INTERNATIONAL STANDARD

ISO 3297

Sixth edition
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Information and documentation — International standard serial number (ISSN)

Information et documentation — Numéro international normalisé des publications en série (ISSN)

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 9, *Identification and description*.

This sixth edition cancels and replaces the fifth edition (ISO 3297:2017), which has been technically revised. The main changes compared to the previous edition are as follows:

— the Cluster ISSN concept has been broadened to identify groups of serial titles based on new types of relations;

— the list of resource types eligible for ISSN assignment has been expanded;

— the construction of the ISSN, its machine legibility, and ISSN metadata profile have been detailed;

— the interoperability of ISSN with other identification systems has been specified.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The need for a brief, unique and unambiguous identification code for serials and other continuing resources is internationally recognized. The exchange of information among libraries, abstracting services and other content users, system suppliers, distributors and other intermediaries, and publishers and other content producers justifies the requirement for a standard code. Communication between the different organizations transcends national boundaries and therefore requires an international code which is numeric, since no single alphabet is used by the majority of producers and users of serials. In response to these requirements, the International Standard Serial Number (ISSN) has been established as the identification code for serials. The ISSN is an opaque identifier where no meaning is to be inferred from the code itself.

The International Serials Data System (ISDS) was established as an inter-governmental organization within the framework of the UNESCO/UNISIST program to be the designated authority for controlling the assignment of ISSN. In 1993, the ISDS became the ISSN network which is the inter-governmental organization comprising ISO 3297 Registration Authority and ISO 3297 Registration Agencies to which some Registration services have been delegated, including ISSN assignment.

The first three editions of this document pertained only to serials. However, in 2002 a new category of resources, "continuing resources", was defined by the library community to encompass new kinds of resources, such as updating databases. The scope of the fourth edition was broadened to cover serials and other continuing resources. The fifth edition removed any reference to the business model from the standard. This sixth edition responds to sector requests by establishing the ability to group and identify related continuing resources into new types of clusters. Furthermore, this document specifies richer metadata elements to allow the communication of additional characteristics of a resource.

Information and documentation — International standard serial number (ISSN)

1   Scope

This document defines and promotes the use of a standard code (ISSN) for the unique identification of serials and other continuing resources.

Each International Standard Serial Number (ISSN) is a unique identifier for a serial or other continuing resource in a defined medium whether print or electronic.

This document also allows for grouping related continuing resources into clusters identified by a separately-prefixed ISSN as defined in this document.

ISSNs are applicable to serials and to other continuing resources, whatever the business model or modes of distribution (e.g. free, open access, on subscription, etc.) and irrespective of whether the serial is currently in publication, has ceased publication, or publication is planned for the foreseeable future. Continuing resources include whatever the medium of production (print or electronic):

— serials, such as newspapers, periodicals, journals, magazines, conference proceedings, monographic series with no predetermined conclusion, annual or other periodic reports, and

— ongoing integrating resources that are updated, such as loose-leaf publications, updating websites, blogs, institutional repositories, directories and databases.

Monographs, sound and video recordings, notated music publications, audiovisual works, textual works and musical works have their own standard identifiers and are not specifically mentioned in this document. Such items can carry an ISSN in addition to their appropriate identifiers when they are part of a continuing resource.

NOTE   This document does not contain any operational guidance for its practical implementation.

2   Normative references

There are no normative references in this document.

3   Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1   Metadata

3.1.1
abbreviated key title
specific title established by the ISSN network by replacing each significant word of a key title with the corresponding abbreviation from the List of Title Word Abbreviations managed by the ISO 3297 Registration Authority for ISO 4

Note 1 to entry: See Reference [2] for the List of Title Word Abbreviations.

Note 2 to entry: Abbreviations are based on ISO 4[3].

3.1.2
ISSN metadata
descriptive data recorded as part of the ISSN assignment process that provides elements by which the continuing resource is identified and distinguished from other continuing resources

Note 1 to entry: It is updated by the ISSN network when needed.

3.1.3
ISSN Register
official registration database managed by the ISO 3297 Registration Authority containing all ISSN and associated metadata records for those ISSN that have been assigned to date

Note 1 to entry: The database is made available in the ISSN Portal.

3.1.4
key title
unique name established by the ISSN network for a continuing resource, and inseparably linked with its ISSN

Note 1 to entry: The key title can be the same as the title proper of the resource (refer to 3.1.5); or, in order to achieve uniqueness, it can be constructed by the addition of parenthetical identifying and/or qualifying elements to the title proper such as name of issuing body, place of publication, edition statement, etc.

3.1.5
title proper
chief name of a continuing resource as it appears on the title page or title page equivalent or other relevant part of the continuing resource

3.2   Stakeholders

3.2.1
applicant
organization or individual that has requested an ISSN to identify a continuing resource under the aegis of, and according to the rules specified by the Registration Authority

3.2.2
Internet Assigned Numbers Authority
IANA
nonprofit private corporation that oversees global IP address allocation, autonomous system number allocation, root zone management in the Domain Name System (DNS), media types, and other Internet Protocol-related symbols and Internet numbers

3.2.3
Internet Engineering Task Force
IETF
open standards organization which develops and promotes voluntary Internet standards, including the standards that comprise the Internet protocol suite (TCP/IP)

Note 1 to entry: The Internet Engineering Task Force (IETF) issues Requests for Comments (RFC) which are formal documents drafted by committees and subsequently reviewed by interested parties.

