

ADS-B MASPS DO-242A AdHoc Working Group Report

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MASPS Change Process

- Criteria defined for considering changes for inclusion in Rev A
- Use of Change Issue Papers (IP) to document issues and considerations
 - Change Issue Paper template available on Web
 - Use Tracking Matrix for quick summary
- Current Status
 - 20 IP Total
 - 18 Open
 - 1 Deferred
 - 1 Closed

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MASPS for ADS-B Rev. A

Tracking Information (committee secretary only)	
Change Issue Number	
Submission Date	
Status (open/closed/deferred)	
Last Action Date	

Short Title for Change Issue:	
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MASPS Document Reference:	Originator Information:
Entire document (y/n)	Name
Section number(s)	Phone
Paragraph number(s)	E-mail
Table/Figure number(s)	Other

Proposed Rationale for Consideration (originator should check all that apply):	
<input type="checkbox"/>	Item needed to support of near-term MASPS/MOPS development
<input type="checkbox"/>	DO-260 ED-102 1090 MHz Link MOPS Rev A
<input type="checkbox"/>	ASA MASPS
<input type="checkbox"/>	TIS-B MASPS
<input type="checkbox"/>	UAT MOPS
<input type="checkbox"/>	Item needed to support applications that have well defined concept of operation
<input type="checkbox"/>	Has complete application description
<input type="checkbox"/>	Has initial validation via operational test/evaluation
<input type="checkbox"/>	Has supporting analysis, if candidate stressing application
<input type="checkbox"/>	Item needed for harmonization with international requirements
<input type="checkbox"/>	Item identified during recent ADS-B development activities and operational evaluations
<input type="checkbox"/>	MASPS clarifications and correction item
<input type="checkbox"/>	Validation/modification of questioned MASPS requirement item
<input type="checkbox"/>	Military use provision item
<input type="checkbox"/>	New requirement item (must be associated with traffic surveillance to support ASAS)

Nature of Issue:	<input type="checkbox"/> Editorial	<input type="checkbox"/> Clarity	<input type="checkbox"/> Performance	<input type="checkbox"/> Functional
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Issue Description (attach additional sheets if necessary):

Originator's proposed resolution if any (attach additional sheets if necessary):

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Note: Attach additional sheets to capture supporting discussion with source and date.

ADS-B MASPS Web Site

- Use of FAATC Web site
 - Open communications to parties
 - Contains minutes, working papers, IP template, current IPs, meeting schedule

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

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Criteria for Selecting Change Items

- MASPS issues that need to be addressed to support near-term MASPS/MOPS development
 - DO-260/ED-102 1090 MHz Link MOPS Rev A (6/2002)
 - ASA MASPS (12/2001)
 - TIS-B MASPS (6/2001 ?)
 - UAT Link MOPS (6/2001 ?)
- Address applications change items only for applications that have well defined concepts of operation. At least one of:
 - Have complete application descriptions
 - Initial validation through early operational evaluation experience
 - Have supporting analysis for candidate stressing applications
- Address items needed for harmonization with international requirements
- Address items identified during recent ADS-B development activities and operational evaluations
- MASPS document clarifications and corrections
- Validation/modification of questioned MASPS requirements
- For a new requirement to be considered, it should be needed to support surveillance for traffic separation assurance
- Military use provisions

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Initial Candidate MASPS Change Items

- WG 3 1090 MHz ADS-B MOPS Items
 - Chris Moody's comments 4-7 and 16
 - Jim Maynard's comments 22, 34, and 37
 - Bob Hilb's comments 2, 5, and 6
 - Gary Livack's comments 2-5, 11, 14, 15, 17, and 18
- WG 4 Items
 - Position and integrity (NIC/NAC vs NUC)
 - TCP concepts and issues
- Potential inputs from WG 1
- Potential inputs from Eurocontrol
- Potential inputs from SC-193/SC-194
- Potentially address non-surveillance application support
- Descriptive material in Chapters 1 & 2 and Appendix D & E to be revised and/or moved to ASA MASPS

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ADS-B Position & Integrity Issue

- Proposal to split navigation accuracy and integrity into separate metrics versus current Navigation Uncertainty Category (NUC)
 - Navigation Accuracy Category (NAC)
 - Navigation Integrity Category (NIC)
- Concept accepted by MASPS group, however, several issues need to be resolved
 - Backward compatibility requirements
 - Category level requirements

