that with regards to the marine electronic highway project covering the Malacca Straits and in the West Indies project that a funding request specifically for establishing transmission of MSI had not been included in the submission to the World Bank. He finally noted that the IHO could possibly send a paper out to all Member States asking who requires this type of equipment funding to support capacity building and would discuss this in a couple of weeks time at the MACHC with CAPT Gorziglia and would include that this funding issue needs to be worked with the IMO. The IMO representative clarified that the IMO policy with regards to capacity building is also only funding assistance for training

and not for infrastructure. The IHO President stated that if an official requests from member states comes in for this type of funding assistance, that there is a possibility that the IHO could change its current policy and see what it could provide as part of the CBC funding.

The delegate from Croatia inquired about conflicting reports with regards to the NAVTEX stations in Italy as to whether they were operational or not. The Secretary of the NAVTEX Coordinating Panel responded that there has been some confusion on this matter and to clarify for the record; in Italy there are 2 new stations that are operating, but not fully operational. Thus, in Italy there are still on only 4 operational stations at this time.

3.3.2 Report of the IMO SafetyNET Coordinating Panel

The Chairman of the IMO SafetyNET Coordinating Panel spoke on a couple of issues. The first was in reference to being contacted by Bulgaria to participate as a SafetyNET service provider for Search and Rescue. The Secretary of the NAVTEX Coordinating Panel noted that the IMO had a conference in Valencia back in 1998 to establish SAR regions in the Black Sea and some 9 years later they are using established stations to cover this area. He expressed caution that if Bulgaria is permitted to start participating now it may hinder attempts by NAVAREA III to establish a Sub-Area in the Black Sea and upset current negotiations. The Chairman asked if NAVAREA III had any information on this issue and they did not and he advised the group that he will continue to work this request.

The second item of note was with regards to the Coastal Warnings in Brazil. As this item had been discussed at length as part of the Self-Assessment by NAVAREA V earlier in the agenda, it was not discussed any further.

The third issue dealt with NAVAREA IX and more specifically with the MENAS and their continued reference as being a Sub-Area Coordinator. Historical records indicate that there was never an official endorsement for them to act in this capacity even though numerous countries submitted their application to do so back in the late 1980s. The NAVAREA IX Coordinator indicated that they have received correspondence directly from MENAS where their signature block indicates that they are indeed the self assumed Sub-Area Coordinator. He expressed concern that their messages use the same numbering scheme as NAVAREA IX messages and this could be confusing. The IHB noted that they too have received e-mails from MENAS with their signature block indicating that they are the Sub-Area Coordinator. They will take this as an action to work.

The fourth item discussed was with regards to the SafetyNET Manual update. This will follow the updates made to IMO Res. A.705 and A.706 and is mentioned because members have submitted changes and they have not been addressed yet. But the Chairman reassured the delegates that they will note be disregarded and will be discussed and incorporated if appropriate when that document is reviewed and updated. In looking at a timeframe as to when work will begin it is anticipated that this document will be reviewed after IMO Res. A.705 and A.706 are submitted and approved at COMSAR 12 in April of 2008 and forwarded to the MSC for final approval and submission to the IMO Assembly in 2009. The next meeting of the Document Review CG is being planned for the week following COMSAR 12 and this document should be started then.

The Chairman finally stated that no further consultations with Denmark had been held during the past year concerning the use of NAVAREA IV as a SafetyNET coastal warning service, in lieu of NAVTEX service, for dissemination of maritime safety information for the Kook Islands NAVTEX station. Kook Island station is an unmanned NAVTEX station and due to its remote location and extreme weather conditions in the area, maintenance at the site has become problematic and increasingly difficult when technical issues arise. Due to the large fishing fleet within this area, questions were originally raised as to whether these vessels would have the appropriate Inmarsat-C transceiver equipment onboard to receive this

safety related information via SafetyNET. The Chairman of the IMO NAVTEX Coordinating Panel stated that he also had not had any further discussions with Denmark on this matter and further noted that these fishing vessels may have Inmarsat-C transceivers onboard for their position polling capability and that this may very well be a viable option.

The Chairman reminded members to be diligent in their need to establish continuity of operations plans, and for those who have, to be cognizant to continually review and update their respective business continuity procedures. He also pointed out the value of the WWNWS CD in this regard, with respects to its compilation of WWNWS guidance documents, points of contact and other important reference documents. The Chairman then invited the IMSO representative to present a paper on contingency planning.

The IMSO representative noted that this concern was raised at CPRNW 8 and the key element that this paper addresses applies to what NAVAREA Coordinators are required to do to ensure continuity of operations for promulgation of navigation and meteorological warnings with regards to satellite control. He advised that every 3 months, Inmarsat does exercise a contingency plan where it is simulated that a satellite in the constellation becomes inoperable. There is an operational plan in place with detailed documentation as to what steps should be taken if this occurs and the staff is fully trained to do this independently without management supervision and at any time on a 24/7 basis. The staff has the authority to start to rebuild the constellation if necessary without any approval. He noted finally that these exercises are normally done in the presence of the CEO of Inmarsat.

The nature of the Inmarsat satellite constellation has changed. In the past there was a spare directly adjacent to the primary satellite whereas today the 4 primary satellites are spared by 1, 2 and sometimes 3 satellites that are not adjacent to the primary in order to continue full operations in the satellite footprint. It is a complex redirect process but the trained staff knows how to do it for each primary satellite and there are very few circumstances where the system would not be back and operational within 60 minutes.

Since CPRNW 8 there have been occasions where some elements of the satellite service have failed and not responded as expected. There has been a single instance in the UK, a couple in Australia, and a few others around the world. There was no single common factor in all of these failures except for the fact that they were all with the same satellite service provider. He stressed that NAVAREA Coordinators need to be aware of contingency arrangements around the world and this is something they should consider when negotiating with their service provider.

In addition to the satellite constellation, another potential failure area is with the Land Earth Station (LES). The service provider should have a secondary one and access to another. In addition, the communications link between the NAVAREA watch desk and the LES is another potential failure area. The most efficient and redundant method to use today is using the internet which will automatically reroute around failures. It was noted that a single leased line is not a good idea. In summation, the IMSO representative encouraged all of the NAVAREA Coordinators to consider each possible area of failure and have a contingency plan in place for each and know what steps need to be taken for each possibility before it happens.

The Chairman thanked the IMSO representative for the presentation and noted that in addition to all of the areas covered already that the equipment at the watch desk may also fail and each NAVAREA Coordinator needs to develop contingency plans for continuity of operations. This item has been added to the Self-Assessment template for each country to report on due to the importance of this.

The NAVAREA I Coordinator concurred that contingency plans are important and agreed that we should have a contingency plan for all broadcast services. He noted that during the past year the entire UKHO facility where the NAVAREA I watch desk is located

had to be evacuated for a bomb threat. They put their contingency plan in action and relocated full operations to the Meteorological Office in a very timely manner.

The NAVAREA X Coordinator noted that he concurred with the presentation and that they are conscious of contingency plans with a remote site available for search and rescue and navigational warnings. He noted that they use FTP to the LES and working towards FTP/VPN. He inquired if pointing customers to a website would be a valid contingency if there is degradation in service. He finally recommended that the Self-Assessment template should include also when the contingency plans were last tested and with whom.

The Chairman responded that he would recommend that contingency plans be tested twice per year and was not favourable to pointing mariners at sea to a website for messages. He would rather that the NAVAREA Coordinator prioritize what message content goes out and understand that there may be some degradation of service. He also noted that contingency planning should be added to NAVAREA Coordinator responsibilities in the WWNWS guidance documents and maybe also with a timeframe that is required to exercise them. He then requested that each NAVAREA Coordinator review their own business continuity plans and report on them at the next meeting.

The IMSO noted that the primary objective was to get everyone thinking about this and it appears to have been successful. In terms of specifics with regards to the spare satellites and where they are in the constellation, NAVAREA Coordinators don't need to know or worry about this as the IMSO ensures that Inmarsat does this transparent to the user and how this is done is irrelevant to your operation.

The Canadian delegate noted that in managing a 24/7 safety system it is common practice to have contingency plans in place and periodic testing for entire suite of safety services that are provided. He then inquired if there were any contingency standards for return of service after a failure other than the 30 minutes for an immediate message to be promulgated. In putting together a contingency plan it is necessary to know to what extent it is required to have a backup plan. The Chairman responded that there is none written anywhere as official guidance.

The NAVAREA X Coordinator mentioned that each NAVAREA Coordinator has an adjacent NAVAREA that is served by the same primary satellite and use of their promulgation system is a viable contingency plan too. The Chairman concurred with this observation and stressed that we all need to assist each other wherever possible to ensure that the WWNWS is fully operational on a 24/7 basis.

3.3.3 WMO Liaison Report

The WMO Representative presented the paper titled WMO Activities on Met-Ocean Services Delivery (CPRNW9-3.3.3-1). He noted that the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) is the intergovernmental body of experts that provides international coordination, regulation, and management of oceanographic and marine meteorological observing; data management and system services; and preparation of regulatory and guidance materials. Within the JCOMM there are Expert Teams of major interest for the IHO/CPRNW and they are the Expert Team on Maritime Safety Services (ETMSS), the Expert Team on Sea Ice (ETSI), the Expert Team on Wind Waves and Storm Surges (ETWS), and the new Expert Team on Maritime Accident Emergency Support (ETMAES).

He first highlighted the work of the ETMSS as it is responsible for the coordination of the provision of met-ocean MSI just as the IHO/CPRNW is responsible for the coordination of the provision of navigational warnings. He informed the delegates that at the second session of the ETMSS that was held in Brazil in January 2007, the following main areas were addressed: responsibilities for new Arctic METAREAs, the provision of MSI related

to sea ice, delivery of tsunami warnings to mariners (pre-tsunami message – not the post tsunami message), and Terms of Reference for an expert team of the ETSI to conduct work on graphical sea ice information. The ETSI will also review of a common abbreviation list for NAVTEX bulletins regarding sea ice and icebergs that is currently used by Canada and prepare a draft common list for endorsement by JCOMM-III which will meet again in 2009.

He next noted two interesting points from the second session of the ETWS that met in Geneva in March 2007. The first item noted was that the team agreed to update the Guide to Wave Analysis and Forecasting publication (WMO-No 702). The second item was that the Team reviewed in detail the first draft of the Guide to Storm Surge Forecasting and a list of suggestions and comments were prepared to be incorporated into the document which should be finalized by the end of this year. In addition, the first JCOMM Scientific and Technical Symposium on Storm Surges will be held in October of 2007 and any outcomes from that meeting will also be incorporated into this document.

Finally he highlighted that at the fifteenth session of the WMO Congress that was held in Geneva, Switzerland in May of 2007 that the Congress requested that JCOMM collaborate with the IOC to develop mechanisms for enhanced coordination of JCOMM with the Intergovernmental Coordination Groups (ICG) of the different Tsunami Warning and Mitigation Systems as an integrated component of a comprehensive multi-purpose global ocean observing system. In addition, at this WMO Congress a side meeting on the Arctic METAREAs was convened with the following outcomes:

- The Environment Canada has officially offered to assume the role as Issuing Service for proposed METAREAs XVII and XVIII. The USA agreed to be a Preparation Service for both METAREAs and Denmark agreed to be a Preparation Service for METAREA XVIII.
- The Norwegian Meteorological Institute has officially offered to assume the role as Issuing Service for proposed METAREA XIX. Denmark agreed to be a Preparation Service for this METAREA.
- The Russian Federation ready to become the Issuing Service for proposed METAREAs XX and XXI as they are already providing meteorological and ice MSI for SafetyNET within the forecast regions of the Northern Sea Route areas.

The Chairman noted that the WMO representative requested support to these WMO meetings with the acknowledgement that if you don't have the correct expertise at these types of meetings that it is very difficult to progress on any issue and move forward. He then thanked the WMO for its progress made to date on the establishment of METAREA Issuing Providers in the Arctic waters. He then suggested that as part of the Tsunami Task Team within the WMO that Japan (NAVAREA XI), Australia (NAVAREA X) and Chile (NAVAREA VI) become members as the work done is mainly by correspondence and it would be worthwhile that any finding can be fully considered and supported by representatives from the navigational warning perspective who have the most experience in this area.

The Chairman next noted that with regards to the establishment of an internationally accepted abbreviation list for English language weather forecasts on 518 kHz, inquired if a bulletin with accepted abbreviations for other national language broadcasts that use a common language such as Spanish could be established. The WMO representative stated that there is not a clear action on that but that it would be a good idea and that they should try to identify focal point on this issue. He noted that this would be very useful in areas where there are national language NAVTEX broadcasts to keep the meteorological broadcasts concise as well. There are very few cases where this is applicable today, but looking over the horizon the national language services will proliferate and may well be a

problem down the road and developing an accepted abbreviation listing for navigational warnings and meteorological warnings is a good idea. The Chairman noted that the abbreviation listing for navigational warnings is included in S53 as Annex 1 and is available on the IHO website and asked if the list of abbreviations for meteorological warnings is available on-line at WMO website to which the WMO representative responded that yes it was already available on the JCOMM GMDSS website (http://weather.gmdss.org) and would be included in WMO n°558 (Manual on Marine Meteorological Services), that would be available online before the end of 2007. The NAVAREA I Sub-Area Coordinator noted that there have been discussions with the Swedish meteorological office about lengthy weather forecasts and the utilization of a list of abbreviation from the United Kingdom. He then asked if there was any template for an internationally accepted structure to these messages with regards to wind speed, visibility, sea state, rain/snow fall predictions and if not – could there be one? The WMO representative responded that there are some guides but that it is up to national meteorological service to specify clearly in the bulletins the unit for wind speed like beaufort scale, knots, etc used in meteorological forecast and warnings. He then stated that there was clearly room for improvement for some parameters like sea state, to be considered by both ETMSS and ETWS.

He then stated that it was a good idea and asked that when the Guide to Wave Analysis and Forecasting publication (WMO-No 702) comes out for review to provide these types of comments and suggestions.

At the conclusion of the discussion, the Chairman proposed that in order to establish better collaboration and coordination with the JCOMM that at the scheduled meeting of this body in 2009 that instead of holding it in Monaco that it be held in Geneva, Switzerland coincident with the JCOMM ETMSS meeting. He then noted that the IHB currently attends these meetings and that delegates consider this proposal for further discussion next year when this body determines where it will meet in 2009.

