# Standards Banquet: What happens when IFLA and ISO come to the same table

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**Abstract:**

*Cooperation between IFLA and ISO was established after World War II under the auspices of UNESCO. Both organizations have a long history of involvement in standardization in the field of information and documentation. IFLA focuses on standards for library services and bibliographic processing. ISO specializes in technical standards. The development process for ISO standards follows several stages from inception to publication. This work is carried out by groups of experts appointed by the members of the committee concerned. ISO shows through its collaborations with organizations with category A liaison status that standardization work can bring together experts from different backgrounds for the benefit of the international community. A joint IFLA/ISO work programme could be developed on the basis of the draft standards under development on both sides.*

**Keywords:** Library standards, Cooperation in standardization, Standardization process.

### A brief genealogy of the relationship between IFLA and ISO since 1947

The establishment of links between the International Federation of Library Associations and Institutions (IFLA), founded in 1927, and the International Organisation for Standardization (ISO), created in 1947, took shape in the immediate post-war period at a time when UNESCO wanted to bring these two organizations together under the aegis of a Liaison Committee. In 1962, the *Code of Good Practice for Scientific Publications* was published[i] , which was the result of the work of this Liaison Committee, which brought together the International Federation of Documentation (IDF), the International Council of Scientific Unions (ICSU), the International Federation of Library Associations (IFLA) and the International Organization for Standardization (ISO). This code proposed to improve the state of scientific information in the sciences and technology. It required that all scientific articles be preceded by an abstract prepared by the author; it defined a typology of scientific articles between original dissertations, provisional publications and developmental papers; it gave

instructions concerning the writing of the article; and it enjoined the publishers of scientific journals to ensure that authors respect this code.

The annex to the code listed a dozen ISO standards relevant to the program, including ISO 4 - Code for the abbreviation of periodical titles, and ISO 8 - Presentation of periodicals and standards for the transliteration of non-Latin languages. "The success of these standardizations will alone make it possible to use automatic means for the classification of scientific information and publications and for searches that allow retrospective bibliographies to be established rapidly."[ii] The committee therefore entrusted ISO "with the task of bringing to a rapid conclusion those standards for which general agreement has not yet been reached." [iii]

Within ISO, Technical Committee 46 - Information and Documentation was and is still responsible for the creation and maintenance of standards that IFLA member organizations usually promote and implement. In the late 1960s, ISO/TC 46 focused its standardization efforts on bibliographical standards, the conversion of written languages, microform standards, and terminology. IFLA was already working with UNESCO to develop an ISO standard for library statistics and another for library terminology[iv]. A standard for international book numbering was then being developed[v].

In the 1970s, IFLA instituted the Core Programs, including Universal Availability of Publications (UAP), the International MARC program (IM) and Universal Bibliographic Control (UBC). The UBC program has spawned several bibliographic standards, including the International Standard Bibliographic Description (ISBD), the International Serials Data System (ISDS), Cataloguing in Publications (CIP), and the harmonization of national bibliographies[vi]. The Committee on Cataloguing thus published two important standards in 1974, namely ISBD(M) International Standard Bibliographic Description for monographic publications and ISBD(S) International Standard Bibliographic Description for Serials[vii]. This second standard was a complement to ISO 3297 - ISSN. In 1975, an intergovernmental organization was created under the dual patronage of UNESCO and the French government and responsible for managing a register of all continuing publications published globally, i.e. the ISSN International Centre. The development of UNIMARC by IFLA to facilitate the international exchange of bibliographic data in machine-readable form between national bibliographic agencies led to the publication of the first version of this standard in 1977 and the second version in 1980. UNIMARC was thus built on the basis of the ISO 2709 - Format for the exchange of information and on the various ISBDs.

