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Space engineering - Interface management

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English version

Space engineering - Interface management

Ingénierie spatiale - Gestion des interfaces

Raumfahrttechnik - Schnittstellenmanagement

This European Standard was approved by CEN on 22 August 2016.

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Table of contents

European foreword	4
Introduction	4
1 Scope	6
2 Normative references	7
3 Terms, definitions and abbreviated terms	8
3.1 Terms from other standards.....	8
3.2 Terms specific to the present standard	8
3.3 Abbreviated terms.....	10
3.4 Nomenclature	10
4 Principles	11
4.1 Type of interfaces	11
4.2 Interface management process.....	11
4.2.1 General description	11
4.2.2 Interface management planning	12
4.2.3 Interface identification	12
4.2.4 Interface requirements specification	13
4.2.5 Interface definition.....	14
4.2.6 Interface approval and control.....	14
4.2.7 Interface verification and validation	17
4.3 Interface management life cycle	17
4.3.1 Generic interface management life cycle.....	17
4.3.2 Space element – Launch segment interface management life cycle	19
4.3.3 Space segment - Ground segment interface management life cycle	20
4.3.4 Interface management life cycle involving OTS products	21
5 Requirements	22
5.1 Interface management planning.....	22
5.2 Interface identification.....	22
5.3 Interface requirements specification	23
5.4 Interface definition	23

5.5	Interface control and approval	25
5.6	Interface verification and validation	25
Annex A (normative) Interface Requirements Document (IRD) - DRD		26
Annex B (normative) Interface Control Document (ICD) – DRD		29
Annex C (normative) Interface Definition Document (IDD) or Single-end Interface Control Document – DRD		33
Annex D (informative) Proposed content of an "Interface Identification Document (IID)"		36
Annex E (informative) Reference interface data list.....		38
Bibliography.....		53
Figures		
Figure 4-1	Interface management process – overview of the main process steps	12
Figure 4-2:	Interface Change Management Process implementation.....	16
Figure 4-3:	Generic interface management life cycle	18
Figure 4-4:	Typical space to launch segment interface life cycle	19
Figure 4-5:	Typical space to ground segment interface life cycle.....	20
Figure 4-6:	Typical interface management life cycle involving OTS	21
Figure B-1 :	Examples of interface data grouping in ICDs	32
Tables		
Table E-1 :	Identified interface natures and corresponding ECSS disciplines	39

European foreword

This document (EN 16603-10-24:2017) has been prepared by Technical Committee CEN-CENELEC/TC 5 "Space", the secretariat of which is held by DIN.

This standard (EN 16603-10-24:2017) originates from ECSS-E-ST-10-24C.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

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.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association.

This document has been developed to cover specifically space systems and has therefore precedence over any EN covering the same scope but with a wider domain of applicability (e.g. : aerospace).

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The management and control of interfaces is crucial to the success of space programmes and projects. Interface management is a process to assist in controlling product development when efforts are divided amongst different parties (e.g. agencies, contractors, geographically dispersed technical teams). Interface control is also needed to define, achieve and maintain compliance between products and actors that interoperate.

The application of this standard to a project is expected to bring the following benefits:

- a consistent, coherent and commonly used approach – including documentation – throughout industry and across different projects;
- effective and efficient product interface management;
- minimize the risk of interface incompatibilities;
- high confidence in achieving successful product operations for the intended use.

1 Scope

The objective of interface management is to achieve functional and physical compatibility amongst all interrelated items in the product tree. The goal of this standard is to define a common and systematic process to meet the objective.

This standard describes a standard process and methodology for interface management throughout the life cycle, in terms of identification, requirements specification, definition, approval and control, implementation, verification and validation of interfaces, within a space programme or project and in accordance with the other relevant ECSS standards.

In line with the definition of the Space System breakdown in Figure 2-1 of ECSS-S-ST-00-01, this standard is applicable to the following interfaces, where a contractual relationship exist among parties:

- within the Space Segment
- within the Ground Segment
- between the Space Segment and the Ground Segment
- between Space Segment and Launch Segment only for ICD aspects in conformance to the launcher user manual.

This standard does not ensure that all the specificities of interfaces within the Launch Segment are covered.

This standard is applicable to development of products at all different levels in the product tree. It is applicable to both the customer and the supplier of the product during all project phases (0 to F) and follows the generic ECSS customer/supplier pattern.

This standard may be tailored for the specific characteristics and constrains of a space project in conformance with ECSS-S-ST-00.

2

Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this ECSS Standard. For dated references, subsequent amendments to, or revision of any of these publications do not apply. However, parties to agreements based on this ECSS Standard are encouraged to investigate the possibility of applying the more recent editions of the normative documents indicated below. For undated references, the latest edition of the publication referred to applies.

EN reference	Reference in text	Title
EN 16601-00-01	ECSS-S-ST-00-01	ECSS - Glossary of terms
EN 16003-10	ECSS-E-ST-10	Space engineering - System engineering general requirements
EN 16003-10-02	ECSS-E-ST-10-02	Space engineering - Verification
EN 16003-10-06	ECSS-E-ST-10-06	Space engineering - Technical requirements specification
EN 16001-10	ECSS-M-ST-10	Space project management - Project planning and implementation
EN 16001-40	ECSS-M-ST-40	Space project management - Configuration and information management
EN 16002-10-09	ECSS-Q-ST-10-09	Space product assurance - Nonconformance control system