INTERNATIONAL STANDARD

ISO/IEC 15498

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Information technology — Data interchange on 90 mm optical disk cartridges — HS-1 format — Capacity: 650 Mbytes per cartridge

Technologies de l'information — Échange de données sur cartouches de disque optique de diamètre 90 mm *— Format HS-1 — Capacité:* 650 Mbytes *par cartouche*

Reference number
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Contents

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

International Standard ISO/IEC 15498 was prepared by ECMA (as ECMA-239) 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 N form an integral part of this International Standard. Annexes P to W are for information only.

Introduction

This International Standard specifies the characteristics of 90 mm Optical Disk Cartridges (ODC) with a capacity of 650 Mbytes per cartridge.

The format for the information on the disk is known as HS-1 ("Hyper Storage").

Information technology — Data interchange on 90 mm optical disk cartridges — HS-1 format — Capacity: 650 Mbytes per cartridge

Section 1 - General

1 Scope

This International Standard specifies the characteristics of 90 mm Optical Disk Cartridges (ODC) with a capacity of 650 Mbytes per Cartridge. The Standard specifies three related, but different implementations of such cartridges, viz.

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

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

Type O-ROM Provides for the recording surface of the disk 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, called HS-1 (HS stands for "Hyper-Storage"), including the physical disposition of the tracks and sectors, the error correction codes, and the recording 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)

A claim of conformance with this International Standard shall specify its Type. An ODC 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 in conformance with this International Standard if the ODC meets the mandatory requirements of this International 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 in conformance with this International Standard if it is able to process any recording made on the cartridge in accordance with 2.1 for 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 International Standards 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 International Standards.

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