INTERNATIONAL STANDARD

ISO 2108

Fourth edition
2005-06-01

Information and documentation — International Standard Book Number (ISBN)

Information et documentation — Numéro international normalisé du livre (ISBN)

Reference number
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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.

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 2108 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 9, *Identification and description*.

This fourth edition cancels and replaces the third edition (ISO 2108:1992). It changes the ISBN to a 13 digit identifier to increase substantially the numbering capacity of the global ISBN system and to harmonise the format of the ISBN with the EAN-UCC product code system. Additional specifications on administration of the ISBN system, the assignment of ISBN and associated metadata have been added.

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Introduction

Since its inception in 1970, the International Standard Book Number (ISBN) has been internationally recognized as the identification system for the publishing industry and book trade. An ISBN accompanies a monographic publication from its production and onwards throughout the supply and distribution chain.

The ISBN system serves as a key element of ordering and inventory systems for publishers, booksellers, libraries and other organizations. It is the basis for collecting data on new and forthcoming editions of monographic publications for directories used throughout the book trade. The use of ISBN also facilitates rights management and the monitoring of sales data for the publishing industry.

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Information and documentation — International Standard Book Number (ISBN)

1 Scope

The purpose of this International Standard is to establish the specifications for the International Standard Book Number (ISBN) as a unique international identification system for each product form or edition of a monographic publication published or produced by a specific publisher. It specifies the construction of an ISBN, the rules for its assignment and use, the metadata to be associated with the ISBN allocation, and the administration of the ISBN system.

This International Standard is applicable to monographic publications (or their individual sections or chapters where these are made separately available) and certain types of related products that are available to the public. Examples of applicable and non-applicable products are provided in Annex A.

NOTE More detailed, operational guidance is provided in a users' manual available from the Registration Authority for this International Standard (see Clause 8).

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 639-2, *Codes for the representation of names of languages — Part 2: Alpha-3 code*

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO/IEC 15420:2000, *Information technology — Automatic identification and data capture techniques — Bar code symbology specification — EAN/UPC*

3 Terms and definitions

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

3.1
EAN.UCC prefix
international product number prefix assigned by EAN International

NOTE Specific EAN.UCC prefixes are allocated solely for the use of the ISBN system (see 4.2).

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3.2
check digit
final character in the ISBN string which is related to all preceding characters in the string by a specified mathematical algorithm and which may be used to verify the accuracy of the ISBN string

3.3
continuing resource
publication that is issued over time with no predetermined conclusion and made available to the public in any product form, usually issued in successive or integrating issues which generally have numerical and/or chronological designations

NOTE Continuing resources include serials such as newspapers, periodicals, journals, magazines, etc. and ongoing integrating resources such as loose-leaf publications that are continually updated and web sites that are continually updated.

3.4
edition
all copies of a publication embodying essentially the same content and issued by the same entity

NOTE A single edition of a publication may be published in multiple product forms.

3.5
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 product form

NOTE Examples of integrating resources include updating loose-leaves and updating web sites.

3.6
ISBN
International Standard Book Number allocated to a registrant by an appointed ISBN registration agency in accordance with the specifications of this International Standard

3.7
monographic publication
publication conceived as a whole in one part or within a finite number of parts by its publisher/author(s) and made available to the public in any product form

3.8
print on demand publication
publication that is printed at the time a customer orders a copy of it rather than that copy being supplied from existing stocks held by the distributor or publisher

3.9
product form
size, binding, medium and/or data format of a publication

EXAMPLE The same edition of a novel may appear in the following product forms: paperback; hardback; cassette audio-book; CD audio-book; Braille, etc.

3.10
registrant
person or organization that has requested and received an ISBN for a monographic publication from an appointed ISBN registration agency

3.11
registration group
area of operation defined by the Registration Authority for ISO 2108 within which one or more appointed ISBN registration agencies function

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4 Construction of an International Standard Book Number

4.1 General structure of an ISBN

As of 1st January 2007, all agencies of the ISBN system shall only assign ISBNs which consist of thirteen digits[1)] made up of the following elements.

a) prefix element;

b) registration group element;

c) registrant element;

d) publication element;

e) check digit.

For specifications concerning 10 digit ISBNs assigned prior to 1st January 2007, see Annex F.

