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INTERNATIONAL STANDARD

ISO/IEC 13346-1

First edition
1995-12-15

Information technology — Volume and file structure of write-once and rewritable media using non-sequential recording for information interchange —

Part 1: General

Technologies de l'information — Structure de volume et de fichier de moyens d'écriture unique et de réécriture utilisant un enregistrement non séquentiel pour l'échange d'information —

Partie 1: Généralités

Reference number
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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialised system for worldwide standardisation. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organisation to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organisations, governmental and non-governmental, in liaison with ISO and IEC, also take part in this work.

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 of an International Standard requires approval by at least 75% of the national bodies casting a vote.

International Standard ISO/IEC 13346 was prepared by the European Association for Standardizing Information and Communication Systems, ECMA, (as Standard ECMA-167) and was adopted, under a special "fast-track procedure", by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by National Bodies of ISO and IEC.

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Introduction

ISO/IEC 13346 is a volume and file structure standard for interchanging files and as such, it is a peer to existing volume and file structure standards such as ISO 9293 and ISO 9660. It is rather different from those standards in at least two important ways. Firstly, it offers much more functionality, mainly because of user needs for increased character set support and for more powerful file system features. Secondly, it acknowledges the separate concerns of booting, volume structure and file system structure. Rather than bundling these different functions together, ISO/IEC 13346 carefully segregates these functions into separate parts and describes in detail how those parts fit together. It is expected that future volume and file structure standards will fit into this framework, rather than building other distinct and incompatible formats.

ISO/IEC 13346 is published in five Parts. Part 1 - general - specifies references, definitions, notations and basic structures used in the other four Parts. Part 2 - volume and boot block recognition - specifies formats and system requirements for recognising the volume structures on a medium and booting from a medium. Part 3 - volume structure - specifies how to record various volume-related entities such as volumes, volume sets and logical volumes. Part 4 - file structure - specifies how to record and interpret files, both file data and file attributes, and file hierarchies within logical volumes. Part 5 - record structure - specifies how to record and interpret file data encoded as records.

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Information technology - Volume and file structure of write-once and rewritable media using non-sequential recording for information interchange -

Part 1:
General

1 Scope

ISO/IEC 13346 specifies a format and associated system requirements for volume and boot block recognition, volume structure, file structure and record structure for the interchange of information on media between users of information processing systems.

The media shall be recorded as if the recording of sectors may be done in any order.

NOTE 1 - The medium is not restricted to being of only one type; the type of medium may be either write once, or read only, or rewritable, or a combination of these types.

ISO/IEC 13346 consists of the following five Parts:

Part 1: General

Part 2: Volume and Boot Block Recognition

Part 3: Volume Structure

Part 4: File Structure

Part 5: Record Structure

Annex A - ICB Strategies, is part of Part 4.

Part 1 specifies references, definitions, notation and basic structures that apply to the other four Parts.

2 Parts references

The first digit of a reference within ISO/IEC 13346 identifies the Part, e.g. 2/5 refers to clause 5 in Part 2, and figure 4/3 refers to figure 3 in Part 4.

3 Conformance

3.1 Conformance of a medium

A medium shall be in conformance with ISO/IEC 13346 when it conforms to a standard for recording (see 1/5.10) and information recorded on sectors of the medium conform to the specifications of Part 1 and one or more of Parts 2, 3, 4 and 5. A statement of conformance shall identify the sectors of the medium on which information is recorded according to the specifications of ISO/IEC 13346, and the Parts and the levels of medium interchange (see 2/10, 3/10.10, and 4/15) to which the contents of those sectors of the medium conform.

3.2 Conformance of an information processing system

An information processing system shall be in conformance with ISO/IEC 13346 if it meets the requirements specified in Part 1 and one or more of Parts 2, 3, 4 and 5 either for an originating system (see 2/12, 3/13, 4/17 and 5/11) or for a receiving system (see 2/13, 3/14, 4/18 and 5/12) or for both types of system. A statement of conformance shall identify the Parts, and the levels of the requirements for each of those Parts, which can be met by the system.

4 Normative references

The following International Standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 13346. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 13346 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

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ISO/IEC 646:1991, *Information technology - ISO 7-bit code character set for information interchange.*

ISO/IEC 2022:1994, *Information technology - Character code structure and extension techniques.*

ISO/IEC 6429:1992, *Information technology - Control functions for coded character sets.*

ISO 8859-1:1987, *Information processing - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No. 1.*

ISO/IEC 9293:1994, *Information technology - Volume and file structure of disk cartridges for information interchange.*

ISO 9660: 1988, *Information processing - Volume and file structure of CD-ROM for information interchange.*

ISO/IEC 9945-1:1990, *Information technology - Portable Operating System Interface (POSIX) - Part 1: System Application Program Interface (API) [C Language].*

ISO/IEC 10646-1:1993, *Information technology - Universal Multiple Octet Coded Character Set (UCS) - Part 1: Architecture and Basic Multilingual Plane.*

ISO/IEC 13490-1:1995, *Information technology - Volume and file structure of read-only and write-once compact disk media for information interchange - Part 1: General.*

ISO/IEC 13490-2:1995, *Information technology - Volume and file structure of read-only and write-once compact disk media for information interchange - Part 2: Volume and file structure.*

ISO/IEC 13800[1)], *Information technology – Procedure for the registration of identifiers and attributes for volume and file structure*

ITU-T Recommendation V.41, *Code-Independent Error-Control System.*

[1)] To be published