

Guidelines for the Implementation of 13-Digit ISBNs

International ISBN Agency
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For enquires in Australia, contact:
ISBN Agency Australia
Email: isbn@thorpe.com.au
Website: www.thorpe.com.au/isbn
Tel: 03 8645 0345

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Introduction

Since its inception in 1970, the International Standard Book Number (ISBN) has been internationally recognised 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, wholesalers, libraries and other organisations. 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.

The revised ISO standard, due to be published at the beginning of 2005, represents the first change there has been to the structure of the ISBN since its inception. To facilitate the continued smooth operation of a supply chain dependent on this identifier, all participants in the book trade will need to ensure that their systems are able to accommodate the new number structure without disruption when it is brought into effect on 1 January 2007. Every system in use that carries the ISBN, internal as well as those used for external communication, will need to be reviewed; as will the display of numbers on publications and in related documentation.

These implementation guidelines do not attempt to solve every possible problem that might arise. Many of the issues that will emerge will only be able to be resolved by individual discussion with users, between trading partners, and with systems providers. These guidelines exist to help those confronting the change to know what it is necessary to achieve by 1 January 2007 and give general guidance on how to approach particular issues and identify other sources of guidance (see *Useful Links and Further Sources of Information*, below).

Number structure

The new ISBN will consist of 13 digits: the 3-digit prefix that identifies the book industry (currently 978), followed by the core 9-digit number and the recalculated check digit that validates the internal integrity of the whole number. As such it will also be identical to the EAN 'Bookland' 13-digit code that already appears encoded in the bar code printed on the back of the book.

The need arises for a new number structure for ISBN because the supply of numbers available to meet the growing number of publishers and publications worldwide is beginning to run out. When it becomes necessary – at some point after January 2007 - the book industry will be able to use the additional

EAN prefix 979. When ISBN agencies in some parts of the world run out of their current allocation of ISBNs, they will be authorised to assign ISBNs with 979 prefixes. It is likely that, due to the availability of different publishers' ranges, an agency may be issuing some ISBNs with the 978 prefix and others with the 979 prefix.

The methods by which 13-digit ISBNs will be allocated will be different from current arrangements. It is most unlikely that publishers will be allocated their existing prefixes when 979-prefixed ISBNs are allocated. Therefore one cannot assume that 978 + publisher identifier will be the same as 979 + publisher identifier.

All these considerations make it essential that all parts of the industry are ready to work with 13-digit ISBNs from 1 January 2007, as all books published after that date must carry 13-digit ISBNs.

Retrospective conversion

Publishers will need to recalculate all their ISBNs and accommodate the new number format in their systems. This will include ISBNs for all titles in print, probably all or most out of print titles for which orders or other enquiries might be received, and for all outstanding unallocated ISBNs supplied by local agencies.

Software will be widely available for small-scale conversions; and systems providers may supply conversion programs to their customers. Some publishers, particularly those with a substantial number of unallocated ISBNs, may be tempted to continue the use of 10-digit ISBNs for internal systems or create other fixes that simply make it seem as if the number has changed whereas, in reality, the ISBN structure is still based on the 10-digit ISBN. This is discouraged because of the ambiguity that becomes possible once 979 prefixes are in circulation. This would be a particular danger for users who truncate ISBNs just down to product number and check digit in internal systems, omitting even the publisher prefix.

N.B. Publishers will not be expected to sticker their stock with 13-digit ISBNs as the bar code will remain the same and the Bookland EAN13 printed below the barcode will be the same number as the 13-digit ISBN (although without hyphenation).

Booksellers will need to process 13-digit ISBNs for ordering, invoices and other functions from 1 January 2007 and may wish to be in a position to do so as soon as possible. Most booksellers' systems will already be capable of handling 13-digit product numbers used by the EAN system; the ability to read and process an identical number structure for books and for other merchandise without the risk of ambiguity should be a considerable benefit. Manual stock control and other systems may require conversions to be made from 10- to 13-digit ISBNs.