When an ISBN is displayed in human readable form (i.e. a form meant primarily to be read or written by a person, in contrast to a form primarily meant to be used by data processing equipment), it shall be preceded by the letters ISBN[2)] and each of the elements of the ISBN should be separated from the others by a hyphen as in the following example.

EXAMPLE: ISBN 978-90-70002-34-3

4.2 Prefix element

The first element of a 13 digit ISBN shall be a 3 digit prefix specified by the International ISBN Agency in conformance with the global EAN.UCC product numbering system. This prefix is made available to the International ISBN Agency by EAN International. This prefix included in the 13-digit product number indicates that this product number originates with and is part of the ISBN system.

Technical information specifying valid EAN.UCC prefixes for ISBN use shall be available from the International ISBN Agency.

4.3 Registration group element

The second element of a 13 digit ISBN shall indicate the registration group. It identifies the national, geographic, language or other such grouping within which one or more ISBN agencies operate.

The registration group element is allocated by the International ISBN Agency.

1) These digits are the Arabic numerals 0 to 9 only.

2) In countries where the Latin alphabet is not used, the appropriate abbreviation for “International Standard Book Number” in the local script may be given in conjunction with the required letters ISBN in the Latin alphabet.

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The registration group element varies in length according to the publishing output within the group concerned. The length of this element for any registration group is determined by the International ISBN Agency. Technical information which specifies validation rules for registration group length shall be available from the International ISBN Agency.

4.4 Registrant element

The third element of a 13 digit ISBN shall indicate the registrant for that ISBN. This element shall be allocated by the ISBN registration agency appointed for this purpose within each registration group. In the majority of cases, the registrant element shall refer to one publisher. Under certain circumstances more than one publisher may share a registrant element, usually as a result of mergers or other commercial activities involving particular titles. ISBN registration agencies may reserve a common block of registrant elements for the purpose of assigning individual ISBN to single title publishers.

The registrant element varies in length according to the projected title output of each publisher. The length of this element shall be determined by the ISBN registration agency in accordance with the agreed specifications of the ISBN system for assigning ranges of the ISBN (see Annex D). Technical information that specifies validation rules for registrant length within a particular registrant group shall be available from the International ISBN Agency (see Annex D).

4.5 Publication element

The fourth element of a 13 digit ISBN shall be the publication element. The publication element shall be allocated in accordance with the specifications of Annex A. It is usually allocated by the publisher of the monographic publication although in some cases ISBN registration agencies may choose to assign an individual ISBN to single title publishers by allocating single publication elements from within a common registrant element block reserved for that purpose.

The length of the publication element is determined by the length of the registration group and registrant elements that precede it.

4.6 Check digit

The fifth and final element of a 13 digit ISBN is the check digit. The check digit for a 13 digit ISBN is calculated using a modulus 10 algorithm. Further details on this method are provided in Annex C.

5 Assignment of an ISBN

5.1 A registrant element shall be allocated to a publisher, upon application, by an appointed ISBN registration agency from the range of ISBNs allocated to that agency by the International ISBN Agency. ISBN registration agencies may assign an individual ISBN to single title publishers from a common registrant element block reserved for that purpose.

5.2 Each time an ISBN is assigned, the registrant should supply the relevant ISBN registration agency or its designated bibliographic agency with metadata specific to the publication to which the ISBN has been assigned (see Annex E).

5.3 Once an ISBN is assigned to a publication, that ISBN shall not be altered, replaced or re-used.

5.4 A separate ISBN shall be assigned to each separate monographic publication, or separate edition of a monographic publication issued by a publisher. A separate ISBN shall be assigned to each different language edition of a monographic publication.

5.5 Different product forms (e.g. hardcover, paperback, Braille, audio-book, video, online electronic publication) shall be assigned separate ISBNs. Each different format of an electronic publication (e.g. ".lit", ".pdf", ".html", ".pdb") that is published and made separately available shall be given a separate ISBN.

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5.6 A separate ISBN shall be assigned if there have been significant changes to any part or parts of a publication. A separate ISBN shall be assigned if there has been a change to the title of a publication. A separate ISBN shall not be assigned to a publication unchanged in edition or product form or publisher. A separate ISBN shall not be assigned for changes in the price of a publication or for small changes such as corrections of misprints.

6 Location and display of the ISBN on publications

6.1 General

The ISBN shall always appear on the item itself.

