BSI Standards Publication

Systems and software engineering — Life cycle processes — Requirements engineering

bsi.

National foreword

This British Standard is the UK implementation of ISO/IEC/IEEE 29148:2018. It supersedes BS ISO/IEC/IEEE 29148:2011, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee IST/15, Software and systems engineering.

A list of organizations represented on this committee can be obtained on request to its secretary.

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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 nongovernmental, 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the rules given in the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Systems and software engineering*, in cooperation with the Systems and Software Engineering Standards Committee of the IEEE Computer Society, under the Partner Standards Development Organization cooperation agreement between ISO and IEEE.

This second edition cancels and replaces the first edition (ISO/IEC/IEEE 29148:2011), which has been technically revised.

Changes in this revision of ISO/IEC/IEEE 29148 were developed in response to the revision of ISO/IEC/IEEE 15288 and ISO/IEC/IEEE 12207. The purpose of these revisions is to accomplish the harmonization of the structures and contents of the two documents, while supporting the requirements of the assessment community.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document provides a unified treatment of the processes and products involved in engineering requirements throughout the life cycle of systems and software. It provides details for the construct of well-formed textual requirements, to include characteristics and attributes, in the context of system and software engineering. This document also provides guidance for the implementation of requirements related processes from ISO/IEC/IEEE 15288 and ISO/IEC/IEEE 12207. Finally, this document identifies information items related to requirements engineering and their content.

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Systems and software engineering — Life cycle processes — Requirements engineering

1 Scope

This document:

— specifies the required processes implemented in the engineering activities that result in requirements for systems and software products (including services) throughout the life cycle;

— provides guidelines for applying the requirements and requirements-related processes described in ISO/IEC/IEEE 15288 and ISO/IEC/IEEE 12207;

— specifies the required information items produced through the implementation of the requirements processes;

— specifies the required contents of the required information items;

— provides guidelines for the format of the required and related information items.

This document is applicable to:

— those who use or plan to use ISO/IEC/IEEE 15288 and ISO/IEC/IEEE 12207 on projects dealing with man-made systems, software-intensive systems, software and hardware products, and services related to those systems and products, regardless of the project scope, product(s), methodology, size or complexity;

— anyone performing requirements engineering activities to aid in ensuring that their application of the requirements engineering processes conforms to ISO/IEC/IEEE 15288 and/or ISO/IEC/IEEE12207;

— those who use or plan to use ISO/IEC/IEEE 15289 on projects dealing with man-made systems, software-intensive systems, software and hardware products and services related to those systems and products, regardless of the project scope, product(s), methodology, size or complexity;

— anyone performing requirements engineering activities to aid in ensuring that the information items developed during the application of requirements engineering processes conforms to ISO/IEC/IEEE 15289.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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/IEC/IEEE 15288:2015, *Systems and software engineering — System life cycle processes*

ISO/IEC/IEEE 12207:2017, *Systems and software engineering — Software life cycle processes*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC/IEEE 15288, ISO/IEC/IEEE 12207 and the following apply.