

This is a preview of "ISO/IEC/IEEE 15289:2...". Click here to purchase the full version from the ANSI store.

15289

Second edition
2015-05-15

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

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



Reference number

ISO/IEC/IEEE 15289:2015(E)

© ISO/IEC 2015
© IEEE 2015

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat, the IEC Central Office and IEEE do not accept any liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies and IEEE members. In the unlikely event that a problem relating to it is found, please inform the ISO Central Secretariat or IEEE at the address given below.



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2015

© IEEE 2015

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from ISO, IEC or IEEE at the respective address below.

ISO copyright office
Case postale 56
CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland
E-mail inmail@iec.ch
Web www.iec.ch

Institute of Electrical and Electronics Engineers, Inc.
3 Park Avenue, New York
NY 10016-5997, USA
E-mail stds.ipr@ieee.org
Web www.ieee.org

Published in Switzerland

Contents

Page

Foreword	vi
Introduction.....	vii
1 Scope	1
2 Applicability	2
2.1 Purpose	2
2.2 Intended users of this International Standard.....	3
2.3 Applicability to work efforts.....	3
2.4 Applicability to information item audiences	3
3 Conformance	4
3.1 Definition of conformance	4
3.2 Conformance situations.....	4
3.3 Type of conformance.....	5
4 Normative references.....	5
5 Terms and definitions	5
6 Life-cycle data and information items	8
6.1 Life-cycle data characteristics.....	8
6.2 Records compared to information items (documents)	9
6.3 Management of life-cycle data (records)	9
6.4 Management of information items (documents).....	9
6.4.1 Developing the documentation plan	10
6.4.2 Managing and controlling information items	10
7 Generic types of information items.....	10
7.1 General	10
7.2 Description – generic content	11
7.3 Plan – generic content.....	11
7.4 Policy – generic content.....	13
7.5 Procedure – generic content	13
7.6 Report – generic content.....	14
7.7 Request – generic content	15
7.8 Specification – generic content.....	15
8 Mapping of information items to the life cycle and service management processes.....	16
8.1 Mapping of information items to the system life cycle.....	16
8.2 Mapping of information items to the software life cycle	20
8.3 Mapping of information items to the service management processes.....	29
9 Records	35
9.1 Record – generic content.....	35
9.2 Specific record contents	36
10 Specific information item (document) contents	40
10.1 General	40
10.2 Acceptance plan	41
10.3 Acceptance review and testing report	41
10.4 Acquisition plan.....	41
10.5 Asset management plan.....	42
10.6 Audit acknowledgement report	42
10.7 Audit plan	42

ISO/IEC/IEEE 15289:2015(E)

10.8	Audit procedure	42
10.9	Audit report.....	42
10.10	Capacity plan	43
10.11	Capacity management procedure.....	43
10.12	Change request	43
10.13	Communication procedure.....	44
10.14	Complaint procedure	44
10.15	Concept of operations	44
10.16	Configuration management plan and policy	45
10.17	Configuration management procedure	46
10.18	Configuration status report.....	46
10.19	Contract	47
10.20	Customer satisfaction survey	47
10.21	Database design description	47
10.22	Development plan	48
10.23	Disposal plan	49
10.24	Documentation plan.....	49
10.25	Documentation procedure	49
10.26	Domain engineering plan	50
10.27	Evaluation report.....	50
10.28	Implementation procedure	50
10.29	Improvement plan	50
10.30	Improvement procedure	51
10.31	Incident management procedure.....	51
10.32	Incident report	52
10.33	Information management plan	52
10.34	Information management procedure.....	53
10.35	Information security plan	53
10.36	Information security policy	54
10.37	Information security procedure	54
10.38	Installation plan	54
10.39	Installation report.....	54
10.40	Integration and test report.....	55
10.41	Integration plan	55
10.42	Interface description	55
10.43	Life-cycle policy and procedure.....	56
10.44	Maintenance plan	56
10.45	Maintenance procedure	56
10.46	Measurement plan.....	57
10.47	Monitoring and control report.....	57
10.48	Operational test procedure	57
10.49	Problem management procedure	58
10.50	Problem report	58
10.51	Process assessment procedure	59
10.52	Process improvement analysis report	59
10.53	Product need assessment.....	59
10.54	Progress report	60
10.55	Project management plan	60
10.56	Proposal.....	61
10.57	Qualification test procedure.....	61
10.58	Qualification test report.....	61
10.59	Quality management plan.....	62
10.60	Quality management policy and procedure.....	62
10.61	Release plan	62
10.62	Request for proposal (RFP).....	63
10.63	Resource request.....	64

