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Systems and software engineering — Life cycle management —

Part 1: Guidelines for life cycle management

Ingénierie des systèmes et du logiciel — Gestion du cycle de vie —

Partie 1: Lignes directrices pour la gestion du cycle de vie

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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 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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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, SC 7, *Software and systems 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 first edition of ISO/IEC/IEEE 24748-1 cancels and replaces ISO/IEC TS 24748-1:2016, which has been technically revised to include movement of material from the new edition of ISO/IEC/IEEE 24748-2.

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

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

The purpose of this document is to facilitate the joint usage of the process content of the latest revisions of both ISO/IEC/IEEE 15288 and ISO/IEC/IEEE 12207, by providing unified and consolidated guidance on life cycle management of systems and software. This is to help ensure consistency in system concepts and life cycle concepts, models, stages, processes, process application, key points of view, adaptation and use in various domains as the two International Standards are used in combination. That will in turn help a project team design a life cycle model for managing the progress of their project. Hence, ISO/IEC/IEEE 15288 and ISO/IEC/IEEE 12207 are the documents that apply the concepts found in this document to specific processes.

NOTE ISO/IEC/IEEE 16326 also applies the concepts found in this document, in the process context for project management.

This document will also aid in identifying and planning use of life cycle processes described in ISO/IEC/IEEE 15288 and ISO/IEC/IEEE 12207 that will enable the project to be completed successfully, meeting its objectives/requirements for each stage and for the overall project.

Besides the above, there is also increasing recognition of the importance of helping to ensure that all life cycle stages and all aspects within each stage are supported with thorough guidance to enable alignment with any process documents that might subsequently be created that focus on areas besides systems and software, including hardware, humans, data, processes (e.g. review process), procedures (e.g. operator instructions), facilities and naturally occurring entities (e.g. water, organisms, minerals).

By addressing these needs specifically in this document, the users of the process-focused ISO/IEC/IEEE 12207 and ISO/IEC/IEEE 15288 will not only benefit from having one document complementarily addressing the aspect of product or service life cycle: they will also benefit from a framework that links life cycle management aspects to more than just the systems or software aspects of products or services.

ISO/IEC/IEEE 15288 and ISO/IEC/IEEE 12207 also have published guidelines (ISO/IEC/IEEE 24748-2 and ISO/IEC TR 24748-3), respectively, to support use of the two revised International Standards individually.

Systems and software engineering — Life cycle management —

Part 1: Guidelines for life cycle management

1 Scope

This document provides guidelines for the life cycle management of systems and software, complementing the processes described in ISO/IEC/IEEE 15288 and ISO/IEC/IEEE 12207. This document:

— addresses systems concepts and life cycle concepts, models, stages, processes, process application, key points of view, adaptation and use in various domains and by various disciplines;

— establishes a common framework for describing life cycles, including their individual stages, for the management of projects to provide, or acquire either products or services;

— defines the concept and terminology of a life cycle;

— supports the use of the life cycle processes within an organization or a project. Organizations and projects can use these life cycle concepts when acquiring and supplying either products or services;

— provides guidance on adapting a life cycle model and the content associated with a life cycle or a part of a life cycle;

— describes the relationship between life cycles and their use in applying the processes in ISO/IEC/IEEE 15288 (systems aspects) and ISO/IEC/IEEE 12207 (software aspects);

— shows the relationships of life cycle concepts to the hardware, human, services, process, procedure, facility and naturally occurring entity aspects of projects; and

— describes how its concepts relate to detailed process standards, for example, in the areas of measurement, project management and risk management.

2 Normative references

There are no normative references in this document.