

Australian/New Zealand Standard™

**Information and documentation—RFID
in libraries**

**Part 1: Data elements and general
guidelines for implementation**



AS/NZS ISO 28560.1:2013

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-019, Information and Documentation, Information Technology—Learning, Education, Training and Research. It was approved on behalf of the Council of Standards Australia on 19 April 2013 and on behalf of the Council of Standards New Zealand on 8 April 2013.
This Standard was published on 13 May 2013.

The following are represented on Committee IT-019:

Australian Computer Society
Australian Library and Information Association
Council of Australian University Librarians
CSIRO Information and Communication Technologies Centre
Department of Education and Training, NSW
Education Services Australia
Institute of Metadata Management
La Trobe University
Macquarie E-Learning Centre of Excellence
National Library of Australia
National Library of New Zealand
Tertiary Library Networks
University of New South Wales
Victoria University
Waikato Institute of Technology

Additional Interests:

Sybis

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.saiglobal.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS ISO 28560.1.

Australian/New Zealand Standard™

Information and documentation—RFID in libraries

Part 1: Data elements and general guidelines for implementation

First published as AS/NZS ISO 28560.1:2013.

COPYRIGHT

© Standards Australia Limited/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

ISBN 978 1 74342 430 8

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-019, Information and Documentation, Information Technology—Learning, Education, Training and Research.

The objective of this Standard is to specify a model for the use of radio frequency identification (RFID) tags for items appropriate for the needs of all types of libraries, including academic, public, corporate, special and school.

This Standard is identical with, and has been reproduced from ISO 28560-1:2011, *Information and documentation—RFID in libraries, Part 1: Data elements and general guidelines for implementation*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) In the source text ‘this part of ISO 28560’ should read ‘this Australian/New Zealand Standard’.
- (b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard

ISO/IEC

15962 Information technology—Radio frequency identification (RFID) for item management—Data protocol: data encoding rules and logical memory functions

Australian/New Zealand Standard

AS ISO/IEC

15962 Information technology—Radio frequency identification (RFID) for item management—Data protocol: data encoding rules and logical memory functions

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

CONTENTS

1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	User data elements	2
4.1	Overview of user data elements	2
4.2	Use of user data elements	5
4.3	Maintenance of the list of data elements used	11
5	System data elements	11
5.1	System data versus user data	11
5.2	System data elements for identification and item security in libraries	11
6	Tools for data security and integrity	13
7	Regional and business profiling	13
7.1	Elements for profiles	13
7.2	Regional profiles	13
7.3	Business profiles	14
8	Privacy issues	14
9	Implementation and migration	15
9.1	New RFID implementations	15
9.2	Migration for regional models	15
9.3	Use of the correct AFI value	15
9.4	Discrimination between ISO 28560-compliant and non-compliant tags	15
9.5	Migrations of ISO/IEC 18000-3 Mode 1 RFID tags	16
9.6	Migrations of other RFID tag technologies	16
9.7	Conversion methodologies	17
9.8	Preservation of business profiles during migration	17
10	Label design and location of the label	17
10.1	Label design	17
10.2	Location of the RFID label	17
Annex A	(informative) Information about ISO 28560 RFID in libraries	18
Annex B	(informative) Uniqueness of RFID tags	19
Annex C	(normative) Type of usage code values (hexadecimal)	20
Annex D	(informative) Country prefixes for supplier identifier	22
Annex E	(informative) Interoperability characteristics of security systems	23
	Bibliography	28

INTRODUCTION

Libraries are implementing RFID (radio frequency identification) as item identification to replace bar codes. RFID streamlines applications like user self-service, security, and materials handling. A standard data model for encoding information on RFID tags could increase the cost-effectiveness of the technology within libraries particularly through greater interoperability of RFID tags and equipment, and enhance support for resource sharing between libraries.

Tags that are currently used in libraries will use proprietary rules adopted by vendors or follow the rules of historic national RFID models. In general, there will be no interoperability between tags with a data model compliant with ISO 28560 and tags that carry a non-ISO 28560-compliant data model.

Several countries have undertaken preliminary work on standardization. The Netherlands developed a data model for public libraries and in Denmark “RFID Data Model for Libraries” has been published. Finland has adopted the Danish model, but with a few changes. There is a French data model that differs from the Danish and Dutch models. Other libraries in different parts of the world have installations based on various proprietary systems offered by technology and library system suppliers. All of these constitute the installed base of RFID systems, but only account for a small minority of the total of libraries globally.

There is an opportunity to develop a standard data model, taking into account the lessons learned from the national schemes and vendor solutions, and provide migration options for those libraries that have already invested in the technology. Because new items are continually being purchased, a number of migration options can be adopted based on factors relevant to each library.

This part of ISO 28560 deals with data elements and provides general guidelines for implementation. Other parts of ISO 28560 describe encodings and choice of frequency.

Communication between the RFID reader and the library system (or other applications) is handled by, for example, SIP-2 and NCIP (see Bibliography).

ISO 28560 provides essential standards-based information about RFID in libraries. Ongoing advice needs to be provided because of the evolving nature of RFID technology, and the opportunities to migrate between different types of legacy system and encoding rules of ISO 28560.

AUSTRALIAN/NEW ZEALAND STANDARD

Information and documentation—RFID in libraries**Part 1:****Data elements and general guidelines for implementation****1 Scope**

This part of ISO 28560 specifies a model for the use of radio frequency identification (RFID) tags for items appropriate for the needs of all types of libraries, including academic, public, corporate, special and school.

This part of ISO 28560 provides the framework to ensure interoperability between libraries that exchange library items with RFID tags, the freedom of the library to acquire or renew equipment or library items from different vendors and interoperability of a single RFID application from the vendor's perspective.

This part of ISO 28560 specifies a set of data elements and general guidelines for implementation, to meet the needs for:

- circulation of library items;
- acquisition of library items;
- interlibrary loan processes;
- data requirements of publishers, printers and other suppliers of library items;
- inventory and stock checking of items.

This part of ISO 28560 gives guidelines for item security, profiles, privacy, implementation, migration, label design and location of the RFID label.

This part of ISO 28560 specifies the data model, system data elements and user data elements to be used in conjunction with ISO 28560-2, ISO 28560-3 and any future parts of ISO 28560.

A source of additional information about implementation issues is provided in Annex A.

2 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/IEC 15961-3, *Information technology — Radio frequency identification (RFID) for item management: Data protocol — Part 3: RFID data constructs*