3.4 Operational Lessons Learned for Consideration as Improvements to the WWNWS

3.4.1 MSI Outside Limits of WWNWS

3.4.1.1 Joint IMO/IHO/WMO Correspondence Group on Arctic MSI Services Update

The Chairman noted that the IHB has established a web based bulletin board service to post all information related to this CG at http://iho-discussions.org . He then reported on the progress to date that has been made by the CG against each of the items identified in the original Terms of Reference and that were approved at COMSAR 11.

- **Should there be a northern limit to any new areas?**
  The Chairman noted that at CPRNW 8 the consensus which the Commission members agreed to was that all NAVAREAs should provide coverage up to 90 degrees North.
  COMSAR 11 agreed and passed to MSC for approval.

- **Can a seasonal service only be provided?**
  The Chairman noted that at CPRNW 8 the consensus which the Commission members agreed to was that there should be full 24/7 operations, understanding that certain areas will not be navigable during certain times.

COMSAR 11 agreed and passed to MSC for approval.

- **Who will act as NAVAREA Coordinator and METAREA issuing service (do not have to be same country)**
  The Chairman noted that the CG took into consideration existing NAVAREA boundaries that border the new areas, Inmarsat satellite footprints, and current NAVTEX coverage areas specifically between new NAVAREAs XIX and XX in determining the extents of the new Arctic NAVAREAs. The Chairman further noted that Canada, Norway and Russia had all agreed to be the new NAVAREA Coordinators for the Arctic regions and to the limits of each NAVAREA. He recognized this as a major achievement for the CG. The actual geographic coordinates of the new NAVAREAs are identified in Annex F. COMSAR 11 agreed to these new NAVAREA Coordinators and NAVAREA limits and passed to MSC for final approval.
  The Chairman noted that METAREA Coordinators still needed to be addressed and this item is carried forward in the new Terms of Reference for the CG. The WMO representative noted that Canada, Norway and the Russian Federation had also informally agreed to act as Issuing Services, but that WMO still needed official offers. He also informed the commission that USA and Denmark would certainly contribute also as Preparation Services and would negotiate their contribution with the relevant Issuing Service(s). He stated that the definition of the contribution of the Preparation Services was not required for the IMO approval process. with regards to this issue that Norway was in negotiations with Denmark and Canada was in negotiations with the US with regards to providing meteorological support in their respective NAVAREAs. Progress made on this will be included in the WMO report for COMSAR 12. The Chairman asked the WMO to send an e-mail to confirm that METAREAs are ok with limit and then to send an official letter with boundary information for each country to officially agree to before 01 December 2008 so that it can be included in the submission to COMSAR 12.

- **Would some of the proposed new NAVAREAs be better established as sub-areas of existing NAVAREAs?**
  The Chairman noted that at CPRNW 8 the consensus which the Commission members agreed to was that it would not be beneficial to extend current NAVAREAs and make these areas as Sub-Areas. The Commission agreed that the Arctic should be covered by new NAVAREAs and not Sub-Areas.
  COMSAR 11 agreed and passed to MSC for approval.

- **How will warnings be transmitted, and can they be monitored as required? Do systems other than Inmarsat (such as HF NBDP, NAVTEX or other satellite service providers) need to be considered?**
  The Chairman noted the current monitoring requirement for all maritime safety information broadcasts under GMDSS. Recognizing the limited coverage of Inmarsat-C within the Arctic waters, and in order to identify other potential satellite service provider capabilities, a questionnaire was generated by the CG and sent directly to: Iridium, Orbcom, Globalstar, and Inmarsat. Of those four companies only Inmarsat and Iridium responded.
  The Chairman reminded all delegates that there will be cost and resource impacts involved if multiple service providers are to be utilized under the GMDSS. The Chairman also noted that national distribution services for maritime safety information promulgation under GMDSS are not acceptable. Further discussions

concerning this matter are still required with new background information from Norway, Canada, and Russia in order to provide a communications solution for the Arctic region. This issue has not been decided and remains on the new Terms of Reference for the CG.

- **Who will undertake provision of SAR information?**
  The Chairman noted that the provision of SAR information within these new NAVAREAs would continue to be provided in accordance with currently agreed SAR regions. COMSAR 11 agreed and passed to MSC for approval.

- **How will Inmarsat system definition manual and existing SafetyNET terminals be updated to allow receipt of the new NAVAREAs? Ideally this update needs to be coordinated with plans to include new areas in other parts of the world.**
  The Chairman noted that discussions with Inmarsat have been held and agreed that changes can be made to system definition manual to accommodate expansion of the WWNWS into the Arctic waters. Inmarsat requested that all agreed upon changes to coverage areas under the WWNWS to include the Arctic expansion and other existing coverage gaps be implemented at the same time. This comprehensive update will lessen the impact on the customer and the equipment manufacturers. Inmarsat will address this issue further in its presentation later in the agenda. This issue has not been decided and remains on the new Terms of Reference for the CG. The Chairman stated that it will be the goal to make all system changes at the same time but not at the cost of impeding progress with regards to the implementation of the new Arctic NAVAREAs.

- **Will assistance be required from IHO/CPRNW to support new NAVAREA co-ordinators or from JCOMM/ETMSS for METAREA issuing services?**
  The Chairman noted that assistance from the CPRNW and NAVAREA Coordinators will be required in the terms of providing training and technical support. He noted that Canada has already visited the United States/NGA and the NAVAREA IV and XII watch desk for operational training and Norway has visited the UKHO and the NAVAREA I watch desk also. This item remains on the new Terms of Reference for the CG.

- **How will WWNWS guidance and other relevant documents be updated?**
  The Chairman noted that COMSAR 11 endorsed the work of the Document Review CG and is anticipating revisions to IMO Res A.705 and A.706 to be submitted COMSAR 12. The Chairman reassured all delegates that prior to submission of these revisions and associated paper, that it will be forwarded to all for comment and review. The IMSO representative noted that with regards to the Inmarsat system definition manual that exact limits of all NAVAREAs need to be included. He stated that when the original system definition manual was drafted that the graphic was simplified due to memory constraints of computer systems at that time. Technology has now advanced that this is probably not an issue and these areas may now be more precisely defined.
  The Norway delegation asked when the approval process will be completed for them to officially start acting as the NAVAREA XIX Coordinator and promulgating maritime safety information as a recognized entity in the WWNWS. The Chairman responded that there are still items on the Terms of Reference for the CG and that there are still unresolved issues with regards to the Inmarsat systems definition manual update and viable means of message promulgation and receipt by vessels in

these areas. He then stated that it is difficult to determine a projected official operational date at this time, but recognizes that a timeline needs to be created and will work that issue. He summarized that it might very well be that the NAVAREAs are ready to operate and will begin to do so but just not as official operations. The IMSO representative concurred and stated that it is beneficial to allow time to establish trial broadcasts and the opportunity to develop internal operations for a period of time. He noted that with this method that when IMO/COMSAR does officially approve the new WWNWS then the NAVAREAs can be fully operational immediately. The NAVAREA I Coordinator noted that if Norway has complete coverage for their respective NAVAREA that they should establish service area limits and begin broadcast of coastal warnings using NAVTEX stations. If they would then decide to broadcast NAVAREA warnings utilizing SafetyNET to a rectangular area such as is done in NAVAREA XIII, they just need to issue sufficient notice to mariners that they intend to set up a trial service to avoid any confusion. The Chairman noted that as Chairman of the IMO SafetyNET Coordinating Panel that he will not issue a certificate of service until there is a collective announcement from both the IHO and IMO with regards to the new WWNWS in order to ensure that there is a whole solution and not a partial solution.

The Chairman noted that a graphic depicting the new Arctic NAVAREAs was posted on the conference room wall. The Chairman reminded all delegates that the delimitation of these new Arctic NAVAREAs is not related to and shall not prejudice the delimitation of any boundaries between Member States.

The Chairman next invited a member of the delegation from Norway, Mr. Jan Erik Steder (Telenor Maritime Radio), to present a potential method on broadcasting maritime safety information in NAVAREA XIX.

Mr. Steder provided a comprehensive presentation on the utilization of existing High Frequency (HF) broadcasts as a potential means of broadcasting MSI in Arctic regions. He noted that as per COMSAR 11 that all new Arctic NAVAREAs should be extended up to 90 degrees North and be responsible for promulgation of MSI in navigable waters within those areas. Results from test trials made to date with the Norwegian Coast Guard have indicated that "navigable waters" within NAVAREA XIX are probably somewhere in the 82 – 84 degrees North latitude range due to drifting ice above that limit.

In cooperation with Coast Guard "Svalbard" Telenor Maritime Radio is testing coverage and technical quality of HF transmissions to include NAVTEX (NBDP), NAVTEX 518MHz, and MF Voice within NAVAREA XIX from Bodo, Vardo, Svalbard and Rogaland which are all manned stations. Current results show that NAVTEX transmissions from these stations will cover at least SSR North Norway up to 82 degrees North. In addition, based on these results they would recommend new NAVTEX service areas be established within NAVAREA XIX. The results are optimistic so far and assume that HF NAVTEX could be a good alternative to Inmarsat north of 70 degrees North latitude. More accurate results and findings will be presented to the Joint IMO/IHO/WMO Correspondence Group on Arctic MSI Services later on this year.

The Chairman noted that this provides a good perspective on a viable alternative means of promulgation of MSI above the limits that Inmarsat can reach and that maybe Canada can complete a similar testing and submit information by December in order to include it also in the Joint IMO/IHO/WMO Correspondence Group on Arctic MSI Services report to COMSAR 12. The NAVAREA I Coordinator referred the discussion back to IMO Res. A.705 and § 3.2 which states, "Information shall be provided for unique and precisely defined sea areas, each being served only by the most appropriate of the above systems. Although there will be some duplication to allow a vessel to change from one system to another, the majority of messages will only be broadcast on one system." He expressed

concern about using several communication systems that need to be run in parallel and further suggested that areas be defined and specifically described as to how MSI will be broadcast within those areas to eliminate the concern that the same sea area may be covered by broadcast from 3 or 4 different systems. The Chairman concurred and stated that both Norway and Canada have agreed that if a message is sent out in the footprint of NAVTEX or SafetyNET coverage that they would only promulgate over those systems. He also noted that HF NBDP was originally included in IMO Res A.706, § 2.3, as a means of promulgating MSI. It was recently removed as part of the Document Review CG updates but that it would be placed back in as it appears to still be a viable means of communication. The IMSO representative concurred and believed it to be critical to included as a means of promulgation and receipt of MSI as every ship shall travelling outside sea area A2 or A3 must carry this equipment as per SOLAS regulations and are guaranteed to receive this message traffic. SOLAS Regulation/IV/7.1.5 and SOLAS Regulation/IV/10.2.1 were cited as mandatory carriage requirement for this equipment:

SOLAS Chapter IV Regulation 7.1

.5 a radio facility for reception of maritime safety information by the Inmarsat enhanced group calling system[1] if the ship is engaged on voyages in any area of Inmarsat coverage but in which an international NA VTEX service is not provided. However, ships engaged exclusively on voyages in areas where an HF direct-printing telegraphy maritime safety information service is provided and fitted with equipment capable of receiving such service, may be exempt from this requirement.[2]

[1]Refer to resolution A.701(17) concerning carriage of Inmarsat enhanced group call SafetyNET receivers under the GMDSS.

[2]Refer to the Recommendation on promulgation of maritime safety information adopted by the Organization by resolution A.705(17).

SOLAS Chapter IV Regulation 10.2

.1 an MF/HF radio installation capable of transmitting and receiving, for distress and safety purposes, on all distress and safety frequencies in the bands between 1,605 kHz and 4,000 kHz and between 4,000 kHz and 27,500 kHz:

.1 using DSC;
.2 using radiotelephony; and
.3 using direct-printing telegraphy;

3.4.1.2 Inmarsat-C EGC SafetyNET Report

The Inmarsat representative could not be present for this meeting and thus the IMSO representative delivered an abbreviated presentation which covered four main focus areas that included EGC SafetyNET message traffic metrics, Inmarsat contingency arrangements, Coastal Warning areas for NAVAREA V, and NAVAREA/METAREA issues for promulgating MSI in proposed Arctic areas.

Discussion primarily centered on the promulgation of MSI in the Arctic regions and the issuance of a test message by Inmarsat to test the extent of satellite coverage. The IMSO representative noted that the test message simply asked for a reply acknowledging receipt of the message and a position report. It did not provide a comprehensive picture of coverage, but from those that did respond to the test message it was realized that they were all in the southern part of the Arctic NAVAREAs. This was an indicative picture of where ships do currently operate and only 1 responding vessel was above 79 degrees North. He highlighted the slide that set forth recommendations as to nominated satellites and scheduled broadcast times for the new Arctic NAVAREAs. He noted that specific times were not identified for each new NAVAREA but just identification of times that MSI broadcast should be avoided for these regions and that identification of specific broadcast times for each should be handled directly by the IMO SafetyNET Coordinating Panel. The NAVAREA X Coordinator inquired as to the exact reason why these times were listed to be avoided and the IMSO representative responded that he was not sure as to exactly why Inmarsat had identified these times. The WMO representative noted that these were the times for METAREA broadcasts over these regions and that may be the reason.

The Chairman noted that at CPRNW 8 a request was made to Inmarsat to send out a test message to these Arctic areas to see how many ships received the message and it appeared that the highest latitude that a vessel received the message was at 79 -30 N over the AOR-E satellite. The Norwegian delegation inquired if a Northern latitude could be guaranteed for Inmarsat coverage. The IMSO representative responded that Inmarsat is advertised as safe up to 79 degrees and that NAVAREA Coordinators can realistically plan and rely upon this satellite service provider for message promulgation up to that limit. The NAVAREA I Coordinator noted that the Inmarsat website identifies that 76 degrees North is the limit for coverage and that was what was adopted under GMDSS and why the northern limits of the original NAVAREAs were established at this latitude.

The Canadian representative noted that Canada is broadcasting in HF Narrow Band Direct Printing (NBDP) with some success. He stated that there are no performance standards for this method such as for a NAVTEX service or SafetyNET service and with a scheduled broadcast it appears to be a viable solution. A more difficult issue will be for unscheduled broadcasts. He also reminded everyone that if the WWNWS is only concerned with SOLAS class vessels that there are not many transiting these waters from the months of November to May each year due to ice in the upper regions of these NAVAREAs. He then expressed concern as to the exact coverage of the intersect gap area between the Indian Ocean and Pacific Ocean Region satellites and asked if any tests had been done to determine exact coverage in this specific area. The IMSO representative responded that a test message was sent in May but only across the AOR –E and POR satellites.

