

Working Group S (WG-S) – Surface Air- Ground Datalink Communication System

**AFC Spring 2014 Meeting
Vancouver, BC**

Aeronautical Mobile Airport Communications System (AeroMACS)

- 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

WG-S Status

- WG-S is an International Civil Aviation Organization (ICAO) sponsored initiative to develop standards for the Aeronautical Mobile Airport Communications System (AeroMACS)
- WG-S Objectives
 - Develop of the System and Recommended Practices (SARPs) standard
 - Develop a Technical Manual (TM) for the AeroMACS system
 - Coordinate with other committees as necessary

WG-S Terms of Reference

- Develop ICAO SARPs and Technical Manuals for AeroMACS
 - *Includes validation*
- Define and describe AeroMACS security framework for worldwide interoperability
 - *System security for AeroMACS link protection and how that fits within the framework of ATN/IPS security*
 - *This includes requirements/recommendations regarding WIMAX Forum security certificate policy/practices versus ICAO/ATA certificate policy & practices*
 - *Define the architecture and role of AAA server*
 - *Identify open items related to AeroMACS security framework*
- AeroMACS addressing and discovery mechanism that is consistent with ATN/IPS for global interoperability while permits local implementation flexibility
- Coordinate with international technical standardization bodies for AeroMACS (ARINC, WMF, RTCA and EUROCAE, Other ICAO committees e. g. ACP WG-I, WG-F, FMG, NSP.....)
- Provide input to development of frequency planning criteria (normally done by another WG of ACP) - Interference & Coexistence with Aero Telemetry – WG-F or S

WG-S Status

- WG-S held meetings on July 9-11, 2013 and October 15-17, 2013 in Montreal, Canada
- Work accomplished included:
 - Reviewed the status of relevant work programs
 - Continued drafting of the SARPs document
 - Continued drafting for the Technical Manual

WG-S Status

- WG-S delivery dates:
 - AeroMACS SARPs
 - ICAO approval process dependent on:
 - Eurocontrol/SESAR completed the validation of AeroMACS SARPs
 - Approval at the ICAO WG-W meeting scheduled for December 2-5, 2014
 - AeroMACS Technical Manual – end of 2015
- Future Work
 - WG-S is using teleconferences to track progress on work
 - Next meeting of WG-S is scheduled for July 14-15, 2014 in Montreal, Canada

AeroMACS Committee Status

- AEEC Executive Committee approved the development of an AeroMACS avionics standard at the AEEC General Session meeting held April 14-17, 2014 in Toronto, Canada
- RTCA SC-223 has completed its work program
- EUROCAE WG-82 is continuing with the development of:
 - A system Minimum Aviation System Performance Standard (MASPS)
 - Ground equipment MOPS

ASRI

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Questions