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Systems and software engineering — Life cycle management —

Part 6: System integration engineering

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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Foreword

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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 document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Systems and software engineering*.

A list of all parts of the ISO/IEC 24748 series can be found on the ISO website.

Introduction

This document was developed in response to a need for consistent terminology, definitions and guidance that elaborates the area of system integration, taking into account the context of use and the proven practices for the development of systems.

ISO/IEC/IEEE 15288 includes an integration process that focuses on physically assembling the implemented system elements composing a system to obtain an "integrated system". This process interfaces directly to other technical processes and indirectly to activities and tasks of other technical processes, in particular, the processes that define the system requirements, architecture and design.

The purpose of this document is to facilitate the usage of the integration process of the latest revision of ISO/IEC/IEEE 15288 by providing guidance on system integration.

This document describes the integration engineering activities dealing with planning, performing and managing the integration of a system, including the related activities of other technical processes, in particular, verification and validation processes. These are real practices in industry, i.e. the integration of a system is technically engineered and managed as a project (included in the system development project). Although these practices are performed, they were not formalized in a standard or a guide when this document was written.

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1 Scope

This document

— specifies activities and processes to be implemented for engineering the integration of systems-of-interest throughout the life cycle (systems made of products and/or services; see Note 1),

— provides guidance for the integration process and its relationships to other system life cycle processes as described in ISO/IEC/IEEE 15288,

— specifies the information items to be produced through the implementation of the integration engineering (integration process and its relationships to other system life cycle processes),

— specifies the contents of the information items, and

— provides guidelines for the format of the information items.

This document can be applied to

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

— anyone performing integration engineering activities to aid in ensuring that the application of the integration process and its relationships to other system life cycle processes conform to ISO/IEC/IEEE 15288.

NOTE 1 Systems concerned within this document are those as defined in ISO/IEC/IEEE 15288, i.e. systems that are man-made and can be configured with one or more of the following: hardware, software, data, humans, processes (e.g. processes for providing service to users), procedures (e.g. operator instructions), facilities, materials and naturally occurring entities.

NOTE 2 This document is intended to be consistent with the other parts of ISO/IEC 24748.

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*