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## **Information processing — Volume and file structure of flexible disk cartridges for information interchange**

*Traitement de l'information — Volume et structure des fichiers des cartouches à disquette  
pour l'échange d'information*

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 9293 was prepared by the European Computer Manufacturers Association (as Standard ECMA-107) and was adopted, under a special "fast-track" procedure, by Technical Committee ISO/TC 97, *Information processing systems*, in parallel with its approval by the ISO member bodies.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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# Information processing — Volume and file structure of flexible disk cartridges for information interchange

## Section one : General

### 0 Introduction

For many purposes ISO 7665 provides a satisfactory data interchange between different types of information-processing systems. However, it imposes some restrictions on the operation of a system as follows:

- a) Each individual file must be recorded on the disk in a sequential, "batch-processing" mode. After a set of files has been recorded on the disk, a file cannot be extended beyond its pre-determined length.

It is common practice in small systems for the user to interact continuously with the system to update files. Files having a suitable structure for this purpose are not within the provision of ISO 7665.

The interchange cartridge has to be created by an "export" copy process from the application's files, after the application has terminated. A similar "import" process is required in the receiving system.

- b) Limitations on the number of file labels permitted on an interchange FDC prevents the full use of the disk space if the average size of files is significantly less than, say 20 kbytes. For conventional data processing purposes this is usually satisfactory. However, the file sizes typically encountered in text processing and small single-user systems are very much smaller and would lead to very inefficient use of the disk space.

In view of these requirements it was decided to develop a second standard for volume and file structure of flexible disk cartridges, the provisions of which were to be based on already existing practice in general use world-wide. Hence this International Standard has the following beneficial characteristics, in addition to those of ISO 7665.

- The interchange file will be especially for direct updating by interactive application.
- There will be no limit on the number of individual files on an FDC, within the overall limitation of available space for holding files. Any file can be extended whenever required.

These characteristics are advantageous for:

- interchange of sets of text files or of small files, or of multiple-part document files;

- interchange of any file when sender and recipient wish to carry out frequent update of the file between interchange cycles, for example files of commercial transactions.

### 1 Scope and field of application

This International Standard specifies the volume and file structure of flexible disk cartridges (FDC) for the interchange of information between users of information processing systems. It also specifies an optional record structure.

This International Standard is applicable to various types of flexible disk cartridges including those identified in clause 3, and other types which may be the subject of future International Standards.

This International Standard specifies the location of files of information on a flexible disk cartridge, and also specifies a set of recorded descriptors which identifies:

- the files which may be interchanged;
- the locations of the files;
- the attributes of the files;
- the location of unused space for recording on the FDC;
- the location of defective recording space on the FDC;
- the attributes of the FDC and of the descriptors recorded on it.

This International Standard also specifies requirements for the processes which are provided within information processing systems to enable information to be interchanged between different systems, utilizing recorded flexible disk cartridges as the medium of interchange. For this purpose it specifies the functions within systems which are intended to originate or to receive flexible disk cartridges which conform to this International Standard.

This International Standard provides a method for the allocation of space that is independent of the number of files that are recorded on the volume. It also enables the sizes of the recorded files to be expanded or contracted during processing, subject only to the availability of unused recording space when needed.

The contents and organization of the files are not specified by this International Standard and are subject to agreement between the originator and the recipient of the interchanged FDC.

## 2 Conformance

### 2.1 Conformance of a flexible disk cartridge

A flexible disk cartridge shall be in conformance with this International Standard when all information recorded on it conforms to the requirements of section 2 of this International Standard.

A prerequisite to such conformance is the conformance of the flexible disk cartridge to the appropriate International Standard for data interchange of flexible disk cartridges.

### 2.2 Conformance of an information processing system

An information processing system shall be in conformance with this International Standard if it meets the set of requirements specified in section 3 of this International Standard either for an originating system, or for a receiving system, or for both types of system. A statement of conformance shall identify which of these sets of requirements is met by the system.

Conformance with this International Standard does not require conformance with section 4.

## 3 References

ISO 646, *Information processing — ISO 7-bit coded character set for information interchange.*

ISO 7487, *Information processing — Data interchange on 130 mm (5.25 in) flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad, 1,9 tpmm (48 tpi), on both sides*

— Part 1: *Dimensional, physical and magnetic characteristics.*

— Part 3: *Track format B.*

ISO 7665, *Information processing — File structure and labelling of flexible disk cartridges for information interchange.*

ISO 8378, *Information processing — Data interchange on 130 mm (5.25 in) flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad, 3,8 tpmm (96 tpi), on both sides*

— Part 1: *Dimensional, physical and magnetic characteristics.*

— Part 3: *Track format B.*

ISO 8630, *Information processing — Data interchange on 130 mm (5.25 in) high density flexible cartridges using modified*

*frequency modulation recording at 13 262 ftprad, 3,8 tpmm (96 tpi), on both sides*

— Part 1: *Dimensional, physical and magnetic characteristics.*<sup>1)</sup>

— Part 3: *Track format B for 80 tracks.*<sup>1)</sup>

ISO 8860, *Information processing — Data interchange on 90 mm (3.5 in) flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad, 5,3 tpmm (135 tpi), on both sides*

— Part 1: *Dimensional, physical and magnetic characteristics.*

— Part 2: *Track format.*

## 4 Definitions

For the purposes of this International Standard the following definitions apply.

**4.1 byte:** A string of binary digits operated upon as a unit. In this International Standard this term designates an 8-bit byte.

**4.2 data field of a sector:** A fixed-length field containing the data of a sector.

**4.3 data interchange standard:** A standard which defines the physical and magnetic characteristics, the recording method, and the track format of a flexible disk cartridge.

**4.4 defective sector:** A sector which cannot be read or written without error.

**4.5 descriptor:** A recorded structure containing descriptive information about the volume or a file.

**4.6 file:** A named collection of information.

**4.7 formatting:** Writing the control information establishing the physical addresses of sectors on the surfaces of a flexible disk cartridge.

**4.8 implementation:** A set of processes which enable an information processing system to behave as an originating system, or as a receiving system, or as both types of system.

**4.9 initialization:** Writing descriptors initially required to be on the FDC, prior to the commencement of general processing or use.

**4.10 originating system:** An information processing system which can record files on an FDC for the purpose of data interchange with another system.

1) At present at the stage of draft.