Libraries and library systems

Libraries and library system vendors will need to support both existing 10-digit ISBNs and new 13-digit ISBNs as much in advance of 1 January 2007 as possible and continue to do so well into the future.

It is not necessary to retrospectively convert the ISBNs held in bibliographic records, but record formats must be able to hold 13-digit as well as 10-digit ISBNs as soon as possible. Libraries may want to record both forms of the same ISBN when publishers print both in publications, which they are likely to start doing well ahead of 1 January 2007. When a purchase order is based on a bibliographic record containing only a 10-digit ISBN, the ISBN must be converted to 13-digits in the purchase transaction records.

Existing references to books citing 10-digit ISBNs will continue to be used by library patrons indefinitely. Patrons must be able to find bibliographic information in library catalogues by searching with either ISBN format for all 10-digit ISBNs and those 13-digit ISBNs in the 978 range, regardless of the form of the ISBN in the bibliographic record. This will require changes to indexes and search interface software, which will need to be done as much in advance of 1 January 2007 as possible.

Libraries that provide for patrons and staff to search other library catalogues and other information sources through a single user interface will need to consider the impact of changes to accommodate 13-digit ISBNs at either end. Systems that merge and de-duplicate search results from multiple sources using ISBNs will need to allow for different records carrying different forms of the same ISBN. Conversely, libraries whose catalogues are accessible for search via remote client systems will also need to consider the impact of changes to those catalogues.

Libraries will need to consider the effect of changes in both their systems and in remote systems in respect of links to and from a variety of content and services based on ISBNs. These may include catalogue enrichments such as jacket images, tables of contents, summaries and reviews, as well as web-based book retailers, reading list systems, link servers, the corporate portal, the Virtual Learning Environment and access to the full text of e-books.

Within the administration modules of library systems there may need to be changes such as form field lengths, validation routines and screen and print layouts. Interlibrary loan systems may depend on ISBNs for matching. There may be software that uses ISBNs for matching and de-duplicating bibliographic records when they are imported either online or in batches.

Libraries' systems will need to work with 13-digit ISBNs for all aspects of book purchasing, including all transactions with booksellers, by 1 January 2007 at the latest. Librarians and their system suppliers should be co-ordinating with book suppliers and appropriate trade organisations to establish transitional arrangements as soon as possible. Standard EDI formats such as EDIFACT

provide for both ISBN (i.e. 10-digit) and EAN, so both elements could be exchanged for a transitional period. It should be noted that these considerations apply not only to printed books but also e-books and all other materials identified by ISBN.

Although proprietary barcoding of accession numbers (i.e. individual copies) of books will not change, barcode scanners that are used for data entry or search input of ISBNs from the EAN barcode, which currently output 10-digit ISBNs, will need to be re-programmed.

ISBN implementation changes

The new standard will include a revision of the guidelines for the scope of ISBN use. These are unlikely to change significantly from the existing guidelines in terms of the applicability of ISBN to eligible products or the rules about format and edition changes. They will, however, be rewritten to accommodate newer forms of publication such as the delivery of electronic publication (e-books). Complete information about the scope of the ISBN may be found by consulting the User Manual and ISBN agencies.

Timing for the use of 13-digit ISBNs

There is likely to be a fairly long transition period leading up to the adoption of 13-digit ISBNs on 1 January 2007; the speed with which the industry moves forward will depend on the requirements of individual trading partners. Some organisations implementing new systems are likely to want to force the pace by requiring their trading partners to adopt 13-digit ISBNs sooner rather than later. This in turn may lead to a chain reaction which makes 13-digit ISBNs widely used ahead of 2007.

Since publishers will inevitably be holding stock carrying 10-digit ISBNs for many years to come, they may feel that it would be sensible to move towards printing the 13-digit ISBN on their books as soon as possible, in conjunction with the 10-digit ISBN until 2007. It is highly recommended that, if this decision is taken, the numbers should appear on the title page verso, and on the book cover if there is no bar code, in the following style:

ISBN-13:	978-1-873671-00-9
ISBN-10:	1-873671-00-8

This will enable the ISBN-10 to be deleted from reprints after 2007 with minimal or no cost.

