

**Minutes of Meeting #9 of SC-186 Working Group 3**  
**Development of Revision A of the ADS-B 1090 MHz MOPS**  
<http://adsb.tc.faa.gov/ADS-B/186-subf.htm>

The meeting was called to order by Dr. Vince Orlando at 9am on 9 January 2002, at the conference facilities of the Best Western Oceanside Inn in Ft. Lauderdale FL, hosted by Dr. Orlando and MIT Lincoln Laboratory. Dr. Orlando welcomed all attendees, and asked that each attendee introduce themselves and their organization. The attendees included:

Gary Furr, Titan Corp. (FAA TC - ACT-350)	Greg Kuehl, UPS Airlines	Stacey Rowlan, L-3, ACSSD
Bill Harman, MIT Lincoln Lab	James Maynard, UPS Aviation Tech.	Stuart Searight, FAA TC – ACT-350
Carl Jeziarski FAA TC, ACT-350	Vince Orlando, MIT Lincoln Lab	John Van Dongen, FAA TC, ACT-350
Ron Jones, FAA ASD-140	Azhar Osmanbhoy, Boeing Air Traffic Mgt	

1. Following the introductions, the following known regrets to attendance were announced:
  - Pio Blankas, Honeywell
  - Robert Semar, UAL Airlines
2. Following Agenda Item #2, Vince Orlando made a few introductory remarks. Dr. Orlando described the previous meeting in London as very productive, and indicated that we will probably plan on holding another meeting in Europe, depending on the continuing schedule, prior to the time that the DO-260A document is finalized for Plenary balloting. Dr. Orlando indicated that Eurocontrol is now deciding what they want to do with ED-102, which is equal to the original DO-260. There have been rumors that Eurocontrol is moving toward the recommendation to their member states to use 1090 MHz data link for air to ground and high rate transmissions and to use VDL-M4 for longer range transmissions. If this is the case, then they certainly will want to update or replace ED-102 to remain in line with the publication of DO-260A.

Ron Jones indicated that there is a draft document being circulated within the FAA for comments regarding the ADS-B Link Decision. It is believed that a recommendation document will be forwarded to the Administrator in the early March timeframe, with an announcement coming from the Administrator by the end of March. It is hoped that discussions with Eurocontrol will lead to a Eurocontrol statement to member states within that same timeframe.

In an additional statement concerning decisions made at the London meeting, Dr. Orlando indicated that meeting discussions led to an understanding that the 1090 implementation of TIS-B will be less complicated than originally thought. This means that the TIS-B Application should be handling many of the tasks that we had originally proposed. This greatly simplifies several proposals for Sections 2.2.17, 2.4.17 and Appendix D.

3. Following Agenda Item #4, the Working Group reviewed the Minutes of Meeting #8 held at the facilities of NATS/CAA in London, England. Hearing no objection or further comment, the Minutes of Meeting #8 were approved as published.
4. Following Agenda Item #5, the Working Group reviewed the locations, dates and times of the next several meetings, which were scheduled. The Working Group agreed that the meeting that had originally been planned for Phoenix in February would be **canceled** because of the decisions on the changes that are to be included in the ADS-B MASPS at the December RTCA SC-186 Plenary. Additionally, it had been previously stated at that Plenary that if the changes to TCP/Intent were approved by the Plenary that there was no way that the 1090 MOPS, Rev A could be completed by

the June 2002 Plenary. The Working Group agreed to target the DO-260A draft to come before the December 2002 SC-186 Plenary. Therefore, the Working Group agreed to shorten the meeting scheduled for the FAA Technical Center to a two (2) day meeting instead of 3, and to reschedule the meeting which was to have been held in conjunction with the June 2002 Plenary to the following Tuesday and Wednesday, at the MIT Lincoln Laboratory facilities in DC. The following table indicates the currently agreed upon meeting dates and places for proposed future meetings of Working Group #3 for the production of Revision A of the 1090 MHz MOPS (RTCA/DO-260A).

