INTERNATIONAL STANDARD

ISO/IEC 13963

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Information technology — Data interchange on 90 mm optical disk cartridges — Capacity: 230 megabytes per cartridge

Technologies de l'information — Échange de données sur cartouches pour disque optique de diamètre 90 mm *— Capacité: 230 mégabytes par cartouche*

Reference number
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Contents

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrical Commission) form the specialised system for world-wide 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 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 as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 13963 was prepared by the European Association for Standardizing Information and Communication Systems, ECMA, (as ECMA-201) 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, B, D, E, F, H, K, M, N, R form an integral part of this International Standard. Annexes C, G, J, L, P, Q and S are for information only.

Introduction

Technical Committee ECMA TC31 for Optical Disk Cartridges (ODC) was set up in 1984. The Committee made major contributions to ISO/IEC JTC1/SC23 for the development of standards for 90 mm, 120 mm, 130 mm, 300 mm and 356 mm ODCs.

A trend towards more Types and increasing capacities is followed by 90 mm ODCs based on the optical disk cartridge specified in ISO/IEC 10090.

This International Standard belongs to the 90 mm ODC series. It specifies three Types providing a capacity of 230 Megabytes per cartridge.

Information technology - Data interchange on 90 mm optical disk cartridges - Capacity: 230 megabytes per cartridge

Section 1 : General

1 Scope

This International Standard specifies the characteristics of 90 mm Optical Disk Cartridges (ODC) with a capacity of 230 Mbytes per Cartridge. The Standard specifies three related, but different implementations of such cartridges, viz.

Type R/W Provides for data to be written, read and erased many times over the whole recording surface of the disk using the thermo-magnetic and magneto-optical effects.

Type P-ROM Provides for a part of the disk surface to be embossed by stamping or other means. This part of the disk is read without recourse to the magneto-optical effect. All parts which are not embossed provide for data to meet the requirements of Type R/W.

Type O-ROM Provides for the whole of the disk surface to be embossed and reproduced by stamping or other means. This type of disk is read without recourse to the magneto-optical effect.

Type R/W, Type P-ROM and Type O-ROM are also referred to as "fully rewritable", "partially embossed" and "fully embossed", respectively.

This International Standard specifies

- the conditions for conformance testing and the Reference Drive;
- the environments in which the cartridges are to be operated and stored;
- the mechanical and physical characteristics of the cartridge, so as to provide mechanical interchangeability between 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.

Annex R specifies the zones of the disk in which the requirements for the signal characteristics given in the body of this International Standard shall be met, and the zones in which a relaxation of these requirements is permitted.

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 to this International Standard if it is able to process any recording made on the cartridge in accordance with 2.1 on the Type(s) specified.

2.4 Compatibility statement

A claim of conformance by a Generating or Receiving system with this International Standard shall include a statement listing any other ECMA and International Standard supported. This statement shall specify the number of the Standard(s), the ODC type(s) supported (where appropriate) and whether support includes reading only or both reading and writing.

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 edition of the standard listed below. Members of IEC and ISO maintain registers of currently valid standards.

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