6.2 Printed publications

6.2.1 The ISBN shall be printed on the verso of the title page of the publication or, if this is not possible, at the foot of the title page itself or in conjunction with the copyright notice.

6.2.2 The ISBN shall also be printed at the foot of the outside back cover, if practicable, and/or at the foot of the back of the jacket. If neither of these positions is possible, then the ISBN shall be printed in some other prominent position on the outside of the publication.

6.2.3 The ISBN shall be represented in machine-readable form as a bar code on the publication. When an ISBN is represented as a bar code it shall use the EAN bar code symbology in accordance with ISO/IEC 15420. In a bar code the ISBN should be displayed in human readable form immediately above the bar code symbol.

6.3 Electronic publications and other non-print product forms

6.3.1 If the publication involves visual display of content stored in electronic form (e.g. an online publication), the ISBN shall appear on the page or screen that displays the title or its equivalent (e.g. the initial screen displayed when the content is first accessed and/or on the screen that carries the copyright notice).

6.3.2 If the publication is issued as a physical object (e.g. a compact disc, cassette or diskette), the ISBN shall be displayed on any labels permanently affixed to that object.

If it is not possible to display the ISBN on the object or its label, then the ISBN shall be displayed at the bottom of the back of any permanent packaging for that object (e.g. the box, sleeve or frame).

6.3.3 The ISBN should be included in any metadata embedded in the publication as well as being visibly placed in the text.

6.4 Display of multiple ISBNs

In cases where ISBNs for different product forms of a publication appear together on a publication, the individual ISBNs should be listed one above the other. Each ISBN in a list of multiple ISBNs shall be qualified by information on the specific product form to which it refers.

7 Fees

Fees may be charged for the assignment of ISBNs by appointed ISBN registration agencies. Any such fees shall be reasonable.

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8 Administration of the ISBN system

The Registration Authority for this International Standard shall be the International ISBN Agency[3]. The ISBN system shall be supervised, coordinated and administered by the International ISBN Agency and, as appropriate, by ISBN registration agencies appointed by the International ISBN Agency.

The principal tasks of the International ISBN Agency and of ISBN registration agencies are outlined in Annex B.

3) Contact (until 2006-03-31): Staatsbibliothek zu Berlin, Preussischer Kulturbesitz, 10772 Berlin, Germany. Telephone: (+49 30) 266-2496. Telefax: (+49 30) 266-2378. E-mail: isbn@sbb.spk-berlin.de.
Web site: <http://isbn-international.org>.

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Annex A
(normative)

Principles for the assignment and use of the ISBN

A.1 General

A.1.1 The assignment of an ISBN to a monographic publication, regardless of product form, shall not imply any meaning or value as legal evidence with regard to the ownership of rights to that publication.

A.1.2 A separate ISBN shall be assigned to each distinct monographic publication or edition of a monographic publication issued by a publisher. Different product forms of a publication where these are made separately available shall be assigned separate ISBNs. Different language versions of a publication shall be assigned separate ISBNs.

A.1.3 The same ISBN shall not be assigned to more than one edition or product form of a publication.

A.1.4 Once assigned to a publication, an ISBN shall never be re-used for another publication, even if the ISBN is found to have been issued in error. A registrant who determines that an ISBN has been erroneously assigned shall report the erroneous ISBN to the relevant local ISBN registration agency.

A.1.5 Each revised edition of a publication shall be assigned a separate ISBN. Minor changes in an edition (e.g. corrections to misprints) shall not require a separate ISBN.

A.1.6 A separate ISBN shall not be assigned to an unchanged impression or unchanged reprint of the same publication, issued in the same product form by the same publisher.

A.1.7 A change in the product form in which a particular publication is published shall require a separate ISBN; e.g. hardcover, paperback, Braille, microform, software, video and online electronic versions and product forms of the same publication shall each require a separate ISBN.

A.1.8 A separate ISBN shall not be assigned if the only change to a publication is its price.

A.1.9 Some examples of types of monographic publications to which an ISBN may be assigned are:

a) printed books and pamphlets (and their various product forms);

b) Braille publications;

c) publications which are not intended by the publisher to be regularly updated or continued indefinitely;

d) educational/instructional films, videos and transparencies;

e) audio books on cassette or CD or DVD (talking books);

f) electronic publications either on physical carriers (such as machine-readable tapes, diskettes, CD-ROMs) or on the internet;

g) digitized copies of print monographic publications;

h) microform publications;

i) educational or instructional software;

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j) mixed media publications where the principal constituent is text-based.