If one needs to qualify the respective standardization activities of IFLA and ISO in the field of documentation, one can recall the following typology established in 1982: "Standards may be guidelines or models against which services, etc., are to be compared. Library service standards fall into this category. Other standards take the form of rules for activities that should be applied as consistently as possible but which, by their nature, will not necessarily produce the identical results even when followed. Cataloguing rules are of this type. A third class of standards are specifications or "technical" standards for which strict observance is necessary if sharing is to take place. Format structure, character sets, and code list standards fall into this class. [...] IFLA concentrates on library community standards of the guideline and rules type-areas."[viii]

It can therefore be deduced that in the context of the standardization activity for documentation shared by IFLA and ISO, ISO concentrates rather on technical standards of strict application allowing the exchange of information, such as ISO 2709 - Format for information exchange and more recently ISO 15836 Part 1 and Part 2 - Dublin Core metadata

element set. IFLA can contribute extensively to ISO's standardization work because it has a Category A liaison with ISO/TC 46. This status gives IFLA the opportunity to "make an effective contribution to the work of the technical committee or subcommittee for questions dealt with by this technical committee or subcommittee. These organizations are given access to all relevant documentation and are invited to meetings. They may nominate Experts to participate in a Working Group."[ix]

In the 1980s, ISO focused on the need to internationalize standards in the field of documentation in order to encourage the exchange of information at a global level. Achieving this goal required a radical change in the mindset of professionals who were still accustomed to following local practices or national standards for document processing. In a book[x] published in 1983, the ISO listed the technical committees relevant to the work of documentalists and librarians, i.e. ISO/TC 37 Terminology, ISO/TC 46 Documentation, ISO/TC 97 Information processing systems, ISO/TC 171 Micrographics, ISO/TC 36 Cinematography, ISO/TC 42 Photography, ISO/TC 68 Banking, ISO/TC 130 Graphic technology, ISO/TC 154 Documents and data elements in administration, commerce and industry. In 1988, ISO published the third edition of *ISO Standards Handbook 1: Documentation and Information* [xi] which brought together in a single volume all the fundamental standards developed by ISO/TC 46. These fundamental standards dealt with bibliographic formats, transliteration, codes for countries and languages, character sets, communication protocols such as Open Systems Interconnection (OSI).

With the emergence of the Internet and the World Wide Web from the end of the 1980s, new standardization organizations were created, such as the Internet Engineering Task Force (1986), the Unicode Consortium (1991), SGML Open (1993), which became the Organization for the Advancement of Structured Information Standards (1998), the World Wide Web Consortium (1994) and the International Digital Publishing Forum (1999). These IT standardization organizations have also developed standards relevant to the library community, such as UNICODE, HTML and RDF.

In the 1990s, the IFLA section on Information Technology organized several conferences on the Web and Internet (1994, 1995, and 1996) and "sponsored workshops and open sessions on protocols (interlibrary loan, information retrieval (Z39.50), email) and an important early program in 1995 on electronic publishing."[xii]

The landscape of standardization was profoundly altered at that time, but ISO was then and still is "the only agency with a universal scope capable of producing relatively binding standards. Composed of the national standards agencies, any standard adopted by ISO becomes de facto a national standard for the whole sector of activity concerned."[xiii]

However, researchers have highlighted the diversification of standardization arenas by identifying three distinct types of organizations active in this domain[xiv]:

- international organizations such as ISO structured on the basis of national, public, private or hybrid representations;

- specialized transnational organizations such as the W3C, which are usually the result of pioneering initiatives in the development of a new technology;

- regional or global industrial consortia such as OASIS, which define standards within the framework of groups of companies.

ISO's standardization process and its scope of intervention are constantly adapting to maintain its position in a more competitive environment.

**Making the standard: the standardization process at ISO**

It would be tedious to describe here the whole standardization process, as it is well detailed in the ISO guidelines[xv] which are publicly available. It is therefore preferable to recall the six main stages in the development of a standard common to all the technical committees and to specify the groups of experts who intervene within technical committees during this process.

At the outset, each ISO deliverable is assigned to a *standards development track*. This track determines the timeframe of the project (18, 24 or 36 months) as it passes through the various *stages* to publication.

The **proposal stage** is the first step to create a new International Standard or review part of an existing standard. A new work item proposal (NP) under the responsibility of a project leader is submitted to the committee for vote to confirm this standard is really needed for a given subject area. This stage can be skipped for revisions and amendments to ISO standards that are already published (as long as the scope does not change).

