

Information technology — Software life cycle processes — Configuration Management

ICS 35.080

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National foreword

This British Standard reproduces verbatim ISO/IEC TR 15846:1998 and implements it as the UK national standard.

The UK participation in its preparation was entrusted to Technical Committee IST/15, Software Engineering, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ISO/IEC TR title page, pages ii to iv, pages 1 to 18 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

This British Standard, having been prepared under the direction of the DISC Board, was published under the authority of the Standards Committee and comes into effect on 15 October 1999

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ISBN 0 580 35329 X

Amendments issued since publication

Amd. No.	Date	Comments

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TECHNICAL REPORT

ISO/IEC TR 15846

First edition
1998-11-01

Information technology — Software life cycle processes — Configuration Management

*Technologies de l'information — Procédés de cycle de vie du logiciel —
Gestion de configuration*



Reference number
ISO/IEC TR 15846:1998(E)

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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 Technical Reports 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.

The main task of technical committees is to prepare Technical Reports, but in exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of a Technical Report, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on a Technical Report;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as a Technical Report (“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 data they provide are considered to be no longer valid or useful.

ISO/IEC TR 15846, which is a Technical Report of type 1, was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software engineering*.

Annex A forms an integral part of this Technical Report.

Introduction

Relationship with other Technical Reports

This Technical Report presents the requirements for the Software Configuration Management (SCM) Process. SCM is a supporting CM Process to the life cycle of a software product, as described in ISO/IEC 12207, “*Information technology — Software life cycle processes*”. SCM provides continuity across the Operation, Maintenance and Development Processes. Annex A (informative) of this Technical Report shows the relationship with the clauses of ISO/IEC 12207.

Where text has been quoted from ISO/IEC 12207:1995, that text is enclosed in a box, for ease of identification.

This Technical Report keeps consistency with ISO 10007 “**1995, Quality management — Guidelines for configuration management**”. The relationship of the clauses in ISO 10007 to the clauses in this Technical Report is shown in Annex A.

Types of software

SCM administers any information that can be stored in a computer, including the software products. For example: specifications, database schema, test cases, user operating instructions, reusable coded objects, source and executable code, or data.

SCM may also administer lists and records about software items of significance stored in other locations. For example: products installed at an operational site, or off-the-shelf products loaded on a network.

Software products used as tools in the software environment to create, maintain, archive or restore the deliverable software product, are also types of software capable of being administered by SCM, as are the instructions and any customization or parameters to operate the tool. The software environment (for example development) may be deliverable or may be proprietary. SCM can apply to few or to all items of software from a life-cycle activity.

Implementation of the SCM Process

SCM may be performed by a combination of software tools, methods and techniques. This Technical Report does not specify how to implement or perform the activities and tasks in the SCM Process. The SCM requirements remain the same irrespective of the tools by which SCM is implemented.

A number of emerging requirements for SCM (e.g. for product delivery to multiple sites with different product configurations, or for concurrent modification of Configuration Items — CIs) may apply the SCM Process in this Technical Report to assist in controlling these emerging areas. Parties wishing to operate such tasks are advised to define the additional requirements in contract agreements or SCM policy and procedures.

NOTE A procedure may be a document, a template, etc.

Benefits

This Technical Report can improve the visibility and accountability within the Operation, Maintenance and Development Processes by:

- providing an appropriate documented and repeatable scheme for identifying and controlling electronic documents, code, interfaces, databases, etc., to support the software life-cycle processes;
- supporting a chosen development, maintenance or operations methodology fitting the requirements, standards, policies and directives, organization and management philosophy;
- producing management and product information concerning the status of baselines, changes, releases, versions, archives, etc.;
- recursively defining a Software CI (SCI) to the level of individual items of significance to be controlled;
- controlling the libraries used to store SCIs together with their status and related information;
- invoking the ISO/IEC 12207 Processes to assure the integrity of the configurations;