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**Electronic archiving — Selection of
digital storage media for long term
preservation**

*Archivage électronique — Sélection d'un support de stockage
numérique pour une préservation à long terme*





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საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

Foreword

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 171, *Document management applications*, Subcommittee SC 1, *Quality*.

Introduction

A significant proportion of digital information generated by different human activities will need to be stored for a long period of time and in some cases for as long as it is possible. Where 'long-term' is used in this Technical Report, a storage period of not less than the anticipated life of the storage media is assumed.

The media currently used to store digital information for the long-term have not been analysed and manufactured for this purpose but mainly developed to maximize transfer rates, density recording, and access time. All these parameters have to be taken in perspective when long-term preservation is the requirement, not just simple backup purposes.

In general, current information management systems might not be conducive to the satisfactory achievement of long-term preservation. For long-term preservation, there needs to be the development of special resources and complex procedures with often increased costs when compared with 'normal' information management systems (duplication of files, refreshing storage, equipment redundancy, monitoring systems, heavy maintenance, frequent and risky migration, high energy consumption, etc.).

Even when a system is designed for long-term preservation, the day-to-day requirements for access and management of the stored digital information needs to be taken into consideration.

When designing systems for long-term preservation, it is necessary to have specific pathways with the objective of providing qualified storage media on criteria such as reliability and stability; this would ensure that the sustainability of digital information leads to optimize the solution for both long-term preservation and access to digital information.

The context of the requirement for long-term digital preservation needs to establish conditions and recommendations for media that is specially manufactured with a guaranteed potential of stability and reliability.

The main criteria involved in the long-term preservation of digital information can be summarized as follows:

- a) intrinsic stability of storage media;
- b) stability of physical and/or chemical modifications of media produced by record processing;
- c) quality and reliability of recording process;
- d) preservation of access path to information and metadata;
- e) preservation of access tools (i.e. any special software needed to use digital items that have not been migrated to a long-term or standardized format);
- f) quality of information;
 - compliance with format specification;
 - data integrity.

Only the first three criteria from the list above are considered as part of this Technical Report.

It is noted that the objective is not to make rules or specifications for use on information management systems as several International Standards, such as ISO 14641-1, ISO 15489-1, and ISO/TR 15489-2, fill this role.