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**Information technology — Data  
interchange on 130 mm optical disk  
cartridges — Capacity: 1,3 gigabytes per  
cartridge**

*Technologies de l'information — Échange de données sur cartouches de  
disque optique de diamètre 130 mm — Capacité: 1,3 gigabyte par  
cartouche*

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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 International Standards 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. 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 13549 was prepared by the European Computer Manufacturers Association (as Standard ECMA-184) 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.

Annexes A to F form an integral part of this International Standard, annexes G to P are for information only.

## Patents

During the preparation of the ECMA standard, information was gathered on patents upon which application of the standard might depend. Relevant patents were identified as belonging to IBM and the Sony Corporation. However, neither ECMA nor ISO/IEC can give authoritative or comprehensive information about evidence, validity or scope of patent and like rights. The patent holders have stated that licences will be granted under reasonable and non-discriminatory terms. Communications on this subject should be addressed to

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## Introduction

This International Standard specifies the characteristics of 130 mm Optical Disk Cartridges (ODC) with a capacity of 1,3 Gbytes per cartridge. This International Standard is the first of a series of International Standards for ODCs of different capacities, based on the optical disk cartridge specified in ISO/IEC 10089. Whilst the latter specifies a fully re-writable disk, this International Standard specifies four related, but different implementations of such cartridges, viz.

- |                   |  |
|-------------------|--|
| <b>Type R/W</b>   | Provides for data to be written, read, and erased many times over the whole of both recording surfaces of the disk using the thermo-magnetic and magneto-optical effects.  |
| <b>Type P-ROM</b> | Provides for a part of both disk surfaces to be pre-recorded and reproduced by stamping or other means. This part of the disk is read without recourse to the magneto-optical effect. All parts which are not pre-recorded, provide for data to meet the requirements of Type R/W. |
| <b>Type O-ROM</b> | Provides for the whole of both disk surfaces to be pre-recorded and reproduced by stamping or other means. This type of disk is read without recourse to the magneto-optical effect.   |
| <b>Type WO</b>    | Provides write once, read multiple functionality on the whole of both disk surfaces using the thermo-magnetic and magneto-optical effects.   |

## **Information technology — Data interchange on 130 mm optical disk cartridges — Capacity: 1,3 gigabytes per cartridge**

### **Section 1 - General**

#### **1 Scope**

This International Standard specifies

- the conditions for conformance testing;
- the environments in which the cartridges are to be operated and stored;
- the mechanical, physical and dimensional characteristics of the case and of the cartridges, so as to provide mechanical interchangeability between the data processing systems;
- the format of the information on the disk, both embossed and user-written, including the physical disposition of the tracks and sectors, the error correction codes, and the modulation method used;
- the characteristics of the embossed information on the disk;
- the magneto-optical characteristics of the disk, enabling processing systems to write data onto the disk;
- the minimum quality of user-written data on the disk, enabling data processing systems to read data from the disk.

This International Standard provides for interchange between optical disk drives. Together with a standard for volume and file structure, it provides for full data interchange between data processing systems.

#### **2 Conformance**

##### **2.1 Optical disk cartridge (ODC)**

An optical disk cartridge claiming conformance with this International Standard shall specify its Type. It shall be in conformance if it meets all mandatory requirements specified herein for that Type.

##### **2.2 Generating system**

A claim of conformance with this International Standard shall specify which Type(s) is (are) supported. A system generating an ODC for interchange shall be entitled to claim conformance with this International Standard if it meets the mandatory requirements of this Standard for the Type(s) specified.

##### **2.3 Receiving system**

A claim of conformance with this International Standard shall specify which Type(s) is (are) supported.

A system receiving an ODC for interchange shall be entitled to claim conformance with this International Standard if it is able to handle any ODC which conforms to this International Standard for the Type(s) specified.

#### **3 Normative reference**

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standard listed below.

**ISO/IEC 13549:1993 (E)**

**IEC 950:1991, *Safety of information technology equipment, including electrical business equipment***