

**Summary of Meeting #22 of RTCA SC-186 Working Group 5
held as a Teleconference and WebEx Session for the
Maintenance of the UAT MOPS
on 23 March 2009 between 1:00pm and 3:00pm EDT
<http://adsb.tc.faa.gov/WG5.htm>**

The meeting was called to order by Working Group 5 Co-Chair George Ligler of PMEI at about 1:15pm EDT on 23 March 2009. George welcomed all attendees. The participants during part, or all, of the Teleconference and WebEx meeting included:

Dr. Larry Bachman, JHU-APL	Dr. George Ligler, PMEI – FAA SBS P.O.	Joe Smith, SAIC – FAA SBS P.O.
Gary Furr, Engility Corp, FAA ATO-P	Chris Moody, Mitre / CAASD	Edward Valovage, Sensis Corp
Carl Gleason, Advancia FAA/NISC	Dean Miller, Boeing ATM	Warren Wilson, Mitre
Richard Jennings, FAA AIR-130	Tom Mosher, Garmin AT	
Stan Jones, Mitre / CAASD	Tom Pagano, FAA ATO-P	

1. George Ligler began the meeting with **Agenda Item #1** by welcoming all participants to the Teleconference and WebEx Session. George briefly discussed the activities of the last few years which have brought us to this point in time where we are considering making changes to the UAT MOPS (RTCA/DO-282A). George briefly indicated that the Aviation Rulemaking Committee (ARC) has been involved with the FAA over the last 18 months in their effort to produce and evaluate comments on the Notice of Proposed Rule Making (NPRM) leading to the actual release of an ADS-B OUT Rule sometime in early 2010. Rich Jennings spoke briefly about the effort that is already underway by RTCA SC-186 Working Group 3 to make changes to the 1090 MHz Extended Squitter MOPS (RTCA/DO-260A) to comply with items that are expected to be published in the ADS-B OUT Rule.

2. After George and Rich concluded their comments, the Meeting turned its attention to **Agenda Item #2** for Tom Pagano to give a short presentation on the specifics of how we got to this point of proposing changes to the UAT MOPS. Tom presented Working Paper UAT-WP22-02 as a few points detailing how the ADS-B OUT Rule had initially proposed being based on Change 2 to DO-260A and on DO-282A. However, as the ARC and the FAA reviewed comments from the NPRM and the ARC made their final set of recommendations back to the FAA, it became clear that further changes would be required, other than a few changes to test procedures that had been identified since Change 2 to DO-260A was published in December 2006. Tom additionally points out that one of the major changes that has been proposed to DO-260A was to change the broadcast rate of the Mode 3/A code when there is a change in the Code. This requirement which came out of the work performed by the RTCA/EUROCAE Requirements Focus Group (RFG) has caused the broadcast of the Mode 3/A Code to be moved from the 1090ES ADS-B TEST Message, and into the Emergency/Priority Status Message. Additionally, several countries have come to ICAO with the request to broadcast the Selected Altitude. After a review of the possibilities, RTCA SC-186 WG-3 has determined that the most effective way to accomplish this task is to revise the parameters that are being broadcast in the Target State and Status Message. All of the changes that are being considered by WG-3 and EUROCAE WG-51 Subgroup 1, in concert with RTCA SC-186 WG-6, have led them to conclude that there are changes that are required to the ADS-B MASPS as well as the 1090ES MOPS. This requires corresponding

changes to the UAT MOPS as well. The depth of the changes to the 1090ES MOPS will require that the ADS-B Version Number be rolled to two (2). If WG-3/WG-5 both agree on the proposed changes to the Target State Message, this alone will also require a change to the Version Number for UAT.

3. Next, under **Agenda Item #3**, the Meeting turned to Working Paper UAT-WP22-03 as presented by Dean Miller of Boeing regarding the cooperation between RTCA SC-186 WG-3/WG-5 and WG-6 for the purpose of identifying and retaining the proposed changes to the ADS-B MASPS. Dean Miller pointed out that he has accepted the co-chair position for WG-6. As part of a process of discussion among the SC-186 Leadership, it has been previously proposed that WG-6 members would be an integral part of the process of all WG-3/SG-1 meetings so that a set of Issue Papers could be maintained that would represent a list of proposed changes to the ADS-B MASPS which could be implemented at a point in time when it is agreed by RTCA SC-186 Plenary that an update to the MASPS is appropriate. Dean also pointed out that WG-6 will be supplying the same kind of support for RTCA SC-186 WG-5 during any proposed changes to the UAT MOPS as a result of changes deemed to be MASPS changes affecting all ADS-B data links.

