

This is a preview of "ISO 14641-1:2012". [Click here to purchase the full version from the ANSI store.](#)

First edition
2012-02-01

Electronic archiving —

Part 1:

Specifications concerning the design and the operation of an information system for electronic information preservation

*Archivage électronique — Partie 1: Spécifications relatives à la
conception et au fonctionnement d'un système d'informations pour la
conservation d'informations électroniques*



Reference number
ISO 14641-1:2012(E)

© ISO 2012

This is a preview of "ISO 14641-1:2012". [Click here to purchase the full version from the ANSI store.](#)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 14641-1:2012". [Click here to purchase the full version from the ANSI store.](#)

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 General characteristics and levels of requirements	5
4.1 Characteristics	5
4.2 Levels of requirements	6
5 General specifications	7
5.1 General	7
5.2 Technical description manual	7
5.3 Archival system profiles	8
5.4 Operational procedures	8
5.5 Security	9
5.6 Date and time stamping	12
5.7 Audit trail	13
6 Storage media considerations	15
6.1 Media type definition	15
6.2 Preservation of archival media	15
7 Systems using removable media	16
7.1 General	16
7.2 Initialization of removable storage volumes	16
7.3 Finalization of removable storage volumes	16
7.4 Labelling of physical WORM media	16
8 Systems using logical WORM media	16
9 Systems using rewritable media	17
9.1 General	17
9.2 Standard security level	17
9.3 Strong security level	17
9.4 Advanced security level	17
10 Archival capture	18
10.1 Electronically born documents	18
10.2 Paper-based or microform documents	20
10.3 Analogue audio/video objects on tape media	23
10.4 Image, audio and video information compression techniques	25
10.5 Format conversion	26
11 Archival operations	27
11.1 Scope	27
11.2 Access	27
11.3 Restitution	28
11.4 Archives disposal	28
12 Information system assessment	28
12.1 General	28
12.2 Internal assessment	29
12.3 External assessment	30
13 Trusted third-party archival	30
13.1 Activities of trusted third-party archive service provider	30
13.2 Service contract model	31
14 Service providers	33

This is a preview of "ISO 14641-1:2012". [Click here to purchase the full version from the ANSI store.](#)

14.1	General	33
14.2	Subcontractor agreement	34
14.3	Contract with subcontractor	34
14.4	Data transfer over telecommunications networks	34
Annex A	(informative) Archival policy	35
Annex B	(informative) Declaration of archival practices	36
Annex C	(informative) General service conditions	37
Bibliography	38

This is a preview of "ISO 14641-1:2012". [Click here to purchase the full version from the ANSI store.](#)

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.

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

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.

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 14641-1 was prepared by Technical Committee ISO/TC 171, *Document management applications*, Subcommittee SC 3, *General issues*.

ISO 14641 consists of the following parts, under the general title *Electronic archiving*:

- *Part 1: Specifications concerning the design and the operation of an information system for electronic information preservation*

Future parts will address trusted content, data-level-controls and the testability of document integrity and authenticity control elements within document management systems.

Introduction

Electronic documents are an essential part of everyday business, whether the sources are incoming communications or output from organizations. It is important that electronic documents be stored appropriately, either fully or in part, in secure information systems designed for operations and archiving, in order to meet business, legal or regulatory requirements.

The objectives of secure information systems are to resolve organizational issues such as:

- a) optimization of long-term electronic document preservation, archiving and integrity;
- b) provision of information search facilities;
- c) ensuring ease of access and use of electronic documents.

This part of ISO 14641 is intended to provide a reference framework for organizations. It describes the methods and techniques to be used for the implementation of an electronic information system for managing documents within an archive. In conjunction with related archival policies of organizations, it describes criteria for system design and specifications for operational processes.

These specifications are intended to ensure that all documents to be managed by the information system are captured, stored, retrieved and accessed in a way that guarantees that the archived document is an authentic rendition of the original document for the duration of preservation. An authentic rendition means that the rendered document corresponds to the source document as it was at the time of input in the information system in respect of criteria of fidelity and integrity, and that this state is maintained for the duration of preservation.

This part of ISO 14641 takes into account the use of three possible archiving media: physical WORM, logical WORM and rewritable media. Archival integrity is ensured on physical and logical WORM media by the inherent properties of WORM solutions. On rewritable media, integrity is ensured using encryption-like techniques, in particular with checksum calculation or hash function, date and time stamp or digital signature. In all cases, it is necessary to comply with related procedures.

Depending on the types of documents to be archived, other specialized standards can be relevant and used to complement the recommendations in this part of ISO 14641.

This part of ISO 14641 provides a specific and complementary definition of issues addressed in other standards or specifications concerning the management of electronic information. Its content is intended to address execution issues raised in several other documents. These include:

- ISO/TR 15801, *Document management — Information stored electronically — Recommendations for trustworthiness and reliability*,
- ISO 15489 (all parts), *Information and documentation — Records management*,
- MoReq2, *Model Requirements for the Management of Electronic Records*,

which detail specifications for organizing and controlling the lifecycle of archived information for purposes of evidence and operational history; and

- ISO 14721, *Space data and information transfer systems — Open archival information system — Reference model*,

which describes the characteristics of an open system for the preservation of digital data.

Annexes A, B and C are informative and complementary.