# The History and Success of ISMN (International Standard Music Number) and Outlook for the Future

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## 1. Definition

The term International Standard Music Number is a bit fuzzy, like many other terms. It applies only a part of the wide semantic field "music", namely notated music, not live music, or recorded music. In German it is more precise as the "M" is rendered there "Musikalie," meaning "printed music". There would have been ways to provide a better fitting term internationally but it would have been unwieldy and longer. ISMN is also a nice four-letter-word, and good company with ISBN and ISSN.

## 2. Standard

ISMN has been an ISO standard, ISO 10957, since 1993 when it was first published. It was designed to fill the needs of the music publishing scene which observed the success of the ISBN in the book publishing world. A similar rationalizing factor would speed up ordering and distribution, would allow comprehensive computerization of businesses and thus save staff, time, and money. Some music publishers had already adopted the ISBN for this purpose, disregarding the clear exclusion of music from that standard.

## 3. History

The timeline for the development of the ISMN standard begins in 1984:
- 1984: First incentive for an ISMN at IAML (UK) conference.
- 1986: Original proposal for an ISMN by the IAML (UK), put forward by Alan Pope (Blackwell's Music Department, Oxford) and Malcolm Lewis (music librarian in Nottingham).
- 1987: Draft ISMN structure and application presented at the IAML conference in Amsterdam.
- 1989: At the IAML conference in Oxford it was decided that the UK, French and German branches should, through their respective national standards bodies file ISMN as an ISO work project.
- 1993: Publication of ISO Standard 10957: 10-digits starting with letter <M>
- 1993: Establishment of the International ISMN Agency at the Berlin State Library – Prussian Cultural Foundation
- 1994: - The first three agencies: Germany, Italy, Lithuania
  - Publication of the first edition of the *ISMN Newsletter*
- 1995: Publication of the Preliminary Edition of the *Users' Manual*
- 2006: ISMN turns into a registered membership association represented by a Board of Directors (Dr. Hartmut Walravens, Dr. Joachim Jaenecke) and a Treasurer (Dr. Bettina von Seyfried)
- 2007: Move to new premises in Berlin
- 2008: - The revision of the ISMN ISO standard changes the formerly 10-digit ISMN (which had started with the letter M for music) into a 13-digit number.
  - Publication of the latest edition of the *Users' Manual* (4th, revised edition)
- 2014: 56 agencies

The present standard was developed from a draft prepared by members of IAML-UK and proposed by Alan Pope and Malcolm Lewis. It was clearly modeled on the ISBN but it did not have a country code - a group number - as the ISBN. Instead there was a constant "M" (for music) in order to clearly distinguish it from the ISBN. The discussions of the working group towards the creation of the ISMN standard were seriously hampered by the fact that there was an alternative proposal supported by Arnold Broido, Chairman of the music publisher Theodore Presser and successively President and Vice President of the International Music Publishers Association. It had a more bibliographical twist and required connections between publications that belonged together, e.g., full score and parts. While this made perfect sense, most numbering experts were convinced that in the future nobody would be interested in analyzing numbers – standard identifiers would just be used like telephone numbers or product codes and would be handled by computers. The British proposal was more computer-friendly, and finally prevailed. Another issue was the initial "M" which at that time could not be processed easily by some computer systems; and it was not possible to use it in the bar code. But here the music sector insisted, and the "M" became part of the number.

But the new number had a feature which made it superior to the traditional ISBN: Emery Koltay (at that time director of standards at Bowker, New York) designed a check digit calculation routine that allowed turning an ISMN into a bar code without further calculation, just by adding the EAN code "979" in front. In contrast, when the ISBN changed to the 13-digit format, this occasioned different check digits.

