

ASAS MOPS Group Meeting Minutes #26

The attendees included the following:

Last Name	First Name	Organization
Bachman	Larry	APL
Bulger	Chip	FAA
Burns	Bob	FAA TC
Chartrand	Ryan	NASA
Eich	Tom	ACSS
Eftekari	Robert	MITRE/CAASD
Garcia	Michael	ITT
Green	Charisse	FAA
Hammer	Jonathan	MITRE/CAASD
Kaliardos	Bill	FAA
Kirk	Dan	MITRE
Maynard	Jim	Garmin
Meyers	Jeff	FAA
Miller	Dean	Boeing
Moody	Chris	MITRE
Palmer	Mike	NASA
Petri	Mike	FAA
Rathinam	Sethu	Rockwell Collins, Inc.
Scopellite	Sebastian	ACSS
Shafaat	Taji	Boeing
Smith	Bernald	Soaring Society of America
Summers	Harold	Helicopter Association International
Teetor	Tom	Defense Concept Associates, Inc.
Walker	Don	Honeywell
Wichgers	Joel	Rockwell Collins Inc.

The ASAS MOPS group meeting, on 21 Apr 2008, started at 9:15 am (EST).

MONDAY:

1. Agenda
 - a. Introductions
 - b. Review of the MOPS FRAC comments.
 - i. First, review all the non-concur critical (C) comments from FAA AIR-130, Rockwell Collins, Honeywell, and UPS.
 - ii. Then, review all substantial (S) comments.
 - iii. All editorial (E) comments will be handled by the editorial team.
2. All group discussions and comment dispositions will be captured with-in the MOPS FRAC comment matrix file. A consolidated matrix file will be archived and placed on the ASSAP website (reference ASSAP-26-04).
3. Reviewed FAA AIR-130 Critical Comments.
 - a. Remaining Non-Concurs
 - i. TIS-B/ADS-R Service Status: AIR-130 is requesting for requirements in the MOPS document for TIS-B and ADS-R Service Status. They believe that the flight crew needs to know

how complete the surveillance picture is. Currently the SBS and Link MOPS details are unknown.

Options:

1. Insert provisional language into our document
 2. Develop detailed requirements (estimate 6+ months).
- ii. TIS-B & ADS-B Correlation Requirements: Currently this is not required (optional) since this condition is rare. But will this really be rare due to many DO-260 (Version 0) equipped aircraft?
Action Item (Mike Garcia, ITT): Determine if the ground system plans to ignore DO-260 (Version 0) equipped aircraft and transmit TIS-B. If so, TIS-B & ADS-B correlation must be required.
- iii. Standardized Symbol Set: AIR-130 is requesting for a standardized symbol set for cross-cockpit commonality. Also for TCAS integrated displays, there are some issues for meeting the current TCAS MOPS for traffic symbols. The CDTI section currently does not have a recommended symbol set.

Options:

1. Approve as is
 2. Create a recommended symbol set based on best engineering judgment and current experience (weeks)
 3. Create a symbol set based on extensive research and evaluation (1+ year)
4. Reviewed Honeywell Critical Comments.
5. Will review Rockwell Collins and UPS critical comments on Tuesday.
6. Began reviewing substantial comments in the master file. Ignored comments from Joel (Rockwell Collins); he will send a revision on Tuesday. Mainly reviewed comments from Garmin.

TUESDAY:

7. Reviewed Brandao (Honeywell) Critical Comments
 - a. Remaining Non-Concurs
 - i. TIS-B/ADS-R Optional: Honeywell is requesting that TIS-B and ADS-R be optional requirements since they cannot be operationally tested. FAA AIR-130's position is that this is required.
8. Reviewed Joel W. (Rockwell Collins) Critical Comments
 - a. Remaining Non-Concurs; "UPDATE", as of the morning of 24 Apr 08, Rockwell Collins (Sethu) has removed their non-concur status for this release of the document, but they believe that these are still critical level issues.

- i. EV Acq Threshold Requirements for all traffic (comment 51): Rockwell Collins is requesting that only traffic within the EV Acq coverage volume (10NM) follow the threshold requirements (e.g. 0.5 NM horizontal accuracy).
 - ii. Own-ship TOA (comment 73): Need more timing/latency requirements for own-ship data between ASSAP and the CDTI. Group believes that the current requirements are sufficient.
9. Reviewed UPS (Bob H.) Critical and Substantial Comments
10. Reviewed Garmin Substantial Comments
11. Reviewed FAA AIR-130 Substantial Comments
12. Reviewed Don Walker's and Dan Kirk's new proposals for Report Validity Test, Inter-Source Correlation, and Flight Test.
 - a. The proposals were reviewed and updated real-time and then included in the latest MOPS document.
 - b. **Action Item (Jim, Garmin)**: The group discussed concerns about seeing potential own-ship TIS-B shadows. The group asked Jim to provide some information regarding his experience with this issue with their existing UAT/TIS-B equipment.
 - c. **Action Item (Don, Honeywell)**: Don will provide some notes describing issues relating to correlation of TIS-B with own-ship.
 - d. **Action Item (Dan Kirk)**: Dan will provide final editorial comments to these sections and also provide new performance values for correlation.
 - e. **Action Item (Don, Honeywell)**: Don will provide a white paper regarding the equations used for the Report Validity Test.

