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**Safety, Performance, and Interoperability  
Requirements Document for Enhanced Traffic  
Situational Awareness During Flight Operations  
(ATSA-AIRB)**

RTCA DO-319  
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## FOREWORD

This document was prepared by the “ADS-B Requirements Focus Group” (RFG). The RFG was established through the EUROCONTROL/FAA Memorandum of Cooperation. The RFG operates as a joint RTCA Special Committee 186 (SC-186) and EUROCAE Working Group 51 (WG51) activity. This document was approved by the RTCA Program Management Committee (PMC) on March 17, 2010:

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## TABLE OF CONTENTS

<b>CHAPTER 1 INTRODUCTION.....</b>	<b>1</b>
1.1 PURPOSE OF THE DOCUMENT .....	1
1.1.1 ATSA-AIRB application.....	2
1.1.2 Use of document for approvals .....	3
1.2 SCOPE OF THE DOCUMENT.....	4
1.2.1 ATSA-AIRB context.....	4
1.2.2 Assumed airborne & ground generic surveillance functional architecture.....	5
1.3 DEFINITION OF TERMS .....	8
1.4 STRUCTURE OF THE DOCUMENT.....	11
1.5 REFERENCES .....	12
1.5.1 ICAO.....	12
1.5.2 EUROCONTROL .....	13
1.5.3 EUROCAE/RTCA .....	13
<b>CHAPTER 2 APPROACH AND METHODOLOGY .....</b>	<b>15</b>
2.1 DOCUMENT DEVELOPMENT PROCESS .....	15
2.2 METHODOLOGY .....	15
2.2.1 Operational Services and Environment Definition (OSED).....	15
2.2.2 Safety and Performance Requirements (SPR).....	16
2.2.3 Interoperability Requirements (INTEROP) .....	17
2.3 KEY TERMS.....	17
2.3.1 Uses of requirements and recommendations and key words.....	17
2.3.2 Assumptions.....	18
2.3.3 Requirements .....	18
2.3.4 Recommendations .....	19
<b>CHAPTER 3 SAFETY &amp; PERFORMANCE REQUIREMENTS (SPR) .....</b>	<b>20</b>
3.1 BACKGROUND/INTRODUCTION .....	20
3.1.1 OPA process.....	20
3.1.2 OSA process.....	21
3.1.3 SPR process.....	23
3.2 ASSUMPTIONS.....	25
3.2.1 General assumptions .....	25
3.2.2 Environmental assumptions .....	26
3.2.3 Receive Aircraft Domain assumptions.....	27
3.2.4 Transmit Aircraft Domain assumptions .....	28

3.2.5	Ground Domain assumptions .....	29
3.3	OPERATIONAL REQUIREMENTS .....	30
3.4	AIRB EQUIPMENT REQUIREMENTS .....	33
3.4.1	Functional requirements for AIRB Equipment .....	33
3.4.2	Safety and Performance Requirements for AIRB Equipment .....	37
3.5	AIRB DATA REQUIREMENTS .....	40
3.6	RECOMMENDATIONS AND DESIGN CONSIDERATIONS .....	43
3.7	TRAINING CONSIDERATIONS.....	47
<b>CHAPTER 4 INTEROPERABILITY REQUIREMENTS .....</b>		<b>49</b>
4.1	PURPOSE OF INTEROPERABILITY REQUIREMENTS .....	49
4.2	SCOPE OF INTEROPERABILITY REQUIREMENTS .....	49
4.2.1	ATSA-AIRB domains .....	49
4.3	ATSA-AIRB INTEROPERABILITY REQUIREMENTS .....	51
4.3.1	Minimum data .....	51
4.3.2	Identity .....	52
4.3.3	Horizontal position.....	53
4.3.4	Vertical position .....	54
4.3.5	Horizontal velocity.....	55
4.3.6	Vertical rate.....	56
4.3.7	Latency impact on surveillance quality indicators .....	56
<b>ANNEX A - OPERATIONAL SERVICES AND ENVIRONMENT DEFINITION .....</b>		<b>58</b>
A.1	INTRODUCTION .....	58
A.2	CONTEXT.....	59
A.2.1	Traffic situational awareness.....	59
A.2.2	Out the window scan.....	59
A.2.3	Listening to radio communications .....	60
A.2.4	Other sources of information.....	60
A.3	OBJECTIVE.....	61
A.4	PROCEDURE DESCRIPTION.....	62
A.4.1	Current procedures .....	62
A.4.2	Proposed procedures .....	64
A.4.3	Roles and responsibilities.....	76
A.4.4	Impact on phraseology .....	76
A.5	AIRSPACE CHARACTERISTICS AND OPERATIONAL ENVIRONMENT .....	77
A.5.1	Airspace characteristics.....	77
A.5.2	CNS requirements .....	77
A.5.3	Meteorological conditions.....	77