3.2.4
ISSN network
inter-governmental association comprising ISO 3297 Registration Authority and ISO 3297 Registration Agencies to which some registration services have been delegated, including ISSN assignment

3.2.5
publisher
organization or individual whose activity is to commission, create, collect, validate, host and distribute information in printed and/or in electronic form

[SOURCE: ISO 5127:2017, 3.2.3.15, modified — Notes to entry have been omitted.]

3.3 Resources identified

3.3.1
continuing resource
publication, in any medium, that is issued over time with no predetermined conclusion and made available to the public

[SOURCE: ISO 5127:2017, 3.4.1.05]

Note 1 to entry: Continuing resources include serials and ongoing integrating resources.

Note 2 to entry: An electronic continuing resource is either a resource available on a tangible medium (e.g. disc, flash drive) or a resource accessed by connection to a communication network and by means of hardware and software connections (e.g. online).

Note 3 to entry: Electronic continuing resources can originate in digital form or be retrospectively digitised.

3.3.2
continuing resource edition
distinct continuing resource issued simultaneously or not simultaneously with one or many editions of that resource, usually with the same title proper

Note 1 to entry: Each edition is intended for a specific audience or use; examples include language, geographic, frequency editions.

3.3.3
integrating resource
publication, either finite or with no predetermined conclusion, that is added to or changed by updates that do not remain discrete and are integrated into the whole, and made available to the public in any medium version

[SOURCE: ISO 5127:2017, 3.4.1.06, modified — The example has been omitted.]

Note 1 to entry: Only integrating resources with no predetermined conclusion (i.e. ongoing) are continuing resources eligible for ISSN assignment.

3.3.4
journal
periodical in any medium version devoted to disseminating original research and commentary on current developments in a specific discipline, sub-discipline, field of study or profession, published over a period of time, or article by article online

3.3.5
medium version
means used to convey the information or content

Note 1 to entry: The medium can be tangible (e.g. print, CD-ROM, DVD-ROM, tapes, flash drives) or intangible (e.g. websites, online databases, downloadable files).

3.3.6
monographic series
group of separate books related to one another by the fact that each book bears, in addition to its own title proper, a collective title applying to the group as a whole

Note 1 to entry: The individual book may or may not be numbered in the series.

Note 2 to entry: Monographic series are not to be confused with multipart monographs which are complete in two or more volumes or series intended to be completed within a finite number of parts/volumes and therefore not eligible for an ISSN.

[SOURCE: ISO 5127:2017, 3.4.1.27.02]

3.3.7
periodical
serial generally characterized by variety of contents and contributors, both within one issue of the publication and from one issue to another

Note 1 to entry: Each issue is usually composed of more than one intellectual contribution (article, essay, review, note, etc.).

Note 2 to entry: A periodical has no predetermined conclusion.

[SOURCE: ISO 5127:2017, 3.4.1.28.02]

3.3.8
serial
publication in any medium version, issued in successive parts, usually having numerical or chronological designations, and intended to be continued indefinitely, whatever its frequency of publication

Note 1 to entry: Publications of limited duration (e.g. newsletter for a one-time event) that have some characteristics of serials such as successive issues and/or numbering can be considered as serials.

[SOURCE: ISO 5127:2017, 3.4.1.28.01]

3.4 Identifiers and locators

3.4.1
cluster ISSN
ISSN assigned to group continuing resources related to each other

EXAMPLE   Titles available in print and electronic medium versions, titles available in several language editions.

3.4.2
Global Trade Item Number
GTIN
unique number from a standard code used internationally to identify products and packaging units

[SOURCE: ISO 5127:2017, 3.2.5.12 — Notes to entry have been omitted.]

3.4.3
ISSN
International Standard Serial Number
standard code assigned by the ISSN network for the unique identification of serials and other continuing resources in a defined medium version

Note 1 to entry: The term ISSNs can be used to refer to more than one ISSN.

[SOURCE: ISO 5127:2017, 3.2.5.03, modified — Notes to entry have been edited.]

3.4.4
ISSN-L
Linking ISSN
cluster ISSN designated by the ISO 3297 Registration Authority to enable collocation or linking among the different medium versions of a continuing resource

3.4.5
PID
Persistent Identifier
unique identifier that ensures permanent access for a digital object by providing access to it independently of its physical location or current ownership

[SOURCE: ISO 5127:2017, 3.2.5.25]

3.4.6
URI
Universal Resource Identifier
compact sequence of characters that identifies an abstract or physical resource

[SOURCE: ISO 5127:2017, 3.1.9.20]

3.4.7
URN
Uniform Resource Name
persistent, location-independent, resource identifier used for recognition of, and access to, characteristics of the resource or the resource itself

[SOURCE: ISO 5127:2017, 3.1.9.22]

4 Construction of ISSN and cluster ISSN

The characters that comprise an ISSN, whatever the prefix, are defined as code points from ISO/IEC 10646.

NOTE   The code points referenced above can be represented without ambiguity in all commonly used character sets.

An ISSN shall consist of eight characters as follows:

Position	1	2	3	4	5	6	7	8
Character	N	N	N	N	N	N	N	C

where:

— N is a digit from the code points in the range U+0030 to U+0039 (the Arabic numerals 0 to 9), and

— C is a check digit being either a digit from the code points in the range U+0030 to U+0039 or the Latin capital letter X (code point U+0058).

