PD CEN/TS 16501:2013

BSI Standards Publication

Air Traffic Management — Specification for software assurance levels

raising standards worldwide™

National foreword

This Published Document is the UK implementation of CEN/TS 16501:2013.

The UK participation in its preparation was entrusted to Technical Committee ACE/58, Environmental and operating conditions for aircraft equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

ISBN 978 0 580 80429 8

ICS 35.240.60

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 April 2013.

Amendments issued since publication

Date	Text affected

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CEN/TS 16501

April 2013

ICS 35.240.60

English Version

Air Traffic Management - Specification for software assurance levels

Gestion du trafic aérien - Spécification des niveaux d'assurance logicielle

Flugverkehrsmanagement - Spezifikation für Software-Sicherheitsanforderungsstufen

This Technical Specification (CEN/TS) was approved by CEN on 12 February 2013 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. CEN/TS 16501:2013: E

Contents

Page

Foreword

This document (CEN/TS 16501:2013) has been prepared by Technical Committee CEN/TC 377 “Air Traffic Management”, the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The European Union launched the "Single European Sky" (SES) Legislation in 2002, which was adopted in 2004.

The SES legislation is based on a framework of 4 regulations, which includes the Interoperability Regulation (EC 552/2004). The objective of the Interoperability Regulation is to ensure interoperability of the European Air Traffic Management Network (EATMN) consistent with air navigation services.

An increasing proportion of functions of the EATMN are implemented by software and these functions are becoming more safety-critical. It is therefore necessary to define guidance on how to standardise the assurances that may be provided for software.

1 Scope

This Technical Specification specifies the technical, operational and maintenance requirements for Software Assurance Levels to support the demonstration of compliance with some elements of the Essential Requirements “Safety” and “Principles governing the construction of systems” of the Regulation (EC 552/2004) of the European Parliament and of the Council on the interoperability of the European Air Traffic network (“the Interoperability regulation”).

This Technical Specification on Software Assurance Levels (SWAL) is intended to apply to software that is part of the EATMN, focusing only on its “ground” segment and providing a reference against which stakeholders can assess their own practices for software specification, design, development, operation, maintenance, evolution and decommissioning.

Requirements in the present document which refer to “should” statements or recommendations in the normatively referenced material are to be interpreted as fully normative (“shall”) for the purpose of compliance with the present document.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EUROCAE ED-153 (August 2009), *Guidelines for ANS software safety assurance*.[1)]

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
ANS
Air Navigation Service

3.2
COTS
Commercial off the shelf software
commercially available application sold by vendors through public catalogue listings and not intended to be customised or enhanced

3.3
EATMN
European Air Traffic Management Network

3.4
EC
European Community

3.5
EU
European Union

3.6
EUROCAE
European Organisation for Civil Aviation Equipment

1) Published by: EUROCAE, 102 rue Etienne Dolet, 92240 Malakoff – France