

MASPS for ADS-B Rev. A

Tracking Information (committee secretary only)	
Change Issue Number	44
Submission Date	7/12/01
Status (open/closed/deferred)	DEFERRED
Last Action Date	2/22/02

Short Title for Change Issue:	Source Data requirements for ADS-B Broadcast should be explicitly documented.
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MASPS Document Reference:		Originator Information:	
Entire document (y/n)	yes	Name	Tony Warren, Boeing ATM
Section number(s)		Phone	206-657-4492/ 206-523-1584
Paragraph number(s)		E-mail	Anthony.w.warren@boeing.com
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
x	DO-260/ED-102 1090 MHz Link MOPS Rev A
<input type="checkbox"/>	ASA MASPS
<input type="checkbox"/>	TIS-B MASPS
x	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
x	Item needed for harmonization with international requirements
x	Item identified during recent ADS-B development activities and operational evaluations
x	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
<u>Issue Description:</u>								
<p>(1) Need to convey required inputs for ADS-B broadcasts to other organizations, e.g. other standard bodies such as RTCA, AEEC, ICAO, service providers, and avionics vendors.</p> <p>(2) Document need for standardization of airborne inputs to create special ADS-B parameters such as Navigation Accuracy and Integrity Category (NAC, NIC), and Intent Parameters such as Target Altitude, Target Heading / Track and Trajectory Change Points (TCP's).</p>								

<u>Originator's proposed resolution:</u>
Develop MASPS appendix documenting data inputs and data source requirements to support broadcast of ADS-B parameters. The appendix will explicitly document avionics source requirements for existing ADS-B state vector reports as well as source requirements for evolving parameters such as TCP's.

Originator's proposed resolution(continued):

Proposed Process for Documenting Source Requirements:

- (1) Identify Problem Areas for ADS-B Source Data
 - State Vector
 - Mode Status
 - On-Condition Reports
- (2) Evaluate Alternative Solutions to Source Data Problems
- (3) Document Recommended Solutions, e.g.
 - no data available/ exemption solutions
 - acceptable alternatives for source data
 - evolution / standardization of input sources needed

Proposed MASPS Appendix Outline

1.0 Existing Data Sources for DO242A MASPS

- State Vector
- Mode Status
- OC Reports – Air Reference Vector

2.0 Evolving Data Sources for DO242A MASPS

- Target Altitude OC Report
- Target Heading/Track OC Report
- Other State Data (NAC_p, NAC_v), ...
- Airplane Specific Data (Nav Center, Airplane Size), ...

3.0 Evolving Data Sources Intended for Future ADS-B MASPS

- Trajectory Change Point (TCP) OC Report
- TCP+n OC Report
- Other ?

Working Group 6 Deliberations:

July 19, 2001: This Issue Paper was reviewed at the July WG6 meeting. This Issue Paper was accepted and it was agreed that the proposed Appendix should be included in Revision A.

February 22, 2002: Due to the need to work on other aspects of DO-242A development, there was not sufficient resources for WG6 to develop this appendix in time for incorporation into Revision A. Therefore, it was decided that this Issue Paper must be deferred to a future revision of the ADS-B MASPS.