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Space projects — Programme management — Dependability assurance requirements

Projets spatiaux — Management de programme — Exigences d'assurance de sécurité de fonctionnement

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 23460 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 14, *Space systems and operations*.

Introduction

The objective of dependability assurance is to ensure a successful mission by optimizing the system dependability within all competing technical, scheduling and financial constraints.

Dependability assurance is a continuous and iterative process throughout the project life cycle, using quantitative and qualitative approaches, with the aim of ensuring conformance to reliability, availability and maintainability requirements.

Space projects — Programme management — Dependability assurance requirements

1 Scope

This International Standard presents the requirements for a dependability (reliability, availability and maintainability) assurance programme for space projects.

It defines the dependability requirements for space products as well as for system functions implemented in software, and the interaction between hardware and software.

The provisions of this International Standard apply to all programme phases.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 17666, *Space systems — Risk management*

ISO 16192, *Space systems — Experience gained in space projects (Lessons learned) — Principles and guidelines*

ISO 15865, *Space systems — Qualification assessment*

3 Terms and definitions

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

3.1
failure scenario
conditions and sequence of events leading from the initial root cause to an end failure

3.2
risk
quantitative measure of the magnitude of a potential loss and the probability of incurring that loss

NOTE 1 In Clause 6, the term “risk” is as defined in ISO 17666.

NOTE 2 In the context of this International Standard, “risk” is related to the potential loss or degradation of the required technical performance that affects the attainment of dependability objectives.

3.3
undesirable event
event whose consequences are detrimental to the success of the mission

[ISO 10795:2011, definition 1.211]