

# P15289

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**Type of Project:** Modify Existing Approved PAR

**PAR Request Date:** 23-Jun-2011

**PAR Approval Date:** 10-Sep-2011

**PAR Expiration Date:** 31-Dec-2011

**Status:** Modification to a Previously Approved PAR for the Revision of a Standard

**Root PAR:** P15289 **Approved on:** 07-May-2007

**Root Project:** 12207.1-1997

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**1.1 Project Number:** P15289

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Title:** Standard Software and Systems Engineering -- Content of life-cycle information products (documentation)

**Changes in title:** Standard ~~for~~Software Systems and SoftwareSystems Engineering -- Content of Lifelife-cycle Cycleinformation Informationproducts Products (Documentationdocumentation)

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**3.1 Working Group:** Life Cycle Documentation (Information Items) (C/S2ESC/15289\_WG)

**Contact Information for Working Group Chair**

**Name:** Annette Reilly

**Email Address:** [annette.d.reilly@lmco.com](mailto:annette.d.reilly@lmco.com)

**Phone:** 301-337-4409

**Contact Information for Working Group Vice-Chair**

None

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**3.2 Sponsoring Society and Committee:** IEEE Computer Society/Software & Systems Engineering Standards Committee (C/S2ESC)

**Contact Information for Sponsor Chair**

**Name:** Paul Croll

**Email Address:** [pcroll@csc.com](mailto:pcroll@csc.com)

**Phone:** 540-644-6224

**Contact Information for Standards Representative**

None

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**4.1 Type of Ballot:** Individual

**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 04/2011

**4.3 Projected Completion Date for Submittal to RevCom:** 05/2011

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 5

**5.2 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 (IS) assumes an organization is implementing life cycle processes in conformance with ISO/IEC/IEEE 15288:2008, Systems and software engineering - System life cycle processes, or ISO/IEC/IEEE 12207:2008, Systems and software engineering - Software life cycle processes, or practicing Service Management in conformance with 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. ISO/IEC/IEEE 12207:2008 and ISO/IEC/IEEE 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/IEEE 15288:2008, clause 1.4). ISO/IEC/IEEE 12207:2008 establishes a common

**Changes in scope:** This International Standard specifies the purpose and content of all identified ~~Systems~~systems and ~~Software~~software Lifelife Cyclecycle 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).

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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 20000-1:2005 establishes general requirements for documents and records (3.2). ISO/IEC/IEEE 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/IEEE 15288:2008 and ISO/IEC/IEEE 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/IEEE 15288:2008 agreement, enterprise, project, and technical processes; the ISO/IEC/IEEE 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/IEEE 15288:2008, ISO/IEC/IEEE 12207:2008, and ISO/IEC 20000-1:2005 and 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 items 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 analyzed 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/IEEE 15288:2008 or ISO/IEC/IEEE 12207:2008. As ISO/IEC/IEEE 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. Not included in the scope of this International Standard are the following:

- a) The format or content of recommended input data or input information items, except for the content of those input items that are also output information items;
- b) Instructions on combining or subdividing information items and information item contents of a similar nature;
- c) Guidance on selecting an appropriate presentation format, delivery media, and maintenance technology for system and software life cycle data, records, information items, or documentation, such as electronic publishing systems, content management systems, or data repositories;
- d) Detailed content for information items related to general business, organizational, and financial management that is not specific to systems and software engineering and Information Technology service management, such as business strategies, human resources and investment policies, personnel selection criteria, financial budgeting and accounting policies and procedures, cost reports, or payroll data;
- e) Information items showing only approval of an ISO/IEC/IEEE 12207:2008 subclause, such as ISO/IEC/IEEE 12207:2008,

clause 1.4). ISO/IEC/IEEE 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 20000-1:2005 establishes general requirements for documents and records (3.2). ISO/IEC/IEEE 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/IEEE 15288:2008 and ISO/IEC/IEEE 12207:2008 clauses with a set of information items.