The check digit shall be calculated from the other seven digits on a modulus 11 basis with weights 8 to 2, using X in lieu of 10 where 10 occurs as a check digit, as calculated in Annex A.

EXAMPLE

22656405

14549042

Since ISSNs are likely to be used in the same context as codes designed for other purposes, when an ISSN is presented for human perception, it should, to avoid confusion, be preceded by the prefix including ISSN (U+0049, U+0053, U+0053, U+004E) and a space (U+0020) and divided into two groups of four characters, separated by a hyphen (U+002D).

EXAMPLE

ISSN 1792-4219

ISSN 2336-1956

5

ISSN 0268-540X

ISSN-L 2397–1754

5 Assignment of ISSN — Principles

5.1   An ISSN shall be assigned only by a member of the ISSN network upon request from an applicant or as part of internal library processing such as legal deposit and digitization projects.

5.2   A request for an ISSN may be made to the ISSN network by any individual or organization that needs to identify serials and other continuing resources, e.g. a publisher or their representative, a library, a content provider, a preservation organization.

5.3   A request for an ISSN shall be accompanied by a copy of or access to the earliest issue of serials or the current iteration of integrating resources.

5.4   A request for an ISSN shall be accompanied by metadata about the continuing resource to which an ISSN is to be assigned. Metadata supplied by applicants should be accurate and verifiable.

5.5   At the time of registration by the ISSN network, each continuing resource is assigned a unique key title that links permanently to the ISSN.

5.6   Each distinct continuing resource in a particular medium version should be assigned only one ISSN.

5.7   When a continuing resource is published in different editions or medium versions, a unique ISSN and key title should be assigned to each edition or medium version whether or not they have the same title proper.

5.8   A new ISSN should be assigned, and a corresponding new key title should be established when the continuing resource undergoes a major change in title or other major changes. The ISO 3297 Registration Authority shall determine, the rules which specify when a new ISSN is required following changes to a continuing resource. In formulating these rules, the ISO 3297 Registration Authority shall take into consideration other relevant bibliographic standards regarding continuing resources.

5.9   Once an ISSN has been assigned to a continuing resource, it should not be altered, replaced or reused for another publication.

5.10   The assignment of an ISSN to a continuing resource shall not imply any meaning or legal evidence with regard to the ownership of rights to that publication or its contents. The ISSN itself is not owned by the applicant and is not changed solely because of a change of publisher or place of publication.

5.11   The assignment of an ISSN to a continuing resource does not imply the ISSN network endorses the content of this continuing resource, nor does it imply any mark of quality about the continuing resource.

6 Establishment of the key title and the abbreviated key title

6.1   The key title is established or authenticated by the ISSN network.

6.2   The key title is based on the title proper. For serials, the issue used to establish the key title is the first issue or earliest available issue at the time of registration. For integrating resources, the key title is based on information appearing on the current iteration. The title proper of the resource becomes the key title if this title is unique in the *ISSN Register* at the time of registration. If this title proper is not unique, the key title is the title of the resource, to which a parenthetical qualifying term is added (such

as name of issuing body, place and/or date of publication, edition statement or medium statement), in order to make the resulting key title unique.

6.3   All key titles should be listed in the *ISSN Register* together with their ISSN. Key titles shall be Romanized, preferably according to International Standards. The ISO 3297 Registration Authority shall publish references to Romanization standards[5]-[16] and guidelines.

6.4   The abbreviated key title should be assigned by the ISSN network as indicated in conjunction with the key title for scientific continuing resources so as to provide an abbreviated form of the key title for purposes of indexing and citations.

7   Continuing resource clusters identified with cluster ISSN

The ISO 3297 Registration Authority shall be responsible for determining the need to identify clusters of continuing resources. This shall be done by assigning a new ISSN and a prefix whose syntax will be ISSN-X where X identifies the type of cluster. Examples of clusters are all earlier, later and current titles of a resource or all language editions of a resource. The ISO 3297 Registration Authority shall publish definitions of cluster types and document the processes by which cluster ISSNs are created and disseminated.

By exception, the cluster identified by the Linking ISSN (ISSN-L) uses an existing ISSN. The Linking ISSN shall be defined according to Annex B. ISSN-L provides collocation or linking among the different medium versions of a continuing resource. The ISSN-L duplicates the ISSN assigned to the first medium version to have received an ISSN for a continuing resource that is part of the cluster and is distinguished only by the prefix ISSN-L.

EXAMPLE

ISSN 2095-2686 identifies the print version of *International Journal of Mining Science and Technology*.

ISSN 2589-062X identifies the online version of the same journal.

ISSN-L 2095–2686 is designated by the Registration Authority as the linking ISSN.

ISSN 2365-807X identifies the electronic version of *Kultur- und Sozialgeschichte Osteuropas.*

ISSN 2365-8061 identifies the print version of the same journal.

ISSN-L 2365–807X is designated by the Registration Authority as the linking ISSN.

ISSN 2651-057X identifies the online-only journal *Warasan Sangkhomwitthaya Manutsayawitthaya*

ISSN-L 2651–057X is designated by the ISO 3297 Registration Authority as the linking ISSN.