The IMSO representative next provided a presentation on the anomalies in the Inmarsat system definition manual coverage diagram and the approval process for the inclusion of Sub-Areas for the Caspian and Black Seas. He noted that with the current boundaries as defined in the system definition manual that there are 6 different areas which have gaps or overlaps in coverage. These boundary limits are important today due to the fact that the Inmarsat-C terminal selects its own primary NAVAREA based on its GPS position and uses this matrix to define which one it is in. In these anomaly areas that have overlap in coverage the terminal will print and display information from more than one NAVAREA. These exist today because the original Inmarsat terminals did not automatically select the NAVAREA based upon GPS position and when the manufacturers actually built this matrix it was not important to have exact coordinates for these limits. He informed everyone that the process to change the software in Inmarsat terminals will take 2-3 years and since it is required to modify and add the new Arctic NAVAREAs, now is the opportunity to fix these anomalies. A graphic depicting the Inmarsat proposal for resolving some of the anomalies was shown

and it was noted that it did not take into consideration any potential political or operational concerns. He stated that the final boundary limits will be a complex issue that will require direct liaise by the Chairman to appropriate parties and then approval by the committee. He finalized his comments by stating that in addition to these anomaly areas that there are 3 other major issues with the system definition manual coverage diagram that need to be addressed by this body and they all deal with the establishment of new Sub-Areas in the Caspian Sea, the Black Sea, and specific inland waterways. He noted that these decisions do not require IMO agreement and once decided by this body simply require the technical capability to implement whenever possible.

The Chairman noted that he felt that the decision on where to place these new Sub-Area and NAVAREA boundaries had little political ramification as the Inmarsat system definition manual coverage diagram simply is used by the terminal to determine what area it is in. He stated that the issue is not missing information but dual receipt of information and that he would work directly with Inmarsat to correctly identify the exact boundaries of each NAVAREA and Sub-Area with the understanding that it is mandatory to pass information that is in close proximity to an adjacent NAVAREA to that NAVAREA for promulgation also. The IMSO representative noted that there are established agreements and contracts with satellite service providers in place that will not change with these modifications and that there will be not cost impacts arising from this proposal. The NAVAREA X Coordinator identified that between NAVAREA X and NAVAREA XIV there is an area of overlap coverage and there was no proposed solution by Inmarsat in the presentation. He noted that in this part of the world there is no apparent reason for any ambiguity or overlap as it is in the middle of open water. The Chairman concurred and with the Inmarsat representative not being present was unsure as to what the reason may be why this was not identified. The NAVAREA VI Coordinator noted another error in the presentation with regards to the River Plate region in Argentina. He informed everyone that NAVAREA VI is posting local warnings on DSC stations for these waters but it appears that this area falls into NAVAREA V according to the graphic. It was concluded again, the Inmarsat system definition manual graphic was incorrect as the limit runs straight instead of being at a diagonal to the shoreline which would put the River Plate into NAVAREA VI where it should be and not NAVAREA V.

In addressing the 3 additional issue areas that the IMSO representative noted with regards to changes in the Inmarsat system definition manual, the Chairman next spoke to the Caspian Sea and Black Sea regions. He proposed that each of these regions be included as individual Sub-Areas within NAVAREA III and be defined as such in the Inmarsat system definition manual. He asked for comments or endorsement of this proposal. The NAVAREA III Coordinator concurred that the Caspian Sea and Black Sea be included as a separate Sub-Area for each. He noted that with regards to the Black Sea region that they had already asked bordering countries for approval on this proposal and had gotten the majority to agree that it should be a Sub-Area. With the Caspian Sea region though this had not yet been done. But at the next Mediterranean and Black Sea Hydrographic Commission meeting that will be held in October 2007 and that part of the agenda will be for him to discuss this and ask for comments. He also noted that in the Russian Federation Self-Assessment report it stated that if Turkey did not want to do this for the Black Sea then they would act in the capacity as a Sub-Area Coordinator for this area and also for the Caspian Sea. The WMO representative responded and stated that he did not foresee any problems with this proposal and with regards to meteorological services that only informal discussions had been held with representatives from Greece as they are at this time the meteorological issuing providers in the Mediterranean and Black Sea. He agreed with the proposal to have new Sub-Areas for these waters.

The delegates concurred that there was no possibility to reach all political and technical answers in an expedient manner. It was recommended that the commission move forward with the proposal for these waters and not delay the process any further for modifications to be included in the Inmarsat system definition manual and the establishment of the Arctic NAVAREAs. All delegates concurred with the proposal and it was agreed upon by unanimous consent that the Caspian Sea and Black Sea should be designated as new Sub-Areas of NAVAREA III within the Inmarsat Systems Definition Manual.

The IHB noted that these changes do not have to be submitted to the IMO for approval and asked the IMSO representative to lead an ad-hoc working group to determine and establish the exact boundaries of these new Sub-Areas. He then suggested that the IMSO author an INF paper to be submitted to COMSAR 12 with regards to these specific changes.

The delegates next addressed the issue of inland waterways and if they should be included as new sub-areas in certain areas of the world. After a very brief discussion all delegates agreed by unanimous consent that these areas should not be included as new Sub-Areas within the Inmarsat Systems Definition Manual.

The NAVAREA X Coordinator recognized the message traffic metrics that were also included in the presentation that are of great value and recommended that this Inmarsat-C EGC SafetyNET Report presentation be submitted as a CPRNW paper in the future.

The IMO representative noted that a revision to Annex 6 of the SafetyNET Manual might be required with regards to these changes being made to the Inmarsat system definition manual. The Chairman agreed and stated that as part of the Document Review CG these 2 manuals would be compared and any required changes incorporated in Annex 6 of the SafetyNET manual as a result.

3.4.1.3 WMO Actions

The Chairman introduced this agenda item and invited the WMO representative to present the paper submitted by the WMO Secretariat on the GMDSS Website: Current and Future Developments (CPRNW9-3.3.3-2)

The representative from the WMO provided a presentation of the JCOMM real-time Meteorological GMDSS website which can be accessed at http://weather.gmdss.org. He noted that it was decided to establish this website and provide web-based access to meteorological information after findings from a customer survey. This website which has been operational since the end of 2003 provides a separate page for each METAREA, direct access to current SafetyNET scheduled forecasts & warnings, and links to the websites of individual meteorological issuing services. He explained that since the report provided last year on this website at CPRNW 8, it has been improved by adding new hotlinks to other pertinent meteorological websites. Next he highlighted some of the proposed actions to move forward in developing the GMDSS website that were decided at the ETMSS-II meeting that was held in January 2007. These included:

- Add MSI prepared for NAVTEX dissemination
- Add a web-based survey form of the questionnaire for the monitoring of Marine Meteorological Services
- Include future MSI in graphical or numerical data
- Add links to NMS websites and WMO and JCOMM documentation
- Investigate the development of interactive map functionality
- Make the e-mail access more visible on the website

He concluded by giving a broad overview of the WMO Global Telecommunication System (GTS) which operates globally, regionally, and nationally by collecting observational data and disseminating the data to other national, regional, and WMO meteorological centers. He noted that this global network is not supposed to be available for navigational warnings but that new global WMO Information System (WIS) – see §3.5.3, which will permit access for agencies and products outside the meteorological community, will be available if so desired.

The Chairman asked for clarification on who manages the website and the currency of the data that is included and if it was synchronized across all METAREAs. The WMO representative responded that with respect to the management of the website that this not done by WMO but by Meteo-France, the French National Meteorological Service, on behalf of JCOMM. The currency of the information on the website is updated every 5 minutes automatically, using updated information from the GTS stream and it is very reliable. The currency of the information on the website is updated every 5 minutes automatically via GTS and it is very reliable. In addition, the current website only provides capability to "pull" data but new one under development will enable a "push" capability to customers. The NAVAREA IX Coordinator asked if the website has local meteorological information. The WMO representative responded that only SafetyNET messages are currently on the website but the plan is to have all broadcasts in the future available to include NAVTEX.

The NAVAREA X Coordinator made the recommendation to use this server to place all navigational warnings for a centralized repository. He noted that Australia posts all navigational warnings to their website in almost real time and with technology believed that if they were provided with another address to send it to the GTS server that this would only involve a simple software script modification. The Chairman concurred that a "1 stop shop" for finding all MSI is a good idea but cautioned that mariners might become totally dependent on this website for their MSI and not rely on broadcasts. The WMO representative noted that further discussion on how the GTS could potentially be used for navigational warnings and how to take benefit of the GMDSS domain as a portal should be held. He stated that the WMO secretariat has registered the web domain named "***gmdss.org***" until January 2011. He recalled the offer of JCOMM, through ETMSS, in the past to cooperate with IHO and IMO, with a view to coordinating the use of the common URL **"*gmdss.org"*** for the provision of both meteorological and navigational warning information in real time via the Web.

The Chairman made a suggestion to establish a link to all the NAVAREA websites as a first step. He noted that some NAVAREA Coordinators are posting information and some are not and those that do post information do it in many different ways and not in a uniform methodology. All delegates agreed to this suggestion with the agreement that once implemented that web hit statistics could be used to determine if users were using them. An action was placed on the WMO to add a link to their website.

3.4.1.4 Caspian Sea, Great Lakes, and Inland Waterways

The Chairman introduced this agenda item and recognized the comments and discussion that were already held in the Self-Assessment Report of NAVAREA III and the Inmarsat C EGC SafetyNET Report provided by the IMSO that pertained to the expansion and inclusion of WWNWS coverage into these areas. No further discussion was required on this agenda item.

3.4.1.5 The Way Forward

The Chairman introduced this agenda item noting that any recommendations that this Commission makes have to be coordinated with other international organizational meetings such as the IMO and WMO. In order to assess, decide, and implement changes in a cooperative approach with these supporting organizations, the Commission needs to establish a timeline framework with milestone goals for submission and approval. He then stated that he was working a timeline that would be available in the near future in order for the Joint IMO/IHO/WMO Arctic Expansion CG to focus on specific issues and to provide guidance at COMSAR 12 in April 2008 as to new Terms of Reference for this group.

3.4.2 MSI Within the Limits of the WWNWS

The Chairman introduced this agenda item noting that there were 2 papers submitted that would be addressed in this area. The Chairman then invited the Sub-Area Coordinator for NAVAREA I to present the paper submitted by Sweden on Recommendations regarding Firing Exercises (CPRNW9-3.4.2.1)

The Sub-Area Coordinator for NAVAREA I noted that firing exercises is a frequent occurrence within the coastal waters of the Baltic Sea. In order to make it easier for the mariner to obtain information on these hazardous operations they propose the following recommendations:

- Encourage relevant authorities to designate firing exercise areas and restrict the exercises to only these areas
- Encourage relevant authorities to make it possible to contact the firing exercise area authority on VHF and/or telephone
- Include the limits and designations of firing exercise areas on charts and if feasible include contact information
- Demand firing exercise authorities to send information in good time to hydrographic offices for inclusion in Notice to Mariners
- Include information about firing exercise areas in the Notice to Mariners
- If possible include information about firing exercise areas in ENC as temporary ER
- If a navigational warning regarding firing exercise areas is necessary, refer to the charted designated firing area rather than listing coordinates.

He then asked for comments and discussion from the delegates on these recommendations with the intent to consider them and then decide if these firing exercise areas could be recommended for inclusion in IHO standards for hardcopy and digital charts.

The representative from Norway noted that in many instances there is not enough time between the decision to hold a firing exercise and when it is actually held to provide this information and have it published as an announcement in a temporary Notice to Mariners.

The NAVAREA IX Coordinator stated that there are designated and known firing exercise areas within his NAVAREA and that most vessels are aware of these and that shipping generally avoids these areas at all times. He stressed that even with these established areas that they still promulgate a navigational warning message every time there is a firing exercise and stated that this is something that all NAVAREA Coordinators must do.

The Chairman concurred with the NAVAREA IX Coordinator and noted that there are publications that have these firing exercise areas identified in them but that they may not be included as a mandatory carriage requirement for all SOLAS class vessels. In addition, with

regards to firing exercise areas in US waters specifically, these are included in a NATO publication that is limited distribution and not available to the general public. He went on to note that firing exercises are also held many times outside known and published limits in international waters as part of joint exercises. In addition, using only a reference to a designated area in the text of a navigational warning may not be prudent as many times the firing exercise extends outside the specified limits of the area and his recommendation was to use the actual coordinates in the message. Finally he stated that the inclusion of firing exercises on hydrographic charts or as an overlay to electronic charts could be passed on as a recommendation but that this sub-committee could not demand hydrographic offices to do so.

The NAVAREA X Coordinator noted that in Australia they do have designated firing areas and that these are listed and included in their Annual Notice to Mariners. He stated that the Australian position on this matter was that this safety of navigation responsibility is on the naval authorities conducting the firing exercise. NAVAREA X does not issue a warning when an exercise is in a charted area as it is the naval "clear range" responsibility to ensure that there are no vessels within the area before they begin firing. This policy for Australia is also stated in the Notice to Mariners. He noted that IMO Resolution A.706, Section 4.2.1.3-13 specifically covers what is in this paper and identifies that whenever possible that not less than 5 days notice should be given for these types of operations. He recommended that this paragraph be modified to address this issue and add text that directs mariners to consult the Notice to Mariners.

The NAVAREA VI Coordinator concurred with the suggestion to enhance the language in IMO Resolution A.706 to allow them to use this as an authoritative source to request that this information be included in the Notice to Mariners and to email an excerpt from this section to notify the mariner that they must consult this publication for firing exercise information.

The NAVAREA VIII Coordinator stated that India has designated firing areas that are included in Notice to Mariners and depicted in large scale charts. He asked for clarification of the recommendation in the paper for contact information on VHF channels.

The Sub-Area Coordinator for NAVAREA I explained that vessels are mandated to keep watch on VHF and believes that it is very important for the mariner and the military authority conducting the firing exercise to be able to have immediate communication method where they can contact each other. He also noted that in the SE part of Baltic Sea there are lots of firing exercises and many times the mariner does not have individual countries Notice to Mariners or publications. He concurred with the "clear range" procedures that should be used by all authorities conducting firing exercises and that these areas should be included in relevant charts and publications, but still was of the opinion that a broadcast warning should be promulgated.

The Chairman then led discussion that resulted in a consensus to add text to IMO Resolution A.706, Section 4.2.1.3-13 with regards to the inclusion of text in navigational warning broadcast messages that specifies that reference may be made to relevant national publications. The exact textual change will be included in the document changes to this resolution.