A.5.4	ADS-B equipage .....	77
A.6	ABNORMAL MODE.....	78
A.7	ASSUMPTIONS AND OPERATIONAL REQUIREMENTS.....	79
A.7.1	Assumptions.....	79
A.7.2	Operational Requirements.....	80
<b>APPENDIX A.1 – ATS AIRSPACE CLASSES – SERVICES PROVIDED AND FLIGHT REQUIREMENTS (ICAO ANNEX 11) .....</b>		<b>83</b>
<b>APPENDIX A.2 – SAMPLE SCENARIOS.....</b>		<b>84</b>
<b>ANNEX B - OPERATIONAL PERFORMANCE ASSESSMENT .....</b>		<b>89</b>
B.1	INTRODUCTION .....	89
B.1.1	Purpose.....	89
B.1.2	The CNS/ATM system.....	89
B.1.3	Definitions.....	90
B.2	ATSA-AIRB OPERATIONAL PERFORMANCE ASSESSMENT.....	91
B.2.1	Scope.....	91
B.2.2	Approach.....	91
B.3	REQUIRED INFORMATION FOR THE ATSA-AIRB APPLICATION.....	92
B.3.1	Operationally required information.....	92
B.3.2	Required data items at the input of the AIRB Equipment .....	93
B.4	ANALYSIS OF OPERATIONAL OBJECTIVES .....	94
B.5	DEFINITION AND SPECIFICATION OF OPERATIONALLY REQUIRED INFORMATION.....	95
B.5.1	Relative horizontal position .....	95
B.5.2	Altitude .....	111
B.5.3	Aircraft Identification.....	112
B.5.4	Direction (ground track).....	113
B.5.5	Vertical tendency .....	114
B.5.6	Speed information (ground speed) .....	115
B.6	DESIGN CONSIDERATIONS .....	119
B.6.1	Availability.....	119
B.6.2	Continuity .....	119
B.6.3	Coverage volume .....	119
B.6.4	Tracking of aircraft .....	119
B.6.5	Display of aircraft .....	120
B.6.6	Traffic Display .....	120
B.7	SUMMARY OF ASSUMPTIONS AND PERFORMANCE REQUIREMENTS .....	122
B.7.1	Assumptions.....	122
B.7.2	Performance Requirements .....	125

<b>APPENDIX B.1 - ATSA-AIRB ERROR MODELING .....</b>	<b>130</b>
<b>APPENDIX B.2 - ATSA-AIRB AVAILABILITY ENHANCEMENT TECHNIQUES .....</b>	<b>134</b>
<b>ANNEX C - OPERATIONAL SAFETY ASSESSMENT.....</b>	<b>142</b>
C.1 INTRODUCTION .....	142
C.1.1 Document objective .....	142
C.1.2 OSA purpose and scope .....	142
C.1.3 References.....	144
C.1.4 Definition of terms used in the OSA .....	144
C.2 OPERATIONAL SAFETY ASSESSMENT APPROACH.....	148
C.2.1 OHA process .....	149
C.2.2 ASOR process .....	156
C.3 ATSA-AIRB APPLICATION DESCRIPTION .....	160
C.4 ATSA-AIRB MAIN OSA RESULTS SUMMARY .....	160
C.4.1 Operational Hazard identification .....	160
C.4.2 Operational Effect assessment .....	161
C.4.3 Safety Objectives determination .....	165
C.4.4 Training considerations .....	171
C.5 DETAILED SAFETY ANALYSIS .....	172
C.5.1 Operational Hazard identification .....	172
C.5.2 Operational environment.....	174
C.5.3 Hazard assessment and Severity Class allocation .....	176
C.5.4 ASOR analysis .....	229
<b>APPENDIX C.1- ED-78A/DO-264 BASED HAZARD CLASSIFICATION MATRIX .....</b>	<b>241</b>
<b>APPENDIX C.2- ADS-B BASED GROUND SURVEILLANCE .....</b>	<b>242</b>
<b>APPENDIX C.3- FAULT TREES SYMBOLS LEGEND .....</b>	<b>266</b>
<b>ANNEX D - ACRONYMS.....</b>	<b>267</b>
<b>ANNEX E - LIST OF PARTICIPANTS .....</b>	<b>272</b>