For titles published after 1 January 2007, the style should revert to that adopted now:

ISBN 978-1-873671-00-9

The bar code symbol on the back cover of the book will be unchanged, except that the eye-readable number should be changed for titles published after 1 January 2007 to the full 13 digits preceded by the letters ISBN, with hyphenation retained for clarity. Publishers and printers using their own software for creating bar codes should ensure that it is adapted to this new requirement and should check that third-party suppliers of film masters or electronic bar code data have correctly interpreted this requirement.



Example of bar code with eye-readable 13-digit ISBN

N.B. During the period before 2007 publishers and printers should continue to print only the ISBN-10 in eye-readable text above the bar code symbol on the back cover of the book even if they have printed both the ISBN-10 and the ISBN-13 on the verso of the title page. Users who wish to determine the ISBN-13 based upon the printed bar code and its associated text should rely upon the eye-readable Bookland EAN printed below the bar code.

The algorithms to enable both 10- and 13-digit ISBNs to be validated and split for display purposes will be found in the User Manual. The data files referred to in the algorithms will be available from the International Agency's web site shortly.

Particular care will have to be taken with catalogues and stock order forms around the time of the introduction of 13-digit ISBNs. It is recommended that publishers print both 10-digit and 13-digit ISBNs in these in the period preceding the change. Abbreviated ISBNs should be avoided to prevent misunderstanding.

It is certain that some booksellers will want to place orders using 13-digit ISBNs ahead of the changeover date. This must be subject to agreement between the trading parties and publishers must decide with their systems suppliers whether they should convert all incoming ISBNs to the 13-digit format when that begins to happen. In any event, they must be in a position to process all 13 digits after 1 January 2007 to avoid possible ambiguity.

Responsibility for changes

Organisations are recommended to review all existing systems – manual and electronic - as soon as possible, develop an action plan and allocate resources as necessary. It is recommended that a senior executive in each

organisation be nominated to oversee the necessary transition in all relevant areas. These will primarily affect systems, but they will also impact on editorial processes, sales and marketing, design and production departments as well as royalty and accounting functions in publishing houses.

A possible – but not exhaustive – list of systems that might be affected in a publishing organisation is as follows:

- ISBN allocation;
- product information;
- editorial management;
- production systems;
- e-Book supply systems;
- order fulfilment/warehouse management;
- accounting;
- rights and contracts;
- rights management and royalty systems.

Booksellers will need to review, among other possible areas:

- ordering systems;
- stock control;
- point of sale systems;
- accounting.

Libraries will need to review:

- Acquisitions systems including transaction messages with trading partners
- Cataloguing and other bibliographic data entry systems
- Interlibrary loan systems
- Bibliographic record importing routines
- Barcode scanners
- Local catalogues
- Information portal / metasearch systems
- Interoperability with remote information sources and clients
- System links to and from remote content and services
- Other ISBN-related functions and systems.

Communication with trading partners

Clear decisions, and communication of them, about timing and methods of implementation are crucial to the smooth introduction of the new standard. All organisations are encouraged as part of their own internal reviews to share their implementation plans and timetables with all their trading partners and ensure that those partners are also taking similar implementation measures.

Other considerations

With the possibility available to the book trade to adopt further prefixes for 13-digit ISBNs in the future, the system is likely to remain in its newly-defined structure for many years to come. However, developers may be wise to bear in mind some additional possible scenarios relating to field lengths:

- Some organisations are taking an interest in a 14-digit GTIN (Global Trade Item Number) where the 13-digit ISBN is prefixed by an additional digit that can be used as a packaging level indicator by agreement between trading partners.
- The use of the Digital Object Identifier (DOI) or of Uniform Resource Names (URN) may become more widely adopted in parts of the industry supply chain; these are variable length identifiers that can accommodate ISBNs.

The ISBN system is set to be robust and stable in its new form for all currently known applications but it may be advisable to build in flexibility required to address the supply chain issues of the future.