8   Display of ISSN[17] and cluster ISSN

8.1   To ensure that the ISSN's eight characters can be easily recognized as an ISSN, any ISSN shall be consistently displayed as two groups of four digits separated by a hyphen and preceded by the appropriate prefix and a space.

EXAMPLE

ISSN 0540-4614

ISSN-L 8755–5108

8.2   The ISSN and related medium version ISSNs should be displayed in a prominent position on or in:

—   the first issue and each subsequent issue of serials,

— each subsequent iteration of ongoing integrating resources.

Relevant cluster ISSNs should be displayed in addition to the other medium version ISSN(s).

8.2.1   For printed continuing resources, the ISSN and related medium version ISSNs should be displayed in a prominent position on each issue in the following order of preference: top-right hand corner of the front cover, title page, caption, masthead, back cover, colophon or editorial pages.

The ISSN should be displayed on the continuing resource even when it is also included in the bar code[18] of the Global Trade Item Number (GTIN) (see E.6).

EXAMPLE

The journal *Anthropology Today* has two medium versions, print and online. Both medium versions display the two ISSNs as shown below:

— ISSN 0268-540X (Print)

— ISSN 1467-8322 (Online)

8.2.2   For electronic continuing resources whether tangible or intangible (e.g. compact disc, online serial), the ISSN and related medium versions ISSNs should be displayed prominently on the title screen or the main menu (e.g. the initial screen displayed when the content is first accessed and/or the screen that carries the copyright notice, i.e. information about the copyright, licensing and publishing rights usually provided in a text box or sidebar).

8.2.2.1   In addition to displaying the ISSN and related medium versions ISSNs as described in 8.2.2, if the publication is issued in a container that is an integral part of the publication (e.g. a compact disc, cassette, or diskette), the ISSN should be displayed on any labels included with that container. If it is not possible to display the ISSN on the container or its label, then the ISSN should be displayed at the bottom of the back of any permanent packaging for that container (e.g. the box, sleeve, or frame).

8.2.2.2   For electronic serials, the ISSN and related medium versions ISSNs should also be displayed at the article level with the journal information.

8.2.3   On a continuing resource published on microfiche, the ISSN and related medium versions ISSNs should be entered in the identification area of the header of the microfiche and/or the labels.

8.3   If a continuing resource bears an ISSN as well as another standard identifier, such as an ISBN for a monograph within a series with no predetermined conclusion, the two identifiers should appear together each with the related title they identify. Each identifier shall include its own prefix such as "ISSN" and "ISBN" or the prefix associated with another standard identifier.

EXAMPLE

The monographic series Ashgate historical keyboard series has been assigned ISSN 2578-0182.

The monograph Studies in English organ music, a volume in the Ashgate historical keyboard series, has been assigned ISBN 978-1-1380–5913–9.

On the publication, these identifiers should appear as follows:

— *Studies in English organ music* ISBN 978-1-4073–1652–9

— *Ashgate historical keyboard series* ISSN 0143-3032

8.4   When a single continuing resource bears more than one ISSN in relation to different continuing resource titles, for example the titles of a main monographic series and its subseries, each ISSN should appear on the continuing resource and each should be distinguished by either adding the full or

abbreviated title proper in parentheses after the relevant identifier, or by printing each ISSN as close as possible to the relevant title proper.

8.5 When a continuing resource contains another continuing resource as an insert with a separate title page, the ISSN for the insert shall be printed on its title page, or in some other appropriate place on the insert.

8.6 When the same serial or other continuing resource is produced in different medium versions for which different ISSNs and key titles are assigned, then the ISSNs of all medium versions should appear together on each version and in one of the prominent locations mentioned in 8.3, each with appropriate distinguishing information.

EXAMPLE

ISSN 1562-6865 (Online)

ISSN 1063-7710 (Print)

ISSN-L 1063–7710

OR

Online version: ISSN 1562-6865

Print version: ISSN 1063-7710

ISSN-L 1063–7710

9 ISSN Machine legibility

9.1 Online electronic continuing resources should contain embedded metadata in a standard format such as Dublin Core, Schema.org, MODS or MARCXML in order to improve discovery of these resources on the Internet. The ISSN should be included as the identifier in the appropriate element of the embedded metadata record, to allow for greater search accuracy, and to help navigating between resources. Relevant cluster ISSN should also be included if the format makes it possible to distinguish them from the ISSN. This also applies to the ISSN-L even when the ISSN-L is the same as the ISSN of the resource.

9.2 Content providers and publishers of serials and other continuing resources should record three types of elements within their systems:

— the ISSN itself using a dedicated metadata field. Precise data elements should be used whenever possible. If there is no ISSN element in the metadata format (e.g. unqualified Dublin Core), an identifier element or equivalent may be used. In the machine-readable presentation, the prefix **"ISSN"** and space shall not be used. However, when ISSN digits are exchanged between systems, the hyphen should be included, since some applications may expect ISSN strings to contain it;

— Cluster ISSNs as appropriate, using a dedicated metadata field;

— the URI of the ISSN or cluster ISSNs linking to the metadata about the continuing resource or the cluster in the ISSN Register.

