

INTERNATIONAL  
STANDARD

ISO/IEC/  
IEEE  
15289

First edition  
2011-11-01

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**Systems and software engineering —  
Content of life-cycle information products  
(documentation)**

*Ingénierie des systèmes et du logiciel — Contenu des systèmes et  
produits d'information du processus de cycle de vie du logiciel  
(documentation)*



Reference number  
ISO/IEC/IEEE 15289:2011(E)



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Published in Switzerland

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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 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.

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

The main task of ISO/IEC JTC 1 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.

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ISO/IEC/IEEE 15289 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*, in cooperation with the Software & Systems Engineering Standards Committee of the IEEE Computer Society, under the Partner Standards Development Organization cooperation agreement between ISO and IEEE.

This first edition of ISO/IEC/IEEE 15289 cancels and replaces ISO/IEC 15289:2006, which has been technically revised.

## Introduction

The purpose of this International Standard is to provide requirements for identifying and planning the specific information items (information products) to be developed and revised during systems and software life cycles and service processes. This International Standard specifies the purpose and content of all identified systems and software life-cycle information items, as well as information items for information technology service management. The information item contents are defined according to generic document types and the specific purpose of the document. Information items may be combined or subdivided as needed for project or organizational purposes.

This International Standard is based on the life-cycle processes specified in ISO/IEC 12207:2008 (IEEE Std 12207-2008), *Systems and software engineering — Software life cycle processes*; ISO/IEC 15288:2008 (IEEE Std 15288-2008), *Systems and software engineering — System life cycle processes*; and the service management processes specified in ISO/IEC 20000-1:2005, *Information technology — Service management — Part 1: Specification*; and ISO/IEC 20000-2:2005, *Information technology — Service management — Part 2: Code of practice*.

IEEE contributed IEEE 12207.1-1997, *Industry Implementation of International Standard ISO/IEC 12207:1995. (ISO/IEC 12207) Standard for Information Technology — Software life cycle processes — Life cycle data*, as a source for this International Standard.



# Systems and software engineering — Content of life-cycle information products (documentation)

## 1 Scope

This International Standard specifies the purpose and content of all identified systems and software life-cycle and service management information items (documentation). The information item contents are defined according to generic document types, as presented in Clause 7, and the specific purpose of the document (Clause 10).

This International Standard assumes an organization is implementing life-cycle processes in conformance with ISO/IEC 15288:2008 (IEEE Std 15288-2008), *Systems and software engineering — System life cycle processes*, or ISO/IEC 12207:2008 (IEEE Std 12207-2008), *Systems and software engineering — Software life cycle processes*, or practising service management in conformance with ISO/IEC 20000-1:2005, *Information technology — Service management — Part 1: Specification*, and ISO/IEC 20000-2:2005, *Information technology — Service management — Part 2: Code of practice*. ISO/IEC 12207:2008 (IEEE Std 12207-2008) and ISO/IEC 15288:2008 (IEEE Std 15288-2008) define a set of processes for managing and performing the stages of a systems life cycle. They define an Information Management process, but they do “not detail documentation in terms of name, format, explicit content, and recording media” [ISO/IEC 15288:2008 (IEEE Std 15288-2008), 1.4]. ISO/IEC 12207:2008 (IEEE Std 12207-2008) establishes a common framework for software life-cycle processes and in passing identifies or requires a number of documentation items. The Process Reference Model does not represent a particular process implementation approach, nor does it prescribe a system/software life-cycle model, methodology, or technique. ISO/IEC 20000-1:2005 establishes general requirements for documents and records (3.2). ISO/IEC 12207:2008 (IEEE Std 12207-2008) does not always specify when software information items are to be prepared, nor does it identify information item contents. This International Standard provides a mapping of ISO/IEC 15288:2008 (IEEE Std 15288-2008) and ISO/IEC 12207:2008 (IEEE Std 12207-2008) clauses with a set of information items.

The generic document types (which may be referred to as information item types) are to be used to identify the information necessary to support the ISO/IEC 15288:2008 (IEEE Std 15288-2008) agreement, enterprise, project, and technical processes; the ISO/IEC 12207:2008 (IEEE Std 12207-2008), primary, supporting, and organizational life-cycle processes; or the ISO/IEC 20000-1:2005 service management processes.

This International Standard identifies records and information items based on analysis of references in ISO/IEC 15288:2008 (IEEE Std 15288-2008), ISO/IEC 12207:2008 (IEEE Std 12207-2008), ISO/IEC 20000-1:2005 and ISO/IEC 20000-2:2005, which in some cases provide partial or complete outlines for the content of specific documents. However, the requirements for the life-cycle processes do not uniquely and unambiguously state the requirements for the information item contents or the information needed by a user of an information item. Moreover, the information from the life-cycle processes may overlap or may be created and revised at different times. In short, the analysed references do not result in a logically complete list of information items.

For each life-cycle process, it would be possible to prepare a plan, procedures, and reports, as well as numerous records, requests, descriptions and specifications. Such an elaboration of the documentation schema would be more rigorous than specified by ISO/IEC 15288:2008 (IEEE Std 15288-2008) or ISO/IEC 12207:2008 (IEEE Std 12207-2008). As ISO/IEC 15288:2008 (IEEE Std 15288-2008) points out (1.4), “This International Standard does not detail the life-cycle processes in terms of methods or procedures required to meet the requirements and outcomes of a process.” Thus, information items may be combined or subdivided as needed for project or organizational purposes, as further defined in Clause 2, Applicability, and Clause 3, Conformance.