Dates/Time	Meeting Place
Tuesday, 12 February 2002 at 9am through 5pm, Wednesday, 13 February	Phoenix AZ --- <b>CANCELED</b>
Tuesday, 26 March at 9am through 5pm, Wednesday, 27 March 2002	Confirmed at the FAA Tech Center, Atlantic City, NJ Building 300, AAR-400 Conference Room, 2 <sup>nd</sup> Floor Travel info and lodging details are available on the ADS-B/1090 web site
Tuesday, 23 April at 9am through 5pm, Thursday, 25 April 2002	Meeting location at the FAA Tech Center, Atlantic City, NJ Travel info and lodging details are available on the ADS-B/1090 web site
Tuesday, 25 June at 9am through 5pm, Wednesday, 26 June 2002	Confirmed at MIT/Lincoln Laboratory Aviation Liaison Office Travel info and lodging details are available on the ADS-B/1090 web site
	Fall 2002 RTCA SC-186 Plenary scheduled for Wednesday & Thursday, 18-19 September.

- Following Agenda Item #6, the Working Group asked Dr William Harman to briefly discuss his summary of SC-186 Plenary Issues outlined in Working Paper WP-9-12. Dr. Harman identified the dates of inter-related documents that the Plenary discussed and the dates that these documents appear to be coming before future Plenary sessions for approval. As discussed at the December Plenary, the ADS-B MASPS and TIS-B MASPS are currently scheduled for the April 2002 Plenary. Also as currently planned, the ASA MASPS and the UAT MOPS are scheduled for the June 2002 Plenary. Until the December Plenary agreed with the proposed ADS-B MASPS changes, the 1090 MOPS Revision A was also scheduled for the June 2002 Plenary. The Working Group discussed the likelihood of these documents making their scheduled review dates and agreed that it was unlikely that any of the documents would actually be presented at their scheduled Plenary review, given the status of completion discussed during the December Plenary.

Further, the Working Group discussed in detail those major changes proposed to the ADS-B MASPS as they relate to necessary changes to the 1090 MHz MOPS, Revision A. Those major changes included the proposed changes to (1) TCP/Intent, (2) Change of Airspeed reporting, (3) NIC/NAC/SIL, (4) Reorganization of SV, MS and OC Reports, and, (5) the potential of increased requirements for aircraft density beyond 40 NM. It was also pointed out during discussions that there are a number of other changes that are proposed to be made to the ADS-B MASPS that would result in changes to DO-260. Stuart Searight accepted **Action Item 9-1** to summarize the Issue Papers that are being reviewed by Working Group 6, which would potentially result in a necessary change to DO-260 and have that summary available for Meeting #10.

In conjunction with the discussion of proposed changes to the ADS-B MASPS, the Working Group discussed a memo sent from John Hallinan, Capstone Program Manager to David Watrous of RTCA requesting various items be included in the modifications to the ADS-B MASPS, DO-242. In an effort to formalize these requests, Working Group 6 has created Issue Paper 53, which deals with the

ADS-B ability to identify aircraft not flying under Air Traffic Control (equivalent to “Squawk 1200”). After discussion, it was agreed by the Working Group that WG-3 will disagree with the proposed solution to IP-53, which calls for expanding the Emergency/Priority Status field by one (1) bit, and expanding the meaning of coding for “8” to “Not receiving ATC Services.”

Further, Issue Paper 51 was created to deal with the Capstone request for the use of a temporarily assignable address, such that a flight is identifiable only to ATC. Again, after discussion, it was agreed that Working Group 3 will disagree with the proposed solution to IP-51. It was further stated that after a review of this Issue Paper by the SCRSP Technical Sub Group at a meeting to be held in Ft Lauderdale the week of 14 January 2002, a statement would be issued from that group also disagreeing with the proposed solution to IP-51.

