



DPC: 23 / 30479096 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

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Part 005: Verification method for the Geocaging function

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Responsible Committee Secretary: **Mr Alex Price (BSI)**
Direct tel: **020 8996 7261**
E-mail: **alex.price@bsigroup.com**

Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

English Version

Aerospace series - Unmanned Aircraft Systems - Part 005: Verification method for the Geocaging function

Série Aérospatiale - Aéronefs télépilotes - Partie 5:
Méthodes de vérification de la fonction Geocaging

Luft- und Raumfahrt - Unbemannte
Luftfahrzeugsysteme - Teil 005: Überprüfungsmethode
für die Geocaging-Funktion

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 471.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 4709-005:2023) has been prepared by Technical Committee CEN/TC 471 “Unmanned Aircraft Systems”, the secretariat of which is held by BNAE.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association and supports essential requirements of EU Directive(s)/Regulation(s).

For relationship with EU Directive(s)/Regulation(s), see informative Annex ZA, which is an integral part of this document.

Introduction

This document gives all economic operators (such as manufacturers, importers and distributors and their trade associations as well as bodies involved in the conformity assessment procedures) a viable way to prove compliance with the requirements linked to geocaging function and to find commonality in compliance methods.

The end user of this document assumes all responsibility for the safe application of the test methods. All relevant safety/quality procedures should be considered. Special consideration should be given to the operation of the UAS for evaluations. All local, state, federal, and national laws should be considered when operating any UAS.

Operational volume and contingency volume are defined in SORA semantic model. Figure 1 provides a consistent use of the terms. Figure 2 provides a graphical representation of the model.

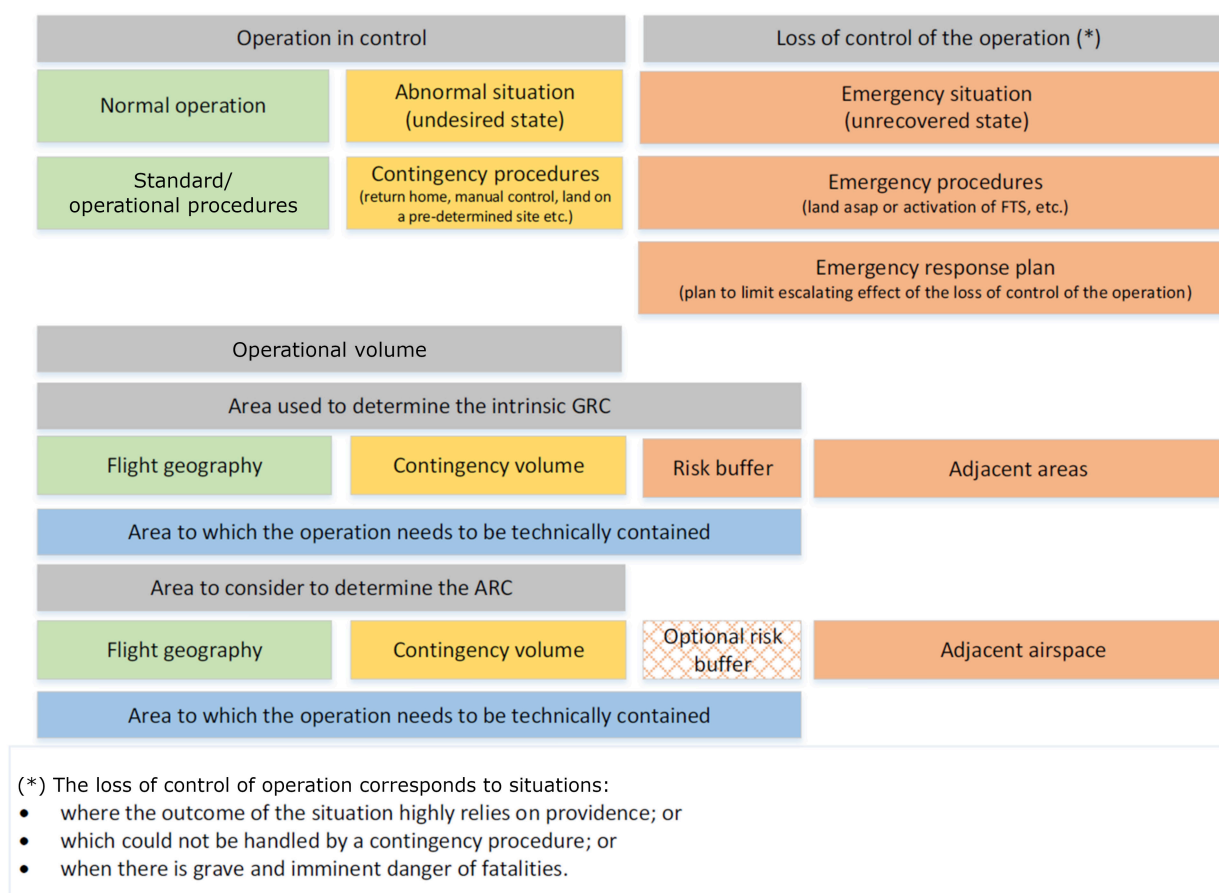


Figure 1 — SORA semantic model [Source: *Easy Access Rules for Unmanned Aircraft Systems*, September 2022]

