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**Safety and Performance Requirements
Document for CDTI Assisted Visual Separation
(CAVS)**

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Prepared by: SC-186
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FOREWORD

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TABLE OF CONTENTS

1.	INTRODUCTION.....	1
1.1	Purpose of the document.....	1
1.1.1	CAVS application.....	1
1.1.2	Use of document for approvals.....	2
1.2	Scope of the document.....	3
1.2.1	CAVS context.....	3
1.2.2	Assumed airborne & ground generic surveillance functional architecture.....	3
1.3	Definition of terms.....	6
1.4	Structure of the document.....	8
1.5	References.....	8
1.5.1	ICAO.....	8
1.5.2	EUROCAE/RTCA.....	8
2	APPROACH AND METHODOLOGY.....	11
2.1	Development process.....	11
2.2	Methodology.....	11
2.2.1	Operational Services and Environment Definition (OSFED).....	11
2.2.2	Safety and Performance Requirements (SPR).....	11
2.3	Key terms.....	12
2.3.1	Uses of requirements and recommendations and key words.....	12
2.3.2	Assumptions.....	13
2.3.3	Requirements.....	13
3.	SAFETY & PERFORMANCE REQUIREMENTS (SPR).....	15
3.1	Background/Introduction.....	15
3.1.1	OPA process.....	15
3.1.2	OSA process.....	16
3.1.3	SPR process.....	18
3.2	Assumptions.....	18
3.2.1	General assumptions.....	19
3.2.2	Environmental assumptions.....	19
3.2.3	CAVS Aircraft assumptions.....	20
3.2.4	Preceding Aircraft assumptions.....	20
3.2.5	Ground Domain assumptions.....	21
3.3	Operational requirements.....	21
3.4	CAVS Equipment requirements.....	25
3.4.1	Functional requirements for CAVS Equipment.....	25
3.4.2	System reliability and integrity requirements.....	29
3.5	CAVS data requirements.....	30
3.6	Recommendations and design considerations.....	31

4.	MEMBERSHIP	35
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ANNEX A OPERATIONAL SERVICES AND ENVIRONMENT DEFINITION (OSED) 2

A.1	Introduction.....	A-1
A.2	Context.....	A-2
A.3	Objective.....	A-3
A.4	Procedure description.....	A-4
A.4.1	Current procedure.....	A-4
A.4.2	Proposed procedure.....	A-7
A.4.3	Roles and responsibilities.....	A-31
A.4.4	Impact on phraseology	A-32
A.5	Airspace characteristics and operational environment.....	A-32
A.5.1	Airspace/runway characteristics.....	A-32
A.5.2	Meteorological conditions.....	A-32
A.5.3	ADS-B equipage.....	A-33
A.5.4	Applicability conditions.....	A-33
A.6	Abnormal modes.....	A-33
A.7	Assumptions and Operational Requirements	A-35
A.7.1	Assumptions.....	A-35
A.7.2	Operational Requirements.....	A-36

APPENDIX A.1 DEFINITIONS..... A-1

APPENDIX A.2 RELEVANT ICAO PROVISIONS..... A-3

APPENDIX A.3 ILLUSTRATION OF POSSIBLE CAVS SCENARIO..... A-6

ANNEX B OPERATIONAL PERFORMANCE ASSESSMENT (OPA) B-1

B.1	Introduction.....	B-1
B.1.1	Purpose.....	B-1
B.1.2	The CNS/ATM system.....	B-1
B.1.3	Definitions.....	B-2
B.2	CAVS Operational Performance Assessment	B-2
B.2.1	Scope.....	B-2
B.2.2	Approach.....	B-3
B.2.3	Safety Error Analysis requirements and assumptions	B-3
B.3.1	Safety methodology.....	B-3
B.3.2	Determination of CAVS NIC / SIL requirements	B-4
B.3.3	Determination of CAVS NACp requirement	B-5
B.3.4	Determination of CAVS surveillance alert threshold.....	B-6
B.3.5	ADS-B data quality indicator coasting.....	B-6
B.4	Required information for the CAVS application.....	B-6
B.4.1	Operationally required information.....	B-6