The IHB summarized the discussion that in response to this paper this sub-committee has made adjustments to IMO Resolution A.706 that were deemed appropriate and suggested that Sweden should submit these recommendations on to other international bodies for further action with regards to inclusion in chart standards.

The Chairman next invited the NAVAREA I Sub-Area Coordinator to present the paper from the Standardization of Nautical Publications Working Group (SNPWG) on Weather Forecast and Navigational Warning Areas (CPRNW9-3.4.2.2) that he submitted for this meeting.

The NAVAREA I Sub-Area Coordinator noted that he is a participating member of this WG and that the intent of this paper was to discuss the inclusion of weather forecast and navigational warning areas into electronic nautical charts (ENCs). This WG is currently reviewing nautical publications and trying to include content information from them as objects and associated attribution into the new S100 standard to integrate these digital publications with digital chart products. In discussions with regards to different kinds of areas that should be included as part of this integration were NAVAREAs, NAVTEX Service Areas, and Inmarsat Satellite footprint areas which are all very clearly defined and well known. But, with regards to weather forecasting and meteorological warnings, investigation by the WG has found that these meteorological service areas are not clearly identified and defined by any international body. This current condition may make it impossible to encode and implement these areas in a logical and consistent manner into the ENC. He closed out his presentation by stating the SNPWG would like to learn if there are any internationally agreed meteorological areas that could be included as part of this effort and if there are none then recommend that the CPRNW in cooperation with the WMO urge the development of these areas. The paper also identified the need for 3 different levels of areas; ocean, coastal, and local – all of which should be internationally coordinated and managed.

The WMO representative remarked on the recommendations set forth in the paper. He noted that this is an important issue for WMO and that there has been some progress made already. He stated that WMO has already adopted some international common sets of sub-areas (in particular for the North Sea, The North-East of Atlantic and the western part of Mediterranean Sea) to be used by all Member States. Those common sets of sub-areas are included in WMO n°558 (Manual on Marine Meteorological Services) and/or WMO n°471 (Guide on Marine Meteorological Services), that should be available online before the end of 2007. All member states are asked to use these areas in their broadcast messages but some use their own service areas still and disregard this. In other parts of the world more harmonization still needs to be done. In addition, all the sub-areas used by Member States for met-ocean MSI are described in WMO n°9 volume D (Weather reporting – information for shipping), available on the WMO website. Thus in summation, there is information that exists that identifies certain areas that have been agreed upon and are used and there are other areas where there is improvement to be made in this regard. A recommendation was made that these known areas could still be added to the ENC even if you there were overlapping boundaries that were dependent on the issuing authority of the meteorological information.

The Chairman stated that this was clearly a WMO issue and recommended that it be passed back to the IHO and WMO for further consideration. The IHB initiated an action for the WMO to provide the information on the reference documents to the SNPWG for known meteorological service areas and noted that if the SNPWG required more information that they can request it directly from the WMO.

The NAVAREA X Coordinator expressed a concern that the SNPWG was getting confused with local broadcasts areas that are not meant for SOLAS vessels and should not be included in an ENC. The WMO representative concurred and noted that it would be impossible to harmonize at this large of a scale.

3.5 Emerging Technologies

3.5.1 E-Navigation Update

The Chairman invited the IHB to present their paper (CPRNW 9-3-5-1) and give a brief synopsis and update on e-Navigation.

The IHB explained that in summary that "e-Navigation" is a concept and not a system or service. It is based on an original proposal by the United Kingdom and other member states that suggested the IMO develop an international strategy for e-Navigation noting that there are many different types of electronic bridge / navigation systems being developed and there should be coordination and oversight into these by a single body that should be looking at these all together. In 2006 the Maritime Safety Committee (MSC) of the IMO put a new work program item on the agenda of the Sub-committee on Safety of Navigation (NAV) and COMSAR to "Develop an E-Navigation Strategy". NAV, the lead Sub-Committee, is due to report back to the MSC in 2008. Details of the consideration of this matter by COMSAR 11 are given in document CPRNW9-3-1 (Report on COMSAR 11). The IMO has taken the lead on this matter with support from the IHO, IALA and other bodies. With this direction, by the end of 2008 there will be a report at MSC from NAV on the long term strategy for e-Navigation.

The IHB noted that although there are differing opinions as to what the "e" stands for in "e-Navigation" (electronic, enhanced, extended, etc), there is an official definition which has been endorsed by NAV and is stated as:

> "e-Navigation is the harmonized collection, integration, exchange, presentation and analysis of maritime information onboard and ashore by electronic means to enhance berth to berth navigation and related services, for safety and security at sea and protection of the marine environment."

There is also a set of core objectives that have been established for e-Navigation which includes: "facilitate safe and secure navigation of vessels having regard to hydrographic, meteorological and navigational information and risks". The proposal to IMO work program on e-navigation defines seven key components of a safe and comprehensive e-navigation policy. Shortly described these are:

- Electronic charts and weather information
- Electronic positioning signals
- Electronic information on vessel route, course, manoeuvring etc.
- Transmission of positional and navigational information
- Display of information
- Information reporting, prioritisation and alert capability
- Transmission of distress alerts and maritime safety information

IMO is the lead body with the IHO and IALA as contributors. Concern has been expressed that some organizations wish to take this matter forward too quickly. The IHO has passed the matter to the CHRIS committee for consideration and IALA has established an e-Navigation Committee in which the IHO participates. COMSAR has clearly stated that e-Navigation must be user and not technology driven and this has been endorsed by NAV and MSC.

Finally the IHB stated that the overall concept is very good and will provide a long term solution for the mariner's future needs for safe navigation. The latest status of this initiative from the IMO can be found in the NAV53 report to the MSC. Further, the IMO CG was re-established at NAV53 with new terms of reference that include: identify all potential users of e-Navigation; define the user needs for e-Navigation; review the need to consult other maritime agencies and interest groups, navigational practitioners, support agencies, research organizations, equipment manufacturers and ports managers; and to

continue to develop other aspects of the strategic vision for e-Navigation. This CG will submit a document to COMSAR 12 and prepare a final comprehensive report for submission to NAV54.

The Chairman stated that the Commission needs to be concerned with this new initiative as it involves MSI and IALA ANIS where an aid to navigation will automatically send out a message to the ship. The issue is to ensure that the NAVAREA Coordinator receives this information so it can be sent out to all SOLAS class vessels. In addition to this, the transmit range of some of these aids is limited and vessels may want notification of changes to these aids in advance. He noted that an automatic information system is a great initiative but it needs to include the local and national hydrographic authorities too. He finally stated that both Steve Shipman and Admiral Maratos attend these e-Navigation meetings representing the IHO and asked that each delegate pass any relevant information that they may come across on this issue to them.

3.5.2 IMO Resolution A.888 "Potential Presentations by Other Service Providers"

The Chairman introduced this agenda item by stating that satellite service providers were invited to attend this meeting and provide a presentation on their capabilities and potential solutions for promulgation of MSI in the Arctic Regions. Only one company responded to this invitation and they were then invited to brief their presentation to the members.

Mr. Chris Snowden representing Iridium Satellite LLC presented a comprehensive briefing that included a company overview, a description of the Iridium satellite network, current Iridium maritime applications, and the Iridium Polar Maritime Distress and Safety Service (PMDSS).

In presenting the company and network overview he noted that the current satellite constellation is made up of 66 Low Earth Orbiting (LEO) fully operational satellites with 10 in-orbit spares that provide global 24/7 coverage. This current constellation life is projected to last through 2014 and could possibly be extended indefinitely. The main commercial gateway is in Arizona, USA with backup sites located in Arizona and Alaska, USA. The satellite network operations center is located in Virginia, USA with a backup facility in Arizona, USA. He summarized that the Iridium constellation is in excellent health and provides pole-to-pole coverage covering all ocean areas with no gaps. Also, there is more than 100% coverage above 60 degrees North due to satellite footprint overlap and with this overlap it increases probability of access to over 98%. He noted that there is not any reliance on a regional infrastructure or any type of ground routing and that Iridium only has one region – and it is global. In addition, new gateway earth stations will also be constructed in Svalbard, Norway and Beijing, China for more system resiliency and flexibility. Currently Iridium has a total of 203,000 subscribers with an increase of 44,000 subscribers, a 27.7% increase over the past year. For maritime subscriptions specifically, they increased by 18% and maritime traffic increased by 12% over the past year. In concluding this part of the presentation he spoke about Iridium NEXT, the new Iridium network that will incorporate the current network and build upon its strengths while remaining reverse compatible with existing terminals. Over the next couple of years, the company will identify the functional requirements of this new system and focus on the customer and the needs of the user rather than a prescribed delivery mechanism.

A typical Iridium maritime terminal is capable of both voice and data transmission services which make it a versatile, low cost, and a complete single box solution for all maritime needs to include voice (includes crew calling and pre-paid), paging, fax, internet, Short Messaging Service (SMS), Short Burst Data (SBD), Ship Security Alert System

(SSAS), Vessel Management System (VMS) identification/tracking, and current requirements for Long Range Identification and Tracking (LRIT). It was noted that the Group calling capability is currently under development and that these systems are used for "Tsunameters" in the Tsunami Warning System – transmitter placed on top of tsunami monitoring buoys.

In the final section of the presentation, Mr. Snowden spoke to the Iridium Polar Maritime Distress and Safety Service (PMDSS) concept. This is in direct response to the new Arctic NAVAREAs and the need to provide a communications service to vessels transiting navigable waters outside the coverage of existing recognized services. He stated that the Basic requirements of the GMDSS can be met by Iridium systems (network and transceivers) combined with existing user-interfaces with no need for retraining. He then outlined 3 phases or options for PMDSS implementation:

- Phase 1: Rapid Deployment. Utilize existing field hardware, system architecture and services. All vessels entering the PMDSS area would pass through a "geo-fence" (which can be defined as almost any area) and would report to the server that they had entered a zone and need to receive MSI reports. When the ship leaves the "geo-fence" area a report would again go to the server and MSI reports would no longer be sent to the vessel. This would require some application development for the marine terminal and some server application development.
- Phase 2: Interim Solution. All vessels inside a PMDSS "geo-fence" area would receive MSI reports via the Iridium paging service. Geo-fence areas would be defined at the network level and ships would automatically receive with no activation required. Application could be augmented with ability to send confirmation of receipt of the PMDSS alert or message. Use existing field hardware with a modified application. Some software development would be required for the SBD transceiver, a special group paging configuration within the Iridium network, and server application development.
- Phase 3: Final Solution. Produce a new low cost, receive-only device within the Iridium paging network.

In closing the PMDSS section of his presentation, Mr. Snowden inquired if IMO Resolution A.707 (17) would be applied to this service and if it would be re-drafted to apply to systems other than Inmarsat. He then concluded his presentation and asked if there were any questions.

Q. The IMSO representative asked if it was possible to identify multiple "geo-fences".
A. Mr. Snowden responded that if the paging network solution is used then there can be multiple "geo-fences" and if the current data network is used, he was not sure.

Q. The Chairman then noted the specific survey question that was sent out to perspective satellite service providers that asked about the capability to repeat messages, cancel messages, and suppress messages already received at the terminal.
A. Mr. Snowden was unable to provide an answer to this question.

Q. The Chairman noted the question relating to IMO Res. A.707 (which dictates charges allowed for MSI, i.e. charges are free to for search and rescue, etc) that was raised during the presentation and the potential changes to this document recommended by Iridium and asked for clarification.

A. Mr. Snowden responded that they weren't asking for this resolution to be changed; they were just asking if it should be updated. He wasn't sure if Iridium could abide by charges mandated in this document as operating costs have not been determined yet and if service can be provided, then that becomes a commercial decision.

Q. The Chairman noted that the presentation indicated that equipment purchase is low cost and asked for a general estimate to actual cost of an Iridium transceiver.
A. Mr. Snowden responded that it depends upon the equipment manufacturer and could not provide an estimated cost but indicated that it was less than $1,000 US.

Q. The Chairman asked for an explanation of how the Iridium system could handle the monitoring of message traffic by a NAVAREA Coordinator with multiple satellites footprints covering a single NAVAREA region.
A. Mr. Snowden responded that the system would know where each vessel was within the NAVAREA and MSI would be categorized as to which ship would need to see what information and after a handshake validation was established, the data would be promulgated to each terminal as required. So effectively it would be passed directly to ship based on where they are.

Q. The Chairman asked if is there was a receipt acknowledgement for a message promulgated.
A. Mr. Snowden responded that there was with both services, Short Burst Data (SBD) and Paging.

Q. The Chairman asked if a vessel enters a "geo-fence" of a NAVAREA, would it automatically receive messages that were previously promulgated and still in-force.
A. Mr. Snowden responded that this would be a server application and that this had not been considered yet by Iridium.

Q. The Chairman asked if the Iridium terminals have a print capability.
A. Mr. Snowden responded that a user can attach a printer to the terminal for use with Short Burst Data (SBD) service but this capability would depend upon the terminal equipment manufacturers. If the Paging service is used then software applications would need to be developed. But there is a print capability with SBD.

Q. The Chairman asked if the Iridium terminals have a message storage capability.
A. Mr. Snowden responded that they did not.

Q. The IMSO representative noted that the existing service provider has requirements put on it to document down to the basic software level as to how the system operates and asked if Iridium has an existing mechanism to document, maintain and provide this information. He also inquired as to how would the consultative process between Iridium and the MSI user community operate with regards to assessing and validating that the terminals behave the way that the information providers (NAVAREA/METAREA Coordinators) expect them to.
A. Mr. Snowden responded that if a terminal is not fully compatible with the Iridium network then it would not be able to connect. He noted that Iridium also has direct commercial contracts with all equipment manufacturers.

Q. The Canadian representative asked for confirmation with regards to any of the 3 options presented that direct addressing of messages in a broadcast with the Iridium server managing which vessel receives what message was a capability.
A. Mr. Snowden responded that it was his understanding that because of the way the Iridium network functions currently that this is not a capability, but they are investigating direct addressing and multiple direct addressing.

Q. The Canadian representative asked if the service had a high reliability level.
A. Mr. Snowden responded that the number provide to ICAO was better than 99%.

Q. The Canadian representative asked if this reliability number included the entire network also.
A. Mr. Snowden responded that he believed it did include the network.

