



E-Books and ISBNs: a position paper and action points from the International ISBN Agency

ISBN background and position

Since its creation in the late 1960s the purpose of the ISBN has been to facilitate book supply chains which by their very nature will evolve and create new demands over time. In the digital environment, it has become less clear how supply chains will develop and, because of that, there has been uncertainty amongst some publishers of the role of ISBN in this market.

One of the principles of ISBN has been that it identifies a unique product (e.g. an edition of a book). This has facilitated discovery and acquisitions, and enabled e-commerce, distribution and aggregation of product information, and sales data reporting. The ISBN standard, ISO 2108, has always required that different product forms of a publication, where these are made separately available, be assigned separate ISBNs.

When the standard was revised in 2005, there was considerable discussion about the appropriate level of granularity for electronic publications. It was agreed that the same rules that had been applied to printed books should also apply to e-books and the current edition of the ISBN standard, ISO 2108:2005, therefore reads:

“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.”

ISBNs and e-books

In the view of the International ISBN Agency this rule is as important for e-books as it is for different formats of printed books, especially where the trading models involve multiple partners. Amongst other benefits:

- the assignment of separate ISBNs to each format ensures that the e-book ordered is the correct one for the user's e-reader device and/or software platform,
- it facilitates electronic trading of e-books, particularly where multiple formats are sold through the same channel. For example, without unique product identification, a retailer or library wishing to order specific formats would have to add various additional metadata fields that would require extra processing by each link in the supply chain,
- it enables product level reporting of sales and usage and facilitates management of e-book products by publishers
- ISBN provides a well-proven global system that is simple to use and involves no new integration work to fit into existing systems

The e-book supply chain

In the traditional printed book supply chains, books were assigned ISBNs “at birth” and the same product with the same identifier progressed through the supply chain from printer to distributor to wholesaler to retailer or library.

E-Book supply chains are different. Publishers often produce a single generic file (now increasingly likely to be .epub) which is sent to an aggregator or service provider for conversion into different formats (standard or platform-specific), addition of proprietary DRM, and distribution. These files are then made available to ultimate consumers from a number of different sources (the publisher's website, a library or trade e-book platform, through a jobber/wholesaler, or from a retailer). The result is a number of different versions of the e-book, many of them with unique characteristics and functionality, which retailers, libraries (and

suppliers to both) need to be able to identify for the purposes of discovery and trading. The aggregation of information about these different versions and their electronic trading would be greatly facilitated by the use of standard identifiers.

Some publishers have decided that they only need to identify the generic (.epub) file rather than the derived formats that are sold downstream, over which they may have relinquished control. In some cases this is dictated by their current computer systems that may require new records and complete metadata to be rekeyed for each ISBN which they issue. Newer systems may allow for a hierarchical listing of works and their manifestations and provide the ability to inherit existing metadata so that only new version-specific data will need to be entered, which makes the management of a multiplicity of ISBNs somewhat less taxing.

However, other publishers still identify a requirement to keep tighter control of their publications and to assign ISBNs to all the different formats, either directly or in collaboration with intermediaries who are producing the different formats from the publishers' generic files. There have been indications that a web-service to facilitate communication of ISBNs between publishers and intermediaries might be helpful.

The need for consistent implementation of ISBNs

As a result of this diversity of practice, the situation with regard to e-book identification is extremely confusing, especially further down the supply chain. Some publishers are identifying each product separately, in line with ISBN guidelines. Others are assigning ISBNs only to generic, non-tradable .epub files with the result that different formats may share the same ISBNs. (Comparisons have been drawn with using the same ISBN to identify both hardback and paperback formats of a printed book). Downstream users often do not know whether or not an ISBN uniquely identifies the version they require. Some wholesalers and retailers are assigning their own ISBN-like proprietary identifiers which, in some cases, have been found to duplicate other publishers' existing ISBNs.

