

CHANGE ISSUE – RTCA/DO-242

MASPS for ADS-B Rev. A

Tracking Information (committee secretary only)	
Change Issue Number	43
Submission Date	06/04/01
Status (open/closed/deferred)	WITHDRAWN
Last Action Date	08/30/01

Short Title for Change Issue:	The Need for "Aircraft Address" in Very Dense Environments
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MASPS Document Reference:		Originator Information:	
Entire document (y/n)		Name	Bill Flathers
Section number(s)		Phone	(703) 883-7578
Paragraph number(s)		E-mail	Bill.Flathers@AOPA.org
Table/Figure number(s)		Other	

Proposed Rationale for Consideration (originator should check all that apply):	
<input checked="" type="checkbox"/>	Item needed to support of near-term MASPS/MOPS development
<input checked="" type="checkbox"/>	DO-260/ED-102 1090 MHz Link MOPS Rev A
<input checked="" type="checkbox"/>	ASA MASPS
<input type="checkbox"/>	TIS-B MASPS
<input checked="" type="checkbox"/>	UAT MOPS
<input checked="" type="checkbox"/>	Item needed to support applications that have well defined concept of operation
<input checked="" type="checkbox"/>	Has complete application description
<input checked="" 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 checked="" 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 checked="" type="checkbox"/>	Performance	<input checked="" type="checkbox"/>	Functional
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Issue Description:

Without qualification, the Oshkosh "Airventure" is the most demanding environment for any ADS-B technique, and bandwidth conservation becomes paramount. The question is whether *all* flight environments *always* require an aircraft address (whether the 24-bit ICAO address, or an anonymous one) to be included in ADS-B messages. Currently, in the Oshkosh air show environment, even the flight identifier is omitted in voice radio communications, and only the aircraft color/type is used for identification in such verbal communications. In addition, in most GA VFR operations the only traffic information that the pilot really needs is relative bearing/range and altitude of the target. It seems that blindly issuing aircraft addresses as part of each ADS-B message in such dense environments is pointless, especially given that that information would not be used by any application and that the bandwidth could be used much more effectively. While the Oshkosh phenomenon is readily identified as a demanding surveillance scenario, there are several other situations in which simple "blip" information is all that the pilot needs.

Originator's proposed resolution if any:

Make provision in the MASPS for ADS-B messages that can be issued, when appropriate, without an "aircraft address".

Working Group 6 Deliberations:

August 30, 2001: This Issue Paper was reviewed at the August WG6 meeting. It was agreed by the paper's author to withdrawal this Issue Paper because it was determined that there was no measurable benefit in bandwidth. The author will submit an addendum for this paper expanding on the reasons for its withdrawal (AI 7-12).

Author's Note on Issue Paper Withdrawal:

This Issue Paper introduced the notion of eliminating the ADS-B address field as a means of conserving bandwidth in very dense operating environments. However, further examination reveals the bandwidth savings to be rather small, especially when compared to the extensive overhaul of the message formats and transmission protocols. Therefore, this proposal is withdrawn by the author. – Bill Flathers, in response to AI 7-12.