ISO/IEC/IEEE 15289:2015(E)

10.64	Reuse plan.....	64
10.65	Review minutes.....	64
10.66	Risk action request.....	64
10.67	Risk management policy and plan	65
10.68	Service catalog	65
10.69	Service continuity and availability plan	65
10.70	Service level agreement (SLA)	66
10.71	Service management plan.....	66
10.72	Service plan.....	67
10.73	Service report.....	67
10.74	Software architecture description	68
10.75	Software design description	69
10.76	Software requirements specification	70
10.77	Software unit description.....	70
10.78	Software unit test procedure	70
10.79	Software unit test report	71
10.80	Supplier management procedure.....	71
10.81	Supplier selection procedure	71
10.82	System architecture description	71
10.83	System element description	72
10.84	System requirements specification.....	72
10.85	Training documentation	73
10.86	Training plan	73
10.87	User documentation	73
10.88	User notification.....	74
10.89	Validation plan	74
10.90	Validation report	74
10.91	Validation test specification	75
10.92	Verification plan.....	75
10.93	Verification report.....	76
Annex A (informative) Procedure for identifying information items and their contents		77
Annex B (informative) Information items and records by source.....		79
Bibliography.....		83

List of Tables

Table 1	— Mapping of ISO/IEC 15288:2008 (IEEE Std 15288-2008), clauses to information items for each system life-cycle process	17
Table 2	— Mapping of ISO/IEC 12207:2008 (IEEE Std 12207-2008) clauses to information items for each software life-cycle process.....	22
Table 3	— Mapping of ISO/IEC 20000-1:2011 (IEEE Std 20000-1:2013) and ISO/IEC 20000-2:2012 (IEEE Std 20000-2:2013) clauses to information items for each service management process	30
Table 4	— Record references and contents	36
Table B.1	— Information items by source	79
Table B.2	— Records by source.....	81

ISO/IEC/IEEE 15289:2015(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards 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.

IEEE Standards documents are developed within the IEEE Societies and the Standards Coordinating Committees of the IEEE Standards Association (IEEE-SA) Standards Board. The IEEE develops its standards through a consensus development process, approved by the American National Standards Institute, which brings together volunteers representing varied viewpoints and interests to achieve the final product. Volunteers are not necessarily members of the Institute and serve without compensation. While the IEEE administers the process and establishes rules to promote fairness in the consensus development process, the IEEE does not independently evaluate, test, or verify the accuracy of any of the information contained in its standards.

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.

Attention is called to the possibility that implementation of this standard may require the use of subject matter covered by patent rights. By publication of this standard, no position is taken with respect to the existence or validity of any patent rights in connection therewith. ISO/IEEE is not responsible for identifying essential patents or patent claims for which a license may be required, for conducting inquiries into the legal validity or scope of patents or patent claims or determining whether any licensing terms or conditions provided in connection with submission of a Letter of Assurance or a Patent Statement and Licensing Declaration Form, if any, or in any licensing agreements are reasonable or non-discriminatory. Users of this standard are expressly advised that determination of the validity of any patent rights, and the risk of infringement of such rights, is entirely their own responsibility. Further information may be obtained from ISO or the IEEE Standards Association.

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 second edition cancels and replaces the first edition (ISO/IEC 15289:2011), of which it constitutes a minor revision. This second edition reflects ISO/IEC 20000-1:2011 (IEEE Std 20000-1-2013) and ISO/IEC 20000-2:2012 (IEEE Std 20000-2-2013), which replaced ISO/IEC 20000-1:2005 and ISO/IEC 20000-2:2005.

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 20000-1:2011 (IEEE Std 20000-1-2013), *Information technology — Service management — Part 1: Service Management System Requirements*; and ISO/IEC 20000-2:2012 (IEEE Std 20000-2-2013), *Information technology — Service management — Part 2: Guidance on the application of service management systems*.

IEEE contributed IEEE Std 12207.1-1997, *IEEE Guide for Information Technology — Software Life Cycle Processes — Life Cycle Data. (ISO/IEC 12207) IEEE Guide for Standard for Information Technology — Software life cycle processes — Life cycle data*, as a source for this International Standard