Further information is provided in the Users' Manual available from the International ISBN Agency.

A.1.10 Some examples of the types of material to which an ISBN shall not be assigned are:

a) continuing resources (e.g. serials, series without predetermined conclusion and ongoing integrating resources);

b) ephemeral printed materials such as advertising matter and the like;

c) printed music;

d) art prints and art folders without title page and text;

e) personal documents (such as electronic curriculum vitae and personal profiles);

f) greetings cards;

g) music sound recordings;

h) software that is intended for any purpose other than educational or instructional;

i) electronic bulletin boards;

j) emails and other electronic correspondence;

k) games.

Further information is provided in the Users' Manual available from the International ISBN Agency.

A.1.11 An ISBN shall not be assigned to abstract entities such as textual works and other abstract creations of intellectual or artistic content; e.g. each specific product form of the novel "*Moby Dick*" is eligible for an ISBN but the novel itself, as an abstract textual work, shall not be assigned a separate ISBN.

A.2 Multi-volume publications

An ISBN shall be assigned to the complete set of volumes where a publication comprises more than one volume. If individual volumes of the set are also available separately, then each volume shall be assigned its own unique ISBN. The title page verso of the individual volume shall state the ISBN for the respective volume and should also state the ISBN for the set.

In cases where individual volumes are not intended to be available separately (such as the individual volumes of an encyclopaedia), it is recommended that an ISBN still be assigned to each separate volume in order to facilitate distribution and returns processing.

A.3 Publications issued as part of a series

When a publication is made available to the public both individually and as a part of a series, it shall be regarded as two separate publications, each of which shall be assigned a separate ISBN.

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A.4 Co-publication

When a publication is published jointly or as a co-edition by two or more publishers, each of the co-publishers may assign its own ISBN and display each of them on the copyright page. However, only one ISBN shall be displayed as a bar code on the publication.

A.5 Reprints

A.5.1 A separate ISBN may be assigned if the same publication is published under a different imprint name by the same publisher.

A.5.2 A separate ISBN shall be assigned when a publication is republished under the imprint of a different publisher.

A.6 Print on demand publications

Print on demand publications are subject to the basic rules specified in Clause 5 for the assignment of an ISBN.

A print on demand version of a publication where the content has been specifically customized or personalized for a user and which has limited availability shall not receive an ISBN.

A.7 Electronic publications

Electronic publications are subject to the basic rules specified in Clause 5 for assignment of an ISBN.

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Annex B
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Administration of the ISBN system

B.1 General

The ISBN system is an identification system for monographic publications. It is administered by the International ISBN Agency and by appointed ISBN registration agencies in accordance with the specifications outlined in B.2 and B.3.

B.2 International ISBN Agency

The International ISBN Agency shall provide the services described in a) to k) below.

a) Promote, co-ordinate and supervise the ISBN system in compliance with the specifications of this International Standard and represent the interests of the ISBN community to other relevant organizations.

b) Appoint appropriate organizations as ISBN registration agencies and revoke such appointments as necessary.

c) Define registration groups and their areas of operation and allocate them to appropriate ISBN registration agencies.

d) Oversee the definition of registration group rules that govern the length of registrant elements within contiguous ranges of registrant element numbers and ensure that an accurate and comprehensive register of these rules is available for all registration groups at all times.

e) Allocate ranges of unique registrant element numbers to ISBN registration agencies and maintain an accurate register of the registrant elements that have been assigned.

f) Secure the maintenance of ISBNs and their associated ISBN administrative data through ISBN registration agency registers.

g) Develop, implement, monitor and enforce policies and procedures governing the operations of ISBN agencies and the process of ISBN registration by those agencies including any fees associated with that process.

h) Facilitate the review and resolution of duplicate assignments of ISBNs.

i) Review and decide on appeals of decisions made by ISBN registration agencies in such matters as:

   1) rejection of ISBN applications;

   2) disputes concerning the appropriateness of assignments of ISBNs to publications.

j) Develop, maintain and make available documentation for users of the ISBN system.

k) Implement and maintain such funding arrangements as are necessary to support the operations of the International ISBN Agency including, but not limited to, financial contributions from ISBN registration agencies.

