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

Part 5:
Record structure

*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 5: Structure d'enregistrement

| Contents | Page |
|--|----------|
| Section 1 - General | 1 |
| 1 Scope..... | 1 |
| 2 Parts references | 1 |
| 3 Part interface..... | 1 |
| 3.1 Input..... | 1 |
| 3.2 Output | 2 |
| 4 Normative Reference | 2 |
| 5 Conformance..... | 2 |
| 5.1 Conformance of a medium..... | 2 |
| 5.2 Conformance of an information processing system..... | 2 |
| 6 Definitions..... | 2 |
| 6.1 Data space of a file | 2 |
| 7 Notation | 2 |
| 8 Basic types..... | 2 |
| 8.1 16-bit unsigned numerical values (MSB) | 2 |
| Section 2 - Requirements for the medium for record structure..... | 3 |
| 9 Record structure | 3 |
| 9.1 Relationship to a file..... | 3 |
| 9.2 Record type..... | 3 |
| 9.2.1 Padded fixed-length records..... | 3 |
| 9.2.2 Fixed-length records | 3 |
| 9.2.3 Variable-length records..... | 4 |
| 9.2.4 Stream-print records | 5 |
| 9.2.5 Stream-LF records | 5 |
| 9.2.6 Stream-CR records..... | 6 |
| 9.2.7 Stream-CRLF records | 6 |
| 9.2.8 Stream-LFCR records | 6 |
| 9.3 Record display attributes..... | 6 |
| 9.3.1 LF-CR display attribute..... | 7 |
| 9.3.2 First byte position display attribute..... | 7 |
| 9.3.3 Implied display attribute | 7 |

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Section 3 - Requirements for systems for record structure 8

10 Requirements for the description of systems 8

11 Requirements for an originating system 8

11.1 General 8

11.1.1 Files 8

11.1.2 Record length 8

12 Requirements for a receiving system 8

12.1 General 8

12.1.1 Files 8

12.1.2 Record length 8

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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.

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 5:

Record structure

Section 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 ISO/IEC 13346-4.

This Part of ISO/IEC 13346 specifies a format and associated system requirements for record structure by specifying:

- record structures intended for use when the information constituting a file is required to be interpreted as a set of records;
- the attributes of the records of a file;
- requirements for the processes which are provided within information processing systems, to enable information to be interchanged between different systems; for this purpose it specifies the functions to be provided within systems which are intended to originate or receive media which conform to this Part of ISO/IEC 13346.

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 ISO/IEC 13346-2, and figure 4/3 refers to figure 3 in ISO/IEC 13346-4.

3 Part interface

This clause specifies the interface of this Part of ISO/IEC 13346 to other standards or Parts.

3.1 Input

This Part of ISO/IEC 13346 requires the specification of the following by another standard or Part.

- Data space of a file (see 5/6.1).
- If the records of the file are to be interpreted according to 5/9.2.4, 5/9.2.5, 5/9.2.6, 5/9.2.7 or 5/9.2.8 or are intended to be displayed according to 5/9.3, specification of how characters, including the LINE FEED, VERTICAL TABULATION, FORM FEED, and CARRIAGE RETURN characters, are encoded within the data space of the file.