The **preparatory stage** is managed by a working group (WG) which is set up by the parent committee to prepare the working draft (WD). The WG is made up of experts and a Convenor (usually the Project leader). During this stage, experts continue to look out for issues around copyright, patents and conformity assessment. Successive WDs can be circulated until the experts are satisfied that they have developed the best solution they can. The draft is then forwarded to the WG's parent committee who will decide which stage to go to next.

During the **committee stage** (optional), the draft is shared with the members of the parent committee. The committee draft (CD) is circulated to the members of the committee who then comment and vote. Successive CDs can be circulated until consensus is reached on the technical content.

During the **enquiry stage**, the Draft International Standard (DIS) is submitted to ISO Central Secretariat by the Committee Manager. It is then circulated to all ISO members who then have 12 weeks to vote and comment on it. The DIS is approved if two-thirds of the P-members of the Technical Committee or Subcommittee are in favor and not more than one-quarter of the total number of votes cast are negative. If the DIS is approved and no technical changes are introduced in the draft, the project goes straight to publication. However, if technical changes are introduced, the FDIS stage is mandatory.

The **approval stage** is the last one before publication. The Final Draft International Standard (FDIS) is submitted to ISO/Central Secretariat (ISO/CS) by the Committee Manager. The FDIS is then circulated to all ISO members for an 8-week vote. The standard is approved if a two-thirds majority of the P-members of the Technical Committee or Subcommittee is in favor and not more than one-quarter of the total number of votes cast are negative.

The final document is then submitted to ISO Central secretariat for **publication**. If the standard has passed through the Approval stage, the committee manager may submit the project leader's responses to member body comments on the FDIS. Only editorial corrections are made to the final text. It is published by the ISO Central Secretariat as an International Standard.

The standardization activity is carried out by the experts gathered in a **working group** (WG). The creation of a WG is decided by the committee, which also appoints the leader of the WG. A working group comprises a restricted number of experts individually appointed by the ISO P-members, ISO A-liaisons of the parent committee and C-liaison organizations, brought together to deal with the specific task allocated to the working group. Experts act in a personal capacity and not as the official representatives of the P-member or A-liaison organization by which they have been appointed with the exception of those appointed by C-liaison organizations. A working group operates by consensus, reports and gives recommendations, if any, to its parent committee.

**ISO/TC 46 standards for the information and documentation community**

The work of Technical Committee 46 and its subcommittees follows this process for the standards under their responsibility. ISO/TC 46 meets annually at a plenary meeting and the last meeting was held remotely 10 - 20 May 2022. The agenda was developed by the French Standards Association, AFNOR, which provides the secretariat for ISO/TC 46, based on information received from the working groups and subcommittees. This annual meeting is an opportunity to take stock of the actions in progress and to vote on resolutions, in particular for the nomination of experts as project leaders and decide on the creation of working groups.

ISO/TC 46 is composed of four working groups that report directly to it, a maintenance agency and five subcommittees[xvi]. Of the standardization projects underway in ISO/TC 46, those mentioned below are under the responsibility of ISO TC 46/SC 4 - Technical Interoperability. These standardization projects are carried out in close collaboration with partner organizations with similar objectives.

**ISO 15836-2: 2019 Information and documentation - The Dublin Core metadata element set - Part 2: DCMI Properties and classes**

The development of this standard is done in close cooperation with the Dublin Core Metadata Initiative [xvii] (1995) of the Association for Information Science & Technology (ASIS&T). DCMI is an organization supporting innovation in metadata design and best practices across the metadata ecology. DCMI works on architecture and modelling, sets up working groups, organizes global conferences and supports educational efforts on metadata standards. DCMI has published several specifications and notably the original Dublin Core of thirteen (later fifteen) elements in 1995. The element set was then published as the US standard ANSI/NISO Z39.85-2001 and as an international standard, ISO 15836-2003. The DCMI Usage Board currently serves as the maintenance agency for ISO 15836.

DCMI has recently established a working group to develop a specific Scholarly Resources Application Profile (SRAP). The working group is to extend DCMI Terms with metadata elements needed to describe scholarly resources such as scientific articles, doctoral dissertations, master's thesis, etc. Once DCMI endorses SRAP, it will be presented to TC 46/SC4 as a NWIP to revise ISO 15836-2. A specific working group under ISO TC 46/SC 4 Technical interoperability, i.e. WG16, will conduct the process for the subsequent revision.

