

Minutes of Meeting #17 of RTCA SC-186 Working Group 3
Development of Revision A of the ADS-B 1090 MHz MOPS
<http://adsb.tc.faa.gov/WG3.htm>

The meeting was called to order by Co-Chair Dr Vincent Orlando at 9am 27 January 2003, at the RTCA Headquarters in Washington DC. Dr. Orlando welcomed all attendees and asked that each attendee introduce themselves and their organization. The attendees included:

Jerry Anderson, FAA – AIR-130	Ron Jones, FAA ASD-140	Bob Saffell, Rockwell Collins
Larry Bachman – Johns Hopkins – APL	Vince Orlando, MIT Lincoln Lab	Mark Schneider, Sensis Corp
Gary Furr, Titan Corp, FAA TC – ACB-410	Azhar Osmanbhoy, Boeing ATM	Stuart Searight, FAA TC – ACB-420
Bob Granville, Retired FAA	Tom Pagano, FAA TC – ACB-410	Ronald Staab, Trios Associates
Bill Harman, MIT Lincoln Lab	Bill Petruzel, FAA AFS-400	

1. Following the introductions, the following known regrets to attendance were announced:
 - Bob Semar, United Airlines
2. Following Agenda Item #2, the Working Group reviewed the Minutes of Meeting #16 held at the RTCA Headquarters in Washington DC. The Minutes of Meeting #16 were accepted as published.
3. Following Agenda Item #3, the Working Group agreed that Meeting #17 would be the last meeting of WG-3 for the purpose of publishing DO-260A. If necessary, following the Plenary, there would be specifically directed teleconferences to discuss any changes that have been directed by the Plenary and that require further discussion. The Working Group also agreed to hold a brief one day meeting in conjunction with some future RTCA Plenary in Washington for the purpose of bringing the Working Group up to speed on any changes that might be discussed with respect to requirements in the ASA MASPS, the TIS-B MASPS or the ADS-B MASPS, with respect to a possible Revision B of this 1090 MOPS document.
4. The first order of business was to review the comments that were received against the Plenary draft of DO-260A. A summary of the received comments indicates that:
 - a. 64 comments were previously received from EUROCAE WG-51/SG-1 and were reviewed at the December 2002 WG-3 meeting at RTCA and most of those comments were accepted and incorporated into the Plenary ballot draft of DO-260A
 - b. A “Non-Concur” with 2 related comments was received from 1 organization
 - c. 77 “Concur with Comments” were received from 10 organizations
 - d. 5 “Concur with no further Comments” were received from 5 organizations

The “Non-Concur” comment addressed the requirement for concurrent receipt of ground referenced and air referenced velocity. After discussion, WG-3 agreed to make provision for receipt of both Velocity Types 1&2 Messages (ground referenced) and Velocity Types 3&4 Messages (air referenced) from a given aircraft and the generation of State Vector and ARV Reports. The Commenter was briefed on the proposed solution and he agreed to withdraw the “Non-Concur.”

With respect to the resolution of the “Concur with Comments” issues, 2 comments were withdrawn after Working Group discussion. 52 comments were accepted and the proposed changes were incorporated into the working draft of DO-260A. 16 comments were accepted with modifications to the original proposed resolution and the revised text was incorporated into the working draft of DO-

260A. 7 comments were rejected after Working Group discussion, principally because the comments were based on a misunderstanding of a requirement or an editorial style. Details of all of the comments and resolutions were presented to the RTCA SC-186 Plenary in RTCA Paper Number 012-03/SC-186-203, which was later posted to the ADS-B/1090 web site as Working Paper 1090-WP-17-07.

There was one open issue that the Working Group brought before the Plenary meeting. This issue dealt with the implementation of the broadcast of the Mode A [4096] code in DO-260A. The broadcast was implemented in the UAT MOPS (DO-282) in order to support the Capstone Project. Working Group 3 developed a proposed change to the TEST Message to add a Subtype to that message for the purpose of having a mechanism by which the Mode A [4096] code could be broadcast inside the boundaries of the USA. After Plenary discussion, it was agreed that this proposed solution would be implemented into DO-260A post-Plenary and that test procedures would be written to test the capability.

5. The following **Action Item** was identified as the only Action Item that remained OPEN at the end of this meeting.

Action Number	Action Description	Assigned to	Status
8-1	Provide the results from testing with the directional 1090 MHz receive antenna. (Flight Tests originally scheduled for 24-25 April 2002 were delayed because the LDPU had a problem and this may be delayed until Spring 2003)	Carl Jezierski	

6. The **Working Papers** shown in the following table are specifically for the Meeting being reported in these Meeting Minutes. Working Papers for all WG-3 Meetings, as well as the Meeting Agendas, Meeting Minutes, Meeting Schedules and modifications to DO-260 for the production of Revision A, will be posted on the ADS-B 1090 MHz web site located at:

<http://adsb.tc.faa.gov/ADS-B/186-subf.htm>

Working Paper	Size	Description	Introduced At:
1090-WP-17-01	355KB	Revisions to Appendix P, Section P.3.1.3 to complete Air-to-Air Performance for Class A2, presented by William Harman	Meeting 17, 01/27/03 RTCA, Washington DC
1090-WP-17-02	277KB	Revisions to Appendix P, Section P.2 to complete TBDs in the Plenary Review copy of Appendix P, presented by Larry Bachman	Meeting 17, 01/27/03 RTCA, Washington DC
1090-WP-17-03	86KB	Additional Materials Supporting the Comment from William Harman relating to Two Low Density Environments, presented by William Harman	Meeting 17, 01/27/03 RTCA, Washington DC
1090-WP-17-04	109KB	Additional Materials Supporting the Comment from William Harman relating to the Effects of Altitude of the transmitting aircraft, presented by William Harman	Meeting 17, 01/27/03 RTCA, Washington DC
1090-WP-17-05	181KB	Technical Materials Supporting Detailed Analysis Performed at MIT LL in the process of generating Appendix P Performance numbers, presented by William Harman	Meeting 17, 01/27/03 RTCA, Washington DC

Working Paper	Size	Description	Introduced At:
1090-WP-17-06	30KB	Revision to 1090-WP-15-20 which proposed revisions to the draft of DO-260A for the purpose of adding support for the Flight Plan ID (Mode A Broadcast) as requested by ATC, originally presented by Ron Jones and modified by WG-3 during and after Meeting 17	Meeting 17, 01/27/03 RTCA, Washington DC
1090-WP-17-06A	22KB	This is Working Paper 1090-WP-17-06 with all of the revisions accepted so that it is more readable	Meeting 17, 01/27/03 RTCA, Washington DC
1090-WP-17-07	225KB	This Working Paper is the Consolidated Summary of all comments received against the Plenary draft of DO-260A. This shows all resolutions to those comments.	Meeting 17, 01/27/03 RTCA, Washington DC

7. Following the RTCA SC-186 Plenary, all of the proposed changes and resolutions identified in 1090-WP-17-07 were incorporated into the draft of DO-260A. Following this procedure and extensive editorial review, DO-260A was prepared for final publication and a draft was forwarded to RTCA on 3 March 2003 for the purpose of having a review by the RTCA Program Management Committee on 10 April 2003 with the objective of approving the document for publication. If approved on 10 April by the PMC, DO-260A will be available from RTCA in hardcopy and electronic formats within 30 to 45 days thereafter.