

Appendix B Mode S Specific Services (MSSS)

Status – for Meeting # 5

RTCA Special Committee 209 Mode S Transponder
Working Paper SC209-WP05-10

Washington, DC

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**Federal Aviation
Administration**



Mode S Specific Services (MSSS) Status for Meeting # 5

- MSSS Appendix B v1.3 - Requirements
- MSSS Test Procedures
- MSSS Test Procedures Format Considerations
- MSSS Test Configuration
- Next Steps

MSSS Appendix B v1.3 - Requirements

- Latest draft ([Appendix B, v1.3](#)) is stable enough for MSSS Test Procedures for the following major components:

- Mode S Specific Protocol (MSP) for Uplink and Downlink
- Broadcast Processing for Uplink and Downlink
- Frame Processing (linked sequences of Comm-A and Comm-B LMs)
- MSSS Timers
 - L-Bit Delivery (Tm)
 - Interrogator Link (Tz)
 - Link Frame Cancellation (Tc)

Test procedures extracted from ADLP MOPS (RTCA DO-218b), and massaged

- GICB (Test Procedures are)  **T B D**

- No major comments from EUROCAE [WG-49](#) relative to Appendix B ([v1.2](#)) requirements (as reported at Meeting # 4, Olathe, KS)
- No changes to GICB registers allocation/tables within this latest version of Appendix B.

MSSS Test Procedures

- **MSP Processing (Uplink and Downlink)**
 - Long Form MSP Format
 - Short Form MSP Format
 - L-Bit Linking, Message Delivery Status
 - SLM and ELM Capability

- **Broadcast Processing (Uplink and Downlink)**
 - Broadcast Format
 - Interrogator Identifier (II)

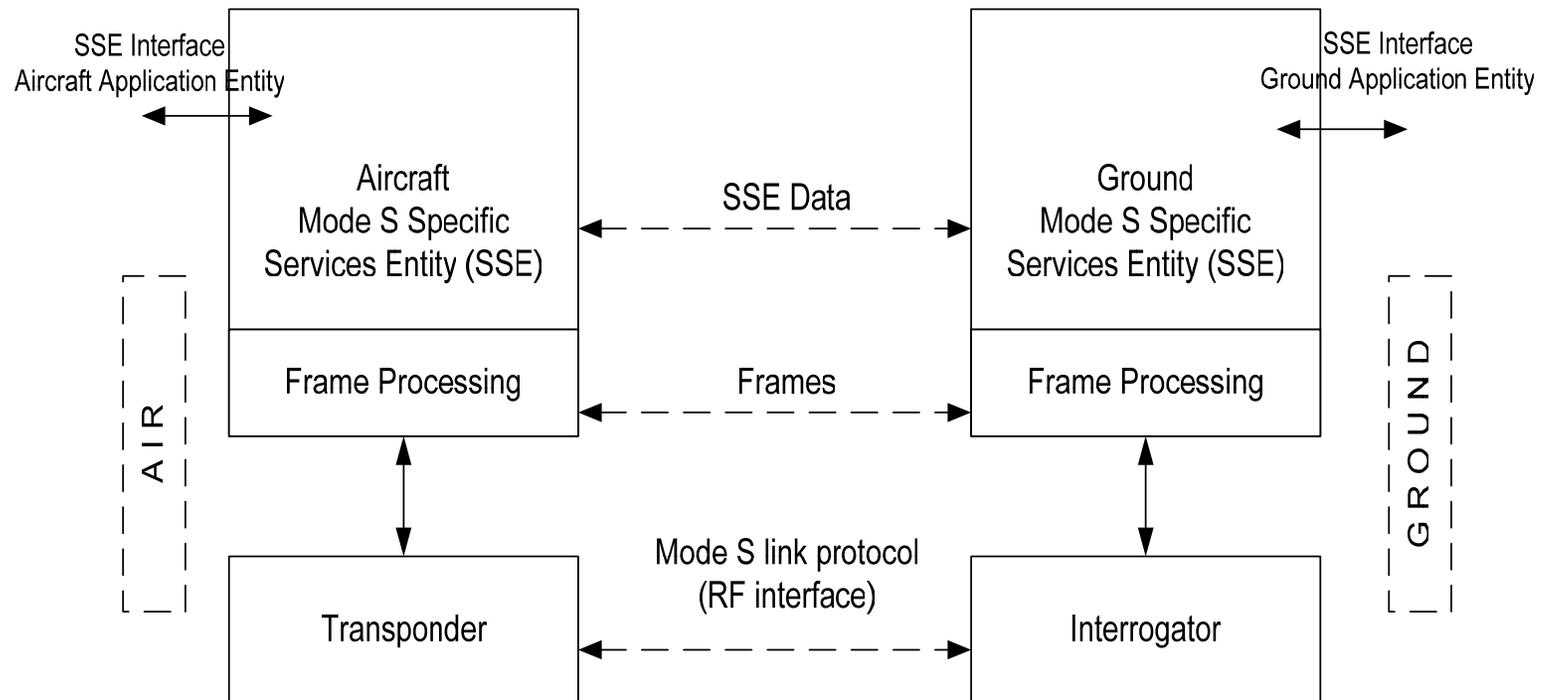
- **Frame Processing (Uplink and Downlink)**
 - SLMs, ELMs
 - SD Field, LAS Coding
 - Single Segment SLMs, Multiple Segment SLMs
 - Frame Cancellation, Linking Protocol for Frames
 - Directing SLM and ELM Frames, Delivery Status
 - SLM and ELM Capability

- **Timers**
 - L-Bit Delivery (T_m)
 - Interrogator Link (T_z)
 - Link Frame Cancellation (T_c)

MSSS Test Format Considerations

- State Objective
- Link Test Procedure to Requirements
- Call Out Procedures in “Steps”
- Consider Creating “[Appendix C](#)” for MSSS Test Procedures
 - As Shown in Working Paper “[WP05-11 MSSS Test Procedures](#)”

MSSS Test Configuration



Next Steps

- Finalize/Validate MSSS Test Procedures (based comments, and fine tuning) for the following:
 - Mode S Specific Protocol (MSP) for Uplink and Downlink
 - Broadcast Processing for Uplink and Downlink
 - Frame Processing (linked sequences of Comm-A and Comm-B segments, and ELMs)
 - MSSS Timers

- Finalize Appendix B Requirements for GICB Registers Allocation

- GICB Test Procedures

- Test Procedures Validation between SC-209 and EUROCAE WG-49