INTERNATIONAL STANDARD

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Information technology — 8 mm wide magnetic tape cartridge for information interchange — Helical scan recording — AIT-3 format

Technologies de l'information — Cartouche de bande magnétique de 8 mm *de large pour échange d'informations — Enregistrement par balayage en spirale — Format AIT-3*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. 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.

ISO/IEC 23651 was prepared by ECMA (as ECMA-329) 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.

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Section 1 - General

1 Scope

This International Standard specifies the physical and magnetic characteristics of an 8 mm wide magnetic tape cartridge containing a memory chip to enable physical interchange of such cartridges between drives. It also specifies the quality of the recorded signals, the recording method and the recorded format - called Advanced Intelligent Tape No. 3 (AIT-3 format) - thereby allowing data interchange between drives by means of such magnetic tape cartridges.

This International Standard specifies two types of cartridge depending on the thickness of the magnetic tape contained in the case.

Information interchange between systems also requires, at a minimum, agreement between the interchange parties upon the interchange code(s) and the specifications of the structure and labelling of the information on the interchanged cartridge.

2 Conformance

2.1 Magnetic tape cartridge

A tape cartridge shall be in conformance with this International Standard if it meets all the mandatory requirements specified herein. The tape requirements shall be satisfied throughout the extent of the tape.

2.2 Generating drive

A drive generating a magnetic tape cartridge for interchange shall be in conformance with this International Standard if all recordings on the tape meet the mandatory requirements of this International Standard, and if either one or both methods of appending and overwriting are implemented. In addition, such a drive shall be able to record the System Log in the AIT Remote Memory In Cartridge (AIT RMIC).

A claim of conformance shall state which of the following optional features are implemented and which are not

- the performing of a Read-After-Write check and the recording of any necessary repeated frames;
- the generation of ECC3 Frames.

In addition a claim of conformance shall state

- whether or not one, or more, registered algorithm(s) are implemented within the system and are able to compress data received from the host prior to collecting the data into Basic Groups, and
- the registered identification number(s) of the implemented compression algorithm(s).

2.3 Receiving drive

A drive receiving a magnetic tape cartridge for interchange shall be in conformance with this International Standard if it is able to handle any recording made on the tape according to this International Standard. In particular it shall

- be able to read the System Log recorded in the AIT RMIC;
- be able to recognise repeated frames, and to make available to the host, data and Separator Marks from only one of these frames;
- be able to recognise multiple representations of the same Basic Group, and to make available to the host, data and Separator Marks from only one of these representations;
- be able to recognise an ECC3 frame, and ignore it if the system is not capable of using ECC3 check bytes in a process of error correction;
- be able to recognise processed data within an Entity, identify the algorithm used, and make its registered identification number available to the host;
- be able to make processed data available to the host.

In addition a claim of conformance shall state

- whether or not the system is capable of using ECC3 check bytes in a process of error correction;

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– whether or not one or more de-compression algorithm(s) are implemented within the system, and are able to be applied to compressed data prior to making such data available to the host;

– the registered identification number(s) of the compression algorithm(s) for which a complementary de-compression algorithm is implemented.

3 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 527 (all parts)	*Plastics — Determination of tensile properties*
ISO 1302:2002	*Geometrical Product Specifications (GPS) — Indication of surface texture in technical product documentation*
ISO/IEC 11576:1994	*Information technology — Procedure for the registration of algorithms for the lossless compression of data*

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