6. Continuing with Agenda Item #6, Ron Jones presented Working Paper WP-9-08 as his proposed approach for 1090 MHz Extended Squitter to accommodate the new requirements for Intent Information. As part of the Working Paper, Ron presented a draft working paper that is to be submitted to Working Group 6, which makes a proposal for the update rate requirements for reports of intent information and recommends an approach for specifying the minimum set of data parameters.
7. As part of Agenda Item #7, and as a review of Open Action Items, James Maynard presented Working Paper WP-9-14 as his response to Action Item 2-17 to review the NL equation at A.7.2.d and possibly reword for latitudes at 87 degrees. After discussion of Jim’s approach and his proposal for changing Table 2-90 and reworking the equations at A.7.2.d, the Working Group concluded that additional study was required to resolve this issue. **Action Item 9-3** was accepted by James Maynard and William Harman, with requested help from Ed Bayliss to review the conclusions and recommendations stated in WP-9-14 in light of comments during this meeting.
8. Turning to issues related to Enhanced Processing in Agenda Item 8, John Van Dongen presented Working Paper WP-9-05 as his response to Action Item 8-8. In response to Action Item 8-8, the 5-fruit case of the enhanced test procedures was run with the desired signal level at 12 dB above MTL, and the relative fruit level varied accordingly. This action was assigned originally because Ron Jones wanted to ensure that the curves behaved the same way at the same low fruit level, and in fact, the graph presented in WP-9-05 shows this to be the case.
9. John Van Dongen continued by presenting Working Paper WP-9-06 in response to Action Items 8-6 and 8-7 to include an additional enhanced bit and confidence declaration technique. The Working Group agreed with all of the proposed changes to Appendix I, and Gary Furr will implement the agreed upon changes identified in WP-9-06 into Appendix I and post them on the ADS-B/1090 web site as agreed upon changes to DO-260.
10. John Van Dongen continued by presenting Working Paper WP-9-10 in response to Action Item 8-5. The enhanced decoding techniques defined in Appendix I suggest using a +/- 3 dB amplitude tolerance band when matching data pulses to the preamble amplitude. Action Item 8-5 was assigned to examine the effects of tightening the amplitude tolerance to +/- 2 dB and +/- 1 dB and testing with Mode S and Mode A/C Fruit. Working Paper WP-9-10 contains data from performing a subset of the Enhanced Surveillance Processing Test Procedures with the tighter tolerances. While that results indicated some improvement in extended squitter reception against Mode S fruit, the benefit was not significant enough to warrant making this change to the enhanced processing, since the tighter tolerance was shown to result in reduced performance against ATCRBS fruit. The Working Group next reviewed its decision to run the multi ATCRBS fruit cases with all ATCRBS fruit at the same power level. After Working Group review of Working Paper WP-9-10, John Van Dongen was assigned **Action Item 9-7** to run one more test with the 3-fruit case at -67, -71 and -75 relative to an

MTL of –83 dBm. William Harman additionally accepted **Action Item 9-8** to simulate 3, 4 and 5 fruit case with different fruit amplitudes in 4 dB relative value of the fruit centered 12 dB above MTL while varying the desired signal in 1 dB steps.

11. Continuing with Agenda Item 8, Vince Orlando presented Working Paper WP-9-01 as the 7<sup>th</sup> draft of the enhanced surveillance processing test procedures. This Working Paper contained a revised draft of proposed enhanced surveillance processing test procedures based on the test concept discussed at the previous meetings of WG-3. The specific change for this revision was to remove the word "optional" from the heading for paragraph 2.2.4.4. This change was made to reflect the fact that these techniques will be required for certain classes of equipment.
12. Returning to Agenda Item 7, Gary Furr presented Working Paper 9-09 in response to Action Item 7-5, which was considered at Meeting #8 in London, and further changes were requested. Working Paper 9-09 details the proposed changes to DO-260 required because of the inclusion of a Version Number in the Aircraft Operational Status Message. After discussion of each proposed change, all proposed changes were accepted. Now, Gary Furr will detail each change and post the changes on the ADS-B/1090 web site as an agreed upon change to DO-260.
13. With Agenda Item 9, the Working Group began the review of Working Papers related to TIS-B issues. Dr. Vince Orlando began by presenting Working Paper WP-9-02 as the 4<sup>th</sup> draft of text proposed for section 2.2.17 on TIS-B. Specific changes to WP-9-02 relative to the 3<sup>rd</sup> draft are: (1) the addition of NIC Supplement, NAC and SIL fields to the Airborne Velocity message, (2) changing the material on management messages to indicate "reserved for future use", and (3) the addition of details for Ground Track Status, Ground Track Angle and Ground Speed in the Coarse Position format based on comments received from industry. Dr. Orlando requested that the Figure in Section 2.2.17.3.4 showing the TIS-B Airborne Velocity Message be updated by Gary Furr to include the NIC/NAC/SIL fields. Dr. Orlando also indicated that no work would begin in the text of section 2.4.17 until such time as writers of Test Procedures were available from the FAA Technical Center and/or manufacturers.
14. Dr. Orlando continued with Agenda Item 9 by presenting Working Paper WP-9-03, which is draft 5 of his proposed materials for Appendix A for TIS-B on 1090 Mhz. Specific changes relative to the last draft are: (1) the addition of NIC Supplement, NAC and SIL fields to the Airborne Velocity message, (2) changing the material on management messages to include only a definition of a format to be reserved for future use, and (3) the addition of details for Ground Track Status, Ground Track Angle and Ground Speed in the Coarse Position format based on comments received from industry. Gary Furr noted that in WP-9-03 all of the Table and Figure references were incorrect because of the fact that other tables and figures were being inserted into the various changes for DO-260A. Gary will edit this document to prepare for correcting the table and figure numbers and forward it back to Dr Orlando for further development.
15. Dr. Orlando continued with Agenda Item 9 by presenting Working Paper WP-9-04, which is draft 2 of his proposed revision to Appendix D to include TIS-B Ground Processing. Based on Working Group agreement at Meeting 8, the TIS-B ground processing material in Appendix D will only address issues specifically related to 1090 MHz. The remainder of the ground processing requirements will be included in a reference to the TIS-B MASPS. In WP-9-04, all of paragraph D.3 has been revised to incorporate this approach. Some edits were applied to WP-9-04 to take into consideration suggestions during the meeting. Gary Furr will return the edited document to Dr. Orlando after the meeting for further development.
16. Completing the review of items in Agenda Item 9, Dr William Harman presented Working Paper WP-9-11, which is his initial draft of proposed materials to be included in section 2.2.17 and 2.4.17