## 4. Structure
The ISMN consists of 4 parts and has 13 digits.
1. Prefix: Since the revision of the Standard in 2008, the prefix for notated music is 979-0. Before then, ISMNs started with the letter M followed by 9 digits.
2. Publisher Element: The publisher element consists of 3 to 7 digits depending on the out put of a publisher. Publishers with a large output are assigned short publisher elements; publishers with a small output are assigned longer publisher elements.
3. Item: Next comes the item element which can consist of 1 to 6 digits.
4. Check Digit: It confirms the mathematical plausibility of the number.

## 5. Administration
Most standards are published and may then serve as guidelines for the respective target group, without further ado. Some standards, however, require constant supervision and registration, such as standard identifiers. In such cases, ISO contracts with a suitable organisation to serve as maintenance agency that prepares and updates implementation rules, provides information and training, and supervises the system. In the case of the ISMN it is the International ISMN Agency in Berlin.
So far it has appointed 56 national or regional agencies to keep in direct contact with publishers, assign blocks of numbers to them, and register their data. The publishers or producers are required to register the metadata corresponding to the numbers and make them available in trade directories or national bibliographies.

## 6. Implementation
Introducing the ISMN in a country is usually not easy. Notated music is rarely in the centre of attention, and more often than not there is no information on the music producing publishers except for the few major ones. In order to implement ISMN in a country or region, one has to search for a suitable institution that has contacts with publishers and would be able to advise the user community. The publication metadata should be made available, as mentioned.

## 7. Application
The main objective of the ISMN is the unique identification of notated music publications. This is the prerequisite for computerizing operations as we are accustomed to seeing these kinds of identifiers in supermarkets and department stores. Thus the added value for the user community is in the applications of the number which in itself is rather neutral, not to say dumb as experts say. Only when a set of metadata is linked to the number it becomes meaningful.
All this is not new - many publishers have numbered their publications for decades and used these numbers for their processing of transactions. As there may be theoretically as many proprietary numbering systems as music publishers their value is rather limited; they do work, however, mainly for large companies. Some older well-trained staff at music stores still remembers by heart many Schott, or Hohner numbers, for example.
Once an ISMN is assigned it can never be used for another item - in the case of an error the number will be cancelled and a new one assigned.

*Application by publishers:*
Production, advertising, shipping, billing, returns, statistics, rights management, licensing, stock control...

*Application by music stores:*
Search, ordering, shipping, sales, statistics, stock-control

*Application by libraries:*
Search, selection, acquisition, cataloguing, legal deposit

## 8. Resolution service
It is of the utmost importance to be able to easily resolve ISMN. In many countries this is done by means of the national bibliography which is usually available as an online service.
As music is not tied to language areas, a more elegant resolution would be through a music-in-print publication. Such a directory is in existence and growing: IDNV, published by the German ISMN Agency (currently 610,000 records). It is well-designed but has not reached a critical mass of titles that would make it so attractive to large stores, wholesalers and distributors that they would prefer to license it instead of maintaining their own data. The music in print would then become the online basis for bibliographic searches and ordering.

# IDNV International Database for Printed Music and Musical Products

IDNV-Katalog Stand 17.03.2014 - [Kombi-Fenster]