EXAMPLE   (XML fragments)

Schema.org

For a reference to the ISSN:

< http://example.org/Sociologyofreligion > < http://schema.org/issn > "1759-8818"

    < http://example.org/Sociologyofreligion > < http://schema.org/sameAs >

< https://portal.issn.org/resource/ISSN/1759-8818 >

For a reference to the ISSN-L:

< http://example.org/Sociologyofreligion > < http://schema.org/sameAs >

< https://portal.issn.org/resource/ISSNL/1069-4404>

Dublin Core

< dc.identifier type = "issn" > 1799–3911</dc.identifier>

<dc.relation> < https://portal.issn.org/resource/ISSN/1799-3911 > </dc.relation >

< dc.identifier type = "issnl" > 1799–3903</dc.identifier>

<dc.relation> < https://portal.issn.org/resource/ISSNL/1799–3903 > </dc.relation >

MODS

< identifier type = "issn" > 0376–4583</identifier>

< identifier type = "issn-l" > 0376–4583</identifier>

< identifier type = "uri" >https://portal.issn.org/resource/ISSN/0376-4583</identifier>

< identifier type = "uri" >https://portal.issn.org/resource/ISSN-L/0376-4583</identifier>

MARCXML (on a MARC21 basis)

MARC 21

022 ## $a 0376–4583 $l 0376–4583

856 42 $3 ISSN metadata $u https://portal.issn.org/resource/ISSN/0376-4583

856 42 $3 ISSN-L metadata $u https://portal.issn.org/resource/ISSN-L/0376-4583

The ISSN field in MARC 21 (022) is not currently structured to accommodate a URI. Until such a change occurs or until there is an alternate mechanism for representing the URI of the ISSN in MARC 21, the example below can be followed.

MARCXML

< datafield tag = "022" ind1 = "" ind2 = "" > < subfield code = "a"> 0376–4583</subfield> < subfield code = "l" > 0376–4583</subfield>

</datafield>

< datafield tag = "856" ind1 = "4" ind2 = "2" > < subfield code = "3" > ISSN metadata</subfield>

< subfield code = "u" > https://portal.issn.org/resource/ISSN/0376-4583</subfield>

</datafield>

< datafield tag = "856" ind1 = "4" ind2 = "2" > < subfield code = "3" > ISSN-L metadata</subfield>

< subfield code = "u" > https://portal.issn.org/resource/ISSN-L/0376-4583</subfield>

</datafield>

9.3   Metadata may be embedded in online resources in various ways depending on the format used. For HTML resources, metadata may be located in the header of the document, or directly in the document using RDF/A[20] or microdata[21]. For resources in PDF[22] format, it may be recorded in the associated

XMP[23] metadata. Container formats such as EPUB[24] or OOXML[25] provide specific guidelines for embedded metadata but allow also external metadata via Internet linking.

More information on the recording of digital identification metadata may be found on the website of the ISO 3297 Registration Authority[1].

9.4   When ISSN digits are processed within the same application, the hyphen may be omitted since it has no semantic content. For example, the URN Namespace Registration for ISSN and ISSN-L defined by the Internet Assigned Numbers Authority (IANA) states that hyphen can be ignored when lexical equivalence of two ISSN strings is analysed.

10 ISSN Metadata

10.1   In addition to copies of or access to continuing resources, some metadata are required from applicants for the assignment of ISSN (see C.1 for full list).

10.2   The ISSN network verifies metadata provided by applicants and adds specific metadata such as the ISSN and the key title, in accordance with Annex C. Each ISSN is represented in the ISSN Register made available by the ISO 3297 Registration Authority by a record that contains metadata that is maintained by the ISSN network.

11 Administration of the ISSN network

The name and contact information of the ISO 3297 Registration Authority for this document can be found at https://www.iso.org/mara.

The ISSN network shall be supervised, coordinated and administered by ISO 3297 Registration Authority whose tasks and services are outlined in Annex D.

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1)   Available at: https://www.issn.org.

Annex A
(normative)

Check digit for ISSN

The check digit helps guard against errors resulting from improper data transcription. The check digit used in the ISSN is calculated on a Modulus 11 basis using weights 8 to 2, as indicated in Table A.1.

Table A.1 — Procedure for calculating the ISSN check digit

	Procedure	Example						
Step 1	Take the first seven digits of the ISSN (the check digit is the eighth and last digit).	0	3	1	7	8	4	7
Step 2	Associate the following constant weighting factors (8 to 2) to each digit.	8	7	6	5	4	3	2
Step 3	Apply each constant weighting factor by multiplying each digit by its associated weighting factor (e.g. 0 × 8; 3 × 7; 1 × 6; etc.).	× 0 8 = 0	3 7 21	1 6 6	7 5 35	8 4 32	4 3 12	7 2 14
Step 4	Sum the products of these multiplications.	0 + 21 + 6 + 35 + 32 + 12 + 14 = 120						
Step 5	Divide this sum by the modulus 11 to find the remainder.	120 ÷ 11 = 10 and a remainder of 10						
Step 6	Subtract the remainder from 11 to generate the required check digit. If the check digit is 10, generate a check digit of X. If there is no remainder, generate a check digit of 0 (zero).	11 – 10 = 1 Check digit = 1						
Step 7	Place the check digit at the end of the first seven digits to create the eight-digit International Standard Serial Number (ISSN).	ISSN 0317-8471						

Annex B
(normative)

Linking ISSN (ISSN-L)

B.1   The linking ISSN (ISSN-L) is the specific ISSN designated by ISO 3297 Registration Authority to enable collocation or linking among the different medium versions of a continuing resource. An ISSN-L is assigned automatically to each title even when there is only one medium version available at the time of assignment. The 8-character string is identical to the first ISSN validated in the ISSN Register of any medium version of a continuing resource.

