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Information technology — Portable Operating System Interface (POSIX®) system administration —

Part 2:
Software administration

Technologies de l'information — Administration du système de l'interface du système opératoire portable (POSIX®) —

Partie 2: Administration du logiciel

Reference numbe

Information technology — Portable Operating System Interface (POSIX®) system administration — Part 2: Software administration

Abstract: ® series of standards for applications and user interfaces to open systems. It defines a software packaging layout, a set of information maintained about software, and a set of utility programs to manipulate that software and information.

Keywords: data processing, open systems, operating system, packaging, portable application, POSIX®, software, system administration, utilities

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In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. 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.

International Standard ISO/IEC 15068-2 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC22, *Programming languages, their environments and system software interfaces.*

ISO/IEC 15068 consists of the following parts, under the general title *Information technology — Portable Operating System Interface (POSIX):*

— *Part 1:* (reserved for future use)

— *Part 2: Software administration*

— *Part 3: User and group account administration*

— *Part 4: Print administration*

Annexes A to D of this part of ISO/IEC 15068 are for information only.

Introduction

/ (This Introduction is not a normative part of IEC 15068-2 Information technology — Portable Operating System Interface (POSIX) system administration — Part 2: Software administration, but is included for information only.)

System administration utilities vary widely between vendors, being an area where there are currently no formal standards that have proved to be significant in practice. This makes the task of system administration difficult. The objective of this part of ISO/IEC 15068 isto address this problem for software administration, a specific area of system administration, and to contribute to the overall solution of administering computing environments, both stand-alone and distributed.

In pursuit of this goal, this part of ISO/IEC 15068 defines a software packaging layout, a set of information maintained about software, and a set of utility programs to manipulate that software and information. These definitions provide the flexibility necessary for system administrators to enforce policies suitable to their environments.

Organization of the Standard

The standard is divided into the following sections:

(1) General

(2) Terminology and General Requirements

(3) Software Structures

(4) Software Administration Utilities

(5) Software Packaging Layout

Also included are the following annexes:

— Bibliography (Annex A)

— Rationale and Notes (Annex B)

— Sample Files (Annex C)

— Portability Considerations (Annex D)

This introduction and the annexes are not considered a normative part of the standard.

Conformance Measurement

In publishing this part of ISO/IEC 15068, both IEEE and the POSIX.7.2 developers simply intend to provide a yardstick against which various operating system implementations may be measured for conformance. It is not the intent of either the IEEE or POSIX.7.2 developers to measure or rate any products or to reward or sanction the product of any vendor as standard by these or any other means. The responsibility for determining the degree of conformance or lack thereof with this part of ISO/IEC 15068 rests solely with the individual evaluating the product claiming to be in conformance with the standard.

Base Documents

Much of the original text came to the developers of this part of ISO/IEC 15068 from UNIX System Laboratories (the **pkg*** utilities) and Hewlett-Packard (HP Software Distribution Utilities). For further details and comparisons of various existing practices, see B.4 and B.4.5.

Extensions and Supplements to This Standard

Activities to extend this standard to address additional requirements are in progress and similar efforts can be anticipated in the future. This is an outline of how these extensions will be incorporated and how users of this document can keep track of that status.

Extensions are approved as supplements to this document following the IEEE standards procedures and eventually as International Organization for Standardization/International Electrotechnical Committee (ISO/IEC) standards.

Approved supplements are published separately and distributed with orders from the IEEE for this document until the full document is reprinted and such supplements are incorporated in their proper positions.

If there are any questions about the completeness of your version, you may contact the IEEE Computer Society, (202) 371-0101, or the IEEE Standards Office, (908) 562-3800, to determine what supplements have been published.

Supplements may contain either required functions or optional facilities. Supplements may add additional conformance requirements (see 1.3, which defines new classes of conforming systems or applications).

It is undesirable (but perhaps unavoidable) for supplements to change the functionality of the already defined facilities.

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When writing, ask to have your letter forwarded to the chairperson or appropriate reviewer/developer of IEEE Std 1387.2-1995.

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Information technology — Portable Operating System Interface (POSIX) system administration — Part 2: Software administration

Section 1: General

1.1 Scope

This part of ISO/IEC 15068 defines a software packaging layout and utilities that operate on that packaging layout as well as software installed from that packaging layout. The scope of this part of ISO/IEC 15068 is administration of software across distributed systems. This administration includes, but is not limited to, packaging of software for distribution, distribution of software to systems, installation and configuration of software on systems, and removal of software from systems.

This part of ISO/IEC 15068 is motivated by many factors, including a desire by system administrators and software suppliers to have a common way of installing and removing software. To meet the needs of these groups, this part of ISO/IEC 15068 consists of several components, listed below. The readers of this part of ISO/IEC 15068 include system administrators, suppliers of software that implement this part of ISO/IEC 15068, and suppliers of software that use implementations of this part of ISO/IEC 15068. Readers in each of these categories may find their attention drawn to different sections.

The key components are listed below.

Software structures

This part of ISO/IEC 15068 defines a hierarchical set of structures used to define software. Information is kept about the software based on these structure definitions. The structure definitions apply both to installed software and to software prepared for installation