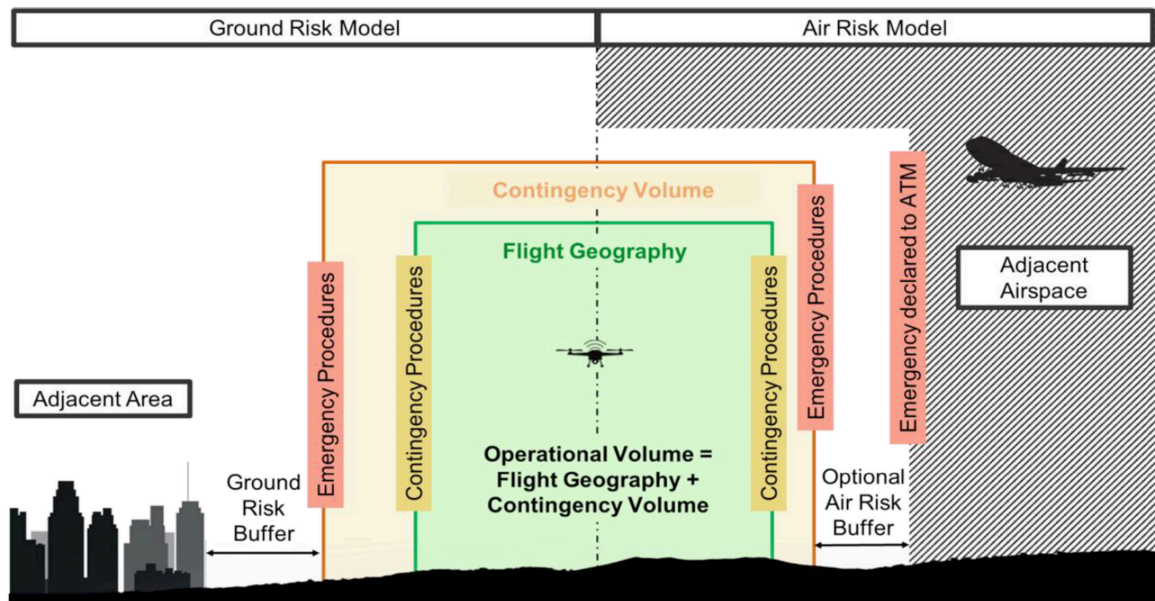


Figure 2 — Graphical representation of the SORA semantic model [Source: *Easy Access Rules for Unmanned Aircraft Systems*, September 2022]

NOTE 1 SORA Step #9 – Adjacent area/airspace considerations and PDRA-G01, G02 and G03.

This document provides a contribution to SORA Step #9 compliance, requirement (b), also known as Standard containment. Nonetheless, this document cannot be used as a complete means of compliance to SORA Step #9, as it does not include design requirements.

NOTE 2 PDRA-G01, G02 and G03 also include this requirement in section technical provisions, Containment.

1 Scope

This document provides requirements, test methods and pass criteria for the:

- implemented geocage function used to prevent the UA from breaching the horizontal and vertical limits of the planned operational volume;
- information to be provided in the manufacturer's instructions describing this function, its limits and the required size of the contingency volume after accounting the errors, reaction time and corrections.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 4709-001:—,¹ *Aerospace series — Unmanned Aircraft Systems — Part 001: Product requirements and verification*

EN 4709-006:—,² *Aerospace series — Unmanned Aircraft Systems — Part 006: Means to terminate flight, requirements, and verification*

EN 4709-007:—,³ *Aerospace series — Unmanned Aircraft Systems — Part 007: General product requirements for UAS classes C5 and C6*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 4709-001¹ and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

caution alert

alert for conditions that require immediate awareness and subsequent response by the UAS remote pilot

Note 1 to entry: in this document, the caution alert condition is related to the breach of the flight geography volume.

¹ Under preparation. Stage at the time of publication: prEN 4709-001:2021.

² Under preparation. Stage at the time of publication: prEN 4709-006:2023.

³ Under development.