



# U.S. Coast Guard Report

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# TOPICS



- **GLOBAL AERONAUTICAL DISTRESS & SAFETY SYSTEM (GADSS)**
- **GLOBAL MARITIME DISTRESS & SAFETY SYSTEM (GMDSS)**
- **GALILEO RETURN LINK SERVICE (RLS)**
- **CORRESPONDENCE WORKING GROUP ON HOMING & INTELLIGENT TRANSMITTING SCHEDULE (HITS-CWG)**





- **HOMING & INTELLIGENT TRANSMITTING  
SCHEDULE CORRESPONDENCE WORKING GROUP  
(HITS-CWG)**





# HITS CWG



- **CONSIDERED SINSIN PROPOSAL FOR ENHANCED BEACON LOCATION ACCURACY**
  - **SOUGHT COUNCIL OPINION (CSC-61) ON USE OF PROPRIETARY TECHNOLOGY; DUE TO INSUFFICIENT TIME, PAPER WAS NOT ADDRESSED**
  - **JOINT COMMITTEE (JC-33) DISCUSSED; RAISED ACTION ITEMS TO:**
    - **PERFORM LOCALIZATION TESTS IN AN ENVIRONMENT WITH SIGNIFICANT BLOCKAGE**
    - **SUBMIT A SUMMARY OF BENEFITS, COST ESTIMATES & IMPLEMENTATION TIMELINE TO COUNCIL (CSC-62)**





# HITS CWG



- **406 MHZ DIRECTION FINDING**
  - **BOTH FGB AND SGB CAPABILITY DESIRED**
    - **NASA TESTED SGB SPREAD-SPECTRUM DF**
    - **ANTENNA & EQUIPMENT REPLACEMENT (SAME SIZE) REQUIRED FOR USCG SAR AIRCRAFT**
  - **406 MHZ HOMING SIGNAL DEVELOPMENT**
    - **UPDATE PRESENTED AT COSPAS-SARSAT JOINT COMMITTEE (JC-33)**
    - **NO CONSENSUS ON REQUIREMENTS – HOLD ON CWG WORK**
    - **121.5 MHZ HOMING – UNIVERSAL AGREEMENT OF NO DESIRE TO REMOVE**





- **GLOBAL AERONAUTICAL DISTRESS & SAFETY SYSTEM (GADSS)**





# GADSS REQUIREMENTS



- **AIRCRAFT TRACKING (AT): INT'L PAX/CARGO AIRCRAFT AUTOMATICALLY REPORTS POSITION EVERY 15 MINUTES OR LESS**
- **AUTONOMOUS DISTRESS TRACKING (ADT): IN DISTRESS EVENT, AUTOMATICALLY REPORTS POSITION EVERY MINUTE IN OCEANIC AREAS**
  - **IDENTIFY AIRCRAFT ACCIDENT SITE WITHIN 6 MILE RADIUS**
  - **IMPLEMENTATION DATE OF 01 JAN 2021**





# GADSS REQUIREMENTS



- **GADSS INFORMATION MANAGEMENT**
  - **DISTRESS TRACKING REPOSITORY (DTR):**
    - **NOW CALLED “LOCATION OF AN AIRCRAFT IN DISTRESS REPOSITORY (LADR)”**
    - **SECURE STORAGE FACILITY FOR POSITION/LOCATION DATA OF AIRCRAFT IN DISTRESS OR POTENTIALLY IN DISTRESS**
    - **SUPPORTS TIMELY ACCESS BY STAKEHOLDERS (OPERATOR, ATSU, RCC & OTHERS) TO AIRCRAFT EVENT DATA**
    - **NOT AN ALERTING MEANS**





# GADSS DEVELOPMENTS



- **EUROCAE/RTCA UPDATED EMERGENCY LOCATOR TRANSMITTER (ELT) MINIMUM OPERATIONAL PERFORMANCE STANDARDS INCLUDE ELT(DT) – PUBLISHED JAN 2020**
  - **QUESTIONS/COMMENTS BEING ADDRESSED**
- **COSPAS/SARSAT DEVELOPED ELT FOR DISTRESS TRACKING [ELT(DT)]**
  - **PROCEDURES & GROUND DISTRIBUTION SHOULD BE READY TO MEET JAN 2021 IMPLEMENTATION DATE**