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B.3 ISBN registration agencies

The ISBN registration agencies shall provide the services described in a) to i) below.

a) Issue notification of the assignment of an ISBN to the registrant of that monographic publication.

b) Manage and maintain the registers of ISBN, ISBN metadata and administrative data in a secure fashion, in accordance with the policies laid down by the International ISBN Agency. Tasks involving ISBN metadata may be delegated to a designated bibliographic agency acting in compliance with the specifications of this International Standard.

c) Enter into registers the details of ISBNs allocated and their associated ISBN metadata and administration data. Tasks involving ISBN metadata may be delegated to a designated bibliographic agency acting in compliance with the specifications of this International Standard.

d) Correct inaccurate ISBNs and ISBN metadata if proof of such inaccuracy is provided.

e) Make ISBN and associated metadata available to other registration agencies and to users of the ISBN system in accordance with the policies laid down by the International ISBN Agency.

f) Compile and maintain statistical data on its ISBN-related operations and report these to the International ISBN Agency annually or more frequently.

g) Promote, educate and train others in the use of the ISBN system in compliance with the specifications of this International Standard.

h) Adhere to the ISBN policies and procedures established by the International ISBN Agency in compliance with the specifications of this International Standard.

i) Ensure that continuous service is provided.

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Annex C
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Check digit for the 13 digit ISBN

C.1 The purpose of the check digit is to guard against errors resulting from improper transcription of an ISBN.

C.2 The check digit for a 13 digit ISBN shall be 1 alphanumeric character using Arabic numerals 0 to 9. The check digit shall be displayed as the final character at the end of the ISBN character string.

C.3 The check digit for a 13 digit ISBN is calculated using a weighting algorithm which utilizes a modulus 10 check.

C.4 When an ISBN is displayed in human readable form, it shall be preceded by the letters ISBN. Hyphens should be used to enhance readability and to provide improved understanding of the internal structure of the number but are not an integral part of the number itself.

EXAMPLE:

This example shows the modulus 10 algorithm to calculate check digit for a 13 digit ISBN (check digit unknown):

Each of the first 12 digits of the ISBN is alternately multiplied by 1 and 3. The check digit is equal to 10 minus the remainder resulting from dividing the sum of the weighted products of the first 12 digits by 10, with one exception. If this calculation results in an apparent check digit of 10, the check digit is 0.

Use the following steps to calculate the check digit for the ISBN 978-0-11-000222-?.

Step 1: Determine the sum of the weighted products for the first 12 digits of the ISBN (see Table C.1).

Table C.1 — Example of the calculation of the check digit for a 13 digit ISBN

	Prefix element			Registration Group element	Registrant element		Publication element						Check digit	Sum
ISBN	9	7	8	0	1	1	0	0	0	2	2	2	?	
Weight	1	3	1	3	1	3	1	3	1	3	1	3	—	
Product	9	21	8	0	1	3	0	0	0	6	2	6	—	56

Step 2: Divide the sum of the weighted products of the first 12 digits of the ISBN calculated in step 1 by 10 and determine the remainder thus:

56/10 = 5 remainder = 6

Step 3: Subtract the remainder calculated in step 2 from 10. The resulting difference is the value of the check digit, with one exception. If the remainder from step 2 is 0, the check digit is 0.

10 – 6 = 4

Check digit = 4

ISBN = 978-0-11-000222-4

The following mathematical formula is an alternative way of expressing the calculation of the check digit.

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Check digit = mod 10 {10 – [mod 10 (sum of weighted products of the first 12 ISBN digits)]}

Check digit = mod 10 {10 – [mod 10 (56)]}

Check digit = 4

In order for the ISBN to be valid, the sum of the weighted products of the first 12 digits plus the check digit shall be divisible by 10 without a remainder.

NOTE The length of the registration group, registrant and publication elements are variable and may not always be the same as in Table C.1. Not all registration group and registrant combinations are valid. See Annex D for the formula required to validate and split an ISBN.

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Annex D
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Ranges of ISBN

D.1 General

This Annex is provided to describe additional verifiable structural characteristics of the ISBN, and is intended primarily for a technical audience. The rules for deriving ranges offer the opportunity to provide visual display or additional programmatic validation of any component of the ISBN.

