

# MASPS for ADS-B Rev. A

Tracking Information (committee secretary only)	
Change Issue Number	9
Submission Date	1/11/01
Status (open/closed/deferred)	CLOSED
Last Action Date	5/24/01

Short Title for Change Issue:	Use of velocity subtypes 3 and 4.
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MASPS Document Reference:		Originator Information:	
Entire document (y/n)		Name	Chris Moody / Mitre/CAASD
Section number(s)		Phone	(703) 883-5506
Paragraph number(s)		E-mail	cmoody@mitre.org
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
<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
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 checked="" type="checkbox"/>	Functional
<b>Issue Description:</b> The attached comment <b>questioning the need for velocity subtypes 3 and 4 which use magnetic heading and airspeed</b> was presented to the SC-186 plenary in reference to the ballot on the 1090 MHz ADS-B MOPS (DO-260). It was agreed that this issue would be deferred from consideration in DO-260 until it was first considered for inclusion in a future revision of the ADS-B MASPS. Included with the attached comment is the official response from working group 3, which was charted with development of DO-260.								

Originator's proposed resolution if any: Proposed resolution is attached with comment from DO-260 ballot.

**Working Group 6 Deliberations:**

May 24, 2001: This Issue Paper was discussed by the ad hoc group at their May 2001 meeting. Action Item 4-14 called for the consolidation of all Issue Papers related to air-referenced parameters. This Action Item was completed with the submission of IP37 and the supporting presentation documented in 242A-WP-5-13 and 242A-WP-5-13a. It was agreed to accept IP37 and CLOSE this Issue Paper and others related to air-referenced parameters (IPs 9, 27 & 28).

**ADS-B 1090 MHz Rev A Comments Related to MASPS Changes  
RTCA SC-186 WG-3/EUROCAE WG-51 SG-1**

#	Comment Author	DO-260 Section	Page	Comment / Rationale	Suggested Resolution
13	C.Moody (4)	2.2.3.2.6.1.2	71	<p>Subtypes 1 and 2 use N/S E/W (velocity over ground) and Subtypes 3 and 4 use Magnetic Heading and Airspeed. The subtypes that include magnetic heading and airspeed are to be used only when velocity over the ground is “not available” according to Table 2-17. Is the “not available” meant in a <i>failure</i> or <i>installation doesn’t support</i> context? If it is for failure of velocity over ground, wouldn’t that likely include failure of position as well? And if that’s the case, is subtype 3 and 4 really worth the trouble given it is reported mutually exclusive with velocity over ground? If it is worth it, is it required that every installation support a magnetic heading and ground speed input?</p> <p><b>WG#3 Position:</b> <i>It is possible to have a simpler navigator which would use subtypes 3 &amp; 4 due to “not available” conditions and not just “failure” conditions. This would mean that subtypes 3 &amp; 4 are required by 1090 MHz ADS-B to stay in compliance with DO-242A.</i></p> <p><i>Also, WG#3 feels the MASPS should be revised so that it is NOT required to provided both ground and air referenced data at the same time.</i></p>	Forget velocity subtypes 3 and 4. They are more trouble than they are worth.