B.2   The prefix ISSN-L is used for human legibility. A specific data field should be created in systems to store the prefix and the identifier.

EXAMPLE

ISSN 1091-613X for the print version of Anthropology, a journal initially published in Guilford, Connecticut, USA

ISSN 2162-3546 for the online version of the same journal.

ISSN-L 1091–613X is designated as the linking ISSN by the ISO 3297 Registration Authority.

B.3   The linking ISSN should be included as a separate data element in the metadata available in the *ISSN Register*. Each record in the *ISSN Register* therefore carries the medium version ISSN assigned to the resource described in the record and the designated linking ISSN as separate data elements.

B.4   A linking ISSN should be designated for each continuing resource identified in the *ISSN Register*, even if the continuing resource exists in only one medium.

B.5   Only one linking ISSN should be designated regardless of how many different medium versions of a continuing resource exist.

B.6   When a continuing resource to which an ISSN has been assigned undergoes a major change and is therefore assigned a new ISSN, the relevant linking ISSN should be designated and recorded in the metadata that was created with the new ISSN assignment.

B.7   The linking ISSN can be used as a component in other global identifiers and mechanisms (see examples in Annex E). In such cases, specific syntax requirements may apply for the display of the linking ISSN within the syntax of such other identifiers or mechanisms.

Annex C
(normative)

ISSN Metadata profile

C.1 Metadata required from an applicant for ISSN assignment

Metadata provided by applicants is not standardised. The ISSN network reviews and formats according to current bibliographic standards and practices.

ISSN assignment and registration are primarily based on the first or earliest issue of serials or on the current iteration of ongoing integrating resources.

Copies or surrogates of the resources are mandatory for ISSN assignment in addition to the metadata shown in Table C.1. Metadata should be supplied using ISO/IEC 10646. Based on the metadata as described in Table C.1, the ISSN network creates a record in the ISSN Registry encompassing the metadata as described in Table C.2.

Table C.1 — Metadata to be supplied by applicants where applicable

Required data elements
Main title as displayed on the publication (in original script and in Roman script)
Other titles as displayed on the publication (e.g. subtitles, titles in other languages, etc.)
Country of publication as displayed on the publication
City(ies) of publication as displayed on the publication (in original script and in Roman script)
Medium of publication (e.g. print, online, other tangible medium)
Language(s) of publication (generally represented in the publication)
Name of publishing company, organization or individual acting as publisher as displayed on the publication (in original script and in Roman script)
Country where publishing company, organization or individual acting as publisher is located if different from Country of publication
Name of publishing company, other organization or individual acting as co-publisher (in original script and in Roman script)
Country of publishing company, other organization or individual acting as co-publisher (if different from Country of publication)
Publication status (e.g. to be published, currently published, discontinued, unknown)
Projected or actual date(s) of publication (year/month of the first issue and, if applicable, year/month of the final issue)
Frequency of publication
Electronic location and access (i.e. URL, mandatory for online resources)
Type of electronic format
Former title and ISSN if assigned
Succeeding title and ISSN if assigned (when the title for which the ISSN is requested has been discontinued and been continued by another title)
Title(s) of additional medium version(s) and ISSN(s) if assigned [e.g. print, tangible digital media (e.g. CD-ROM), intangible digital media (e.g. online journal)]
Type of publication (e.g. newspaper, periodical, updating database, updating website, book series with no predetermined conclusion, updating loose-leaf)

C.2   Metadata available in the ISSN Register

Table C.2 — ISSN Register Metadata elements supplied by the ISSN network where applicable

Data elements
ISSN
Key title
Title proper (in original script and in Roman script)
Variant titles
Abbreviated key title
Country of publication as displayed on the publication
Country code[26]
Medium of publication
Specific material designation
Language(s) of publication
Language code[27]
Place(s) of publication as listed on the serial publication (in original script and in Roman script)
Name of publishing company, organization or individual acting as publisher as displayed on the publication (in original script and in Roman script)
Access point corresponding to name of publishing company, organization or individual acting as publisher (optional)
Identifier for publishing company, organization or individual acting as publisher (optional)
Name of publishing company, organization or individual acting as co-publisher (in original script and in Roman script; optional)
Identifier for publishing company, organization or individual acting as co-publisher (optional)
Date(s) of publication (year of the first issue and, if applicable, year of the final issue)
Publication status (e.g. to be published, currently published, ceased, unknown)
Projected date of publication (year/month)
Subject classification (UDC or DDC)
Frequency of publication
Type of publication (e.g. newspaper, periodical, updating database, updating website, monographic series with no predetermined conclusion, updating loose-leaf)
Access point corresponding to name of issuing body (organization responsible for intellectual content; in original script and in Roman script)
Identifier for issuing body (optional)
Electronic location and access (i.e. URI, URL, etc., mandatory for online resources)
Type of electronic format (optional)
Title(s) of additional medium version(s) and ISSN(s) if assigned [e.g. print, tangible digital media (e.g. CD-ROM), intangible digital media (e.g. online journal)]
Preceding title and ISSN thereof
Succeeding title and ISSN thereof
Parent title of the supplement and ISSN thereof
Title of the supplement and ISSN thereof
Title of main series or ISSN thereof
Title of subseries or ISSN thereof
Other edition title(s) on same medium and ISSN thereof (e.g. linguistic, geographic, other)
Other title related to the title in a manner not specified elsewhere or ISSN thereof
CODEN and other codes