Datei  Bearbeiten  Ansicht  Auswahl  Datenaustausch  Fenster  Hilfe

Artikel | Einzeltitel | Komponisten | Instrumente | Merkzettel

Neue Suche

| Lieferbarkeitsanzeige | Verlag | Best.-Nr. | ISMN | Covi | Wet | Gesamttitel | Komp./Urheber | Produktart | Instr./Stimmen | EVP | Währ | Ist R | Preisänd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | BWV 1035 | Bach, Johann | | | | | | |
| Lieferbar (15.07.2002) | Heinrichsh | N 1279 | 9790204412792 | | | Drei Sonaten BWV 1033, 1034, 1035 | Bach, Johann Sebastian | Spielpartitur(en), Str | Alt-Blockflöte in f, Kla | 16,90 | EUR | RJ | |
| Lieferbar (01.01.2000) | Boosey Ha | BH 2000008 | 9790060010873 | | | Drei Sonaten BWV 1033-1035 | Bach, Johann Sebastian [Bea.] | | Flöte, Klavier | 15,95 | EUR | RJ | |
| Nicht mehr lieferbar (28. | Breitkopf & | EB 2428 | 9790004161036 | | | Sechs Sonaten Heft II BWV 1033 C-du | Bach, Johann Sebastian [Hrsg | | Flöte, Klavier | A.Anfr. | EUR | | |
| Lieferbar (15.04.2006) | Dohr | E.D.21857 | 9790220008577 | | | Sonata für Alt-Saxophon und Klavier ( | Bach, Johann Sebastian [Bea.] | Partitur, Solostimme | Alt-Saxophon, Klavie | 9,80 | EUR | | |
| Lieferbar (15.07.2002) | Breitkopf & | EB 6786 | 9790004169858 | | | Sonata III E-dur BWV 1035 | Bach, Johann Sebastian [Hrsg | | Flöte, Gitarre | 10,50 | EUR | RJ | |
| Lieferbar (01.01.2000) | Advance | ADV 7043 | 9790206306945 | | | Sonata No. 6 A-Dur BWV 1035 | Bach, Johann Sebastian | | | 14,95 | EUR | RJ | |
| Lieferbar (22.09.1992) | Breitkopf & | EB 8555 | 9790004178447 | | | Sonate E-dur BWV 1035 | Bach, Johann Sebastian [Hrsg | | Flöte, Basso continuc | 12,50 | EUR | RJ | |
| Status ungewiß | Kossack | K099002 | 9790700069435 | | | Sonate E-Dur BWV 1035 | Bach, Johann Sebastian [Hrsg | | Flöte, Gitarre | A.Anfr. | EUR | | |
| Lieferbar (02.10.2006) | Antes Edit | E49 90034-01 | 9790008044292 | | | Sonate e-Moll BWV 1034, Sonate E-Du | Bach, Johann Sebastian [Bea.] | Partitur, Stimme(n) | Flöte, Gitarre | 17,60 | EUR | | |
| Lieferbar (07.12.1984) | Universal E | UE17294 | 9790043081692 | | | Sonate En Fa Majeur Bwv1035 (Flöte | Bach, Johann Sebastian [Hrsg | | Flöte, Basso continuc | 20,95 | EUR | RJ | |
| Lieferbar (04.11.2010) | Billaudot | GB8169 | 9790043081692 | | | Sonate F-Dur BWV 1035 -nach der St | Bach, Johann Sebastian | Noten | Blockflöte, Klavier | 9,38 | EUR | | |
| Lieferbar (01.01.2000) | Schott GB | ED 10272 | 9790220101854 | | | Sonate F-Dur BWV 1035 -nach der St | Bach, Johann Sebastian [Hrsg | | Alt-Blockflöte in f, Kla | 8,95 | EUR | RJ | |
| Lieferbar (28.01.1992) | Universal E | UE18749 | 9790008007910 | | | Sonate für Altblockflöte und Basso coi | Bach, Johann Sebastian [Hrsg | | Alt-Blockflöte in f, Ba | 13,95 | EUR | RJ | |
| Lieferbar | Dowani | DOW 02512-400 | 9790700232887 | | | Sonate No. 6 En Majeur Bwv 1035 ( | Bach, Johann Sebastian [Bea.] | Buch, Solostimme, K | Alt-Blockflöte in f, Kla | 22,99 | EUR | | |
| Lieferbar (13.10.2002) | Billaudot | GB3536 | | | | Sonate Nr. 6 En Mi Majeur Bwv 1035 ( | Bach, Johann Sebastian [Hrsg | Noten | Flöte, Klavier | 9,38 | EUR | | |
| Lieferbar (01.01.2000) | Moeseler | MOS 24653 | 9790203718123 | | | Sonate Nr. 3 E-Dur BWV 1035 | Bach, Johann Sebastian [Bea.] | | | 11,20 | EUR | | |
| Lieferbar (15.07.2002) | Noetzel O | N 3037 | 9790204530373 | | | Sonate (Original E-Dur) F-Dur BWV 10 | Bach, Johann Sebastian [Hrsg | Spielpartitur(en), Str | Alt-Blockflöte in f, Kla | 7,90 | EUR | RJ | |
| Nicht mehr lieferbar (22. | Boosey Ha | D 2000400 | | | | Sonaten BWV 1033, 1034, 1035 (Banc | Bach, Johann Sebastian | | | 17,50 | EUR | RJ | |
| Nicht mehr lieferbar (16. | Music Partr | MP 4461B | 9790014101572 | | | Sonaten für Flöte und Basso continuo | Bach, Johann Sebastian | CD | | 15,80 | EUR | | |
| Lieferbar (16.08.2002) | Music Partr | MP 4461-2 | | | | Sonaten für Flöte und Basso continuo | Bach, Johann Sebastian | CD | | 16,00 | EUR | | |
| Lieferbar (19.11.2004) | Peters | EP 4461BB | 9790014106645 | | | Sonaten für Flöte und bezifferten Bas: | Bach, Johann Sebastian [Hrsg | Sammelband, Urtexti | Flöte, Cembalo, Cello | 12,80 | EUR | | |
| Lieferbar (16.08.2002) | Peters | Q 4461B | 9790014108403 | | | Sonaten für Flöte und bezifferten Bas: | Bach, Johann Sebastian [Hrsg | Sammelband, Urtexti | Flöte, Klavier, Cello | 24,80 | EUR | | |
| Lieferbar (15.07.2002) | Bärenreiter | BA 5198 | 9790006447992 | | | Vier Sonaten –BWV 1034-1035 für Flö | Bach, Johann Sebastian [Hrsg | Spielpartitur(en), Str | Flöte, Basso continuc | 16,95 | EUR | RJ | |

