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Systems and software engineering — Systems and software assurance —

Part 1: Concepts and vocabulary

*Ingénierie des systèmes et du logiciel — Assurance des systèmes et
du logiciel —*

Partie 1: Concepts et vocabulaire

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Contents

| | Page |
|--|-----------|
| Foreword | iv |
| Introduction | v |
| 1 Scope | 1 |
| 2 Applicability | 1 |
| 2.1 Audience..... | 1 |
| 2.2 Field of applicability..... | 1 |
| 3 Terms and definitions | 1 |
| 3.1 Terms related to assurance and properties..... | 1 |
| 3.2 Terms related to product and process..... | 3 |
| 3.3 Terms related to integrity level..... | 4 |
| 3.4 Terms related to conditions and consequences..... | 4 |
| 3.5 Terms related to organization..... | 5 |
| 4 Organization of this International Standard | 6 |
| 5 Basic concepts | 6 |
| 5.1 Introduction..... | 6 |
| 5.2 Assurance..... | 6 |
| 5.3 Stakeholders..... | 7 |
| 5.4 System and Product..... | 7 |
| 5.5 Property..... | 7 |
| 5.6 Uncertainty and confidence..... | 8 |
| 5.7 Conditions and initiating events..... | 8 |
| 5.8 Consequences..... | 9 |
| 6 Using multiple parts of ISO/IEC 15026 | 9 |
| 6.1 Introduction..... | 9 |
| 6.2 Initial usage guidance..... | 9 |
| 6.3 Relationships among parts of ISO/IEC 15026..... | 10 |
| 6.4 Authorities..... | 10 |
| 7 ISO/IEC 15026 and the assurance case | 11 |
| 7.1 Introduction..... | 11 |
| 7.2 Justification of method of reasoning..... | 11 |
| 7.3 Means of obtaining and managing evidence..... | 12 |
| 7.4 Certifications and accreditations..... | 12 |
| 8 ISO/IEC 15026 and integrity levels | 13 |
| 8.1 Introduction..... | 13 |
| 8.2 Risk analysis..... | 13 |
| 9 ISO/IEC 15026 and the life cycle | 14 |
| 9.1 Introduction..... | 14 |
| 9.2 Assurance activities in the life cycle..... | 15 |
| 10 Summary | 15 |
| Bibliography | 16 |

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national 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 and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 15026-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*.

This first edition of ISO/IEC 15026-1 cancels and replaces ISO/IEC TR 15026-1:2010, which has been technically revised.

ISO/IEC 15026 consists of the following parts, under the general title *Systems and software engineering — Systems and software assurance*:

- *Part 1: Concepts and vocabulary*
- *Part 2: Assurance case*
- *Part 3: System integrity levels*
- *Part 4: Assurance in the life cycle*

The IEEE Computer Society collaborated with ISO/IEC JTC 1 in the development of the international standards of ISO/IEC 15026. *IEEE Std 1228-1994* and *IEEE Standard for Safety Plan* were used as base documents in the development of this standard.

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Introduction

Software and systems assurance and closely related fields share concepts but have differing vocabularies and perspectives. This part of ISO/IEC 15026 provides a unifying set of underlying concepts and an unambiguous use of terminology across these various fields. It provides a basis for elaboration, discussion, and recording agreement and rationale regarding concepts and the vocabulary used uniformly across all parts of ISO/IEC 15026.

This part of ISO/IEC 15026 clarifies concepts needed for understanding software and systems assurance and, in particular, those central to the use of ISO/IEC 15026-2 to ISO/IEC 15026-4. It supports shared concepts, issues and terminology applicable across a range of properties, application domains, and technologies.