relating to TIS-B Message Processing and Reporting. Some edits were applied to WP-9-11 to take into consideration suggestions during the meeting. Gary Furr will return the edited document to Dr. Harman after the meeting for further development. With the next presentation of these materials, they will be rolled into the next draft of what was presented as 1090-WP-9-02 for sections 2.2.17 and 2.4.17.

17. In conjunction with Agenda Item 10, Ron Jones presented Working Paper WP-9-07, which is draft 4 of his proposed Appendix M to define Extended Range Reception Techniques. Some edits were applied to WP-9-07 to take into consideration suggestions during the meeting. Gary Furr will return the edited document to Ron after the meeting for further development.
18. In conjunction with Agenda Item 11, the Working Group briefly discussed Working Paper WP-9-13 which is a submission originated by Jerry Anderson which requests changes in DO-260 based on the changes made to DO-260 relating to DF=19. After brief discussion, WP-9-13 was deferred to a later meeting when Jerry Anderson can be present. Additionally, Dr. Orlando agreed to discuss the DF=19 issue with Cyro Stone during a meeting of the SCRSP Technical Sub Group during their meeting the very next week in Ft Lauderdale at the same meeting facility. Dr. Orlando will then discuss the DF=19 issue with Jerry Anderson prior to the next WG-3 meeting in Atlantic City.
19. The following **Action Items** were identified at this, or previous, meetings of this Working Group. The asterisk (\*) beside a name or organization indicates that they are the lead for the resolution of that Action Item. Actions shown here are those Action Items that remained OPEN at the end of this meeting.

Action Number	Action Description	Assigned to	Status
4-11	Add material on dynamic bandwidth control for the proposed Appendix M	Bob Saffell	
5-4	Incorporate any modifications to WP-5-10A as necessary based on the MASPS meeting discussion, any changes in the Report Assembly Function, and resubmit at future meeting	James Maynard	
7-2	Estimate the data rate required for current versus XML encoding	Mike Culver	
7-6	Make changes to Appendix A for changing all DO-260 subparagraphs to A.1, since TIS-B is going to be inserted as A.2. This also includes making changes to the entirety of DO-260 to change all references to Appendix A subparagraphs.	Gary Furr	
8-1	Provide the results from testing with the directional 1090 MHz receive antenna	Carl Jeziarski	
8-2	Provide at least 24 hours worth of recorded GPS position data using a stationary antenna.	Carl Jeziarski Azhar Osmanbhoy	Done <b>CLOSED</b>
8-3	Analyze the GPS data from Action Item 8-2 and report on the percent of time a stationary aircraft would be in the high transmission rate mode for thresholds of 5, 4 and 3 meters and recommend a threshold for DO-260A.	Bill Harman	
8-4	Provide analysis of GPS characteristics in support of reduced threshold for transition to high rate mode	Bill Harman	