Q. The NAVAREA I Coordinator questioned the operational costs and procedures of the Iridium service. He noted first that with the current satellite provider that a message is promulgated with a single broadcast and it goes out immediately and received instantaneously to all vessels at the same time with only a single broadcast charge for that message. Under the Iridium system, it appears that the promulgation cost for a single message could be dependent on how many ships were in the NAVAREA (which could be 300 ships) and a separate cost would be incurred for the promulgation of the message to each individual vessel. In this regard, this could raise the broadcast costs considerably. In addition, with so many ships to promulgate this message to, he asked if the message would be broadcast in some sort of sequential order or be based on a ship location proximity to the message content prioritization schema or if the process was so quick that we really don't need to worry. He then questioned the redundancy built into the Iridium system and the reference to a system server that each NAVAREA and METAREA and SAR information provider would be required to have in order to store, manage, and retrieve message traffic and asked if this was a cost that would be placed on the hydrographic authority that provides the information or if this was a cost that will be assumed by the satellite provider. He then acknowledged that these were a lot of questions to answer at this time and that perhaps Iridium could provide an answer in due course if he couldn't address them all now. In closing out his comments he also advised that ships would prefer a piece of equipment that meets all GMDSS needs to include distress alerting to meet complete requirements and not just MSI receipt.
A. Mr. Snowden responded that one of the issues that were at the forefront of discussions was whether this PMDSS service would be for only MSI or full GMDSS and that it has been considered.

Q. The Chairman asked that since the Iridium terminal can be used for voice and other maritime applications, what would happen if the ship was using their system for some other reason when an immediate broadcast message was promulgated. Would there be an interrupt capability built in for this type of MSI receipt?
A. Mr. Snowden responded that he believed that this was already built into the Short Burst Data (SBD) service and didn't think it would be a problem.

Q. The Chairman asked what would happen if a message was promulgated and a vessel was in port and had their terminal off. Would they miss the message promulgated until the next scheduled broadcast or would it be a continuous

broadcast until it was received and would there be additional charges for multiple calls to the information provider?

A. Mr. Snowden responded that he was not sure of the answer to this question.

Q. The WMO representative asked if the vessel will receive information based on only where it is or can they also request information for an adjacent area where they may be going.

A. Mr. Snowden responded that he was not sure of the answer to this question

There were no further questions. Mr. Snowden requested a listing of all attendees for this meeting. The IHB responded that they would provide this to him.

The IMSO representative noted that as per IMO Resolution A.888, all satellite service providers under the GMDSS are required to provide all GMDSS services. Iridium, if approved through the IMO recognition process, would fall under the full terms of this resolution. He then recommended that if Iridium was interested in taking their proposal to become a GMDSS provider to the IMO that now would be good time to begin discussions with IMSO to ensure that they comply. The Chairman asked that if from a business standpoint Iridium can not provide all GMDSS services, but they can provide a solution for MSI promulgation in these Arctic regions, would there be possibly that the IMO would make an exception to Resolution A.888? The IMSO representative responded that he understood the need to move forward with the implementation of these new NAVAREAs and recognized that this body does have a position to influence a decision on this at the IMO. But, he indicated that it would be a difficult argument to make after supporting the original revision of this resolution as it was recently approved that mandated the full GMDSS services. It was noted that the latest version of Resolution A.888 was located at the IMO website for anyone that was interested in a copy of it and the Chairman stated that it would also be placed on the IHO website under the CPRNW.

The NAVAREA X Coordinator noted that the current SafetyNET manual is totally focused on the Inmarsat system and recommended that as this body looks to revise the manual in the near future that the main body is made as generic as possible to accommodate the addition of new service providers and possibly include an annex for each individual system. The Chairman responded that in direct discussions with the IMO at the last Document Review CG meeting that this exact issue was raised and that the IMO provided guidance that Inmarsat is the only approved satellite service provider for the WWNWS and that all the guidance documents should reflect that. The NAVAREA I Coordinator concurred and further stated that there are currently only 2 approved methods for MSI promulgation: NAVTEX and SafetyNET. He recommended that if another method is approved in the future, then there should be a new manual to address this specific system.

3.5.3 Other means of MSI Distribution

The Chairman introduced this agenda item and invited the WMO representative to provide a briefing and present his paper on the WMO Information System (WIS).

The WMO representative provided a comprehensive presentation of his paper on the WMO Information System (WIS). He noted that direction from the Fourteenth WMO Congress in 2003 approved the concept to develop a single coordinated global infrastructure to be known as the WIS in order to avoid development of independent national solutions, serve all relevant programs of WMO, collect and share information, and increase operations efficiency. Today there are various independent WMO programmes and the WMO Global

Telecommunication System (GTS) which provides for information collection, distribution, and information management. The vision for the WIS is to provide an integrated approach for the routine collection and automated dissemination of time-critical and operation-critical data and products, ad-hoc data discovery, access and retrieval, timely delivery of high volume data and processed products via a "push" mechanism, discovery, access, and retrieval for all data stored by every WMO program, and unified procedures for data exchange to include standardized data formats and metadata. The WIS network will be based on an improved GTS and integrated satellite two-way systems, alternative dissemination services provided by environmental satellites, and the free use of the Internet. The WIS architecture, functions, and services will provide for all information exchange needs between world-wide meteorological centres that will be interconnected by data communication networks to include National Centers (NC) – about 300 globally, Data Collection and Production Centers (DCPC) - about 150 globally, and Global Information System Centers (GISC) – about 10 globally. It will improve forecasting and warning services, expand the range of "push-pull" services provided, coordinate real-time data collection and dissemination, and enhance the visibility and importance of meteorological information. There will be a phased implementation of this new system and it is currently under development with some prototypes established around the world with the planned implementation of the first GISC in 2008 and DCPC in 2009.

As one of the objectives of WIS is to be opened and accessible to products and agencies outside the meteorological community, including users and partners like the NAVAREA Co-ordination centers, which could become in the future Data Collection and Production Centers (DCPC) in this system if so desired, the WMO representative suggested that this body be kept informed on this system development for the potential exchange of navigational warnings. He noted that the WIS will not only have a pull but also a push capability for data delivery and offers more various possibilities for the dissemination of Maritime Safety Information in the future.

4 REVIEW OF GUIDANCE DOCUMENTS

The Chairman noted that the next planned meeting of the Document Review CG will be after COMSAR 12 at IMO facilities and asked the IHB representative to coordinate the scheduling for this event. The IMSO representative then suggested that to manage the difficult process for enacting change to these guidance documents that the Commission look at the approval sequence required for changing these documents and establish a time schedule with major milestones against each document noting significant events and final submission.

The Chairman then stated that the process for document review at this meeting will be to review and discuss specific items where there is still some ambiguity remaining on the proposed draft changes. Focus would be on the latest revised draft documents that had been forwarded to all to discuss only the new changes that were made after the March 2007 meeting of the Document Review CG. In addition he noted that some changes are based on IMO standard format and are not able to change. He finally encouraged all to participate as this meeting is a great opportunity to get input and expert insight on these issues from all Commission members present.

4.1 Document Review Update and Status Report

At the 7th meeting of the CPRNW it was recommended and agreed upon to establish a Correspondence Group (CG) to conduct a thorough review of all WWNWS guidance

documents. This recommendation also identified that the IMO SafetyNET and NAVTEX Coordinating Panels should lead this effort and that any proposed changes to any of the WWNWS guidance documents as a result of this initiative would be forwarded to all members of the CPRNW for comment prior to final approval.

The Chairman next invited the Secretary of the IMO NAVTEX Coordinating Panel to provide a status on the WWNWS guidance document review to date. The Secretary thanked the Chairman and noted that the Document Review CG did initially meet in March of 2006, immediately following COMSAR 10 in London at IMO Headquarters where it was decided by the group at that time that the two top level guidance documents should be reviewed first. These are Resolution A.705 (17) "Promulgation of Maritime Safety Information" and Resolution A.706 (17) "World-Wide Navigational Warning Service". Work to date by the CG has focused on these documents and a 2nd meeting was held following COMSAR 11 in London at IMO Headquarters this past March. Draft revisions of these documents have been generated and posted for comments on the IHB website. The next goal is to achieve a final draft of both documents by 01 December 2007 in order to submit to IMO COMSAR 12 in April 2008 for approval. The Secretary noted that after these two documents are finalized, the Document CG would then begin to review the remaining guidance documents.

4.2 IMO Res. A.705 (17)

The Secretary of the IMO NAVTEX Coordinating panel presented the current version of all recommended changes to Resolution A.705 (17). The document was reviewed paragraph by paragraph with each proposed change discussed and either accepted, modified, or changed with final concurrence achieved for each specific item. A final draft version with all revisions included will be sent to all members for final comments by 12 October 2007 for submission to COMSAR 12.

4.3 IMO Res. A.706 (17)

The Secretary of the IMO NAVTEX Coordinating panel presented the current version of all recommended changes to Resolution A.706 (17). The document was reviewed paragraph by paragraph with each proposed change discussed and either accepted, modified, or changed with final concurrence achieved for each specific item. A final draft version with all revisions included will be sent to all members for final comments by 12 October 2007 for submission to COMSAR 12.

4.4 Joint IMO/IHO/WMO Manual on MSI 2003 Ed.

This document was not discussed and it was agreed to that that any revisions to this document as a result of the Document Review CG would be reviewed at the next CPRNW meeting. A digital version of this document will also be provided to all members.

4.5 Joint IMO/IHO/WMO Manual on MSI S-53 App 1

This document was not discussed and it was agreed to that that any revisions to this document as a result of the Document Review CG would be reviewed at the next CPRNW meeting. A draft digital version of this document will also be provided to all members.

4.6 International SafetyNET Manual 2003 Ed

This document was not discussed and it was agreed to that that any revisions to this document as a result of the Document Review CG would be reviewed at the next CPRNW meeting. A draft digital version of this document will also be provided to all members.

4.7 NAVTEX Manual 2006 Ed.

This document was not discussed and it was agreed to that that any revisions to this document as a result of the Document Review CG would be reviewed at the next CPRNW meeting. A draft digital version of this document will also be provided to all members.

4.8 Implementation of the GMDSS (IHO Circular Letter 31/2000, 12 July 2000)

This document was not discussed and it was agreed to that that any revisions to this document as a result of the Document Review CG would be reviewed at the next CPRNW meeting.

4.9 IMO Res. A.664 (16)

This document was not discussed and it was agreed to that that any revisions to this document as a result of the Document Review CG would be reviewed at the next CPRNW meeting.

4.10 Terms of Reference for the CPRNW (IHO Circular Letter 112/2005, 11 November 2005)

This document was not reviewed in detail. It was agreed that until the restructure of the IHB comes into place that these should not be considered.

The IHB directed that this body should operate under the Terms of Reference as they stand now and with the new revised Terms of Reference which will guide all sub-committees in the restructure of the IHO becoming effective no later than 01 January 2009, that this body should review this at the next scheduled meeting.

The President of the IHB then stated that the Directors are currently finalizing the draft text for the new Terms of Reference and have attempted to harmonize the text and rules of procedure as much as possible. He noted that for this body that the Terms of Reference and Rules of Procedure are primarily the same with no significant changes. This document will be ready to send to member states and finalized by the end of 2008 and that no operational changes need to be considered for next year for this body. He stated that in 2009 the new IHO Committee and Sub-Committee chairmen will then review for any final changes at that time and that he agreed that there was no for review at this point in time.

The Chairman noted that in preparation for the review of this document in 2009 that if any delegates have any issues that they should submit them for discussion at the next meeting. He noted that specifically in Item 5 of the new Rules of Procedure it states that the meeting shall be held in early September and that with the Sub-Committee report required to go to the overarching Committee for approval before it can be submitted to COMSAR that dependent upon the new meeting schedule for the IHB may require a change to when this body meets in order to meet submission deadlines. The NAVAREA I Baltic Sub-Area Coordinator noted that in regards to Item 1 of the new Rules of Procedure that the current text does not specifically identify Sub-Area Coordinators as potential members of this body and that they should be included in the list for membership. The Chairman and IHB agreed and will include the recommendation as a future update to this document.

5 CPRNW REPRESENTATION AT REGIONAL HYDROGRAPHIC COMMISSIONS AND OTHER CONFERENCES

5.1 Update on CPRNW Member Attendance to RHCs

The Chairman reminded all delegates that this item was included as part of the Self-Assessment template and encouraged that in the future for each NAVAREA Coordinator to include and indicate to what extent they participated in Regional Hydrographic Commissions in their area of responsibility. The Chairman then cited a reference that indicated that this is a responsibility of each NAVAREA Coordinator as per the CPRNW Terms of Reference paragraph 1.4.

The Chairman noted that it was important that NAVAREA Coordinators attend RHCs that are held within their respective areas. A standing agenda item at these RHC meetings is maritime safety information and any capacity building training that will be required for the region will come at the request of the RHC. The Chairman stressed the fact that there is no intention to direct NAVAREA Coordinators or impose a requirement on them to provide training to other countries within their region if it is not requested. The representative from the IHB confirmed that capacity building is requested from the RHC and that they will decide what capacity building is required along with coordinating the logistical aspects.

Members present thought it was a good item to keeping the Self-Assessment and that it may be appropriate to have a standardized WWNWS brief for each to present with then additional local slides as appropriate. The Chairman took an action item to provide a standardized brief.

5.2 Capacity Building Training Course Progress

The Chairman informed everyone that the IHO has given a high priority to capacity building and that it is in the best interest of all member states if each NAVAREA Coordinator can get national authorities within their area of responsibility to start providing and producing maritime safety, hydrographic, and bathymetric information. The Chairman then stated that the CPRNW has been tasked by the IHO to provide training in maritime safety information to areas requesting assistance. In addition, the IHO is providing assistance to this capacity building initiative by providing funding to cover training materials and travel costs for those participants who wish to attend.

The Chairman then noted that he, the Secretary of the IMO NAVTEX Coordinating Panel, and other representatives from both the US and UKHO provided instruction at the first training course that was held within NAVAREA IV as part of the Meso-American Caribbean Hydrographic Commission (MACHC) from 20-22 March 2007 in Jamaica.

The Chairman stated that the goal is to establish a model course along with lesson plans and region specific practical exercises that will enable all NAVAREA Coordinators to provide this training in their respective regions and to ensure consistency in the training approach. He also advised that as the course gets further defined it will be included on the next version of the WWNWS CD-ROM for all to use. He then invited the Secretary of the IMO NAVTEX Coordinating Panel to present to the delegates an overview of the training course.