B.4.2	Required data items at the input of ASSAP	B-7
B.5	Analysis of operational objectives	B-8
B.5.1	Visual acquisition.....	B-8
B.5.2	Maintaining own separation	B-8
B.6	Definition and specification of performance parameters	B-9
B.6.1	Horizontal position.....	B-9
B.6.2	Altitude.....	B-10
B.6.3	Aircraft identification.....	B-11
B.6.4	Direction (ground track).....	B-11
B.6.5	Vertical tendency.....	B-12
B.6.6	Ground Speed information.....	B-12
B.6.7	CAVS qualification	B-13
B.7	Design considerations	B-14
B.7.1	Availability.....	B-14
B.7.2	Continuity.....	B-14
B.7.3	Coverage volume.....	B-15
B.7.4	Minimum number of aircraft tracked	B-15
B.7.5	Minimum number of aircraft displayed.....	B-15
B.7.6	Traffic Display design considerations.....	B-15
B.8	Assumptions and Performance Requirements.....	B-16
B.8.1	Assumptions.....	B-16
B.8.2	Performance Requirements	B-19
ANNEX C OPERATIONAL SAFETY ASSESSMENT (OSA)		A-2
C.1	Introduction.....	C-1
C.1.1	Document objectives	C-1
C.1.2	OSA purpose and scope	C-1
C.1.3	Definition of terms used in the OSA.....	C-2
C.2	Operational Safety Assessment approach	C-4
C.2.1	OHA process.....	C-6
C.2.2	ASOR process.....	C-11
C.3	CAVS main OSA results summary.....	C-15
C.3.1	Operational Hazard identification	C-15
C.3.2	Operational Hazard assessment.....	C-15
C.3.3	Performance determination and Safety Objective assignment	C-18
C.3.4	Safety Requirements determination	C-19
C.4	Detailed safety analysis per Operational Hazard.....	C-23
ANNEX D CAVS SPACING ERROR ANALYSIS		D-1
D.1	Introduction.....	D-1
D.2	CAVS operational Spacing Error Analysis	D-1
D.2.1	Spacing Error Analysis modelling	D-1
D.2.2	Determination of CAVS NIC / SIL requirements	D-5
D.2.3	Determination of CAVS NACp requirement	D-11

D.2.4	Determination of CAVS surveillance alert threshold.....	D-14
D.3	ADS-B data quality indicator coAusting.....	D-20

ANNEX E	ACRONYMS.....	E-1
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TABLE OF FIGURES

FIGURE 1.1: SURVEILLANCE FUNCTIONAL ARCHITECTURE FOR AIRBORNE SURVEILLANCE APPLICATIONS.....	4
FIGURE 2.1: REQUIREMENT TRACEABILITY SCHEME.....	14
Figure A- 1: Weather Conditions for “Visual Approach” Operations in the United States.....	3
Figure A- 2: Scope of the CAVS OSED.....	A-8
Figure A- 3: “Visual Acquisition” Phase (Controller Initiative).....	A-12
Figure A- 4: “Visual Acquisition” Phase (Flight crew Initiative).....	A-18
Figure A- 5: “Clearance for Maintaining Own Separation from the Preceding Aircraft” Phase.....	A-21
Figure A- 6: “Maintaining Own Separation on the Approach” Phase.....	A-26
Figure A- 7: “Termination” Phase.....	A-30
Figure A- 8: Example of CAVS Use while Intercepting Track for the ILS.....	A-6
Figure B- 1: Surveillance Functional Architecture for CAVS.....	B-1
Figure C- 1: OSA Process Overview.....	C-6
Figure C- 2: OSA Steps.....	C-7
Figure C- 3: Probability “Pe” per Hazard-Effect Pair Scheme.....	C-8
Figure C- 4: ASOR Steps.....	C-12
Figure C- 5: Example of Fault Tree Structure.....	C-13
Figure C- 6: Operational Scenario for OH-1.....	C-24
Figure C- 7: Illustration of OH-1 Scenario B.....	C-27
Figure C- 8: Event Tree for OH-1 Scenario A.....	C-29
Figure C- 9: Operational Scenario for OH-2: AC5 and AC4 on Runway Centreline inside the FAF.....	C-39
Figure C- 10: Operational Scenario for OH-2: AC4 on Runway Centreline, AC6 on Intercept.....	C-39
Figure C- 11: Operational Scenario for OH-2: AC4 on Intercept, AC6 on Base Leg.....	C-40
Figure C- 12: Event Tree for OH-2.....	C-44
Figure C- 13: Fault Tree for OH-2 (US SMS Approach).....	C-48
Figure C- 14: Fault Tree for OH-2 (Europe ESARR 4 Approach).....	C-49
Figure D- 1: Quantitative Spacing Loss Severities.....	D-2
Figure D- 2: CAVS Spacing Error Allowable SPACING Loss Rates (Based on ESARR 4).....	D-3
Figure D- 3: Example Integrity Monitoring Analysis Snapshot.....	D-7
Figure D- 4: Determination of CAVS NIC Requirement.....	D-8
Figure D- 5: Example Accuracy Monitoring Analysis Snapshot.....	D-12
Figure D- 6: Determination of CAVS NACp Requirement.....	D-13
Figure D- 7: CAVS Surveillance Alert Reaction Spacing Loss.....	D-15
Figure D- 8: CAVS Surveillance Alert Threshold & Spacing Error Analysis Reconciliation.....	D-16
Figure D- 9: Containment Bound & Integrity Monitoring Missed Detection Probability.....	D-17
Figure D- 10: Conditional CAVS NIC Bounds.....	D-21
Figure D- 11: Conditional CAVS NACp Bounds.....	D-22