## TABLE OF TABLES

Table 3.1	Operational Requirements .....	31
Table 3.2	Equipment Requirement .....	33
Table 3.3	Functional Requirements for AIRB Equipment .....	33
Table 3.4	System Reliability and Integrity Requirements .....	38
Table 3.5	ATSA-AIRB Timing Requirements .....	39
Table 3.6	AIRB Data Quality Requirements .....	41
Table 3.7	.....	43
Table A.1	Building Of Enhanced Traffic Situational Awareness Phase .....	70
Table A.2	Enhanced Flight Operations Phase .....	74
Table A.3	Abnormal Modes .....	78
Table B.1	Required Data Items at the Input of the AIRB Equipment .....	93
Table B.2	Converging Traffic Scenario Inputs .....	100
Table B.3	Converging Traffic Scenario Outputs .....	100
Table B.4	Crossing Traffic Scenario in Controlled Airspace Inputs .....	102
Table B.5	Crossing Traffic Scenario in Controlled Airspace Outputs .....	102
Table B.6	Local Flight Scenario Inputs .....	104
Table B.7	Local Flight Scenario Outputs .....	105
Table B.8	Relative Range Scenario Inputs .....	106
Table B.9	Relative Range Scenario Outputs .....	107
Table B.10	Time to Common Point .....	108
Table B.11	Horizontal Position Data Performance Values .....	110
Table B.12	Summary of OPA Assumptions .....	122
Table B.13	Summary of OPA Requirements .....	125
Table B.14	Model validation for the bearing error .....	133
Table B.15	NUCp equivalences to NIC and NACp, in their respective categories .....	135

Table C.1	Definition of Terms used in the OSA.....	144
Table C.2	Safety Targets from US FAA SMS Approach .....	153
Table C.3	Safety Targets from European Approach .....	154
Table C.4	Number of ATM Hazards per Severity Class in Controlled Airspace.....	154
Table C.5	Safety Targets per Flight Hour, European Approach .....	155
Table C.6	ATSA-AIRB Operational Hazards.....	161
Table C.7	Environmental Conditions.....	162
Table C.8	External Mitigation Means .....	163
Table C.9	Most Demanding Operational Effects, Pe and Severity Class.....	165
Table C.10	Safety Objectives per ATSA-AIRB Operational Hazard .....	165
Table C.11	Internal Mitigation Means .....	166
Table C.12	ATSA-AIRB Safety Requirements .....	166
Table C.13	ATSA-AIRB Safety Assumptions.....	168
Table C.14	ATSA-AIRB Safety Objectives Achievement .....	170
Table C.15	Probability Effect and Safety Objectives for OH1.1 .....	182
Table C.16	Probability Effect and Safety Objectives for OH1.2 .....	187
Table C.17	Class G Airspace Basic VFR Weather Minimums (FAA) .....	188
Table C.18	Probability Effect and Safety Objectives for OH1.3 .....	194
Table C.19	Barriers for OH1.....	195
Table C.20	Probability Effect and Safety Objectives for OH1 .....	206
Table C.21	Probability Effect and Safety Objectives for OH2.1 .....	211
Table C.22	Probability Effect and Safety Objectives for OH2.2 .....	215
Table C.23	Probability Effect and Safety Objectives for OH2.3 .....	219
Table C.24	Barriers for OH2.....	220
Table C.25	Probability Effect and Safety Objectives for OH2 .....	228
Table C.26	Basic Causes Descriptions for OH1 .....	235
Table C.27	Basic Causes Descriptions for OH2 .....	240
Table C.28	Safety Objectives per ATSA-AIRB Operational Hazard .....	240

