

P21840

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Type of Project: Modify Existing Approved PAR

PAR Request Date: 23-Jul-2019

PAR Approval Date: 05-Sep-2019

PAR Expiration Date: 31-Dec-2021

Status: Modification to a Previously Approved PAR

Root PAR: P21840 **Approved on:** 06-Dec-2017

1.1 Project Number: P21840

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Systems and software engineering -- Guidelines for the utilization of ISO/IEC/IEEE 15288 in the context of system of systems (SOS)

Changes in title: Systems ~~Engineering~~ and software engineering -- ~~Guide~~ Guidelines for the ~~Utilization~~ utilization of ISO/IEC/IEEE 15288 in the ~~Context~~ context of ~~System~~ system of ~~System~~ systems ~~Engineering~~ (SOS)

3.1 Working Group: Working Group for Life Cycle Processes (C/S2ESC/WG_LCP)

Contact Information for Working Group Chair

Name: Teresa Doran

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Contact Information for Working Group Vice-Chair

None

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

Contact Information for Sponsor Chair

Name: Edward Addy

Email Address: edward@addy.email

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Contact Information for Standards Representative

None

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 05/2018

4.3 Projected Completion Date for Submittal to RevCom

Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 08/2019

5.1 Approximate number of people expected to be actively involved in the development of this project: 15

5.2 Scope: The proposed new standard will provide guidance for the utilization of ISO/IEC 15288 in the context of Systems of System Engineering.

This document addresses systems of systems (SoS) considerations that apply to systems at key stages in the life cycle of systems.

There is a wide variety of systems in terms of their purpose, domain of application, complexity, size, novelty, adaptability, quantities, locations, life spans and evolution. This document is concerned with describing the systems of systems considerations that apply to any system. It applies to one-of-a-kind systems, mass produced systems or customized adaptable systems.

This document does not detail the approach to addressing systems of systems considerations in terms of methods or procedures.

This document does not detail the described documentation in terms of name, format, explicit content, and recording media of documentation.

This document is intended neither to be in conflict with any organization's policies, procedures, and standards nor with any national laws and regulations. Any such conflict needs to be resolved before using this International Standard.

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

5.4 Purpose: This document will not include a purpose clause.

5.5 Need for the Project: There is growing demand for systems engineering for systems of systems (SoS) which are proliferating in all application domains. Today almost all systems operate in a systems of systems environment, and must work effectively with other independently developed and operated systems to meet the user business or mission needs.

ISO/IEC/IEEE 21840 is intended to be used in conjunction with ISO/IEC/IEEE 15288 and two other fundamental SoS standards currently in development. ISO/IEC/IEEE 21839 - addresses systems of systems from the perspective of their life cycle stage, while ISO/IEC/IEEE 21840 addresses systems of systems at the SoS level. ISO/IEC/IEEE 21841 - provides a set of taxonomies for systems of systems, which help to organize the relevant aspects or essential characteristics of systems of systems, providing specific viewpoints that align with stakeholder concerns. Used in conjunction with this standard, this organization facilitates better communications between the various stakeholders that are involved activities like governance, engineering, operation, and management of these SoS.

Although each of ISO/IEC/IEEE 21839, 21840 and 21841 provide stand-alone SoS support, together these standards supply a key set of well-coordinated guidance and recommended practices for a growing field of SoS stakeholders.

5.6 Stakeholders for the Standard: Stakeholders include systems engineers and designers, systems owners and acquirers of the System of Interest (SoI) and the SoS, project evaluators and reviewers,

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

7.1 Are there other standards or projects with a similar scope?: No

7.2 Joint Development

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

Organization: ISO/IEC JTC1

Technical Committee Name: Systems and Software Engineering

Technical Committee Number: SC7

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8.1 Additional Explanatory Notes: Title: This modification to the PAR is solely to revise the title consistent with changes made by ISO. The term Guide is reserved in ISO for general Guides and the term Guidelines is used for standards that provide guidance.

7.2 This is a joint development project with ISO/IEC JTC 1/SC7 under terms of the Partner Standards Development Organization (PSDO) agreement with IEEE.