**ILLUSTRATION 1** Sample listing from IDNV
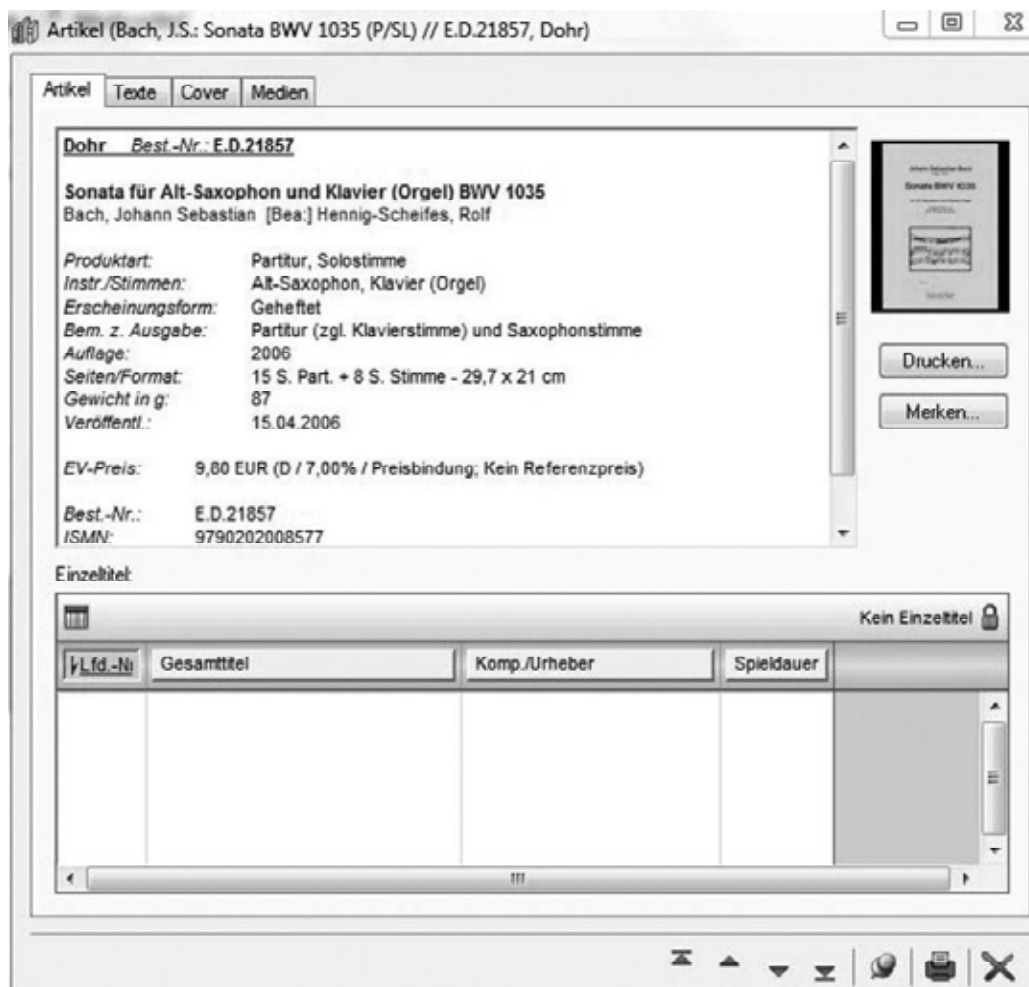
**ILLUSTRATION 2** Sample listing from IDNV