D.2 Distribution of ranges

The number of digits in each of the ISBN elements for registration group, registrant and title varies in length, although the number of digits contained in these three elements is 9 in total. These 9 digits, together with the 3 digit prefix element and the check digit, make up the 13 digit ISBN.

The number of digits in the registration group and registrant elements varies according to the publishing output of the registration group or registrant in question. Registration groups for which large output of monographic publications is anticipated will receive group numbers of one or two digits. Publishers with an expected large output of publications will be assigned registrant numbers of two or three digits.

NOTE The number of digits specified and assigned for registration groups and registrants within prefix element 978 cannot be relied upon to predict those which are specified and assigned within future prefix elements (e.g. prefix element 979). Registration groups and registrant allocations for future prefixes will reflect assignment history and assignment projections for the entire prefix element system viewed collectively.

Determining the internal divisions of the 13 digit ISBN is a two-step process:

1st) determine the registration group using the rules for prefix elements assigned for ISBN;

2nd) determine the registrant and title length using the registration group rules. Registration group rules are available from the International ISBN Agency.

Table D.1 illustrates the distribution of registration group ranges within prefix element 978. Any other EAN.UCC prefix defined for use within the ISBN system will have registration group rules available from the International ISBN Agency prior to any registration group assignment within that EAN.UCC prefix.

It is strongly recommended to check the International ISBN Agency on a regular basis for possible additions or changes to registration group rules.

Table D.1 — Distribution of registration group ranges within prefix element 978

Prefix element	Registration group element range	Numbers available per registration group
978	0-5	100 000 000
	6	(undefined range)
	7	100 000 000
	80-94	10 000 000
	950-989	1 000 000
	9900-9989	100 000
	99900-99999	10 000

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Table D.2 illustrates how to derive the registration group structure for prefix element 978 which is assigned for ISBN. An examination of the 5 digits following the prefix element will permit the determination of the length of the registration group element. Once the registration group length is known, the registrant group can be derived.

Table D.2 — Method of deriving the registration group structure for prefix element 978

If the 5 digits following the prefix element are between:	Registration group length is:	The prefix element and registration group divisions would occur after the following digits and associated elements
00000-59999	1	3rd (prefix element) 4th (registration group)
60000-69999	0 (undefined)	(undefined range)
70000-79999	1	3rd (prefix element) 4th (registration group)
80000-94999	2	3rd (prefix element) 5th (registration group)
95000-98999	3	3rd (prefix element) 6th (registration group)
99000-99899	4	3rd (prefix element) 7th (registration group)
99900-99999	5	3rd (prefix element) 8th (registration group)

The length of the registrant element is established within each registration group by ISBN registration agencies in accordance with the needs of the publishing industry within their designated area. The ranges assigned to each registration group are established in advance by the International ISBN Agency before determining distribution of ranges of ISBN to publishers within those groups.

EXAMPLE 1:

Test ISBN: 9786000000004

EAN.UCC prefix: 978

(registration group test segment): 60000

Registration group: (undefined)

NOTE This test ISBN is not valid because the registration group test segment is within the group 60000 to 69999 which has a specified group length of 0 (currently undefined).

EXAMPLE 2:

Test ISBN: 9780777777770

EAN.UCC prefix: 978

(registration group test segment): 07777

Registration group: 0

NOTE This test ISBN is valid because the registration group test segment is within the range 00000 to 59999 which has a specified registration group length of 1 (defined).

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Table D.3 illustrates the distribution of registrant number ranges and maximum titles per registrant within registration group 978-0.

Table D.3 — Distribution of registrant number ranges and titles within group 978-0

Registration group	Registrant element range	Numbers available per registrant for title identification
978-0	00-19	1 000 000
	200-699	100 000
	7000-8499	10 000
	85000-89999	1 000
	900000-949999	100
	9500000-9999999	10

Table D.4 illustrates how to derive the internal structure for the registration group 978-0. An examination of the 5 digits following the registrant group element permits the determination of the length of the registrant element. Once the registrant element length is known, the title element length can be derived.

