

Surface Air-Ground Datalink Communications System (AeroMACS) Status AFC Winter 2016 - Albuquerque



Aeronautical Mobile Airport Communications System

- Aeronautical Mobile Airport Communications System (AeroMACS) is a WiMAX based technology (IEEE 802.16) supporting airport broadband communications
 - Operation in 5091-5150 MHz (extended MLS band) protected spectrum
 - 5 MHz channel BW 11 adjacent channels
 - In band Interference considerations: Globalstar (uplink), telemetry AMT (reverse link only)
- Intended for use on airport surface (not on Runways) with aircraft speeds <= 50 knots

 Supporting both ATC and AOC applications



AeroMACS Standardization Activities

- The RTCA Special Committee 223 has completed a Profile document and Minimum Operational Performance Standard (MOPS) and is expected to reconvene to address system security
- The ICAO WG-S has completed a Standards and Recommended Practices (SARPs) and is continuing to develop a Technical Manual which is scheduled for completion by the end of 2016
 - Next meeting is scheduled for February 29 March 2, 2016 in Montreal, Canada
- The AEEC formed an AeroMACS Working Group (WG) which is tasked with defining an airborne radio suitable for installation in all types of aircraft



AEEC AeroMACS Working Group

- The AeroMACS WG has held meetings November 12-13, 2015 and February 4-5, 2016
- A draft ARINC Project Paper 766 (AeroMACS Transceiver and Aircraft Installation Standards) has been prepared
- The goal of the WG is to develop a mature draft of ARINC Project Paper 766 by the end of 2016
- Next meeting is scheduled for May 24-26, 2016 in Annapolis, MD



AEEC AeroMACS Working Group

- Key issues being addressed by the AEEC AeroMACS WG include:
 - AeroMACS network issues
 - Address a coverage study concerning the use of dual AeroMACS networks in an airport
 - Single or dual AeroMACS units in one box?
 - Aircraft Radio Unit (ARU) specific issues
 - Segregation between safe and non-safe sections: logical or physical?
 - ATN/OSI integration?
 - DAL level design?
 - Connection to A/C safe domain: Ethernet or AFDX?
 - ARU security aspects
 - Proposed airport ground network architecture
 - Allow multiple Access Service Networks
 - Allow multiple Service providers
 - System architecture that would allow frequency diversity and security





Questions?



1-2 March 2016

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