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Aircraft Intent Issue

- Following items to be addressed by MASPS group:
 - Need for including TCP type information to better define target path at TCP
 - Need for including near-term intent information to aid track quality when TCP is not available, e.g. target heading, target airspeed. [Note: this also aids ground automation use of ADS-B data]
 - Need for defining intent validity requirements
 - Needed clarifications of the MASPS to minimize misinterpretation
- Not able to address some TCP requirements, e.g. number needed, transmission characteristics
 - Lack definition of operational concepts and procedures based on use of TCPs
 - May defer to next MASPS revision

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ADS-B Security Issue

- What level of security is needed?
- How to be addressed in the ASA and ADS-B MASPS?
 - Need for support of anonymity and methods to accomplish
 - Need for protection from spoofing and methods to accomplish
- Plenary guidance requested

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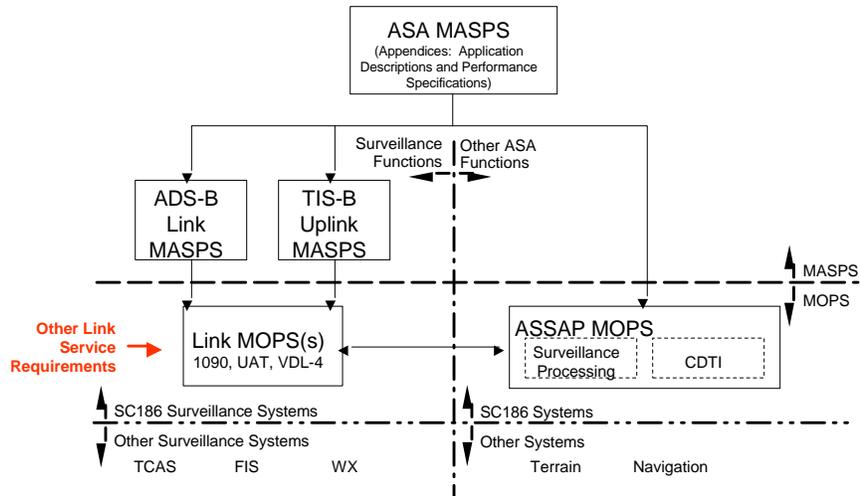
Non-ADS-B Link Requirements

- Current criteria for accepting new changes
 - “For a new requirement to be considered, it should be needed to support surveillance for traffic separation assurance”
- Group has received several change requests that do not meet this criteria, e.g. MET reporting, a/c data for wake vortex modeling, etc.
- Proposed ADS-B links have multi-service capabilities, e.g. support for FIS-B
- Issue: “Should the ADS-B MASPS address the requirements for these other services?”
 - Recommend these additional requirements to NOT be included in ADS-B MASPS
 - Suggest that Link MOPS accept other requirements sources besides ADS-B MASPS for these services
 - ADS-B MASPS to address requirement for links to assure ADS-B data delivery when supporting shared services

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SC-186 Document Relationship Chart



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DO-242A ADS-B MASPS Work Plan

(As reported at Dec 2000 Plenary meeting)

- Rev. A to support near term related MASPS and MOPS development timelines. Therefore:
 - Need to identify change areas/items needed
 - Prioritize and limit to achieve schedule
- **Target completed draft to plenary in 6-9 months**
- Work as AdHoc Working Group reporting to Plenary
- Work by frequent working meetings and interim coordination telecons
 - Most meetings to be held in Washington DC area
 - One or two meetings in Europe
- Assemble a Distribution List and potentially use a Web site for dissemination of AdHoc Group materials

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Schedule Issue

- Original plan for meetings every 4-6 weeks, with telecons as needed, to achieve schedule
- Work effort large and growing
- Inputs from other SC186 groups recommending parallel schedules to better coordinate documents
- Therefore, recommend changing ADS-B MASPS completion schedule to 12/2001
- Plenary guidance requested

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Meeting Summary

- Past Meetings
 - Dec 7-8 MITRE
 - Kick-off meeting
 - ASA MASPS/ADS-B MASPS split
 - NIC/NAC vs NUC discussion
 - Change criteria
 - Jan 22-24 MITRE
 - Intent/TCP discussion
 - Eurocontrol ADS-B briefing
 - Change item assessment/task assignments
- Future Meetings
 - Feb 26-28 RTCA
 - April 3-6 Brussels

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