Table D.4 — Method of deriving the internal structure for registration group 978-0

If the 5 digits following the registration group are between:	Registrant element length is:	Title element length is:	The internal divisions would occur after each of the following digits and associated elements
00000-19999	2	6	3rd (prefix element) 4th (registration group) 6th (registrant) 12th (title)
20000-69999	3	5	3rd (prefix element) 4th (registration group) 7th (registrant) 12th (title)
70000-84999	4	4	3rd (prefix element) 4th (registration group) 8th (registrant) 12th (title)
85000-89999	5	3	3rd (prefix element) 4th (registration group) 9th (registrant) 12th (title)
90000-94999	6	2	3rd (prefix element) 4th (registration group) 10th (registrant) 12th (title)
95000-99999	7	1	3rd (prefix element) 4th (registration group) 11th (registrant) 12th (title)

EXAMPLE:

Test ISBN: 9780777777770

EAN.UCC prefix: 978

Registration group: 0

(registrant test segment): 77777

Registrant: 7777

Title: 7777

Check digit: 0

Displayable ISBN: 978-0-7777-7777-0

NOTE The registrant test segment is within the range 70000 to 84999 which has a specified registrant length of 4 (defined).

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Table D.5 illustrates the distribution of registrant number ranges and maximum titles per registrant within registration group 978-952.

Table D.5 — Distribution of registrant number ranges and titles within registration group 978-952

Registration group	Registrant element range	Numbers available per registrant for title identification
978-952	00-19	10 000
	200-499	1 000
	5000-8899	100
	89-94	10 000
	9500-9899	100
	99000-99999	10

Table D.6 illustrates how to derive the internal structure for the registration group 978-952. An examination of the 5 digits following the registrant group element permits the determination of the length of that registrant element. Once the registrant element length is known, the title element length can be derived.

Table D.6 — Method of deriving the internal structure for registration group 978-952

If the 5 digits following the registration group are between:	Registrant element length is:	Title element length is:	The internal divisions would occur after each of the following digits and associated elements
00000-19999	2	4	3rd (prefix element) 6th (registration group) 8th (registrant) 12th (title)
20000-49999	3	3	3rd (prefix element) 6th (registration group) 9th (registrant) 12th (title)
50000-88999	4	2	3rd (prefix element) 6th (registration group) 10th (registrant) 12th (title)
89000-94999	2	4	3rd (prefix element) 6th (registration group) 8th (registrant) 12th (title)
95000-98999	4	2	3rd (prefix element) 6th (registration group) 10th (registrant) 12th (title)
99000-99999	5	1	3rd (prefix element) 6th (registration group) 11th (registrant) 12th (title)

EXAMPLE:

Test ISBN: 9789528988885

EAN.UCC prefix: 978

Registration group: 952

(registrant test segment): 89888

Registrant: 89

Title: 8888

Check digit: 5

Displayable ISBN: 978-952-89-8888-5

Test result: the registrant test segment is within the range from 89000 to 94999 which has a specified registrant length of 2 (defined).

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Annex E
(normative)

Metadata for the registration of an assigned ISBN

E.1 General

E.1.1 In order to provide enough information to differentiate one entity bearing an ISBN from another, ISBN registrants should supply the ISBN registration agency with a specified amount of metadata (descriptive information) about the publication to which the ISBN is assigned. The metadata associated with each ISBN assignment shall be maintained by the ISBN registration agency or by its designated bibliographic agency.

E.1.2 The specifications concerning the type and format of these metadata shall be established by the International ISBN Agency in cooperation with the individual ISBN registration agencies and published in the ISBN Users' Manual.

E.2 Elements of ISBN metadata

E.2.1 The metadata requirements for the ISBN system should be compatible with the ONIX International product information standards[11] maintained by EDItEUR and its associated organizations.

E.2.2 Elements of ISBN metadata shall include, at a minimum, the following.

Data element	Comments
ISBN	In the 13 digit ISBN format
Product form	Coding that indicates the medium and/or format of the product
Title	The title of the publication, together with sub-title where applicable
Series	Series title and enumeration when applicable
Contributor	Contributor role code(s) and contributor name(s)
Edition	Edition number (for editions after the first), type and statement
Language(s) of text	Using ISO 639-2/B language codes
Imprint	The brand name under which the publication is published
Publisher	The person or organization that owns the imprint at the date of publication
Country of publication	Using ISO 3166-1 country codes
Publication date	The date of first publication under this ISBN. In the ISO 8601 format (YYYY-MM-DD)
ISBN of parent publication	ISBN of the parent publication of which this publication is a part, when applicable

E.3 Association of an ISBN with ISBN metadata

ISBN registration agencies should either make available databases linking ISBNs with their core metadata or work with bibliographic agencies to ensure that such databases (i.e. books in print, national bibliography) are accessible. ISBN registration agencies and publishers of bibliographic databases may charge a fee for access to such information.

