

Concepts and Design Philosophy Behind ISO/IEC/IEEE 42010 Systems and software engineering—Architecture description

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Abstract. ISO/IEC/IEEE 42010, 'Systems and software engineering—Architecture description', has been used by system, enterprise and software architects since its publication in 2011. It was based upon earlier work, IEEE 1471:2000, 'Recommended Practice for Architecture Description of Software-Intensive Systems' -- the first formal standard on description of software and systems architectures.

Currently 42010 is undergoing joint revision by ISO and IEEE with active participation by a number of nations and liaison organizations (including INCOSE).

This presentation will offer the basic concepts and design philosophy of 42010, its usage, and what to expect when the revision is completed in 2021. Topics include: architecture descriptions, architecture description frameworks, viewpoints and model kinds, current usage of the standard and supporting tooling.

Biography

Rich Hilliard (nHansa)

Rich Hilliard was technical editor of IEEE 1471:2000, Recommended Practice for Architecture Description of Software-Intensive Systems; the project editor of its adoption by ISO: Software and Systems Engineering — Architecture description, ISO/IEC/IEEE 42010:2011; and co-editor of the joint ISO and IEEE revision of that standard currently underway. He has been a user of the Standard since 2000 in both research and consulting as a practicing system architect. Currently working with nHansa Inc. on architecture modeling tools for safety- and performance-critical systems. He is a member of INCOSE, IEEE Computer Society and Free Software Foundation.