The Secretary of the IMO NAVTEX Coordinating Panel presented an outline of the course syllabus and explained the overall intent of the course. He noted that a Master Mariner was included in the course instruction in order to add a first hand customer

perspective to the importance and relevance of proper maritime safety information being promulgated in a timely manner to vessels at sea. He then provided a comprehensive explanation of the various instructional and practical exercise components of the course using a slide presentation that illustrated actual course material that was used to address the assessment of incoming source information, the drafting of navigational warning messages, and the promulgation of messages as an actual watchkeeper in a time sensitive atmosphere. He finally stated that everyone was very pleased with the personnel that attended this course and that a significant reason why it was so successful was due to their own individual eagerness to attend and learn.

The NAVAREA III Coordinator notified everyone that there has been funding approved for up to 12 students for an MSI training capacity building training course as part NAVAREA III and the Mediterranean and Black Seas Hydrographic Commission (MBSHC) sometime in 2008. He then noted that this subject is on the agenda in for the next meeting of this IHO Regional Commission which will be held in Malta during October 2007 where he will present the intent of this course and generate interest for countries to attend this training. He also stated that if some countries in this region can not attend this meeting that he will contact them individually to find out who wants to attend. Finally he stated that the exact dates and location of this training has not been determined at this time. The IHB offered to host the training in Monaco as it does fall within NAVAREA III and the area covered by this IHO Regional Commission if no other member state wishes to do so.

The Chairman reminded everyone that the primary language for the WWNWS and the promulgation of maritime safety information is English. He has received requests from other member states for future course to have translators and/or be given in a language other than English. He then stated that the position of the IHB on this matter is that this capacity building training will only be conducted in English. The IMSO representative offered assistance from his organization for instruction at future capacity building courses.

The Chairman concluded in stating that the next training course will be held during November in Maputo, Mozambique which falls within the NAVAREA VII region and the Southern Africa and Islands Hydrographic Commission (SAIHC). Instruction at this course will be provided by the NAVAREA VII Coordinator and again by representatives from the US and UKHO in order to provide continuity and consistency in training.

6 OTHER BUSINESS

6.1 Update on WWNWS CD-ROM

The Chairman introduced the September 2007 Edition of the "WWNWS CD-ROM". The Chairman stated that this concept was first suggested at the 6th CPRNW meeting in 2003 as there were varying degrees of documents that were important for everyone to have and they were available via various means and in various places. Each delegate provided with a copy of the WWNWS CD-ROM.

The Chairman then presented the contents of the CD-ROM highlighting the new information that has been included in the 2007 version. He noted the addition of a link to the USA/NGA Publication 117 on Radio Navigational Aids and then invited all members if they have relevant navigation publications that they would like to include on this CD that he will include. He also noted that as suggested by the IMSO at the last CPRNW, on the CD is now all historical meeting minutes from the CPRNW except for the 1st meeting which have not been located yet.

The Chairman finally requested that everyone review the content of the CD-ROM as it is a standing agenda item of the CPRNW for delegates to provide any updates, comments,

and additional information that they would like to see included. He identified that this CD-ROM would be continued to be updated on an annual basis and a new edition will be distributed at the next CPRNW meeting.

6.2 Suggested Change to CPRNW Name

The Chairman noted that the CPRNW has been in existence as a Commission under the IHO since 1977. The new IHO organizational structure that was approved at the International Hydrographic Conference in May of 2007 will now include two main committees known as the Hydrographic Services and Standards Committee (HSSC) and the Inter Regional Co-ordination Committee (IRCC). The CPRNW has been identified to come under the IRCC and be designated as a sub-committee. The new name for the CPRNW as part of this restructure at the current time would be the Sub-Committee for Promulgation of Radio Navigational Warnings (PRNW). The Chairman expressed concern that this name change may affect the stature, recognition, and effectiveness of the Commission in other international bodies. In addition, as per new operational procedures, any decisions made by this sub-committee would in the future have to go to the committee body above us for approval before it would go out to IHO member states.

Discussion followed with regards to the name change to PRNW and many delegates agreed that the term "Radio" should be omitted in the new name. Suggestions were then made to possibly change the name to the Sub-Committee for Promulgation of Navigational Warnings (PNW) or to the Sub-Committee for Navigational Warnings (NAV WARN). The Chairman then suggested that in an attempt to retain the stature of this body, use a term that is widely recognized and applicable to the work of this body, and preserve the respect with regards to the recognition of this body by other international organizations, that the delegates consider a name change to be the Sub-Committee for the World-Wide Navigational Warning Service (WWNWS).

The NAVAREA I Coordinator endorsed the Chairman's name change proposal to the Sub-Committee for the World-Wide Navigational Warning Service (WWNWS) and fully agreed that it defines exactly what we do and confirms what this body is responsible for. The IMSO representative stated that from a historical perspective this new proposed name ensured a historical connection and also supported the proposed name change. Discussion then followed with several delegates supporting the proposed name change and others noting concern. The NAVAREA X Coordinator then proposed another possible name change to the Sub-Committee for the Global Navigation Warning Service (GNWS). The Chairman noted all comments and agreed this body needs to cooperate and collaborate with Meteorological and SAR organizations to include the WMO, but as per the definition outlined in IMO Resolution A.705(17) § 2.1.19, "the World-Wide Navigational Warning Service (WWNWS) means the internationally and nationally co-ordinated service for the promulgation of navigational warnings". Along with this, he noted that the IMO Resolution A.706 (17) section 1.3 identifies specifically that any amendments made to this joint IMO/IHO WWNWS guidance document shall be evaluated by the IHO CPRNW. With this stated, he then concluded that this body is responsible for the oversight and coordination of all services under the WWNWS and that the body would be better served to be named with a widely known and accepted term. A vote was then held with the majority of delegates approving the name change of this body to be the Sub-Committee for the World-Wide Navigational Warning Service (WWNWS).

The Chairman then asked the IMO representative if there were any concerns from the IMO as to the name change of this body to be the Sub-Committee for the World-Wide

Navigational Warning Service (WWNWS) and he responded that this was an internal matter to IHO and had no comment on this decision.

The IHB President stated that from a procedural point of view, this new recommended name change will be passed to all IHO Member States for approval along with the minutes of this meeting. They will be given 30 days to respond and if approved by a 2/3 majority, then this new name can be used for this body.

6.3 2008 Meeting

The Chairman noted that as per the Terms of Reference the meetings of the CPRNW will be held in even years at a NAVAREA Coordinator home country and in odd years at the IHB in Monaco. The first meeting of the CPRNW to be held outside of Monaco was last year (2006) in Buenos Aires, Argentina and it was a true success in looking at the attendance, participation, and outcome of this meeting. It is evident that this was a fantastic testament to the concept of the rotation of this meeting to other parts of the world.

The Chairman then noted that the Terms of Reference also state that the next meeting will be decided at the current meeting and with that being stated, he announced that NAVAREA V (Brazil) had agreed to host the 10th meeting of the CPRNW which will tentatively be held in Rio de Janeiro from 26-29 August 2008. The agenda may extend to a 5 day meeting due to impending issues that may need to be discussed and if this occurs, the meeting start would be on the 25th of August. The Chairman encouraged all delegates to attend and asked that for those planning to attend, to please make travel arrangements to depart on Saturday 15 September 2007 as he anticipates a full agenda with discussions concluding late on the last day. The Chairman identified that a preliminary invitation with a provisional agenda to attend the 10th meeting will be sent out in January of 2008 once all details and arrangements have been coordinated.

7 ANY OTHER BUSINESS

7.1 Final Comments

The Chairman asked if any of the delegates had any final comments or issues that they would like to have discussed at this meeting.

The NAVAREA X Coordinator asked if there could be a standard format for papers submitted to include a standard header associate with the appropriate agenda item. The IHB agreed to this and will incorporate this in the planning for the next meeting.

The NAVAREA X Coordinator next asked if the misuse of C-codes was discussed and presented at COMSAR 11 and if it was approved at the assembly. The Chairman noted that a paper was submitted by the IHO and presented at COMSAR 11 relating to the incorrect use of "C" Codes while promulgating maritime safety information via the SafetyNET service. A Drafting Group was then established and prepared a draft COMSAR circular on this matter that was approved at COMSAR 11. The IHB then stated that due administrative procedures that this circular needs approval by the MSC before it is issued to all member states which is the normal procedure unless it is of an urgent matter. It is anticipated that this circular will be sent out within a short period of time as the MSC next meets 3-12 October 2007 in Copenhagen, Denmark and no issues are anticipated. Finally the Chairman instructed all delegates that if they see an inappropriate use of C-codes they should notify Inmarsat with a cc to the IHB and the Chairman.

7.2 Review of Action Items from the 9th Meeting

The IHB reviewed all action items captured from this meeting with concurrence as to responsible party, wording of action, and due date.

The IHB then again requested that the delegates submit the costs incurred to attend this meeting in order for the IHB to establish a cost estimate that will be included in the calculation of the true cost of operating the IHO.

8 CLOSURE OF THE MEETING

8.1 Final Report

The Chairman stated that he would prepare a draft summary report of the meeting and provide it to the attendees for their review and comment in due course. If the comments on the draft meeting minutes were substantive in nature, he would then provide another draft for review. If editorial edits only, he would prepare the final summary report and provide it to all CPRNW members and Observers as a COMM Letter.

8.2 Closure

In closing the meeting, the Chairman expressed his gratitude to all the participants for their considerable efforts in the implementation of the WWNWS and GMDSS and for their very active and valuable contributions to the meeting. Their inputs over the past few days resulted in the sharing of useful information and future refinements to the system and appropriate documentation. He thanked the IHB for its excellent support and hospitality during the meeting.

The 9th meeting of the CPRNW closed at 1700 on Friday, 14 September 2007.

ANNEX A

IHO Commission on Promulgation of Radio Navigational Warnings
Ninth Meeting
Agenda item 1.5

AGENDA FOR THE NINTH MEETING

IHO Commission on the Promulgation of Radio Navigational Warnings
to be held at the International Hydrographic Bureau
4 quai Antone 1er, Monaco
11 - 14 September 2007

1 OPENING REMARKS AND ADMINISTRATIVE ARRANGEMENTS

.1 Opening Remarks and Introductions

.2 Welcome by the IHB

.3 Working Arrangements

.4 Administrative Arrangements

.5 Adoption of the Agenda

.6 Election of the Chairman

.7 Review of Action Items from 8th CPRNW Meeting

.8 Report of the XVIIth International Hydrographic Conference

2 MATTERS RELATING TO THE GMDSS MASTER PLAN

.1 IMO Update

3 PROMULGATION OF MARITIME SAFETY INFORMATION (MSI)

.1 Results from the 11th Session of the International Maritime Organization's Sub-Committee on Communications and Search and Rescue (COMSAR) – Feb 2007

- .1 Joint IMO/IHO/WMO CG on Arctic MSI Services Update
- .2 Tsunami Update
- .3 Amendments to IMO Resolution A.888 - Other Satellite Service Providers
- .4 Long Range Identification and Tracking (LRIT)

.2 NAVAREA Assessments of Navigational Warnings Services by Coordinators

- .1 Individual Assessments

.3 Broadcast Systems and Services

- .1 Report of the IMO NAVTEX Coordinating Panel

.2 Report of the IMO SafetyNET Coordinating Panel
.3 WMO Liaison Report

.4 Operational Lessons Learned for Consideration as Improvements to the WWNWS

.1 MSI Outside the Limits of the WWNWS

.1 Joint IMO/IHO/WMO Correspondence Group on MSI Arctic Services Update
.2 Inmarsat-C EGC SafetyNET Report
.3 WMO Actions
.4 Caspian Sea and Black Sea
.5 The Way Forward

.2 MSI Within the Limits of the WWNWS

.5 Emerging Technologies

.1 E-Navigation
.2 IMO resolution A.888: Presentations by Other Service Providers
.3 Other means of MSI distribution

4 REVIEW OF GUIDANCE DOCUMENTS

.1 Document Review Update and Status Report

.2 IMO Res. A.705(17)

.3 IMO Res. A.706(17)

.4 Joint IMO/IHO/WMO Manual on MSI 2003 Ed.

.5 Joint IMO/IHO/WMO Manual on MSI S-53 App 1

.6 International SafetyNET Manual 2003 Ed.

.7 NAVTEX Manual 2006 Ed.

.8 Implementation of the GMDSS (IHO Circular Letter 31/2000, 12 July 2000)

.9 IMO Res. A.664(16)

.10 Terms of Reference for the CPRNW (IHO Circular Letter 112/2005)

5 CPRNW REPRESENTATION AT REGIONAL HYDROGRAPHIC COMMISSIONS AND OTHER CONFERENCES

.1 Update on CPRNW Member Attendance to RHCs

.2 Capacity Building Training Course Development

6 OTHER BUSINESS

.1 Update on WWNWS CD-ROM

.2 Suggested Change to CPRNW Name

.3 2008 Meeting

7 ANY OTHER BUSINESS

.1 Final Comments

.2 Review of Actions Items from the 9th Meeting

8 CLOSURE OF THE MEETING

.1 Final Report

.2 Closure

ANNEX B

IHO Commission on Promulgation of Radio Navigational Warnings
Ninth Meeting
Agenda item 1.1

LIST OF PARTICIPANTS

COUNTRY	NAME	E-mail
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UK – IRIDIUM *(Wednesday only)*	Mr. Chris SNOWDON	chriss@AccessPartnership.com

ANNEX C
IHO Commission on Promulgation of Radio Navigational Warnings
Ninth Meeting
Agenda item 1.5