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Table C.2 *(continued)*

Data elements
Reproduction note
System details note
Source of the description note
Note regarding access status (for online resources only)
Code of ISO 3297 Registration Authority or of ISO 3297 Registration Agency assigning the ISSN

Annex D
(normative)

Administration of the ISSN network

D.1 General

The ISSN network (see Introduction) is an inter-governmental organization whose purpose is to identify serials and other continuing resources globally. It is administered by the designated Registration Authority.

Applicants apply for ISSN in accordance with the specifications and directions of the ISO 3297 Registration Authority.

For full details of the administration of the ISSN network, see the website of the Registration Authority.

D.2 Responsibilities of ISO 3297 Registration Authority

ISO 3297 Registration Authority shall provide the following services:

a) coordinate, supervise and promote globally the policies and operations of the ISSN network in compliance with the specifications of this document;

b) represent the interests of the ISSN network to other relevant entities and ensure coordination and cooperation between the ISSN network and other organizations in related fields;

c) implement and maintain such funding arrangements as are necessary to support the operations of the Registration Authority;

d) manage the creation and the maintenance of ISSN, ISSN-L and other Cluster ISSN for the ISSN network and for all users; define new Cluster ISSN as needed;

e) issue notification of the assignment of an ISSN to the applicant requesting the identification of a serial publication and update the ISSN Register so that the applicant and other interested parties are able to check information online;

f) train interested parties in the implementation of this document;

g) provide technical assistance to applicants and to other interested parties to foster the implementation of this document;

h) set up, maintain and update services based on this document, notably the ISSN Register compiling global metadata about material being assigned ISSN by the ISSN network, and the ISSN Portal providing specific services to applicants;

i) correct inaccurate ISSN and related metadata if proof of such inaccuracy is provided;

j) compile and maintain statistical data on ISSN-related operations;

k) establish and disseminate common rules, policies and procedures within the ISSN network;

l) review and decide on appeals of decisions in such matters as rejection of ISSN applications, and disputes concerning the appropriateness of assignments of ISSN to publications;

m) develop, maintain and make available documentation for users of this document;

n) develop, maintain and make available promotional material and communication tools for users of this document;

o) ensure that continuous service is provided.

D.3   ISO 3297 Registration Agencies

The Registration Authority may delegate certain tasks and services listed in D.2 to ISSN Registration Agencies. ISSN Registration Agencies hold an important role in the allocation of ISSN. Therefore, applicants are advised to consult the website of the Registration Authority to find information concerning the most appropriate ISSN Registration Agency to contact and the tasks and services it has been delegated.

Annex E
(informative)

Interoperability of ISSN

E.1 General

URI, DOI®, URN, OpenURL and GTIN are examples of identification systems and protocols that can use ISSN and cluster ISSNs such as ISSN-L. The information in this annex is provided for the convenience of users of this document to illustrate the interoperability of the ISSN with these systems. This list of examples is not exhaustive. This annex does not provide complete or authoritative information on these systems. The relevant governing organizations and documents should be consulted for further information.

ISSN and cluster ISSNs can be incorporated into other identification and linking systems, including, but not limited to, those listed in E.2 to E.6. The use of ISSN in such systems should be for the purpose of identifying or linking to a specific medium version of a continuing resource, such as the print version, the online version, the CD-ROM version, as illustrated below. In cases where identifying and linking to a continuing resource is desired without regard to medium (such as in the resolution of OpenURLs where results sets might include links to either online full text or the location of a print copy through a library's catalogue), the ISSN-L should be used.

E.2 ISSN in linked data formats

E.2.1 Overview

Identification and description data from the ISSN Register has been made available as linked data, in various RDF formats (RDF/XML, Turtle and JSON). This service fosters the use, re-use, exchange and enrichment of ISSN data. The ISSN linked data service is available on the ISSN Portal implemented by the Registration Authority.

E.2.2 Syntax

The URI template for ISSN resources is https://issn.org/resource/identifier_type/resource_identifier.

The {identifier_type} URI component can have the following values:

— ISSN for resources identified by an ISSN (e.g. http://issn.org/resource/ISSN/1683-4135);

— ISSN-L for resources identified by an ISSN-L (e.g. http://issn.org/resource/ISSN-L/1683-3775).

The URI pattern http://issn.org/resource/identifier_type/resource_identifier can therefore serve in different circumstances and within various data sets to identify a specific continuing resource.

Information about the ISSN Data Model can be found on the website of the Registration Authority.

E.3 ISSN and Digital Object Identifier (DOI)

E.3.1 Overview

The DOI system is defined by ISO 26324[28]. A DOI name is a unique and persistent alphanumeric (digital) string assigned to an object which can be a digital or printed publication or other resource. It provides information about the object, which may include one or more URIs that point to, or otherwise relate to,

the object. The DOI name does not change over time; even if the item or information about it moves to a new location, the DOI name stays the same and the DOI metadata are updated as appropriate. DOI thereby provides actionable, interoperable, and persistent links to resources and information about them.

