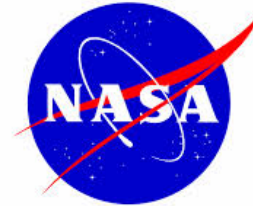




# Homing & Intelligent Transmit Schedule Correspondence Group

Beacon Manufacturers Workshop  
2016

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# Homing & On-Scene Locating

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- Identify homing signal characteristics to support Search & Rescue operational goals
- Develop draft homing and on-scene location specifications for document Cospas-Sarsat (C/S) T.018
- Assess impact of defined homing signal characteristics on existing DF equipment
- Define interleaving schema to facilitate multiple homing signals (i.e. 121.5 MHz, 406 MHz, & AIS-SART)
- Develop interleaved homing signal draft specifications for document C/S T.018



# Transmit Schedule

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- Assess transmit schedule to meet requirements in document C/S G.008
  - Consider alternative transmit schedules
- Assess the effects of requirements on beacon battery
  - Allocation of battery capacity to functions
  - Trade-offs between performance, features, and capacity
  - Analyze alternative schedules impact on battery capacity
- Develop draft transmit schedule for inclusion in draft document C/S T.018



# Activities Completed

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- Defined 406 MHz homing signal characteristics
- Developed industry questionnaire to validate characteristics for an effective homing signal
- Presented draft specification of 406 MHz homing signal at C/S TG-1/2016 in April; gathered input
- Developed plan to assess impact of a reduced duty cycle on 121.5 MHz homing performance; four national administrations engaged in efforts
- Initial assessment of transmit requirements presented in document C/S G.008



# Future Work

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- Conduct industry survey to validate effective 406 MHz homing signal characteristics
- Complete transmit schedule development
- Revise draft specification for 406 MHz homing signal for submission to Joint Committee (JC-30)
- Complete performance assessment of reduced duty cycle 121.5 MHz homing; report to JC-30 and ICAO/IMO Joint Working Group on SAR
- Complete battery capacity analysis
  - Complete function/performance/battery trade-off analysis



# Direction Finding Research

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- Engaged the U.S. Coast Guard Academy to investigate direction finding on a spread spectrum signal
- Work started in 2014; this is second year of analysis in direction finding a spread spectrum signal
- Professor Richard Hartnett and Ensign Ben Morseth have joined us to present this year's results



# Questions ?

Thank you for your attention!