**ISO 21127:2014 Information and documentation - A reference ontology for the interchange of cultural heritage information**

ISO TC46/SC4 Technical interoperability is cooperating with the International Committee for Documentation Conceptual Reference Model Special Interest Group for the

revision of this standard. The **CIDOC CRM** represents an 'ontology' for cultural heritage information i.e. it describes in a formal language the explicit and implicit concepts and relations relevant to the documentation of cultural heritage. The primary role of the CIDOC CRM is to serve as a basis for mediation of cultural heritage information to align disparate, localized information sources into a coherent global resource.

During its May 2022 meeting, ISO TC 46/SC 4 resolved to initiate a full revision of ISO 21127 at DIS stage and requested CIDOC-CRM SIG prepare an appropriate document for a DIS ballot by October 2022.

**New Work Item Proposal for the ISO standardization of Data Documentation Initiative specifications**

The Data Documentation Initiative (DDI) is a standard for describing the data produced by surveys and other observational methods in the social, behavioral, economic, and health sciences. DDI is a free standard that can document and manage different stages in the research data lifecycle, such as conceptualization, collection, processing, distribution, discovery, and archiving. Documenting data with DDI facilitates understanding, interpretation, and use -- by people, software systems, and computer networks.

The DDI Alliance is a category A liaison to SC 4 and it has expressed its interest in cooperating with TC46/SC4 for the ISO standardization of its specifications.

**ISO/IEC TS 22424-1:2020 Digital publishing - EPUB3 preservation - Part 1: Principles**

The ISO/IEC TS 22424 series supports long-term preservation of EPUB publications via a dual strategy. This document considers EPUB features from a long-term preservation point of view. Some EPUB features are forbidden and some others required, depending on how they relate to long-term preservation. EPUB publications constructed according to these guidelines are suitable for preservation. ISO/IEC TS 22424-2 makes EPUB compliant with Open Archival Information System (OAIS) and current practices of OAIS archives.

A ballot will be launched by ISO regarding a Preliminary Work Item (PWI) on EPUB long-term preservation. National Member Bodies will be requested to nominate experts in digital preservation and/or EPUB production to participate in the effort.

These examples show that ISO/TC 46/SC 4 collaborates with various organizations that have an interest in obtaining the ISO seal to make their standards more visible at the international level. The technical documents remain available on the site of the organization carrying the project even if the ISO standard is made available for a fee.

Current cooperation between IFLA and ISO/TC 46 includes joint work on the development of library statistics and performance evaluation in ISO/TC 46/SC 8 Quality - Statistics and performance evaluation. ISO 2789:2013 Information and documentation - International library statistics is currently under revision and the leader of the working group is also one of the authors of a book published by IFLA on this topic[xviii] .

Other collaborations could be developed, notably with ISO/TC 46/SC 9 - Identification and description. This committee is responsible for ISO 690:2021 Information and

documentation - Guidelines for bibliographic references and citations to information resources, which is of primary interest to IFLA members, and for other standards dealing with bibliographic description. The revision of these standards is expected to attract experts from IFLA's specialised sections. ISO/TC 46/SC 9 would benefit from their involvement to develop its portfolio of standards, which currently focuses more on the identification of information resources than on their description. Other topics such as information governance (ISO 24143:2022 Information and documentation - Information Governance - Concept and principles) or documentation terminology (ISO 5127:2017 Information and documentation - Foundation and vocabulary) are also likely to attract the interest of IFLA experts.

**Conclusion**

IFLA and ISO have a long history of cooperation in the development of standards useful to libraries. These standards are well known to the international professional community but sometimes face particular national contexts that hinder their implementation. For example, in Bulgaria [xix] and other former Soviet bloc countries, librarians continue to place greater emphasis on ISO standards at the expense of IFLA standards. In Thailand, standards created by and for Western professionals are not widely used, mainly because the library management systems deployed in that country are not adapted[xx].

While IFLA's Advisory Committee on Standards (CoS) is engaged in the creation or revision of several standards[xxi], it seems necessary to encourage consultation between IFLA and ISO in order to define a joint work program, to involve a greater number of international experts and to consult as widely as possible the communities concerned, wherever they are located in the world.

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