CPRNW 9
14 September 2007

LIST OF PAPERS

Invitation	Letter of Invitation
CPRNW9-List_of_Participants	List of Participants
CPRNW9-Documents	List of Documents
CPRNW9-1.5-Rev3	Agenda
CPRNW9-1.6	List of Action Items and their Status
CPRNW9-1.6-1	Action Item CPRNW7-4.2 Contingency Planning
CPRNW9-3.1	Outcome of COMSAR 11
CPRNW9-3.2.1-I	NAVAREA I - UK - Self Assessment
CPRNW9-3.2.1-I-Subarea	NAVAREA I - Baltic Sub-Area - Self Assessment
CPRNW9-3.2.1-II	NAVAREA II - France - Self Assessment
CPRNW9-3.2.1-III	NAVAREA III - Spain - Self Assessment
CPRNW9-3.2.1-IV-XII	NAVAREA IV and XII - USA - Self Assessment
CPRNW9-3.2.1-V	NAVAREA V - Brazil - Self Assessment
CPRNW9-3.2.1-VI	NAVAREA VI - Argentina - Self Assessment
CPRNW9-3.2.1-VII	NAVAREA VII - South Africa - Self Assessment
CPRNW9-3.2.1-VIII	NAVAREA VIII - India - Self Assessment
CPRNW9-3.2.1-IX	NAVAREA IX- Pakistan - Self Assessment
CPRNW9-3.2.1-X	NAVAREA X - Australia - Self Assessment
CPRNW9-3.2.1-XI	NAVAREA XI - Japan - Self Assessment
CPRNW9-3.2.1-XIII	NAVAREA XIII - Russia Self Assessment
CPRNW9-3.3.1	NAVTEX Panel Report
CPRNW9-3.3.3-1	WMO Report
CPRNW9-3.3.3-1a	WMO Information System
CPRNW9-3.3.3-2	Update on the GMDSS web site by WMO
CPRNW9-3.4.1.1	Extract from COMSAR 11/18 on NAVAREA's in Arctic Waters
CPRNW9-3.4.1.2	Inmarsat C EGC SafetyNET Status
CPRNW9-3.4.2-1	Firing announcements - Sweden
CPRNW9-3.4.2-2	Weather forecast at Navigational Warning Areas - SNPWG
CPRNW9-3.5.1	E-Navigation update from the IHB
CPRNW9-4.2	Draft amendment of IMO resolution A.705 (17)
CPRNW9-4.3	Draft amendment of IMO resolution A.706 (17)
CPRNW9-4.4	Terms of Reference for CPRNW and update from IHC XVII
CPRNW9-4.9	IMO resolution A.664 (16)
CPRNW9-Misc	Iridium Presentation
CPRNW9-Draft_A-888	Draft revision of IMO resolution A.888
CPRNW9-List_of_Actions	Action list as at end of CPRNW9

ANNEX D

IHO Commission on Promulgation of Radio Navigational Warnings
Ninth Meeting
Agenda item 1.7

LIST OF CPRNW ACTION ITEMS
(Status as of 14 September 2007)

Agenda Item	Subject	Status	Comments	Action By
CPRNW7 4.2	Feedback and input on the "WWNWS CD-ROM"	New CD issued during CPRNW8 Feedback still wanted. **ONGOING**	Please provide feedback by 1 Nov 2006. Next Edition will produced in Jan 2007	All Members
CPRNW7 5	Chairman requests each member provide an estimated cost of attending a CPRNW meeting. Chairman to send email to all attending CPRNW8.	**ONGOING**	Only travel, lodging and food. Not necessary to add salary. Provide by 16 October 2006.	Chairman, All Members
CPRNW7 4.2	IMSO to draft text for contingency planning for inclusion into the Chairman's "WWNWS Presentation CD-ROM".	**ONGOING**	Business continuity plans. For submission to CPRNW9	IMSO
CPRNW7 3.5	SafetyNET and NAVTEX Coordinating Panel will create correspondence group to review all guidance documents. First meeting will convene after COMSAR 10. NAVAREA I asked to host	Meeting at COMSAR10 COMPLETE. Document review **ONGOING**.	NAVAREA I to confirm dates/location and provide feedback back to Chairman ASAP.	CG on the WWNWS documentation.
CPRNW7 3.4.4	Inmarsat to provide IMSO (IHO/WMO) with proposed boundaries of existing NAV/METAREAs for approval and software changes	**ONGOING**		Inmarsat
CPRNW7 3.4.2.2	IMSO representative to contact the WHO concerning Health Advisories	**ONGOING**	Who is the WHO contact replacement for Sandy Cocksridge?	IMSO

Agenda Item	Subject	Status	Comments	Action By
CPRNW7 3.4.2	The IMSO raised question to IMO as to whether or not the ships in the Caspian Sea were being held to the SOLAS agreements for carriage requirements.	SOLAS almost certainly does not apply to ships in the Caspian but might be being used. **ONGOING**	Need IMO opinion	IMO
CPRNW8 2.1	IHB to contact IMO regarding the way forward for amending A.705(17) & A.706(17)	This decision will be taken at COMSAR once the extent of the changes has been assessed.	It might be better to have an MSC resolution. Can we go straight to COMSAR or do we have to go to MSC?	IHB
CPRNW8 3.1.1	Chairman and WMO to confirm METAREA contacts for Arctic waters	Jan 07		Chairman, WMO
CPRNW8 3.1.1	Information required regarding reception of MSI in high latitudes.	Feb 07 **ONGOING**	Norway to investigate and provide information regarding the highest latitudes regularly used by surface ships and the ability to receive MSI. Chairman to seek similar information from Russian Federation	Norway, Russian Federation, Chairman
CPRNW8 3.1.2	Tsunami message template to be prepared as guidance for Navarea coordinators and to be attached to the report of CPRNW. The text of COMSAR.Circ/36 to be attached to meeting report.	Oct 06 **ONGOING**	Pre and post templates required	Chairman, WMO and UK
CPRNW8 3.2	Navarea I Coordinator is requested to provide information as to the intention of UKHO to provide MSI via the internet.	CPRNW9		Navarea I coordinator

Agenda Item	Subject	Status	Comments	Action By
CPRNW8 3.2	CPRNW and IHB to consider a submission to the Tokyo (Asia - Pacific Region), Goa (Indian Ocean Region), Paris (European Region) and other regions' Secretariats which support the Memorandum of Understanding (MOU) on Port State Control to advise MSI deficiencies as reported by Australia.	Feb 07		IHB, Chairman
CPRNW8 3.2	Navarea III coordinator to investigate the possibility of the Black Sea becoming a sub-area within Navarea III along the lines of the Baltic Sea within Navarea I	CPRNW9		Navarea III coordinator
CPRNW8 3.4.1.3	Inmarsat is requested to provide an information as to the percentage of Inmarsat terminals in use that can only access Navareas 1 – 16 as opposed to 0 – 99	CPRNW9		Inmarsat
CPRNW8 3.4.1.4	IMSO to discuss with appropriate experts and the countries concerned the provision of a coordinated service for the delivery of MSI in "Inland waters" such as the Caspian Sea and at some point in the future to present appropriate proposals to IMO, IHO, and WMO.	**ONGOING**		IMSO
CPRNW8 4.4	Review the TOR for further discussion at the next meeting	ONGOING CPRNW10	(See paper CPRNW9-4.4)	ALL
CPRNW9 1.6.1	IMSO to check with Inmarsat the requirement for tests with the Inmarsat hub and inform NAVAREA Coordinators	ASAP		IMSO
CPRNW9 3.2.1	Advice required from IMO as to whether bodies of water such as the Caspian Sea and Lake Victoria are covered by the SOLAS Convention	ASAP		IMO

Agenda Item	Subject	Status	Comments	Action By
CPRNW9 3.2.1	Advice required as to whether Inmarsat primary satellite contingency tests are required at regular intervals e.g. annually?	ASAP	Inmarsat is requested to provide guidance	Inmarsat
CPRNW9 3.2.1	Tsunami template used by NAVAREA IX to be considered for inclusion in the re-write of S-53	During document review		Secretary of the WWNWS Document Review team
CPRNW9 3.2.1	The provision of information on the number of hits on NAVAREA web sites to be an optional entry in the MSI Self Assessment template.	CPRNW10	Some countries are prohibited by national legislation from publicizing such information. Those who are allowed are encouraged to provide this information.	Chairman / IHB
CPRNW9 3.2.1	Agenda for CPRNW10 to include an item on the "Monitoring of MSI Broadcasts"	CPRNW10	This matter is also to be considered as part of the WWNWS Documents review	Chairman / IHB
CPRNW9 3.2.1	The Chairman requires assistance to get MSI Self Assessment reports from those NAVAREAs who have neither attended CPRNW9 nor submitted an MSI self assessment.	CPRNW10	Despite requests from the Chairman no Self Assessments received from NAVAREAs XIV, XV and XVI.	IHB / IMO
CPRNW9 3.2.1	Self Assessment template to include an entry relating to contingency planning including the testing of the plan. Contingency planning to be put on the Agenda for CPRNW10	CPRNW10		Chairman / IHB
CPRNW9 3.3.3	Chairman to seek CPRNW/IHO representative to participate in the JCOMM Task Team on Tsunami Products for transmission as MSI	ASAP	Chairman to approach Australia, Chile and Japan	Chairman
CPRNW9 3.3.3	WMO to investigate the possibility of holding the next JCOMM-ETMSS and CPRNW11 in parallel at the same venue in 2009 and to include 1 day common to both meetings.	CPRNW10	This would allow a beneficial exchange of ideas.	WMO

Agenda Item	Subject	Status	Comments	Action By
CPRNW9 3.4.1.1	Canada, Norway and Russian Federation to provide information regarding the receipt capabilities of MSI and HF transmissions in the new Arctic NAVAREAs to the Chairman for inclusion in the Arctic MSI CG report to COMSAR 12	1 December 2007		Canada, Norway, Russian Federation
CPRNW9 3.4.2	IMSO to convene a CG with WMO, CPRNW Chairman and other interested CPRNW members to formulate proposals for amendments to be made to area delimitations (not inland waters) in the Inmarsat System Definition Manual.	1 December 2007		IMSO
CPRNW9 3.4.2.2	WMO to provide SNPWG with information on the availability of information about Metareas and sub-areas	ASAP		WMO
CPRNW9 3.4.3	WMO to provide update report on the GMDSS website and WIS to CPRNW10. (This item to remain on the agenda for CPRNW10)	CPRNW10		WMO/ Chairman
CPRNW9 3.4.3	IHB to provide WMO with URLs for NAVAREAs providing Navigational Warnings on their web sites	ASAP		IHB
CPRNW9 4.2 and 4.3	CPRNW members to provide comments on the texts of the revision of IMO resolutions A.705 and A.706 as finalized at CPRNW9 to the chairman	12 October 2007		ALL
CPRNW9 5.1	Chairman to provide standardized briefing structure for reports to RHCs	CPRNW10		Chairman
CPRNW9 5.2	NAVAREA III to continue exploring the establishment of Su-areas for the Black Sea and Caspian Sea and report back to CPRNW 10	CPRNW10		NAVAREA III Coordinator Spain

Agenda Item	Subject	Status	Comments	Action By
CPRNW9 6.4	Chairman / IHB to produce a standardized template for documents submitted to CPRNW	CPRNW10		Chairman / IHB
CPRNW9 6.3	Agenda for CPRNW10 to include "Election of a Vice-Chairman	CPRNW10	To conform to new IHO committee structure and guidelines	Chairman/IHB

ANNEX E

IHO Commission on Promulgation of Radio Navigational Warnings
Ninth Meeting
Agenda item 3.1.1

TERMS OF REFERENCE OF THE JOINT IMO/IHO/WMO CORRESPONDENCE GROUP ON ARCTIC MSI SERVICES

Taking into account resolution A.706 (17), as amended by MSC/Circ.685, MSC/Circ.750 and MSC/Circ.957 including the relevant decisions of COMSAR 10 and COMSAR 11, the Joint IMO/IHO/WMO Correspondence Group on Arctic MSI Services should give consideration and provide comments on the following:

.1 continue to address the expansion of MSI services taking into account and recognizing that the following items have been agreed to and approved at COMSAR 11:

.1 that all new Arctic NAVAREAs should extend up to 90 degrees North and be responsible for the promulgation of maritime safety information (MSI) in navigable waters within those areas;

.2 that the new Arctic NAVAREAs should be fully operational 24/7, bearing in mind that certain parts of the NAVAREAs will not be navigable during certain times;

.3 to expand the Arctic WWNWS and accept Canada as the NAVAREA Coordinator for new NAVAREAs XVII and XVIII, Norway as the NAVAREA Coordinator for new NAVAREA XIX, and the Russian Federation as the NAVAREA Coordinator for new NAVAREAs XX and XXI;

.4 that new Arctic NAVAREAs be established rather than being Sub-Areas of an existing NAVAREA;

.5 that agreed changes to the coverage areas under the WWNWS, to include the Arctic expansion and other existing coverage gaps, within the Inmarsat system definition manual, should be implemented at the same time; and

.6 the boundary limits for the five (5) new Arctic NAVAREAs should be:

.1 NAVAREA XVII bound by:
From a geographical position on the Alaskan East coastline along the 67°00.00'N parallel to:
67°00.00'N 168°58.00'W,
90°00.00'N 168°58.00'W,
90°00.00'N 120°00.00'W,
south to a geographical position on the Canadian North coastline along the 120°00.00'W meridian;

.2 NAVAREA XVIII bound by:
From a geographical position on the Canadian North coastline at the 120°00.00'W meridian to:

90°00.00'N 120°00.00'W,
90°00.00'N 035°00.00'W,
67°00.00'N 035°00.00'W,
west to a geographical position on the Canadian East mainland coastline along the 67°00.00'N parallel;

.3 NAVAREA XIX bound by:
From a geographical position on the Norwegian West coastline along the 65°00.00'N parallel to:
65°00.00'N 005°00.00'W,
75°00.00'N 005°00.00'W,
west to a position on the Greenland East coastline;

From the border between Norway and Russia (inland) to:
69° 47.68'N 030° 49.16'E,
69° 58.48'N 031° 06.24'E,
70° 22.00'N 031° 43.00'E,
71° 00.00'N 030° 00.00'E;

From this geographical position (71° 00.00'N - 030° 00.00'E) further north along the 030° 00.00'E meridian to:
90° 00.00'N 030° 00.00'E,
90° 00.00'N 035° 00.00'W,
south to the Greenland coastline along the 035° 00.00'W meridian;

.4 NAVAREA XX bound by:
From the border between Norway and Russia (Inland) to:
69° 47.68'N 030° 49.16'E,
69° 58.48'N 031° 06.24'E,
70° 22.00'N 031° 43.00'E,
71° 00.00'N 030° 00.00'E;

From this geographical position (71° 00.00'N - 030° 00.00'E) further north along the 030° 00.00'E meridian to:
90°00.00'N 030°00.00'E,
90°00.00'N 125°00.00'E,
then south to the Russian Federation coastline along the 125° 00.00'E meridian;

.5 NAVAREA XXI bound by:
From a geographical position on the Russian Federation coastline at the 125° 00.00'E meridian to:
90° 00.00'N 125° 00.00'E,
90° 00.00'N 168° 58.00'W,
67° 00.00'N 168° 58.00'W,
west to a position on the Russian Federation Coastline along the 67°00, 00'N parallel;

.7 that the provision of SAR information within these new NAVAREAs would continue to be provided in accordance with currently agreed SAR regions; and

.8 that all WWNWS guidance and other relevant documents should be updated as part of the IHO WWNWS Guidance Document Review Correspondence Group.