## TABLE OF FIGURES

Figure 1.1	Surveillance Functional Architecture .....	6
Figure 2.1	Traceability Scheme .....	19
Figure 3.1	Surveillance Functional Architecture for ATSA-AIRB .....	24
Figure A.1	Phase Diagram of the ATSA-AIRB application (1) .....	68
Figure A.2	Phase Diagram of the ATSA-AIRB application (2) .....	69
Figure A.3	Surveillance Functional Architecture for ATSA-AIRB .....	89
Figure B.1	Converging Traffic Scenario .....	99
Figure B.2	Crossing Traffic Scenario in Controlled Airspace .....	101
Figure B.3	Local Flight Scenario .....	104
Figure B.4	In Trail Scenario .....	106
Figure B.5	Crossing Traffic Scenario in Uncontrolled Airspace .....	108
Figure B.6	Affine Coordinates of Relative Distance between AIRB Aircraft and Traffic of Interest .....	132
Figure B.7	Velocity Error Distribution Observed by SASS-C Tool .....	140
Figure C.1	OSA Process Overview .....	149
Figure C.2	OHA Steps .....	150
Figure C.3	Probability “Pe” per Hazard-Effect Pair Scheme .....	152
Figure C.4	ASOR Steps .....	157
Figure C.5	Example of Fault Tree Structure .....	158
Figure C.6	Event Tree for OH1, Environment 1 .....	181
Figure C.7	Diagram of Scenario #1 .....	183
Figure C.8	Event Tree for OH1, Environment 2 .....	186
Figure C.9	Diagram of Scenario #2 .....	188
Figure C.10	Event Tree for OH1, Environment 3, Case A .....	192
Figure C.11	Event Tree for OH1, Environment 3, Case B .....	193
Figure C.12	Event Tree for OH2, , Environment 1 .....	210
Figure C.13	Diagram of Scenario #3 .....	211
Figure C.14	Event Tree for OH2, Environment 2 .....	214

Figure C.15      Diagram of Scenario #4..... 216  
Figure C.16      Event Tree for OH2, Environment 3 ..... 218  
Figure C.17      Fault Tree for OH1 ..... 234  
Figure C.18      Fault Tree for OH2..... 239

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## CHAPTER 1 INTRODUCTION

This document provides the minimum operational, Safety and Performance Requirements (SPR) and Interoperability Requirements (INTEROP) for the implementation of Airborne Traffic Situational Awareness (ATSAW) for “Enhanced Traffic Situational Awareness during flight operations” (ATSA-AIRB). The ATSA-AIRB application is fully defined in the Operational Services and Environment Definition (OSED) found in Annex A.

All material in this document was developed jointly by EUROCAE Working Group 51 and RTCA Special Committee 186 within the group commonly referred to as the “ADS-B Requirements Focus Group” (RFG).

This document was developed based on the criteria for SPR and INTEROP documents set forth in RTCA DO-264/EUROCAE ED-78A, “Guidelines for Approval of the Provision and Use of Air Traffic Services Supported by Data Communications.” [9]. It provides the minimum ATSA-AIRB requirements - and allocations thereof - based on the results of a coordinated requirements determination process.

The requirements contained in this document are necessary to provide adequate assurance that the appropriate aspects of the relevant Communication Navigation Surveillance and Air Traffic Management (CNS/ATM) system, when operating together, will perform their intended function in an acceptably safe manner for the operations defined in the OSED.

Whilst all detailed SPR related assessments are found in Annexes to this document, Chapter 3 presents the outcome of the reconciliation process of all of these results into a single set of underlying Safety and Performance Requirements. This process retains the most stringent requirement for those attributes or parameters commonly treated by both the safety and performance assessments. Traceability of those requirements back to the corresponding assessment(s) is provided.

### 1.1 PURPOSE OF THE DOCUMENT

This document defines and allocates the set of minimum requirements for the end-to-end operational, safety, performance and interoperability aspects for implementations of the ATSA-AIRB application. Allocation of these requirements is done by this SPR/INTEROP to the necessary domains of the CNS/ATM system, i.e. at aircraft and ground domain level.

These requirements can be used as a component for approval processes including aircraft type design approval, aircraft operator operational approval and Air Traffic Services (ATS) provider operational approval. This SPR/INTEROP document is also written to support system specific standards (e.g. MOPS, TSOs) which will be required for many airspace regulators.

*Note: Requirements for EVAcq (Enhanced Visual Acquisition) in DO-317 [17], which is an application similar to ATSA-AIRB, are different than those for ATSA-AIRB. A Change Proposal will be developed to harmonize the ASAS MOPS with this SPR by advocating changes to make a DO-317 revision consistent with ATSA-AIRB SPR/INTEROP.*