TECHNICAL REPORT

RAPPORT TECHNIQUE

TECHNISCHER BERICHT

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English version

Space product assurance - Software process assessment and improvement - Part 2: Assessor instrument

Assurance produit des projets spatiaux - Evaluation et amélioration des processus logiciel - Partie 2: Elément d'évaluation	Raumfahrtproduktsicherung - Software - Prozessüberprüfung und -verbesserung - Teil 2: Gutachter

This Technical Report was approved by CEN on 13 September 2021. It has been drawn up by the Technical Committee CEN/CLC/JTC 5.

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European Foreword

This document (CEN/CLC/TR 17602-80-12:2021) 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 16602-80.

This Technical report (CEN/CLC/TR 17602-80-12:2021) originates from ECSS-Q-HB-80-02 Part 2A.

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

This Standard provides the instruments needed by competent assessors to perform assessments and to support improvement initiatives based on the framework described in TR 17603-80-11 (equivalent to ECSS-Q-HB-80-02 Part 1).

The ECSS-Q-HB-80-02 assessment method is a space specific instantiation of ISO/IEC 15504-5. In turn, ISO/IEC 15504 provides a common internationally recognized framework for the terminology and reference process assessment description.

The instruments provided in this handbook, when applied by competent assessors, support application of the methods described in Part 1 and allow claiming conformance to those methods and to requirements in ECSS-Q-ST-80. Specific instruments are also provided to enable claiming conformance to the requirements in ISO/IEC 15504 for process assessments as an additional advantage of the application of this Standard.

While the instruments provided in this handbook may be provide useful information to participants in process assessment and improvement in general, their use is intended specifically for competent assessors. This handbook does not pose any requirements on the organisations being assessed or carrying out process improvement programmes whether using the methods described in Part 1 or not.

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Scope

This handbook provides assessors with a number of instruments needed to perform software process capability assessments using the assessment method described in Part 1. It also provides instruments that help assessors to carry out their activities when performing assessments and supporting the implementation of software process improvement initiatives using the method for process improvement described in Part 1.

The instruments provided are:

- The Process Assessment Model (PAM) required to perform ECSS-Q-HB-80-02 assessments including process descriptions and process attribute indicators

- Conformance statement to the requirements in ISO/IEC 15504 Part 2

- A definition of the Process Reference Model (PRM) on which the ECSS-Q-HB-80-02 PAM is based (defined in ECSS-Q-HB-80-02 Part 1)

- Detailed traces from base practices in the ECSS-Q-HB-80-02 PAM to ECSS standards clauses and from ECSS-Q-HB-80-02 work products to ECSS expected outputs

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References

EN Reference	EN in text	Title
EN 16601-00-01	ECSS-S-ST-00-01	ECSS System - Glossary of terms
EN 16601-10	ECSS-M-ST-10C rev.1	Space project management - Project planning and implementation
EN 16601-10-01	ECSS-M-ST-10-01C	Space project management - Organization and conduct of reviews
EN 16601-40	ECSS-M-ST-40C rev.1	Space project management - Configuration and information management
EN 16601-60	ECSS-M-ST-60C	Space project management - Cost and schedule management
EN 16601-80	ECSS-M-ST-80C	Space project management - Risk management
EN 16602-10	ECSS-Q-ST-10C	Space product assurance - Product assurance management
EN 16602-10-04	ECSS-Q-ST-10-04C	Space product assurance - Critical-item control
EN 16602-10-09	ECSS-Q-ST-10-09C	Space product assurance - Nonconformance control system
EN 16602-20	ECSS-Q-ST-20C	Space product assurance - Quality assurance
EN 16602-20-07	ECSS-Q-20-07A	Space product assurance - Quality assurance for test centres
EN 16602-30	ECSS-Q-ST-30C	Space product assurance - Dependability
EN 16602-40	ECSS-Q-ST-40C	Space product assurance - Safety
EN 16602-80	ECSS-Q-ST-80C	Space product assurance – Software product assurance
EN 16603-10	ECSS-E-ST-10C	System engineering general requirements
EN 16603-10-02	ECSS-E-ST-10-02C	Space engineering - Verification
EN 16603-10-03	ECSS-E-10-03A	Space engineering - Testing
EN 16603-40	ECSS-E-ST-40C	Space engineering – Software
	ISO/IEC 15504: 2003-2006	Information technology – Process assessment Part 1: Concepts and vocabulary (normative) Part 2: Performing an assessment (normative) Part 3: Guidance on performing an assessment (informative) Part 4: Guidance on use for process improvement and

		process capability determination (informative)
		Part 5: An exemplar process assessment model (informative)
	ISO/IEC 12207:2004 Amd 1/Amd 2	Information Technology – Software life cycle processes