# GADSS DEVELOPMENTS



- **ICAO/IMO JOINT WORKING GROUP ON SEARCH & RESCUE MET FROM 9-13 SEP 2019**
  - **JWG AFFIRMED NEED FOR POST-DISTRESS EVENT LOCATING SIGNAL TO ENABLE SAR UNITS TO LOCATE EVENT SITE IN A TIMELY & EFFICIENT MANNER TO ASSIST SURVIVORS**
  - **JWG AFFIRMED POSITION INFORMATION (LAT, LONG) SHOULD BE PROVIDED IN THE FORMAT RECOMMENDED IN THE IAMSAR MANUAL**





# GADSS DEVELOPMENTS



- **ICAO ASSEMBLY (40<sup>TH</sup> SESSION)**
  - **MEETING 24 SEP – 04 OCT IN MONTREAL**
  - **TECHNICAL COMMISSION TO CONSIDER GADSS MATTERS**
    - **IMPLEMENTATION GUIDANCE**
    - **IMPLEMENTATION SCHEDULE**
    - **ANTICIPATE RESULTS AVAILABLE IN NOV/DEC**





- **GLOBAL MARITIME DISTRESS & SAFETY SYSTEM (GMDSS)**





# GMDSS DEVELOPMENTS



- **REVISED EPIRB PERFORMANCE STANDARDS COMPLETED AT IMO SUB-COMMITTEE FOR NAVIGATION, COMMUNICATIONS AND SEARCH & RESCUE (NCSR 6)**
- **SUBMITTED TO AND APPROVED BY MARITIME SAFETY COMMITTEE (MSC) IN JUNE 2019**
  - **MSC RESOLUTION 471(101)**





# GMDSS DEVELOPMENTS



- **MSC RESOLUTION 471(101) UPDATED FLOAT-FREE EPIRB PERFORMANCE STANDARDS:**
  - **ADDS GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) RECEIVER + 5 MINUTE REFRESH RATE**
  - **ADDS AN AUTOMATIC IDENTIFICATION SYSTEM (AIS) LOCATING SIGNAL**
  - **FLASHING LIGHT VISIBLE TO BOTH EYE AND NIGHT VISION DEVICES**
- **RTCM TO REVIEW AND UPDATE RTCM 11000.4 STANDARD AS NECESSARY**





# GMDSS MODERNIZATION



- **NCSR 7 WILL BE UPDATING EPIRB RELATED CIRCULARS:**
  - **MSC/CIRC.1039 – GUIDELINES FOR SHORE-BASED MAINTENANCE OF SATELLITE EPIRBS**
  - **MSC/CIRC.1040 – GUIDELINES ON ANNUAL TESTING OF 406MHZ SATELLITE EPIRBS**
  - **DRAFTS PREPARED AT IMO/ITU EXPERTS GROUP**
- **IEC CURRENTLY UPDATING 61097-2 TO ALIGN WITH & REFLECT RESOLUTION 471(101)**





- **GALILEO RETURN LINK SERVICE (RLS)**





# RETURN LINK SERVICE



- **GALILEO RETURN LINK SERVICE (RLS)**
  - **TYPE-1 ACKNOWLEDGMENT**
    - **COSPAS/SARSAT SUPPORTING TYPE 1 MESSAGES**
    - **SYSTEM MAY BE READY AS EARLY END OF 2019**
  - **USCG CONCERNS:**
    - **LACK OF PROGRAM TRANSPARENCY**
    - **RECENT GALILEO OUTAGE & SERVICE ROBUSTNESS**
    - **INCOMPLETE WORLDWIDE COVERAGE**
    - **AT THIS TIME, RLS NOT ENDORSED FOR U.S. BEACONS**
    - **CONTINUING EVALUATION VIA COSPAS-SARSAT EXPERTS WORKING GROUP**





# QUESTIONS?

## USCG POINTS OF CONTACT:

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