Action Number	Action Description	Assigned to	Status
9-1	Summarize Issue Papers which produce agreed upon changes to the MASPS, so that WG-3 can determine how each proposed MASPS change will affect DO-260. Prepare for Meeting 10 – to be held 26-27 March at FAA-TC.	Stuart Searight	
9-2	Investigate the need for the additional ID Squitter to support target acquisition for long-range deconfliction.	Bill Harman	
9-3	Review WP-9-14 in light of comments raised during Meeting 9.	Bill Harman James Maynard Ed Bayliss	
9-4	Revise the Enhanced Test Procedures to perform the tests at 12 above MTL.	John Van Dongen	
9-5	Evaluate Appendix I for the possible purpose of removing the text relating to “Center Sample Technique.”	Vince Orlando	
9-6	Investigate the confidence value parameter for the multi-sample technique without table lookup at 8 MHz sampling rate. Determine whether the new technique is compatible with an 8 MHz rate.	Bill Harman	
9-7	Run one more test: 3 fruit case at -67, -71 & -75 relative to an MTL of -83 dBm. Vary desired signal in 1 dB steps. Repeat on the UPS-AT receiver/decoder – center sample method.	John Van Dongen	
9-8	Simulate 3, 4 and 5 fruit case with different fruit amplitudes in 4 dB relative value of the fruit centered 12 dB above MTL. Vary desired signal in 1 dB steps.	Bill Harman	
9-9	Write a test to verify that the sliding window error correction technique is not used.	Bill Harman Stacey Rowlan	
9-10	Run Frankfurt data from the first encounter on the 19 <sup>th</sup> using the enhanced techniques for comparison with the LDPU.	John Van Dongen	
9-11	Make provision in TIS-B formats on 1090 for Anonymous addressing in TIS-B Gateway.	Vince Orlando	
9-12	Add to Appendix D recommendations on when to use the TIS-B Coarse and Fine Formats.	Vince Orlando	
9-13	Update and re-present at Meeting 10 the Working Paper 1090-WP-9-11, with comments from Meeting 9 for changes to TIS-B Message Processing and Reporting. Use the file returned from Gary Furr as a starting point.	Bill Harman	
9-14	Define Mode A Code of all zeros to define a TIS-B Message on a primary radar target.	Vince Orlando	
9-15	Simulate reception, using enhanced surveillance, with a 4 or 6 MHz bandwidth, and compare to the 8MHz bandwidth case.	Bill Harman	

20. 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>

<b>Working Paper</b>	<b>Size</b>	<b>Description</b>	<b>Introduced At:</b>
1090-WP-9-01	52KB	Draft 7 of the Enhanced Surveillance Processing Test Procedures, presented by Vince Orlando	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-02	43KB	Draft 4 of the TIS-B MOPS Materials for Sections 2.2.17 and 2.4.17, presented by Vince Orlando in response to Action Item 8-9	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-03	55KB	Draft 5 of the Proposed Materials for Appendix A for 1090 TIS-B, presented by Vince Orlando in response to Action Item 8-9	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-04	167KB	Draft 2 of a Proposed Revision to Appendix D to Include TIS-B Ground Processing, presented by Vince Orlando in response to Action Item 8-11	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-05	9KB	Re-run of the 5-fruit Case of the Enhanced Test Procedures with the Desired Signal Level set at 12 dB above MTL, presented by John Van Dongen in response to Action Item 8-8	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-06	11KB	Proposed Change to Appendix I to Include Additional Multiple Sample Enhanced Decoding Technique, presented by John Van Dongen in response to Action Items 8-6 and 8-7	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-07	22KB	Draft 4 of the Proposed Appendix M to the ADS-B 1090 MHz MOPS to define Extended Range Reception Techniques, presented by Ron Jones	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-08	37KB	Proposed Approach for 1090 MHz Extended Squitter to Accommodate the proposed New Requirements for Intent Information, presented by Ron Jones	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-09	83KB	Draft 3 of the Proposed Changes to Section 2.2, 2.4 and Appendix A required by the addition of a Version Number, presented by Gary Furr in response to Action Item 7-5 and discussion at Meeting #8	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-10	23KB	The Effects of a Smaller Amplitude Tolerance on Reception Performance with Mode S and Mode A/C Fruit, presented by John Van Dongen in response to Action Item 8-5	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-11	19KB	Draft of MOPS Material for TIS-B Message Processing and Reporting, Sections 2.2.17.4 to the end of Section 2.2.17, presented by William Harman in response to Action Item 8-10	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-12	10KB	Topics for Discussion of the RTCA SC-186 Plenary and Changes to the ADS-B MASPS, presented by William Harman	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-13	34KB	Proposal to modify DO-260 with respect to DF=19, initiated by Jerry Anderson and presented by Gary Furr	Meeting 9, 01/09/2002 Ft. Lauderdale, FL
1090-WP-9-14	55KB	Proposed Changes to the Transition Table for NL (lat) Function, presented by James Maynard in response to Action Item 2-17	Meeting 9, 01/09/2002 Ft. Lauderdale, FL

21. As per Action Item 4-7, a review of DO-260 was accomplished and the following table of open, or unresolved, issues was generated, along with two issues defined during Meeting #4. WG-3 members

should review this list and ensure that there are not other issues known to them that should be on this list. This list will be review at each future meeting for addition or deletion of items.

