



BSI Standards Publication

Information and documentation — Trusted third party repository for digital records

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National foreword

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TECHNICAL
REPORT

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**Information and documentation -
Trusted third party repository for
digital records**

*Information et documentation – Répositoire tiers de confiance pour
les enregistrements électroniques*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed, unless the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 17068 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 11, *Archives/records management*.

Introduction

As digital records are the inevitable by-products of various business activities in electronic and/or digital systems, there is an increasing need to secure the legal admissibility of digital records during their period of retention. It is internationally agreed that “digital records shall not be denied validity or enforceability of legal recognition by reason of their format alone”¹⁾. Despite this, it may be very difficult for an organization to assert that its digital records are authentic and able to act as effective evidence of business action over a long period. In many cases legal admissibility of digital records managed by organizations’ records systems may not be ensured. As a result, there is a growing need for certification services for digital records by neutral third parties.

In order to protect digital records from business disputes during the period they are required for sustaining legal obligation and ongoing retention, it is essential to ensure that the authenticity, reliability and integrity of digital records endures.

Digital signatures are a well-known means of maintaining the integrity of digital records. However, as a digital signature can only ensure integrity within its validity time (generally one to two years or less), most digitally signed records cannot ensure their integrity for longer than this validity time. As a result, it may be very difficult for an individual record system to prove the integrity of their digital records for the period of retention obligation, where this is longer than the validity period of the digital signature.

A possible solution can be provided by a Trusted Third Party Repository (TTPR) service.

A TTPR is defined as a set of services, systems and personnel to ensure that digital records, entrusted to it by a client, remain and can be asserted to be reliable and authentic, with the aim of providing reliable access to managed digital records to its clients for the period of obligation for retention. A TTPR for digital records should provide trustworthy services for clients, which can be examined by interested parties (i.e. inspector, auditor, evaluator). These TTPR services are helpful to identify the evidence admissibility of clients’ digital records as a source of evidence.

This Technical Report describes the specific requirements for the trustworthy services provided by a TTPR. Its main purpose is to ensure that digital records can retain the relevant evidence and information in an ensured and trusted manner during the required period of retention.

1) UNCITRAL 200t, United Nations Convention on the Use of Electronic Communication in International Contracts.

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Information and documentation - Trusted third party repository for digital records

1 Scope

This Technical Report details the authorized custody services of a Trusted Third Party Repository (TTPR) in order to ensure provable integrity and authenticity of the clients' digital records and serve as a source of reliable evidence.

It describes the services and processes to be provided by a TTPR for the clients' digital records during the retention period, to ensure trust. It also details the criteria of "trustworthiness" and the particular requirements of TTPR services, hardware and software systems, and management.

This Technical Report has the limitation that the authorized custody of the stored records is between only the third party and the client.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

client

individual or organization that contracts with the TTPR and obtains permission to use the TTPR services

2.2

client system

hardware and software used by a client to use the service provided by the TTPR

2.3

digital record

information in any format created, received and maintained by digital means, used as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business

NOTE Adapted from ISO 15439-1:2001.

2.4

digital signature

data appended to, or a cryptographic transformation of, a data unit that allows a recipient of the data unit to prove the source and integrity of the unit and protect against forgery by, for example, the recipient

NOTE Adapted from ISO 7498-2:1989.

2.5

information package

content information and associated preservation description information which is needed to aid in the identification and preservation of the authentic and reliable digital records

NOTE 1 The information package has associated packaging information used to delimit and identify the content information and preservation description information.

NOTE 2 Adapted from ISO 14721:2012.

2.6

process

series of actions or events taking place in a defined manner leading to the provision of TTPR services