TABLE OF TABLES

Table 1.1: Definition of Terms.....	6
Table 3.1: Operational Requirements.....	22
Table 3.2: Equipment Requirement.....	25
Table 3.3: Functional Requirements	26
Table 3.4: System Reliability Requirements.....	29
Table 3.5: Data Quality Requirements	30
Table 3.6: Recommendations and Design Considerations	32
TABLE A- 1: “VISUAL ACQUISITION” PHASE (CONTROLLER INITIATIVE)	A-13
Table A- 2: “Visual acquisition” Phase (Flight crew Initiative)	A-19
Table A- 3: “Clearance for maintaining own separation from the Preceding Aircraft” Phase.....	A-22
Table A- 4: “Maintaining own separation on the approach” Phase	A-27
Table A- 5: Abnormal Modes	A-34
TABLE B- 1: DEFINITION OF TERMS.....	B-2
TABLE B- 2: CAVS OPA ASSUMPTIONS.....	B-16
Table B- 3: CAVS Performance Requirements.....	B-19
TABLE C- 1: DEFINITION OF TERMS.....	C-2
Table C- 2: Safety Targets from US SMS Approach.....	C-9
Table C- 3: Safety Targets from European Approach.....	C-10
Table C- 4: Number of ATM Hazards per Severity Class	C-10
Table C- 5: Safety Targets, European Approach.....	C-11
Table C- 6: Fault Tree Symbols Legend	C-13
Table C- 7: CAVS Operational Hazards	C-15
Table C- 8: Environmental Conditions.....	C-16
Table C- 9: External Mitigation Means	C-17
Table C- 10: Safety Objectives per CAVS Operational Hazard	C-19
Table C- 11: Internal Mitigation Means.....	C-19
Table C- 12: CAVS Safety Requirements.....	C-20
Table C- 13: CAVS OPA Assumptions	C-21
Table C- 14: CAVS Safety Objectives Achievement.....	C-22
Table C- 15: Barriers and Associated Probabilities Identified for OH-1 Scenario A	C-30
Table C- 16: Probability of Effect of each Severity Class for OH-1.....	C-34
Table C- 17: Derivation of Safety Objective for OH-1	C-34
Table C- 18: Basic Causes for OH-1	C-35
Table C- 19: Safety Requirements and Assumptions for OH-1	C-36
Table C- 20: OH-1 Safety Objective Achievement.....	C-37
Table C- 21: Barriers and Associated Probabilities Identified for OH-2	C-45
Table C- 22: Probability of Effect of each Severity Class for OH-2.....	C-46
Table C- 23: Derivation of Safety Objective for OH-2	C-46
Table C- 24: Basic Causes for OH-2.....	C-50
Table C- 25: Misleading data	C-50

Table C- 26: Human Error Rates.....	C-51
Table C- 27: Safety Requirements and Assumptions for OH-2	C-52
Table C- 28: OH-2 Safety Objective Achievement.....	C-52
Table D- 1: CAVS Spacing Error Analysis – Safety Methodology Parameter.....	D-4
Table D- 2: CAVS Spacing Error Analysis –Measurement Integrity Modelling.....	D-9
Table D- 3: CAVS Spacing Error Analysis – CAVS Alert Reaction Modelling.....	D-18

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1. INTRODUCTION

This document provides the minimum operational, Safety and Performance Requirements (SPR) for the implementation of the “CDTI (Cockpit Display of Traffic Information) Assisted Visual Separation” (CAVS) application. CAVS is fully defined in the Operational Services and Environment Definition (OSED) found in Annex A.

This document does not provide any Interoperability Requirements (INTEROP) as they are identical to those defined for the “Enhanced Visual Separation on Approach” (VSA) application (DO-314/ED-160 [10]).

All material in this document was developed jointly by EUROCAE Working Group 51 and RTCA Special Committee 186. This document was developed based on the criteria for SPR documents set forth in DO-264/ED-78A, “Guidelines for Approval of the Provision and Use of Air Traffic Services Supported by Data Communications” [4]. It provides the minimum CAVS 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 results of reconciling all of these assessment 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 and performance aspects for implementations of the CAVS application. This SPR allocates these requirements to the necessary domains of the CNS/ATM system (i.e. at aircraft and ground domain levels).

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 document is also written to support system-specific standards (e.g. MOPS, TSOs, etc.) which will be required for many airspace regulators.

In addition, this document also provides guidance to determine the levels of design assurance and performance that are needed for each element (aircraft, operator, and Air Navigation Service Provider - ANSP) to support the CAVS application.

The CAVS SPR is also envisaged to be used along with those from other surveillance applications based on Automatic Dependent Surveillance-Broadcast (ADS-B) to develop minimum standards for avionic systems to assure that all subsystems perform their intended functions adequately for these applications

1.1.1 CAVS application

To increase runway capacity, operations at some airports are based on a flight crew maintaining own separation from the Preceding Aircraft. The “Enhanced Visual Separation on Approach” application (VSA) [10] has been developed and standardised