

RTCA DO-242A ADS-B MASPS  
Ad Hoc Working Group  
Minutes of Kickoff Meeting at MITRE/CAASD  
December 6-8, 2000

**Thursday , December 7, 2000**

Tom Foster began the meeting with opening remarks and introductions.

The attendees included:

Tom Foster, Rockwell Collins, Inc.	Chuck Gresham, Alaska Airlines / ALPA	Christos Rekkas, Eurocontrol
J. Stuart Searight, FAA Tech. Center	Edward Hahn, Mitre/CAASD	Will Russell, Russell Systems
Jerry Anderson, FAA / AIR-130	Jonathan Hammer, Mitre/CAASD	David Spencer, MIT / Lincoln Laboratory
Ned Bacon, Raytheon	Steve Heppe, ADSI	Rick Stead, ARINC, Inc.
Joe Comeaux, ALPA	Gary Livac, FAA / AFS-400	Tony Warren, Boeing
Cynthia Cyrus, Trios Assoc.	James Maynard, UPS AT	Andrew Zeitlin, Mitre/CAASD
John Gonda, HQUSAF / DOD	Sethu Rathinam, Rockwell Collins, Inc.	

The agenda was reviewed and accepted with some changes to accommodate WG#4 and SC-193 presenting material to the Ad Hoc group.

Tom gave a briefing on his proposed work plan. (See included file: 242A-WP-1-01.pdf) Tom briefed his draft of criteria for selecting change items. This criteria stresses issues that are needed to support current activities related to other documents and the maturity of the applications to which those issues are related.

Steve Heppe wanted to make sure that some shortcomings of the MASPS that might not be particularly addressed by the various application or link groups will be revisited in rev. A. Examples he cited dealt with Turn Indicator and Vertical Rate. To accommodate these types of issues, the group agreed to add the following criteria items (which are included in 242A-WP-1-01.pdf):

- “MASPS clarifications and corrections”
- “Validation/Modification of questioned requirements”

In response to a concern raised by John Gonda that CDTI concerns were not directly mapped to criteria for selecting items to be addressed in DO-242A, the group reviewed the overall hierarchy of documents being written by various SC-186 groups. In that discussion, the ASA MASPS was discussed. It was shown that CDTI is an integral part of the list of applications that are to be included in initial version of ASA MASPS. That list currently is as follows:

- Enhanced Visual Approach
- Enhanced Visual Acquisition
- Approach Spacing (WG#1 recommended it be dropped from initial list)
- Conflict detection for GA pattern approach
- Surface situational awareness

John Gonda also felt that the military applications areas of DO-242 were not adequately addressed and should be reviewed.

Christos Rekkas, from Eurocontrol, gave a quick summary of application development currently happening in Europe. He will give a more in-depth briefing at the next meeting and discuss how these activities might effect the Ad Hoc group's work on DO-242A.

Tom continued his briefing with a tentative list of change items for DO-242A. After some discussion on these items, the following other bullets were added to Tom's list:

- Potentially address support of non-surveillance applications such as FIS-B
- Potential inputs from SC-193 and SC-194 activities
- Items raised at Ad Hoc kickoff meeting

John Gonda brought up the issue of whether DO-242A needed to be concerned with other surveillance /communication architectures being worked on to assist free flight such as the ATN and ADL build #2. The group felt that since ADS-B was a broadcast communication and ATN is being built for addressed communications, these issues are outside of the scope of the ADS-B MASPS.

The question was raised about the compatibility of the ADS-B MASPS with ADS-C provided surveillance services.

It was suggested that the Ad Hoc group needs to identify to SC-186 leadership about potential collisions in possible work activities (i.e. ADS-B Approach spacing vs. pFAST/aFAST).

The afternoon session was a joint meeting with WG#4. Jonathan Hammer gave a briefing from WG#4 covering the following issues:

- Determine boundaries & scope between ASA MASPS and ADS-B MASPS
- Overview / introduction of material that needs to be coordinated
- Specific changes (NIC/NAC, TCP) that WG#4 feels need to be addressed in DO-242A

WG#4 is taking a heavy application-based approach to what will be included in the ASA MASPS. A long discussion on TCP's ensued. Topics ranged from how many TCPs should be required based on planned future applications to whether any of these applications or the TCP's themselves were mature enough to be revisited in DO-242A. While some felt there are not yet applications close enough to implementation to address TCP, others felt strongly that this would be a big mistake to leave this important topic as is.

The flow down of requirements from the ASA MASPS to the ADS-B MASPS was discussed. It was mentioned that some parts of the current DO-242 will probably be moved into the ASA MASPS. This included some parts of section 2 and Appendices D and E. Since DO-242A is scheduled for a summer/fall ballot and the ASA MASPS is on schedule for the end of 2001, the idea of moving the material to appendices within DO-242A with a note stating the planned migration of the material to the ASA MASPS was raised. This would deal with the gap in publishing dates. It was also proposed that everyone would be best served if the two MASPS documents were published simultaneously so that the migration of material would be seamless.