### 9. OPAC solutions

Total numbering would open up new readers' services for libraries. The National Library of Australia's TROVE has the option of linking different aspects of a subject. If, for example, somebody searches for a Verdi opera in the OPAC he may also be shown, besides the score and the libretto, unpublished material by or on Verdi, a video of a performance of this opera, Verdi's portrait, Verdi biographies, an edition of Verdi's letters, a sound recording of the opera, or parts thereof, and so on. The options are unlimited and of course not restricted to one library or institution. For example it would be possible to announce the performance of this opera in the Sydney Opera House, with a link to buy tickets.

Here you see two examples, just a few components among many others.

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"Rigoletto"
*Sunday Mail (Brisbane) (Qld. : 1926 - 1954)* Sunday 26 November 1950 p 9
Article

... 'Rigoletto' Verdi's opera, 'Rigoletto,' which retails a dramatic story of a hunchback who murders his 'daughter in mistake, will be staged at Cremorne Theatre for a swson beginning next Wednesday night. Brisbane Opera Society has selected a talented cast for lie presenta tion. ... 43 words

"RIGOLETTO"
*The Argus (Melbourne, Vic. : 1848 - 1957)* Saturday 19 August 1933 p 18
Article

... "RIGOLETTO" An auction of the boxes and seats in the front row of the dress circle at the Princess Theatre for the performance of "Rigoletto" ot Kn.olvtto' on September 11 in aid of the Children's en'_. Hospital in which Mr John Biossnlce is 111 appear, mil be held at Men/iCb Hotel on Moudnj, ... 86 words

"RIGOLETTO."
*The Sydney Morning Herald (NSW : 1842 - 1954)* Thursday 21 August 1924 p 10 Article

... . "RIGOLETTO." That "Rigoletto," notwithstanding its repeated performances, peiformances, continues to enjoy unabated bated popularity was conclusively demonstrated ted by the large attendance at Her Majesty's Thoatre last night. Totl Dal Monto further charmed with her singing and acting, while ... 94 words

**ILLUSTRATION 3** TROVE listing for reviews of Verdi's *Rigoletto*

**ILLUSTRATION 4** TROVE listing for recordings and music scores of Verdi's *Rigoletto*

**10. Benefits**

Nobody would spend a moment on ISMN if it did not offer benefits. The practical challenge is that a large number of titles has to be part of the project first before the advantages show. For example, if most new acquisitions in a library do not have ISMN there is little advantage in establishing a copy cataloguing routine. Thus all partners in the music sector will have to be patient, apply the ISMN and make it visible – then the turning-point will be reached soon.

