AS/NZS ISO 28560.2:2013
ISO 28560-2:2011

AS/NZS ISO 28560.2:2013

Australian/New Zealand Standard™

Information and documentation—RFID in libraries

Part 2: Encoding of RFID data elements based on rules from ISO/IEC 15962

STANDARDS Australia

STANDARDS NEW ZEALAND
PAEREWA AOTEAROA

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.
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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
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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.

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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 data model and encoding rules 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 libraries). The rules for encoding a subset of data elements taken from the total set of data elements defined in ISO 28560-1 are based on ISO/IEC 15962, which uses an object identifier structure to identify data elements.

This Standard is identical with, and has been reproduced from ISO 28560-2:2011, *Information and documentation—RFID in libraries*, Part 2: *Encoding of RFID data elements based on rules from ISO/IEC 15962.*

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		*Australian/New Zealand Standard*	
ISO/IEC		AS ISO/IEC	
15962	Information technology—Radio frequency identification (RFID) for item management—Data protocol: data encoding rules and logical memory functions	15962	Information technology—Radio frequency identification (RFID) for item management—Data protocol: data encoding rules and logical memory functions
ISO		AS/NZS ISO	
28560	Information and documentation—RFID in libraries	28560	Information and documentation—RFID in libraries
28560-1	Part 1: Data elements and general guidelines for implementation	28560.1	Part 1: Data elements and general guidelines for implementation

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

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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.

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 the encoding of data elements in a flexible manner using encoding rules that are specified in ISO/IEC 15962. ISO 28560-1 defines the set of mandatory and optional data elements.

ISO 28560-3 and this part of ISO 28560 are mutually exclusive with respect to an RFID tag being applied to a loan item. In other words, the RFID tag is encoded according to the rules of this part of ISO 28560, or to the rules of ISO 28560-3, or to some proprietary rules. Depending on the technologies being used, and other features of tags that are claiming compliance with this part of ISO 28560, the reading system might achieve a degree of interoperability.

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 2:
Encoding of RFID data elements based on rules from ISO/IEC 15962

1 Scope

This part of ISO 28560 specifies a data model and encoding rules 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 libraries). The rules for encoding a subset of data elements taken from the total set of data elements defined in ISO 28560-1 are based on ISO/IEC 15962, which uses an object identifier structure to identify data elements.

This part of ISO 28560 defines the technical characteristics required to encode the data elements defined in ISO 28560-1 in accordance with ISO/IEC 15962. These subsets of data elements can be different on different items in the same library. The encoding rules also enable the optional data to be organized on the RFID tag in any sequence. In addition, the encoding rules provide for flexible encoding of variable length and variable format data.

This part of ISO 28560 provides essential standards-based information about RFID in libraries. 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 15961-1, *Information technology — Radio frequency identification (RFID) for item management: Data protocol — Part 1: Application interface*

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

ISO/IEC 18000-3, *Information technology — Radio frequency identification for item management — Part 3: Parameters for air interface communications at 13,56 MHz*

ISO/IEC 18046-3, *Information technology — Radio frequency identification device performance test methods — Part 3: Test methods for tag performance*

ISO/IEC TR 18047-3, *Information technology — Radio frequency identification device conformance test methods — Part 3: Test methods for air interface communications at 13,56 MHz*

ISO 28560-1, *Information and documentation — RFID in libraries — Part 1: Data elements and general guidelines for implementation*