The DOI prefix is allocated to an organization by a DOI registration agency. The DOI suffix is created by the organization using a DOI registration agency to register key metadata in the DOI system[29].

E.3.2   Syntax and examples

A title-level DOI name can be assigned to a publication and article-level DOI name can be assigned to a particular article within a publication. In either case, the publisher should include the ISSN of the publication in the metadata supplied to the relevant DOI registration agency. The DOI registration agency will then include the ISSN in the public data relating to the title or article.

ISO 26324:2012, Annex A states that

"where the referent of a DOI name also has an existing identifier within a commonly recognized identifier scheme or schemes, at least one of the following methods is used to express the relationship.

a)   *The other existing identifier(s) is (are) indicated in the DOI metadata field "referentIdentifier(s) (...) irrespective of whether the identifier (s) is (are) incorporated into the syntax of the DOI name.*

b)   *An existing identifier can be incorporated as an explicit part of the DOI name for the referent.*

(...)

EXAMPLE

10.1038/issn.1476-4687 shows a DOI suffix using an ISSN."

E.4   ISSN and OpenURL

E.4.1   Overview

OpenURL[30] is an enabling technology that uses a web-based request to link metadata for resources to services for that resource. OpenURLs transport identifiers and/or descriptive metadata, along with contextual information, from a metadata source to a link server. When resolving the OpenURL request initiated by a user, the user's link resolver interprets the incoming resource metadata, taking into account the electronic holdings and access privileges of the user's institution. The link resolver then generates web links to services to which the user has access, including, for example, the online full text of an article. Currently, resource metadata and context information are transported using URLs (the "OpenURL").

NOTE   For information on OpenURL, see the National Information Standards Organization (NISO) website, available   at: https://www.niso.org/publications/z3988-2004-r2010-openurl-framework-context-sensitive -services. In 2006, OCLC was designated as the Maintenance agency for OpenURL for a period of five years and developed the OpenURL registry. The OpenURL Registry is no longer being maintained.

E.4.1.1   Syntax and examples

In OpenURL Z39.88-2004 (R2010), resource metadata and context information can be transported as either "by value" OpenURLs or "by reference" OpenURLs. The key value pairs in "by value" OpenURLs can be encoded by two methods: KEV format or XML format. ISSN is included in the 'journal' metadata formats, which are defined in the OpenURL Registry.

EXAMPLE   Showing the KEV journal metadata format (info:ofi/fmt:kev:mtx:journal) in which the ISSN is encoded as:

http://... &rft.issn = 0987–5432&

EXAMPLE   Showing the XML journal metadata format (info:ofi/xml:xsd:journal) in which the ISSN is encoded as an XML element such as:

<rft:issn>9876–5432</rft:issn>

E.4.1.2   Usage scenario

OpenURL[2] is used on a daily basis by link resolvers notably in libraries and discovery platforms to direct users to appropriate content.

A link resolver is an application that accepts and parses properly formed OpenURL data including identifiers and uses this data to direct users to appropriate content. It checks whether the institution owns a copy of or a license for the resource and directs the user to it, generally through a link.

The accurate use of the correct ISSN is critical in ensuring successful resolution of OpenURL-based links. The content provider should ensure that the ISSN being supplied to the knowledge base on which the link resolver relies is accurate in relation to the work described, i.e. the ISSN identifying the print version, the ISSN identifying the electronic version, and the ISSN-L which collocates various medium versions. When the OpenURL application has a metadata element identifying the ISSN-L, it is recommended to include the ISSN-L.

E.5   ISSN and URN

E.5.1   Overview

The Uniform Resource Name (URN) is an Internet standard developed by the Internet Engineering Task Force (IETF).

According to RFC 8141[35]:

"*a Uniform Resource Name (URN) is a Uniform Resource Identifier (URI) [RFC 3986] that is assigned under the "urn" URI scheme and a particular URN namespace, with the intent that the URN will be a persistent, location-independent resource identifier. A URN namespace is a collection of such URNs, each of which is (1) unique, (2) assigned in a consistent and managed way, and (3) assigned according to a common definition.*"

The URN namespace "ISSN"[31] has been registered for ISSN which makes it possible to turn ISSNs into actionable and resolvable URN URIs.

E.5.2   Syntax and example

All URNs include a Namespace Identifier (NID) code and a Namespace Specific String (NSS). The NID indicates the identification system being used for the URN and facilitates the interpretation of the NSS. The NSS is the local code that identifies the individual document. The ISSN is a registered URN Namespace identified by the NID code ISSN.

The current URN syntax, as specified in RFC 8141, is:

"URN" ":"<NID>":"<NSS>

where <NID> is a namespace identifier (to distinguish between different identifier schemes) and where <NSS> is the namespace-specific string. Thus, when 'ISSN' is the NID for the ISSN, each URN[32] based on an ISSN begins with URN:ISSN: followed by a namespace specific string; in this case, an ISSN.

EXAMPLE

https://urn.issn.org/urn:issn:1560-1560

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2)   NISO RP-21-2013, *Improving OpenURLs Through Analytics (IOTA): Recommendations for Link Resolver Providers.* Baltimore, MD: NISO Press, 2013. Available at https://www.niso.org/standards-committees/iota [cited 9 July 2018].