

English version

Space engineering - Communication guidelines

Ingénierie spatiale - Recommandations pour les
systèmes de communications

Raumfahrttechnik - Richtlinien zur Kommunikation

This Technical Report was approved by CEN on 20 April 2022. It has been drawn up by the Technical Committee CEN/CLC/JTC 5.

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European Foreword

This document (CEN/TR 17603-50:2022) has been prepared by Technical Committee CEN/CLC/JTC 5 "Space", the secretariat of which is held by DIN.

It is highlighted that this technical report does not contain any requirement but only collection of data or descriptions and guidelines about how to organize and perform the work in support of EN 16603-50.

This Technical report (CEN/TR 17603-50:2022) originates from ECSS-E-HB-50A.

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 mandate 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 TR covering the same scope but with a wider domain of applicability (e.g.: aerospace).

Introduction

1.1 Purpose

This ECSS handbook is intended to help implementers and users of data handling systems who are adhering to the ECSS E-50 series of standards. The handbook provides an overview of the E-50 standards and related CCSDS Recommended Standards and describes how the individual standards may be used together to form a coherent set of communications protocols. It also evaluates issues which could not be discussed in the Standards documents themselves, and provides guidance on option selection and implementation choices.

1.2 Scope

This handbook provides guidance to the ECSS E-50 series of standards including related CCSDS Recommendations. The information provided is informative and intended to be used as best practice; it is not binding on implementers.

The information contained in this handbook is not part of the ECSS Standards. In the event of any conflict between the ECSS Standards and the material presented in this handbook, the ECSS Standards prevail.

1.3 Document structure

This document is divided into sections and annexes as follows:

- Section 1 (this section) provides intentional and administrative information.
- Section 2 provides the definition and abbreviations of the terms used in the present document.
- Section 3 gives a list of the E-50 series of standards and describes their relationship to CCSDS and other standards bodies. It also provides an overall architectural framework.
- Section 4 provides detailed information on each of the individual ECSS and CCSDS standards covered by the handbook.
- Section 5 addresses individual technical topics related to the ECSS E-50 standards.

- Section 6 provides guidance on selecting appropriate ECSS and CCSDS standards for coherent mission and infrastructure scenarios.
- Section 7 provides a summary of supporting components and products.
- Annex A to Annex F contain draft proforma of the Protocol Implementation Conformance Statement (PICS) for three of the E-50 standards.
- Annex G provides additional performance data for one of the telemetry channel coding options.

This document is a preview generated by EVS