This state of affairs is reminiscent of the printed book supply chain in the early 1960's, when each trading partner was assigning and transmitting their own product identifiers with chaotic results. The book trade finally realised that, when there is a need to communicate information to other links in the supply chain as well as to aggregate such information and provide e-commerce services, standard identifiers are required. The solution was agreement on a standard book trade numbering system, the ISBN.

The lack of consistent standard identifiers for e-books has created particular problems for the use of e-commerce and bibliographic metadata, where EDI and product description standards expect a unique identifier to differentiate separate products and have difficulty coping with the ambiguity of a single identifier for multiple products.

Recommendation of International ISBN Agency

The International ISBN Agency continues to recommend that publishers should assign ISBNs to each e-book format separately available. Publishers should supply their ISBNs to downstream intermediaries and channels if they are creating their own formats. There will, however, be instances of compressed supply chains where an e-book in a particular format is available exclusively through a single channel (e.g. Kindle). In those circumstances there is no requirement for an ISBN, unless the publisher needs it for control purposes. **(A simple guiding principle is that a product needs a separate identifier if the supply chain needs to identify it separately).**

Can ISBNs be assigned by non-publishers?

As a result of the reluctance of some publishers to assign ISBNs to each format, and the demand from intermediaries and their customers to have them, the International ISBN Agency issued a guideline in April 2008 allowing ISBNs to be assigned by e-book resellers (primarily wholesalers),

in limited circumstances where publishers will not provide their own ISBNs and the reseller judges that a unique identifier is essential.

This practice is far from ideal and requires metadata to be shared with both the original publisher and the major bibliographic databases, but it could provide a solution for customers who require a unique and valid ISBN for each product where one is simply not available from the publisher. The guideline from the International ISBN Agency stresses that third parties should always attempt to obtain an ISBN from the publisher before assigning their own.

So how should publishers identify generic .epub files?

There is clearly a requirement that publishers should be able to identify generic .epub files in their own systems and in communications with intermediaries. Some librarians have also reported potential benefit of having both product and more generic identification for the purposes of resolving Open URLs and other linking systems where identifiers need to link to an appropriate copy of a resource. However, the use of an ISBN by some publishers to identify generic .epub files and by others to identify specific products is causing confusion and threatening the integrity of the ISBN as a product identifier. There is a clear requirement for a generic identifier. Such an identifier, known in the music industry as a “release identifier”, identifies digital resources that can be disseminated in different products (see definition from the Global Release Identifier (GRid) in footnote¹). Indeed, there could be considerable benefit in sharing such an identifier with the music industry.

Identifying chapters and other fragments

There is increasing interest, especially by academic publishers, in making individual chapters and other fragments of books available separately. The ISBN standard, in its scope statement, states that it *“is applicable to monographic publications (or their individual sections or chapters where these are made separately available)”*. In other words, a chapter that is made publicly available as a separate product should have its own ISBN.

The principle already stated applies: **“a product needs a separate identifier if the supply chain needs to separately identify it.”** If the chapters are available through a supply chain consisting of multiple channels and levels then an ISBN should be assigned. If they are available only from the publisher itself or a single channel, an ISBN is probably not necessary and an internal identifier or DOI can be used.

International ISBN Agency actions

- **The International ISBN Agency plans to work with EDItEUR, the international book sector standards body, to investigate and develop web services for intermediaries to request and receive ISBNs from publishers for new formats as required.**
- **The International ISBN Agency will work with stakeholders and other standards bodies to explore the potential, options, technical requirements and implementation issues for a generic e-book release identifier.**

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¹ “A Release is an abstract entity representing a bundle of one or more Digital Resources compiled by an Issuer for the purpose of electronic distribution to individual consumers, directly or through intermediaries. The Digital Resources in Releases are commonly sound recordings or audio-visual recordings, however, they can also include other Digital Resources (including, for example, text, graphics, software). The Release is not itself a Product. Products have more extensive attributes than Releases; one Release may be disseminated in many different Products”

(Global Release Identifier (GRid) Standard : http://www.ifpi.org/content/section_resources/grid-standard.html#Terms)