Tony Warren next gave his briefing on NIC/NAC.

### **Friday, December 8, 2000:**

The meeting was reconvened and the group started by discussing the Selection Criteria for inclusion of changes in DO-242A

It was questioned exactly what was meant by a “reasonably mature concepts of operation.” More specificity was added to this criterion and “reasonably mature” was replaced with “well defined”. New bullets were added under this criterion of which an application must meet at least one of the following:

- Have complete application descriptions;
- Initial validation through early operational evaluation experience;
- Have supporting analysis for candidate stressing applications;

It was proposed that maybe DO-242A should only address concerns raised by work already done (i.e. 1090 MOPS, ACM ConOps). Tom disagreed saying that the ADS-B MASPS needs to lay a foundation upon which links can be developed and near term and longer term applications can be built. If we are to only respond to existing link and application definitions we will specify a foundation that has little potential to support future growth.

Further discussion dealt with how to best filter which application requirements we should consider for DO-242A. While it was proposed that WG#1 or WG#4 might be that filter, it was decided that those decisions should be left with this ad hoc group.

The discussion regarding how to filter applications continued with the debate turning towards the question of whether the concerns of the applications we consider be from the broader definition of surveillance that includes weather, or should it only be for those applications relating to traffic separation assurance. The discussion concluded with the following bullet being added to the criteria for selecting DO-242 change items:

- For a new requirement to be considered, it should be needed to support surveillance for traffic separation assurance for either air-air or ground operations.

Next, the group moved on to how we will track raised issues, possible resolutions, and their current status. Steve Heppe volunteered to draft a “Change Request/Problem Report” or “Issue Paper” to document submitted issues for consideration into DO-242A, the discussions about them, and perhaps the arguments for or against their inclusion in rev. A. This form will hold the details of issues and how they might be addressed in a revision of the MASPS. This will compliment the status tracking matrix that will also be used. Drafts of both these forms will be distributed as soon as Steve and Stuart generate drafts of these two documents.

SC-193 (surface mapping) telephoned into the meeting to brief the ad hoc group on the issues they feel need consideration for DO-242A. After a brief high-level discussion, it was agreed that we should have a face-to-face presentation in the future. Among their items for consideration are broadcasting of the following:

- Navigation Accuracy Category (NAC) for surface movement
- Aircraft make/model information
- Navigation position reference location on aircraft
- How to broadcast heading at Vstop
- Brake on

The meeting was concluded with the scheduling of the next several meetings, the setting of tentative agenda items for the next meeting, and a review of assigned action items as shown below.

The next meeting of the DO-242A Ad Hoc Working Group will begin at 1:00PM Monday, January 22 and go through Wednesday January 24. These meetings will tentatively be held at Mitre/CAASD.

Agenda Items for the January meeting:

- Eurocontrol briefing
- WG#4 briefing on TCPs/intent
- Have a follow-up discussion on NIC/NAC
- Review change list and Jim Maynard's preliminary assessment of submitted comments
- Prepare status briefing/questions/issues for Tom to present to plenary in February

Future meetings are tentatively scheduled as follows:

- February 27 – March 2, (RTCA?)
- April 3– 5, Brussels (Eurocontrol?)

Action Number	Action Item Description	Assigned to	Status
1-1	Develop template for "Issue Paper" form to be used for submitted issues to be addressed by MASPS	Steve Heppe	Draft completed
1-2	Transcribe all submitted issues into our Issue Tracking Matrix and Change Issue Forms (where necessary)	Stuart Searight	To be completed by 12/15/00
1-3	Give a preliminary evaluation on submitted comments as to whether those comments should be included in DO-242A or be deferred to later revisions of the MASPS.	Jim Maynard	To be distributed before January meeting

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Handouts from  
DO-242A ADS-B MASPS  
Ad Hoc Working Group Meeting  
7-8 December 2000

1. Agenda (001207-agenda.pdf)
2. Presentation "ADS-B MASPS Work Plan" from Tom Foster (242A-WP-1-01.pdf)
3. Document "Minimum Aviation System Performance Standards (MASPS) For Airborne Surveillance and Separation Assurance (ASSA)" Draft 0.1f dated September 28, 2000 from WG4
4. Paper "ADS-B 1090 MHz Rev A Comments Related to MASPS Changes" with WG3 position comments from Stu Searight (242A-WP-1-03.pdf)
5. Paper "Tools to Assist DO-242A Ad Hoc Group" from Stu Searight (242A-WP-1-02.pdf)
6. Paper "Proposed MASPS Changes" from WG1 (242A-WP-1-04.pdf)