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Information technology — Systems and software engineering — Guide for configuration management tool capabilities

Technologies de l'information — Ingénierie des systèmes et du logiciel — Guide pour les capacités d'outil de gestion de configuration

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

In exceptional circumstances, the joint technical committee may propose the publication of a Technical Report of one of the following types:

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— type 3, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard (“state of the art”, for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

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ISO/IEC TR 18018, which is a Technical Report of type 2, was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*.

Introduction

Configuration management (CM) is a process central to the software engineering life cycle. CM has been established as an ISO/IEC standard life cycle process in ISO/IEC 12207:2008, *Systems and software engineering — Software life cycle processes* and ISO/IEC 15288:2008, *Systems and software engineering — System life cycle processes*.

ISO/IEC 12207 and ISO/IEC 15288 describe a comprehensive set of processes, activities and tasks to be performed when acquiring or developing software. However, these documents do not address the capabilities that a CM tool user can expect from a tool in order to support the CM process and other software engineering life cycle activities. There is a gap between CM process descriptions and corresponding CM process automation which affects both tool users and tool suppliers.

This Technical Report provides guidance in the evaluation and selection for CM tools during acquisition. CM tool evaluation by prospective users can be complex, time consuming, and expensive. This Technical Report helps to characterize what a CM tool can and cannot do in the CM process.

This Technical Report provides guidance for tool manufacturers in implementing a minimum set of capabilities. The capabilities defined in this Technical Report are linked to ISO/IEC 12207 and ISO/IEC 15288, and will provide tool manufacturers with guidance on the characteristics their tools should support to meet these International Standards.