4. Under **Agenda Item #4a**, the Meeting then began a review of Working Paper UAT-WP22-04 as Gary Furr reviewed of all of the currently proposed changes that could be included in what was originally referenced as “Change 3 to DO-260A.”
 - 4.1 Gary pointed out that WP22-04 represents the latest update to the proposed set of changes that have been reviewed by WG-3/SG-1 during their first two meetings. Gary accepted Action Item 22-01 to take WP22-04 and create a UAT specific set of changes that can be discussed in detail during the first face-to-face meeting of WG-5 in this effort to update DO-282A.
 - 4.2 Gary stepped down through all of the proposed changes in WP22-04 and was stopped several times for discussion on specific topics.
 - 4.3 Next under **Agenda Item #4b**, the Meeting began a review of Working Paper UAT-WP22-05 as Gary Furr presented the list of meetings that had been agreed to by WG-3/SG-1 for their production of a proposed DO-260B. This is for the purpose of beginning to think about a schedule of meetings for WG-5 to produce what will probably be referenced as DO-282B. It was pointed out that the schedule for both DO-260B and DO-282B must be considered the same so that their publications can be completed to support the timely release of the FAA ADS-B OUT Rule.

5. Next, under **Agenda Item #5**, the Meeting began the review of Working Papers that represent Issue Papers and other suggestions for potential changes to DO-282A that have been collected since the publication of DO-282A.
 - 5.1 The first Working Paper to be reviewed was UAT-WP22-06 under Agenda Item 5a as presented by Tom Mosher. This Issue Paper was written several years ago by Tom as a

place holder for discussions about the potential of separating some of the items in Table 2-64. Tom also points out that we may wish to consider removing the NIC_{BARO} parameter. George Ligler agreed with Tom, and points out that WG-3 is also having this same discussion. If WG-3 and WG-5 both agree that the NIC_{BARO} parameter has no value, then it can be removed from both Link MOPS and MASPS documents.

- 5.2 Gary Furr presented Working Paper UAT-WP22-07 as an Issue Paper that was written by Jonathan Hammer of Mitre several years ago when he was the Co-Chair of the subgroup that was developing the ASAS MOPS. Jonathan pointed out in the Issue Paper that there are static data elements in both Link MOPS, such as, but not limited to, the A/V Length and Width Codes, the Emitter Category and Position Reference Point that are constant throughout flight and should only be referenced in the ASAS MOPS. Jonathan proposes removing the definitions of these static parameters from the respective Link MOPS and defining them in the ASAS MOPS. After discussion, the Meeting agreed that this issue has been overcome by events and that there is no way that the just approved ASAS MOPS can be revised quickly to effect these proposed changes and that to propose any such changes to 1090ES or UAT would cause delay in the implementation of changes for both Link MOPS. This issue will be cataloged in the set of proposed changes, but will probably be given a change class of 3 or 4 (i.e., without being implemented into DO-260B).
- 5.3 The Meeting began to review Working Paper UAT-WP22-08 as presented by Chris Moody of Mitre as a list of items that Chris has collected over the years which might become potential items to discuss for change in DO-282A. It was agreed that Gary would add this list to the proposed set of UAT specific changes to be reviewed during the next meeting.
6. Under **Agenda Item #6**, the Meeting discussed the dates, times and length of the future meetings of RTCA SC-186 WG-5. The Meeting agreed that the currently planned future meetings in order to meet our schedule would be the following:

Meeting	Dates/Time	Meeting Location
#23	14 – 15 April 2009 9:00am – 5:00pm EDT	RTCA Headquarters, Washington DC
#24	3 – 4 June 2009 9:00am – 5:00pm EDT	RTCA Headquarters, Washington DC with RTCA SC-186 Plenary on 5 June 2009
#25	14 – 16 July 2009 9:00am – 5:00pm EDT	RTCA Headquarters, Washington DC
#26	11 – 12 August 2009 9:00am – 5:00pm EDT	RTCA Headquarters, Washington DC
#27 (if needed)	Week of 5 October 2009 Dates & Times TBD	RTCA Headquarters, Washington DC with RTCA SC-186 Plenary on 9 October 2009

7. The following is a summary of all of the Open Action Items from Meeting #22.

Action Number	Action Description	Assigned to	Status
22-01	Create a UAT MOPS specific set of proposed changes that start with the list of proposed changes that were identified in Working Paper UAT-WP22-04 for discussion during the April meeting.	Gary Furr	Due < 13 April
22-02	Consult with the SBS Program Office and ITT to determine if members of the ITT Team should be involved in the meetings of WG-5.	George Ligler	Due < 13 April
22-03	Consult with FAA AFS to determine if members of Flight Standards should be involved with meetings of WG-5.	Rich Jennings	Due < 13 April
22-04	Contact ICAO Aeronautical Communications Panel and Secretariat to begin discussions on the possibilities of holding meetings for the purpose of making updates to ICAO Document 9861 for UAT Technical Details and Implementation.	George Ligler	

8. The **Working Papers** for all WG-5 Meetings, as well as the Meeting Agendas, Meeting Minutes, and Meeting Schedules are posted on the ADS-B UAT MOPS web site maintained at the FAA William J Hughes Technical Center, located at:

<http://adsb.tc.faa.gov/WG5.htm>