WEDNESDAY:

13. Reviewed FAA AIR-130 Set 2 Substantial Comments
14. Reviewed Ed Lester Substantial Comments
15. Reviewed Randy Bone Comments
16. Reviewed Bandao (Honeywell) Substantial Comments
17. Reviewed Bob Burns Comments– No changes.
18. Reviewed Dean (Boeing) Comments
19. Reviewed Bob Hilb's new proposed sections. New sections were updated real-time and inserted into the MOPS document.

20. Reviewed Honeywell Consolidated Substantial Comments
21. Reviewed Joel W. (Rockwell Collins) Substantial Comments (reference ASSAP-WP26-06)
22. Reviewed Petri Comments
23. Reviewed Sethu (Rockwell Collins)
24. CDTI Coordination Items:
 - a. AIR-130 Comment 58: May add a flight test procedure for validating closure rate or differential ground speed during EV Approach operations.
 - b. BURNS Comment 52: What will the ground system or others use the CDTI installed indication for? This item needs to be discussed at Plenary. Currently the group does not plan to address this item.
 - c. Joel Comment 77: Tom Eich (ACSS) will draft a note describing ADS-B/TIS-B/ADS-R/TCAS tracking when Heading is failed.
 - d. Joel Comment 87: The health of ASSAP needs to be depicted to the pilot on the CDTI.
 - e. Brandao Comment 10: No change. Each Application status state is needed for the CDTI. The Application status I/O requirements are complete as currently defined.
25. Misc. List
 - a. Verify that all shalls are bolded.
 - b. Added a general requirement in Section 2.2.2.5.1 saying that the output data shall be calculated and updated at least once per second. **Action Item (Bob Burns):** Bob will create a new test for this requirement.
 - c. General editorial comment to make “horizontal position uncertainty” consistent throughout the document.
 - d. **Action Item (Joel):** Joel will provide some notes regarding the implications of using ground speed from GPS sources. Ground Speed may be based on the planes current geo or MSL altitude.
26. Plan for Approval of the MOPS Document (Discussion for Plenary):
 - a. All Critical and Substantial comments have been reviewed and dispositioned.
 - b. Forward Plan:
 - i. The editorial group will incorporate all the changes based on this week’s disposition of comments (5 weeks). Note: Assigned action items need to be worked in parallel and provided to the editorial group ASAP.
 - ii. Re-Submit document for “limited” FRAC comments.
 1. No Critical (C) comments

2. Substantial (S) comments will be received only related to the changed sections (change bars).
 3. Editorial (E) comments will be received for the whole document.
- iii. One (1) more meeting (about 2 months from now) to review and disposition comments before a special Plenary to approve the document.
- c. Summary of Remaining Non-Concurs
- i. TIS-B/ADS-R Service Status (AIR-130): AIR-130 is requesting for requirements in the MOPS document for TIS-B and ADS-R Service Status. They believe that the flight crew needs to know how complete the surveillance picture is. Currently the SBS and Link MOPS details are unknown.
Options:
 1. Insert provisional language into our document
 2. Develop detailed requirements (6+ months).
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 - iii. Standardized Symbol Set (AIR-130): AIR-130 is requesting for a standardized symbol set for cross-cockpit commonality. Also for TCAS integrated displays, there are some issues for meeting the current TCAS MOPS for traffic symbols. The CDTI section currently does not have a recommended symbol set.
Options:
 1. Approve as is
 2. Create a recommended symbol set based on best engineering judgment and current experience (weeks)
 3. Create a symbol set based on extensive research and evaluation (1+ year)
 - iv. TIS-B/ADS-R Optional (Honeywell): Honeywell is requesting that TIS-B and ADS-R be optional requirements since they cannot be operationally tested. FAA AIR-130's position is that this is required.
- d. Misc. Issues:
- i. CDTI Installed Bit: What will the ground system or others use this indication for? Currently the group does not plan to address this item.
 - ii. EV Acq Threshold Requirements for all traffic (RCI critical comment 51): Rockwell Collins is requesting that only traffic within the EV Acq coverage volume (10NM) follow the threshold requirements (e.g. 0.5 NM horizontal accuracy).

- iii. Own-ship TOA (RCI critical comment 73): Need more timing/latency requirements for own-ship data between ASSAP and the CDTI. Group believes that the current requirements are sufficient.

27. Editorial Group (5 weeks):

- a. Chris M.
- b. Bob B.
- c. Tom E.
- d. Mike P.

28. Group Meeting Ended 23 Apr 08; 5:30PM.