Some of the benefits include:
- unique identification of any music publication
- efficient ordering and distribution of music publications
- fast accounting, billing, and processing in general
- the compilation of trade directories (Music in Print)
- the use of the bar code
- the use of electronic point of sale systems
- efficient rights management
- easy copy cataloguing in libraries
- the compilation of up-to-date sales statistics
- the administration of the national lending right, etc.
- linking with related standards

**11. ISMN and ISBN**

As ISMN and ISBN are admittedly very close the question is: Do we need a *separate* ISMN standard? This question is often asked and was repeated in the context of the revision of the standard. It is true, just looking at the technical side of the identifiers, ISBN would be able to cover also music publications. There are a number of practical reasons, however, which exclude this "easy" solution:

- Some ISBN agencies, especially those connected with private companies, refuse to cover music publications, owing to lack of experience in this field. Sharing contingents of numbers within one country would easily lead to confusion.
- The music sector (publishing, trade) is organised quite differently from the book sector; supply and distribution channels have not been the same.
- There are distribution forms which do not exist in the book-trade, e.g., hire materials.
- Many people (including staff) are music illiterate - they cannot read music.
- In contrast to Books in Print, Music in Print should be an international directory.
- Music is clearly excluded from ISBN in the text of the standard.
- Music publications can be easily filtered out of the huge amount of other publications by means of the ISMN and thus used for Music in Print and other purposes. Customers do not have to search the needle in a haystack, namely music among millions of non-music items.

## 12. Rights management

Royalties and rights management are important elements in the music business. The formerly time-consuming process of reporting, matching and calculating might actually shrink to seconds if the necessary links were in place, namely from ISMN to the ISWC (work) and then to the ISNI (composer or rights holder).

## 13. Interoperability with other ISO standards

ISMN is part of a whole family of international standard identifiers the first of which was ISBN. If we put the music standards in relation we might come up with the following diagram. This whole network provides good coverage of the publication sector and contributes to efficient bibliographic control, facilitates many trade applications, and allows for low-cost rights administration.
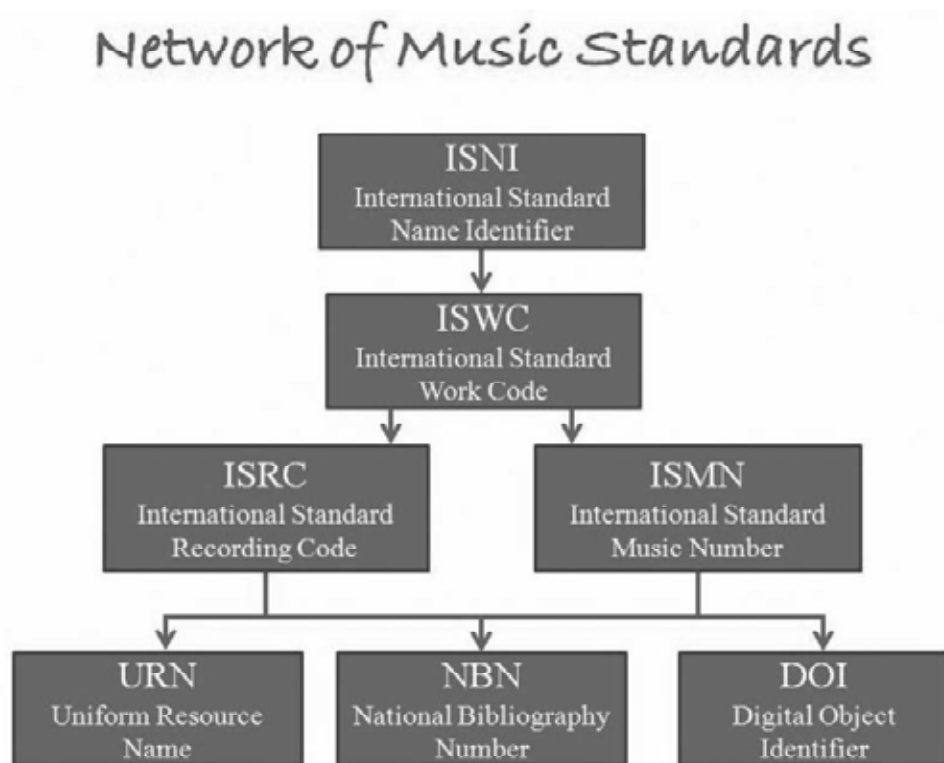