FAQs

What happens to ISBNs that have already been obtained by a publisher but are not yet assigned?

The publisher should continue to use these until they are exhausted but must convert the number formats to the new 13-digit standard, prefixed by 978.

e.g. ISBN 1-873671-00-8

is converted to

ISBN 978-1-873671-00-9

Will new ISBNs have to be assigned to products that have already been published?

No. Existing ISBNs should be converted from the 10-digit format to the 13-digit format (prefixed by 978) by 1 January 2007. This will apply to records for any title for which transactions may occur and should therefore include out of print titles as well as those currently in the catalogue.

The ISBN and bar code on books will not need to be changed until the book is reprinted as the bar code already represents the EAN13 which is the same number as the new 13-digit ISBN.

May publishers re-use existing 10-digit ISBNs on a new publication adding a 978 prefix?

No. The addition of a 978 prefix to a previously used ISBN does not make a new ISBN and for that reason must not be assigned to a new publication.

Will I be able to communicate with trading partners using 10-digit ISBNs after 1 January 2007?

After 1 January 2007 the ISBN will be a 13-digit number and all mechanical systems will have to be able to accommodate its use in that form. Commercial systems may not support 10-digit ISBNs after that date. In the transitional period, however, arrangements may be made between trading partners to support both formats.

Will publishers have to change to 13-digit ISBNs or can they continue using the 10-digit ones?

Publishers will have to change all their systems to accommodate the 13-digit ISBN by 1 January 2007 in order to avoid the possibility of ambiguity (when the additional 979 prefix comes into use). Although this possibility will be remote to begin with, publishers are strongly encouraged to make the necessary conversions no later than that date. It is essential that mechanical systems are adapted by that date to enable communication with trading partners to continue without interruption.

If our company still has lots of 10-digit ISBNs, why do we need to reformat them as 13-digit ISBNs?

The International ISBN standard is changing. The ISBN system drives all trading in the industry internationally and the allocation of ISBN is organised on an international basis. The 13-digit ISBN is necessary because existing stocks of numbers in certain parts of the world are running low. In order to maintain the system, therefore, the additional 979 prefix is being adopted to expand number availability.

May publishers use the 979 prefix on their existing 10-digit ISBNs?

No. See next FAQ below.

Will our publishing company get the same prefixes in the new 979 range as we have in the 978 range?

Almost certainly not. One of the reasons for the current shortage of 10-digit ISBNs is that prefixes were allocated too generously in the past, resulting in some publishers having many more numbers than they require. ISBN agencies will seek to assign smaller blocks of numbers in the future and this will lead to new criteria for the allocation of prefixes.

Should both a 10-digit and a 13-digit ISBN be printed in a publication?

For books published after 1 January 2007 only the 13-digit ISBN should be printed. In order to minimise the amount of change that will be required, publishers are recommended to print both the 10-digit and 13-digit ISBNs on the title verso of their publications as soon as possible in such a way that the 10-digit version can be deleted from reprints after that date.

There is no need to include the 13-digit ISBN above the barcode before 1 January 2007 as the Bookland EAN number already shown in the bar code and in eye-readable form below the bar code is the same number as the ISBN-13 (although without hyphenation). However, for titles published after 1 January 2007, publishers should print the 13-digit ISBN in eye-readable form above the bar code on the back cover of their publications, retaining the correct hyphenated structure.

Useful links and further sources of information

ISO ISBN Web Page (including progress report on the ISO ISBN standard)

<http://www.lac-bac.gc.ca/iso/tc46sc9/wg4.htm>

Frequently Asked Questions about changes to the ISBN

<http://www.lac-bac.gc.ca/iso/tc46sc9/isbn.htm>

International ISBN Agency (including ISBN User Manual)

<http://www.isbn-international.org/>

Information about EAN.UCC GTIN

<http://www.ean-int.org/products.html>

Information about DOI

<http://www.doi.org>

Information about URN

<http://www.ietf.org/rfc/rfc2611.txt>

EDItEUR

<http://www.editeur.org>