

**RTCA Special Committee 186 Working Group 6**

**ADS-B / ASA MASPS Maintenance**

**Meeting #20**

**RTCA, Washington DC**

**9:00am – 5:00pm EST**

**14 – 16 December 2010**

**Proposed Table of Contents for the Combined DO-242B and DO-289  
Super MASPS**

**Gary Furr, Engility Corporation and Tom Pagano, FAA**

**SUMMARY**

This Working Paper reviews the proposed Table of Contents of the combined Super MASPS including parts of both DO-242B and DO-289 as it has been reviewed and revised during several WG-6 Meetings.

## **1. INTRODUCTION**

The RTCA SC-186 Plenary has directed the newly reconvened Working Group 6 to review the ADS-B MASPS (working draft of DO-242B) and the ASA MASPS (DO-289, including Change 1) for the purpose of combining the two MASPS documents.

During discussions in several Teleconference and face-to-face Meetings that Working Group 6 has held since reconvening, it has been suggested that the two MASPS documents be combined into a newly minted RTCA publication which represented a combining and reorganizing of the materials in both MASPS documents.

This Working Paper serves to present the latest version of the proposed Table of Contents of the combined MASPS document in a format that will allow further modifications during this and future meetings and Teleconferences.

## 2.0 Initial Proposed Outline of Combined Document

Sections numbers of DO-3xx	Title of DO-3xx Sections	Author	Comments
1	Purpose and Scope	Larry Kenney	Review Section 1 of both DO-242A and DO-289 and make recommendations on final content.
1.1	Introduction		
1.2	System Overview		
1.3	Operational Applications		
1.4	Verification Procedures		
2	Operational Requirements	Dean Miller	Review Section 2 of both DO-242A and DO-289 and make recommendations on final content.
2.1	General Requirements		Probably all of section §2.1.2 can be moved into the ADS-B section below into §3.2.1.3. §2.1.2.19 may specifically be moved into Appendix "I" and revised
2.2	System Performance – Standard Operational Conditions		Parts of DO-289 section 2.4 will be moved into §2.2. Need to review the need for the Operational descriptions in the new document.
3	System Definition and Functional Requirements		
3.1	System Scope and Definition of Terms		
3.2	System Descriptions		Need to include a section for Surface Vehicles.
3.2.1	Aircraft Systems (ACL description)		
3.2.1.1	CDTI		
3.2.1.2	ASSAP		
3.2.1.3	ADS-B Subsystem (Transmit and Receive)	Tom Pagano	Review Sections of both DO-242A and DO-289 and make recommendations on final content.
3.2.1.3.1	ADS-B		
3.2.1.3.1.1	ADS-B Receive and Process	Tom Pagano	
3.2.1.3.1.2	ADS-B Transmit	Tom Pagano	
3.2.1.3.2	ADS-R Receive and Process	Mike Garcia	
3.2.1.3.3	TIS-B Receive and Process	Mike Garcia	
3.2.2	ANSP Systems		
3.2.2.1	ADS-B ( Ground Receive) (RAD, NRA, APT)		
3.2.2.2	TIS-B & ADS-R Sources of Surveillance Information (Ground Transmit) (Are these requirements or assumptions for the Ground Stations?)	Rob Strain	
3.3	System Requirements (and ACL)		Parts of DO-289 §2.4 may be moved into §3.3. Top level

Sections numbers of DO-3xx	Title of DO-3xx Sections	Author	Comments
			summary and table of applications.
3.3.1	CDTI	Jonathan Hammer	
3.3.1.1	CDTI for ACL=1	Jonathan Hammer	
3.3.1.2	CDTI for ACL=2	Jonathan Hammer	
3.3.2	ASSAP	Jonathan Hammer	
3.3.3	ADS-B Subsystem Requirements	Tom Pagano	
3.3.3.1	ADS-B Surveillance Coverage	Tom Pagano	
3.3.3.2	ADS-B Information Exchange Requirements by Equipage Class	Tom Pagano	
3.3.3.3	ADS-B Data Exchange Requirements	Tom Pagano	
3.3.3.4	ADS-B Network Capacity		
3.3.3.5	ADS-B Medium		
3.3.3.6	ADS-B System Quality of Service	Dean Miller	
3.4	Messages and Reports		The Intent Info can be removed IP12-ASA needs to be reviewed as part of this editing. Add broadcast of TCAS RA Message for TCAS equipped aircraft.
3.5	Subsystem Requirements and Assumptions	Rudy Johnson	Section 3.4 of DO-289 should be reviewed and included as necessary
3.6	Functional Level Requirements		No shall statements in this section of DO-242A
4	ADS-B IN System Applications Requirements	Taji Shafaat	
4.1	Enhanced Visual Acquisition (EVACQ) / ATSA-AIRB (Reference only in DO-3xx)		
4.2	Conflict Detection (CD) (TBD)		
4.3	Airport Surface Situational Awareness (ASSA) (Reference only in DO-3xx)		
4.4	Final Approach and Runway Occupancy Awareness (FAROA) (TBD)		
4.5	Enhanced Visual Approach (EVAPP) / ATSA-VSA (Reference only in DO-3xx)		
4.6	ATSA – SURF (Reference only in DO-3xx)		
4.7	In Trail Procedure (ITP) (Reference only in DO-3xx)		
4.8	SURF IA (TBD)		
4.9	Flight Deck Interval Management – Spacing (FIM-S) (Reference in DO-3xx and add Appendix “I” for intent)		
4.10	Ground-Based Interval Management (TBD) (May move into 3.2.2)		

Sections numbers of DO-3xx	Title of DO-3xx Sections	Author	Comments
Appendix A	Acronyms and Definitions of Terms		
Appendix B	Bibliography and References		
Appendix C	<a href="#">Derivation of Link Quality Requirements for Future Applications</a>		
Appendix D	Design Tradeoff Considerations ( <a href="#">update old 242A-App_G</a> )		
Appendix E	Receive Antenna Coverage Constraints ( <a href="#">update old 242A-App_H</a> )		
Appendix F	Integrity Considerations for ADS-B Applications ( <a href="#">rewrite and retitle old 242A-App_I</a> )		
Appendix G	Latency and Report Time Error Data ( <a href="#">update old 242A-App_K</a> )		
Appendix H	Derivation of Track Acquisition and Maintenance Requirements ( <a href="#">update old 242A-App_L</a> )		
Appendix I	Intent Guidance Material for Future ADS-B Intent Broadcast ( <a href="#">update or rewrite old 242A-App_N</a> )		
Appendix J	L/W and Position Offset Coding (old 242A-App_P, renamed and updated with GPS Antenna and L/W Changes)		
Appendix K	Future Air-Referenced Velocity (ARV) Broadcast Conditions ( <a href="#">update old 242A-App_Q</a> )		
Appendix L	Determining the Navigation Accuracy Category for Velocity (NAC <sub>v</sub> ) ( <a href="#">rewrite starting with revised Appendix from Link MOPS</a> )		
Appendix M	Compatibility of ASA MASPS with ADS-B Standards and Fielded Systems ( <a href="#">update of old 289-App_AE</a> )		
Appendix N	<a href="#">MASPS / Link MOPS Compliance Matrices</a> (alternatively could be published as new Appendices in <a href="#">Changes to DO-260B and DO-282B</a> )		
Appendix O			
Appendix P			
Appendix Q			
Appendix R			