**ILLUSTRATION 5** Network of Music Standards

## 14. Outlook, Challenges, Things to do or to cope with

Looking at the music business over the past 30 years since the creation of the ISMN project, we see the following as items to be considered for the future. Some of these items are points that have been ignored up to now (such as backlists and hire material) and other points are new (digital or print-on-demand scores).

Hire materials should be included in the Music in Print directory. The transaction is similar to a sale or lending by a library and could easily be based on the same metadata collection.

Publishers should be encouraged to enter their backlists in the Music in Print. This is often not done because of the work and staff time involved. But wouldn't it be possible to use the large data files of major music libraries

for copy cataloguing? It would not only be a service to the publishers themselves but also to the customers who may not be aware what is still available (in one form or another).

Electronic publications are sometimes forgotten when it comes to numbering. The media does not play any role with regard to ISMN. There seems to be a prejudice according to which ISMN and ISBN are applicable only to print - this is definitely wrong: these identifiers are even compatible with DOI (Digital Object identifier) and may be integrated in its syntax.

While the ISMN is basically for publications we encounter the situation that musical works cannot be printed for reason of cost and are deposited with a Music Information Centre or similar institution which makes them available on request as scan or copy. The ISMN could rationalize such transactions and allow listing in Music in Print.

ISMN is also a convenient identifier for licensing systems. When an item is scanned for distribution - as printing may be too expensive - it may be offered for downloading (for a fee). The procedure is practically the same as with buying ebooks.

There is a large number of internet suppliers that offer tens of thousands of musical works (for downloading). They are not interested in using the ISMN – perhaps because some of them do not want to reveal the origin of their material?

Music statistics in Spanish and Portuguese-speaking countries reflect different principles than in other countries. Since the membership contribution of the ISMN agencies is based on the annual output of notated music publications in a country, this makes it difficult to compare the figures. For example following such figures, Argentina seems to be the second-largest music country in the world (which it is obviously not).

There has been a law in Poland exempting publications with ISBN from VAT (in an attempt to support the publishing industry and national education). It is practically impossible to prevent the music publishers from assigning ISBN to their publications – for obvious reasons.

There had been reports from Scandinavia and the UK that Amazon pressed music publishers to put ISBN on their publications. The reason was not clear as ISMN and ISBN were technically completely compatible. It seemed to be a misunderstanding but Amazon was large enough not to care about such arguments from the user community. The International Agency asked the numbering association GS 1 to mediate and they recently updated their GTIN guidelines and included ISMN there.

**Summary**

The development of the ISMN has transformed access to notated music by making it more accessible,: retrieval of individual titles or the music production of a publisher, even a country, are made much easier, ordering, borrowing (hiring) and distribution, whether in printed, scanned or ebook format are facilitated. Catalogues and directories make the music market more transparent, and company listings lose relevance. Libraries profit from copy cataloguing, legal deposit institutions and national bibliographies use ISMN as a simple means of control. With 56 countries now enrolled, we hope to implement all the benefits soon that ISBN provided for the book world.