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Software engineering — Software product Quality Requirements and Evaluation (SQuaRE) — Requirements for quality of Commercial Off-The-Shelf (COTS) software product and instructions for testing

*Ingénierie du logiciel — Exigences de qualité pour le logiciel et
évaluation (SQuaRE) — Exigences de qualité pour les logiciels et
instructions d'essai*

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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/IEC 25051 was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and system engineering*. This first edition cancels and replaces the first edition of ISO/IEC 12119:1994.

The IEEE Computer Society participated as a liaison organization in the revision of this International Standard. Some suggestions from the IEEE adoption of the 1994 edition of this International Standard have been incorporated in this revision.

This corrected version of ISO/IEC 25051:2006 incorporates the following corrections:

— English and French titles corrected.

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Introduction

Commercial Off-The-Shelf (COTS) software products are used in an increasingly wide variety of application areas and their correct operation is often vital for business, safety or personal applications.

COTS software products are ready-made packages sold off-the-shelf to the acquirer who had no influence on its features and other qualities. Typically the software is sold pre-wrapped with its user documentation. The information provided on the cover of the package is often the only means whereby the manufacturer or marketing organization can communicate with the acquirer and user. It is therefore important that essential information is given to enable acquirers to evaluate the quality of the COTS software products for their needs.

Selecting high quality COTS software products is of prime importance, because COTS software products may have to be operational in various environments and selected without the opportunity to compare performance among similar products. Suppliers need a way to ensure confidence in services given by the COTS software product to the users. Some suppliers may choose third-party evaluation or certification to assist them in providing this confidence.

In addition, when users require assurances that business or safety critical risks are involved, those assurances may need to be addressed by the user using techniques chosen by the user after the purchase. It is not the intent of this International Standard to specify minimum safety or business critical quality requirements for COTS, however, informative guidance is given. (See Annex B.)

ISO/IEC 12119:1994, was developed to support these needs. This International Standard took into account ISO/IEC 9126:1991, which defined quality characteristics.

The environment has changed. ISO/IEC 9126 has been revised, issued as ISO/IEC 9126-1 (including, for example, concept about quality in use), and in the new SQuaRE series it will become ISO/IEC 25010. ISO/IEC 12119:1994 has been used by certification bodies, which have identified some difficulties and ambiguities to correctly use the first edition.

These items are the major points for revising this International Standard, which provides a set of requirements for COTS software product and requirements for testing a COTS software product against its requirements.

This document is then a revision of ISO/IEC 12119:1994 to:

- be consistent with ISO/IEC 25010;
- take into account the experience resulting from usage of the standard, particularly by certification bodies;
- take into account the new normative context;
- add a clause about testing;
- delete Annex B for consistency with ISO 9127.