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Annex F
(informative)

ISBN in the 10-digit format assigned prior to implementation of the fourth edition of ISO 2108

F.1 General

This fourth edition of this International Standard expands the numbering capacity of the ISBN identification system by incorporating the prefix element as the first element of a 13 digit ISBN.

In previous editions of ISO 2108, the ISBN was a 10-digit number composed of 4 elements:

a) a registration group element;

b) a registrant (publisher) element;

c) a title element;

d) a check digit.

The 10 digit ISBN is incapable of distinguishing between the different ranges of numbers that can be assigned under different prefix elements. For this reason, as of 1st January 2007, the 10 digit ISBN should only be used for historical purposes.

F.2 Calculation of the check digit for a 10 digit ISBN

In the case of a 10 digit ISBN, the ISBN check digit is calculated using a modulus 11 algorithm as shown in the following example.

EXAMPLE

This example shows the modulus 11 algorithm to calculate the check digit for a 10 digit ISBN (check digit is unknown):

Incomplete 10 digit ISBN = 0-393-04002-? (see Table F.1)

Table F.1 — Example of calculation of the check digit for a 10 digit ISBN

Position	Total	1	2	3	4	5	6	7	8	9
ISBN		0	3	9	3	0	4	0	0	2
Weight		10	9	8	7	6	5	4	3	2
Product	144	0	27	72	21	0	20	0	0	4

Check digit = mod11 [11 – mod11 (Product Total)] = mod11 [11 – mod11 (144)] = 10

NOTE 1 When the check digit calculates to 10, it is represented as an “X”.

NOTE 2 mod11 of a test number returns the remainder of the test number divided by 11 unless the number is less than 11 in which case it returns the test number itself.

Complete 10 digit ISBN = 0-393-04002-X

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F.3 Representation of a 10 digit ISBN as a 13 digit identifier

Where a 10 digit ISBN is being converted for bar code usage, the prefix element 978 precedes the first 9 characters of the 10 digit ISBN and the check digit of the 10 digit ISBN is dropped and replaced by a check digit calculated using a modulus 10 algorithm (see Annex C).

EXAMPLE:

This example shows the conversion of a 10 digit ISBN to a 13 digit ISBN or for EAN bar code usage:

10 digit ISBN with check digit: 0-393-04002-X

10 digit ISBN without check digit: 0-393-04002

Added prefix element (13 digit ISBN): 978-0-393-04002

Added prefix element (13 digit ISBN) check digit: 978-0-393-04002-9 (see Annex C for check digit calculation details.)

NOTE Hyphens are illustrated to enhance readability only. Hyphens are used to provide improved understanding of the internal structure of the number but are not an integral part of the number itself.

F.4 Compatibility with an ISBN assigned prior to the implementation of the fourth edition of ISO 2108

F.4.1 International product identifiers will converge into a *de facto* 13 digit standard. It is recommended that processes be initiated to ensure that product identifiers always be represented in full. This will have the added benefit that the number encoded within an EAN13 bar code will be identical to the product identifier used in computer systems and in associated print materials.

F.4.2 It is recommended that for trade applications all existing references to the 10 digit ISBN structure — in computer systems and in print — be converted to the associated 13 digit ISBN structure.

F.4.3 If the 10 digit ISBN appears on a publication or on any accompanying material in conjunction with the publication, it should be clearly identified as a 10 digit ISBN. In addition, the 13 digit ISBN should also be displayed.

F.4.4 In previous editions of ISO 2108, the maximum required length for a registrant identifier was 8 digits, comprised of the registration group element and the registrant element. In order to differentiate between registration group identifiers assigned within different prefix elements, all references to registration groups include the prefix element and the registration group — in computer systems and in print. In order to differentiate between registrant identifiers assigned within different prefix elements, all references to registrants include the prefix element and the registration group element along with the registrant element — in computer systems and in print. See Annex D for further details about the registration group element and the registrant element.

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