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- b) Instructions on combining or subdividing information items and information item contents of a similar nature;
- c) Guidance on selecting an appropriate presentation format, delivery media, and maintenance technology for system and software life cycle data, records, information items, or documentation, such as electronic publishing systems, content management systems, or data repositories;
- d) Detailed content for information items related to general business, organizational, and financial management that is not specific to systems and software engineering and Information Technology service management, such as business strategies, human resources and investment policies, personnel selection criteria, financial budgeting and accounting policies and procedures, cost reports, or payroll data;
- e) Information items showing only approval of an ISO/IEC/IEEE

6.1.2.3.4.5;  
f) Any ISO/IEC/IEEE 15288:2008 or ISO/IEC/IEEE 12207:2008 subclause not explicitly or implicitly identifying the recording of information about an activity or task, for example, ISO/IEC/IEEE 12207:2008, 6.4.4;  
g) Work products, models, software, and other artifacts of the life-cycle products and services that are not information items or records used in information items  
NOTE 1: ISO/IEC 26514:2008 Systems and software engineering --Requirements for designers and developers of user documentation provides guidance on formats for software user documentation.  
NOTE 2: ISO/IEC 15504-5: 1999, Information technology -- Software process assessment -- Part 5: assessment model and indicator guidance details the content of work products as well as information items. Its guidance includes descriptions of a set of information items (documents), which an assessor may encounter. The information items in its guidance may be produced by combinations and subdivisions of the required information items in this IS.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** No

**5.4 Purpose:** document will not contain a purpose clause

**5.5 Need for the Project:** Adoption of ISO/IEC 15289 as an IEEE standard is in accordance with the liaison agreement between the IEEE-CS SESC and ISO JTC 1 SC7. IEEE 12207.1 was contributed as a major source for ISO 15289. Through the joint development of ISO/IEC/IEEE 15289:2011, IEEE users will have a current and consistent standard for life-cycle documentation (information items) which will replace IEEE 12207.1-1997.

**5.6 Stakeholders for the Standard:** The stakeholders include systems and software engineers, and information managers.

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## Intellectual Property

**6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?:** No

**6.1.b. Is the Sponsor aware of possible registration activity related to this project?:** No

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**7.1 Are there other standards or projects with a similar scope?:** Yes

**If Yes please explain:** IEEE 12207.1-1997 was a source for 15289, but is not up to date and does not address the systems life cycle information items. IEEE 12207.1-1997 will be completely replaced and superseded by ISO/IEC/IEEE 15289:2011.

**and answer the following**

**Sponsor Organization:** IEEE C/S2ESC

**Project/Standard Number:** 12207.1

**Project/Standard Date:** 09-Dec-1997

**Project/Standard Title:** Software Life Cycle Processes--Life Cycle Data

**7.2 Joint Development**

**Is it the intent to develop this document jointly with another organization?:** Yes

**Organization:** ISO/IEC JTC 1

**Technical Committee Name:** Information Technology

**Technical Committee Number:** SC7/WG2

**Contact Name:** Annette Reilly

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**8.1 Additional Explanatory Notes (Item Number and Explanation):** PAR is being revised so that title and scope match the final balloted standard draft. This draft has completed both IEEE and ISO/IEC balloting.

12207:2008 subclause, such as ISO/IEC/IEEE 12207:2008, 6.1.2.3.4.5;

f) Any ISO/IEC/IEEE 15288:2008 or ISO/IEC/IEEE 12207:2008 subclause not explicitly or implicitly identifying the recording of information about an activity or task, for example, ISO/IEC/IEEE 12207:2008, 6.4.4;

g) Work products, models, software, and other artifacts of the life-cycle products and services that are not information items or records used in information items

NOTE 1: ISO/IEC 26514:2008 Systems and software engineering --Requirements for designers and developers of user documentation provides guidance on formats for software user documentation.

NOTE 2: ISO/IEC 15504-5: 1999, Information technology -- Software process assessment -- Part 5: assessment model and indicator guidance details the content of work products as well as information items. Its guidance includes descriptions of a set of information items (documents), which an assessor may encounter. The information items in its guidance may be produced by combinations and subdivisions of the required information items in this IS.

~~**Changes in purpose:** The document purpose will of not this contain International a Standard purpose is clause to guide users of ISO/IEC 12207:2008, ISO/IEC 15288:2008, and ISO/IEC 20000 1 and 1:2005 in identifying and planning the specific information items to be produced during systems and software life cycles.~~