.2 in progressing the matter also consider the following additional salient issues:

.1 who will act as METAREA issuing service?

.2 how will warnings be transmitted, and can they be monitored as required? Systems other than Inmarsat (such as HF NBDP, NAVTEX and other satellite service providers) need to be considered;

.3 How will Inmarsat system definition manual and existing SafetyNET terminals be updated to allow receipt of the new NAVAREAs?

.4 Required training, assistance, and support from IHO/CPRNW to support new NAVAREA co-ordinators and/or from JCOMM/ETMSS for METAREA issuing services; and

.5 Submit its report to COMSAR 12.

ANNEX F

IHO Commission on Promulgation of Radio Navigational Warnings
Ninth Meeting
Agenda item 3.1.2

INTERNATIONAL MARITIME ORGANIZATION
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Ref. T2-OSS/2.6

COMSAR/Circ.36
18 February 2005

BROADCAST OF WARNINGS FOR TSUNAMIS AND OTHER NATURAL DISASTERS

1 The Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), at its ninth session (7 to 11 February 2005) considered the promulgation of warnings for tsunamis and other natural disasters using the existing International SafetyNET and/or NAVTEX systems and agreed to the following, pending the review of resolution A.706(17) on World-Wide Navigational Warning Service.

2 Tsunami Warning Centres and those who may seek to broadcast warnings as a result of natural disasters (natural disaster warnings) may make use of the existing International SafetyNET system. As a first step each Tsunami Warning Centre and those who may seek to broadcast natural disaster warnings should register with the IMO International SafetyNET Co-ordinating Panel* to obtain a certificate of authorization. A detailed procedure of the steps to be taken following registration is set out in annex 1.

3 NAVAREA and National Co-ordinators in the affected areas, or areas likely to be affected, upon receipt of any tsunami warnings or of any other natural disaster warnings should immediately re-broadcast such warnings using the highest priority and all existing means as appropriate.

4 In the interim and until Tsunami Warning Centres are established and registered, those responsible for issuing tsunami or natural disaster warnings may use the World-Wide Navigational Warning Service (WWNWS) to broadcast such warnings both regionally and locally. This may be achieved by passing the warnings to be broadcasted to the NAVAREA or National Co-ordinators for the affected areas, or areas likely to be affected. The Geographic areas for co-ordinating and promulgating NAVAREA warnings and the contact details of the NAVAREA Co-ordinators under the WWNWS are set out in annexes 2 and 3.

5 NAVAREA and National Co-ordinators in the affected areas or areas likely to be affected should consider tsunami warnings and warnings for other natural disasters as exceptional circumstances and should immediately broadcast such warnings using the highest priority and all existing means as appropriate.

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* The Chairman
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ANNEX G

IHO Commission on Promulgation of Radio Navigational Warnings
Ninth Meeting
Agenda item 3.3.1

NAVTEX Panel Report
Submitted by: Chairman, IMO International NAVTEX Coordinating Panel

1. **Action Required**: None, submitted for information only.

2. **Background:** The Terms of Reference of the NAVTEX Panel are in the IMO NAVTEX Manual at Annex 1.

3. **The routine work of the Panel** is mainly associated with advising Administrations on procedures for establishing NAVTEX services and then providing identifying letters and time slots for approved additions to the NAVTEX infrastructure. The Panel has continued with its policy of requesting assistance from the relevant NAVAREA Co-ordinators on issues of local co-ordination within specific NAVAREAs and wishes to express its appreciation to all those concerned who have co-operated fully in this process over the past year. Since the last meeting of the Commission, the following items have been processed by the Panel:

- **Algeria**.
  - Confirmation was received in December 2006 that the 518 and 490 kHz NAVTEX services installed by Algeria were fully operational utilizing the service area agreed at the meeting of western Mediterranean countries co-ordinated by NAVAREA III earlier in the year.

- **Argentina**.
  - Following on from the very useful discussions between the Argentine administrations and the NAVTEX Co-ordinating Panel in the margins of the last CPRNW meeting, a complete overhaul of Argentina's NAVTEX services took place in February 2007. The whole of the Spanish language transmissions, which were previously being broadcast every 8 hours on 518 kHz, were successfully migrated to a new National NAVTEX Service on 490 kHz. All five of Argentina's NAVTEX stations now conform fully with COMSAR/Circ.28 as reproduced in ANNEX 7 of the IMO NAVTEX Manual. Due to the increase in cruise ship activity in the region, the Panel considers that this development significantly enhances the safety of life at sea by ensuring that mariners are able to receive messages in English & Spanish every 4 hours, for the whole of the Argentine coastline.

- **Cabo Verde**.
  - Both the 518 and 490 kHz services announced at the last meeting are now fully operational.

- **China**.
  - China has indicated that it intends to establish a national language service on 486 kHz from 7 stations.

- **Colombia**
  - An initial enquiry has been made by Colombia with the NAVAREA IV Co-ordinator with regard to possibly establishing a NAVTEX station on the San Andres archipelago. This is a very welcome development as it could possibly cover the approaches to the Panama Canal on the Caribbean side as well as the northern coast of Colombia. Further

discussions took place during the IHO MSI Training Course in Jamaica during which Colombia confirmed that they were ready to progress to the next stage of site surveys and tendering within the next year.

- **Democratic People's Republic of Korea**.
  - Co-ordination discussions for proposed new NAVTEX services are ongoing with the NAVAREA XI Co-ordinator. No substantive developments have been reported since CPRNW8.

- **Ecuador**.
  - Ecuador has established a national service on 490 kHz from its station in the Galapagos Islands.

- **Faeroes**.
  - The station on the Faeroe Islands became operational in early 2007. Discussions between the NAVAREA I co-ordinator (United Kingdom) and the administrations of Iceland, the Færoes, and Norway regarding NAVTEX coverage for the north and east coasts of Iceland and the area around the Faeroes, have resulted in agreed service area limits for the new station on the Faeroes. The current service areas for the Stations at Reykjavik, Portpatrick, Cullercoats, Bodø and Orlandet will be amended.

- **Germany**.
  - The station at Pinneberg in Germany is now operational on both International and National frequencies. The service area has been agreed for the International service after discussions between the NAVAREA I Co-ordinator, Germany, the Netherlands, Denmark and Norway.

- **Iceland**.
  - The Icelandic Navtex situation is unchanged, with the old transmitter still running in Reykjavík. The new Navtex transmitter South of Reykjavik is planned to be installed later this year, with testing beginining later in August or September. The second new NAVTEX transmitter will be located on the North coast at Siglufjordur. Installation for the northern transmitter will continue after the southern transmitter has been declared operational.

- **Iran**.
  - Confirmation has been received from the installation company that the NAVTEX station at Fereydoonkenar on the Caspian Sea has been fully installed. Operational status will be declared on successful completion of trials and operator training.

- **Italy**.
  - The Italian Delegation to COMSAR 11 reported that two of their new NAVTEX stations in the Mediterranean were operational, however, the NAVTEX Co-ordinating Panel has not received official confirmation of this to date.

- **Philippines**.
  - A contractor has contacted the Panel with regards to moving forward with the establishment of NAVTEX coverage in the Philippines. The Panel welcomes this development, but is concerned that the plan involves using 5 kW transmitters. The Panel has indicated that before any station starts broadcasting the service area would need to be agreed and also that it would be most reluctant to approve any station with such a power output.

- **Senegal**.
  - Co-ordination discussions for proposed new NAVTEX services are ongoing with the NAVAREA II Co-ordinator. No substantive developments have been reported since

CPRNW8.

- **Syria**.
  - The new NAVTEX equipment requested by Syria was due to be installed in February 2007. The Authorities in Syria are content with the decision of the NAVTEX Coordinating Panel not to allocate a B1 character for 518 kHz due to the existing facilities in the area, but intend to continue with their plans for a national NAVTEX service on 490 kHz.

- **Taiwan**.
  - Taiwan has announced the cessation of their National Service on 490 and 4209.5 kHz due to the lack of vessels monitoring the Chinese language broadcasts. All existing 518 kHz services are unaffected.

- **Ukraine**.
  - Details were received regarding a new national service on 490 kHz already in operation in Ukraine from the existing NAVTEX stations at Odesa and Kerch. Due to a legacy issue surrounding the original allocation of B1 characters on 518 kHz for these existing stations, they did not conform to the time slot template in the NAVTEX Manual. The Panel responded by recommending to Ukraine that the opportunity be taken to bring these stations into line with the NAVTEX Manual guidance and, at the same time, two new B1 characters for use in the new National 490 kHz service were assigned. Subsequently, the existing 518 kHz station Odesa [C] has adjusted its time slots to agree with the NAVTEX Manual, and the station at Kerch has been reassigned the ident [G]. The 490 kHz service is also fully operational using idents [X] and [U] from Odesa and Kerch respectively.

4. **Current operational issues**.

- **NAVTEX Service Areas**.
  - The issue of ensuring each station broadcasting on 518 kHz has agreed service area limits, has been raised at several recent meetings. IHO published a Circular Letter on the subject in 2003, and COMSAR/Circ.34 was raised in 2004. The Panel continues its policy of not issuing B1 characters for new stations on 518 kHz until service area limits are agreed with all concerned. The procedure of the relevant NAVAREA co-ordinator leading on the initial local co-ordination task is working well. The Panel invariably acts upon their recommendations.

- **National Language Broadcasts on the International NAVTEX Service**.
  - Administrations were again reminded at IMO COMSAR 11 that IMO MSC 74 approved the recommendation of IMO COMSAR 5 that non-English language broadcasts should be migrated from the International NAVTEX frequency (518 kHz) to national NAVTEX services (on 490 kHz or 4209.5 kHz) by 1 January 2005. (This was promulgated by COMSAR/Circ 28).

    Whilst Argentina has migrated its national language broadcasts to 490 kHz in the past year, the Panel continues to be concerned by the lack of progress by a few administrations to address this matter.

- **WWNWS expansion.**
  - The Chairman, Secretary and other members of the NAVTEX Panel are participating in the joint IMO/IHO Correspondence Group on the expansion of the WWNWS.

- **WWNWS document review.**
  - The Secretary of the NAVTEX Panel continues to act as Secretary of the IHO

correspondence group undertaking a review of all WWNWS documentation.
The group met at the temporary IHO HQ following COMSAR 11 in an attempt to finalise the work on IMO Resolutions A.705(17) and A.706(17) which will be presented to this meeting under a separate agenda item.

5. **Other Points of Note.**

• **ETMSS** - the Chairman of the Panel represented the IHO at the second session of the Expert Team on Maritime Safety Services (ETMSS) of the Joint IOC/WMO Commission for Oceanography & Marine Meteorology (JCOMM) from 24 to 27 January 2007 in Brazil. A report was forwarded to the IHB and the chairman of CPRNW after the meeting.

6. **Recommendations:** It is recommended that the Commission notes this report.

ANNEX H

IHO Commission on Promulgation of Radio Navigational Warnings
Tenth Meeting
Agenda item 6.3

PROVISIONAL AGENDA FOR THE TENTH MEETING

**To be held at the Directorate of Hydrography and Navigation,
Niteroi, Brazil, commencing on Monday, 25 August 2008 at 0930**

1 OPENING REMARKS AND ADMINISTRATIVE ARRANGEMENTS

.1 Opening Remarks and Introductions

.2 Welcome by Brazil and the IHB

.3 Working Arrangements

.4 Administrative Arrangements

.5 Adoption of the Agenda

.6 Review of Action Items from 9th CPRNW Meeting

2 MATTERS RELATING TO THE GMDSS MASTER PLAN

.1 IMO Update

3 PROMULGATION OF MARITIME SAFETY INFORMATION (MSI)

.1 Results from the 12th Session of the International Maritime Organization's Sub-Committee on Communications and Search and Rescue (COMSAR) – April 2008

- .1 Update on Joint IMO/IHO/WMO CG on Arctic MSI Services ToR
- .2 Update with the progress of the revision of IMO Res. A.705(17)
- .3 Update with the progress of the revision of IMO Res. A.706(17)
- .4 Update on Long Range Identification and Tracking (LRIT)

.2 NAVAREA Assessments of Navigational Warnings Services by Coordinators

- .1 Individual Assessments

.3 Broadcast Systems and Services

- .1 Report of the IMO NAVTEX Coordinating Panel
- .2 Report of the IMO SafetyNET Coordinating Panel
- .3 WMO Liaison Report
- .4 Monitoring MSI
- .5 Contingency Planning

.4 Operational Lessons Learned for Consideration as Improvements to the WWNWS

.1 MSI Outside the Limits of the WWNWS

.1 Joint IMO/IHO/WMO Correspondence Group on MSI Arctic Services
.2 Inmarsat-C EGC SafetyNET Report including SDM Update
.3 WMO Actions
.4 Caspian Sea and Black Sea
.5 The Way Forward

.2 MSI Within the Limits of the WWNWS

.5 Emerging Technologies

.1 E-Navigation
.2 IMO Resolution A.888 - update on other service providers
.3 Presentations by Other Service Providers
.4 Other means of MSI distribution

4 REVIEW OF GUIDANCE DOCUMENTS

.1 Document Review Update and Status Report

.2 Joint IMO/IHO/WMO Manual on MSI 2003 Ed.

.3 Joint IMO/IHO/WMO Manual on MSI S-53 App 1

.4 International SafetyNET Manual 2003 Ed.

.5 NAVTEX Manual 2006 Ed.

.6 Implementation of the GMDSS (IHO Circular Letter 31/2000, 12 July 2000)

.7 IMO Res. A.664(16)

.8 Terms of Reference for the CPRNW (IHO Circular Letter 112/2005)

5 CPRNW REPRESENTATION AT REGIONAL HYDROGRAPHIC COMMISSIONS AND OTHER CONFERENCES

.1 Update on CPRNW Member Attendance to RHCs

.2 Capacity Building Training Course Developments

6 OTHER BUSINESS

.1 Election of a Vice Chairman

.2 Update on WWNWS CD-ROM

.3 Name Change of CPRNW

.4 2009 Meeting

7 ANY OTHER BUSINESS

.1 Final Comments

.2 Review of Actions Items from the 10th Meeting

8 CLOSURE OF THE MEETING

.1 Final Report

.2 Closure