Issue #	Issue/Question Description	Raised by	Date Raised	Status
1	DO-260 Table 2-11 in Section 2.2.3.2.3.1, NUC <sub>P</sub> code for Type Code=22 is still shown as <b>TBD</b>	Gary Furr	15 May 01	
2	DO-260 Table 2-30 in Section 2.2.3.2.6.1.13, “Turn Indicator” coding is still <b>TBD</b> and the implementer is directed to set the code to ZERO until further notice. If this requirement is deleted, then sections 2.2.3.2.6.2.13, 2.2.3.2.6.3.13, 2.2.3.2.6.4.13, 2.2.5.1.10, 2.2.5.1.15 and 2.2.8.1.19 must also be addressed, along with all of their section 2.4 mates. Also Appendix F, MASPS Ref #R.2.26.	Gary Furr	15 May 01	
3	DO-260 Table 2-43 in Section 2.2.3.2.7.1.4, the “TCP/TCP+1 Data Valid Subfield” was declared not to be useful during the June 2000 Plenary and the field was declared to be “reserved” and set to ZERO in the initial version of the MOPS. Section 2.4.3.2.7.1.4 only tests for the case where the code is set to ZERO. Until this field has validity, no TCP data will be considered valid! All sections relating to TCP/TCP+1 were left as written in the initial DO-260.	Gary Furr	15 May 01	A Note is being added to 2.2.3.2.7.1 to state the status of TCP in DO-260A assuming no changes.
4	Sections 2.2.3.2.7.3.3.1 through 2.2.3.2.7.3.4.4 defining both the “Capability Classes” and the “Operational Mode” of the Aircraft Operational Status Message, including Tables 2-54 through 2-61 are full of <b>TBDs</b> . Also affects Appendix F, MASPS Ref R2.31 and R2.32.			
5	DO-260 Table 2-67 in Section 2.2.8.1.5, the “NUC <sub>P</sub> Coding Requirements” contains numerous <b>TBDs</b> .	Gary Furr	15 May 01	
6	DO-260 Table A-2 in Section A.4.1, NUC <sub>P</sub> code for Type Code=22 is still shown as <b>TBD</b>	Gary Furr	15 May 01	
7	DO-260 Section A.4.9.4 was never altered after the June 2000 Plenary which declared the “TCP Data Valid” subfield to be ‘reserved’ and hard wired to ZERO in the initial DO-260.	Gary Furr	15 May 01	
8	Sections A.4.11.3 through A.4.11.10 defining the CC_4, CC_3, CC_2, CC_1, OM_4, OM_3, OM_2 and OM_1 Operational Capabilities and Statuses are full of <b>TBDs</b>	Gary Furr	15 May 01	
9	Appendix F, Ref. #R2.38, the effective coverage of the ground receiver is still <b>TBD</b> .	Gary Furr	15 May 01	
10	Implementation of the Working Papers WP-4-03 and WP-4-06 for TCAS RA, are pending a decision by the Ad Hoc MASPS Working Group on the requirement.	WG-3	15 May 01	
11	Address the issue of whether or not to write a requirement into Section 2.2 of DO-260A for using the “Conservative Error Correction Technique.”	WG-3	15 May 01	
12	Clarify the need to transmit current TCP/TCP+1. In particular the need to comply in the Test Procedures, in view of the fact that the Data Valid Flag is currently set to zero (0) in DO-260	WG-3	21 Aug 01	

Issue #	Issue/Question Description	Raised by	Date Raised	Status
13	Additional changes will need to be made to Tables 2-3, 2-4 and 2-5, and potentially other places in DO-260, if SC-186 approves changes suggested by WG-6 to DO-242A to eliminate the Partial Mode Status Report (MS-P), only produce a standard MS Report, and to put all TCP information into a newly defined “On-Condition” Report.	WG-3	18 Oct 01	