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**Functional Requirements and Numbering of Authority Records (FRANAR) :
to what extent authority control can be supported by technical means ?**

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Abstract:

An IFLA Working Group on authority data was created in April 1999 under the acronym FRANAR for Functional Requirements And Numbering Authority Records. What are the terms of reference of FRANAR ? What were its activities during the past two years ? What is its action plan for the next months ?

An IFLA Working Group on authority data was created in April 1999 under the acronym FRANAR for Functional Requirements And Numbering Authority Records. The Group met during the annual conferences of IFLA at Bangkok in 1999, Jerusalem in 2000 and Boston in 2001. Moreover this year a special grant was allocated to the Group and FRANAR was able to hold a two-day meeting in May 2001 in Paris, at the invitation of the Bibliothèque nationale de France.

What are the terms of reference of FRANAR ? What were its activities during the past two years ?
What is its action plan for the next months ?

1. FRANAR: What are the goals ? What are the members ?

FRANAR was created during a meeting of the Coordinating Board of the Division on Bibliographic Control, which brought together chairpersons and secretaries of the Section on Cataloguing, Bibliography, Classification and Indexing, with the UBCIM (Universal Bibliographic Control and International MARC) Programme Director. I attended this meeting as secretary of the Section on Bibliography, and I was entrusted by the Coordinating Board with the leadership of the Group, the definition of the terms of reference and the identification of possible members.

1.1. Why was FRANAR created ?

1.1.1. The need for an international standard authority data number (ISADN)

Some milestones :

- ISADN as a data element in an authority record (1984)

GARE (Guidelines for Authority and Reference Entries) published in 1984 (1) is the first set of recommendations concerning the content of authority records. According to this document, ISADN is one of the elements of the authority record, area 7-: "*The International Standard Authority Data Number Area serves to identify the number assigned to the authority entry for purposes of international exchange and control*" (p.20). ISADN itself is not defined in the guidelines-: there is just a footnote, which reads "*A proposal for an International Standard Authority Data Number is under discussion within the IFLA Working Group on an International Authority System*" (p.20). *GARE* does not indicate the structure of the number, just the fact that it is preceded by the letters ISADN and a space, and that if an ISADN has been assigned to the heading given in area 1, the ISADN must be given in area 7.

We can immediately sense an ambiguity : is an ISADN assigned to an authority record or to an authority heading ?

- a field is devoted to ISADN in the UNIMARC format for Authorities (1991)

GARE was the source for the elaboration of the universal exchange format for authority records, the UNIMARC format (2) published in 1991. So obviously we find in this format a 0XX block devoted to "*numbers that identify the record or the authority*", a field 015 with the label International Standard Authority Data Number. ISADN not yet being defined in 1991, the unique comment made for this field is "*Reserved for the ISADN*".

We can note that the block 0XX being devoted to numbers which identify either the authority record or the authority heading ; the ambiguity previously mentioned is not solved.

- ISADN is defined in a too ambitious way (1993)

In the report *International cooperation in the field of authority data* (3), in which I limited the scope of my study to authorities for names, several pages are devoted to the ISADN (p. 79-80) and we can read: "*The aim of the ISADN is to attribute a number to each entity which is the subject of a name access point (personal names, corporate bodies, uniform titles). This number makes it possible to identify unambiguously on an international scale unimpeded by barriers of language*". The comparison with ISSN and ISBN, already examined by the IFLA Working Group on an International Authority System (4), is the subject of a detailed study the conclusions of which concerning ISADN now appear to be ambitious, and even utopian:

- ISADN should not be assigned only to the authorized form but to the authority record as a whole
- ISADN should be an "intelligent" number the structure of which should be meaningful
- ISADN should be built automatically by a computer system from the fixed fields of an authority record

ISADN should have 4 segments : origin of the authority record, nationality of the entity, authority record number in the authority file of the responsible agency, reliability of the record (provisional or not). In addition it could be possible to link together several ISADN when different authority records are linked each other.

The architecture to be created to manage such a system and the constraints of a centralized or of a decentralized system are only briefly examined in the report.

- the demand for a definition of the ISADN becomes urgent (1998)

The Action Plan defined by an IFLA Seminar hold in Vilnius in June 1998 on the theme, "The function of bibliographic control in the global information infrastructure," contains the revision of UNIMARC/Authorities, the development of consistent and persistent vehicles for the international exchange of authority data and a reconsideration of a numbering system such as the ISADN (5). In August 1998, the definition of ISADN was asked by the participants at the "UNIMARC in transition" Workshop held in the framework of the IFLA annual conference in Amsterdam. Then the International Conference on National Bibliographic Services (ICNBS) held in Copenhagen in November 1998 recommended "*The national bibliographic agency should ... develop and promote standards, guidelines and methods for authority control to facilitate the international exchange of authority data*"

- ISADN is considered as necessary but we should still wait before giving it a definition (1998)

The Working Group on Minimal Level Authority Records and ISADN, created in 1996 under the auspices of the IFLA UBCIM Programme and chaired by Barbara Tillett (Library of Congress) submitted its final report in December 1998 (6). The participants came to realize that the goal of the Universal Bibliographic Control by way of requiring everyone to use the same form for headings globally is not practical. It is better to give priority in our catalogues and national bibliographies, to the form of names familiar to our users, forms that can be different according to linguistic or cultural areas. So, a numbering system, which allows link between different authority records established for the same entity by different bibliographic agencies, is quite necessary to assist in searching. It may be the control number of the authority record in the local database as well as an ISADN.

Nevertheless, the Group gave up defining such a numbering system and suggested to wait and see what solutions to manage links between records could be gained from new technical environment. In addition, opening the discussion to include other sectors such as archives, publishing, management of rights on intellectual property was proposed. And then the creation of another IFLA Working Group to examine these new ways to work was recommended.

- the feasibility study of an ISADN is one of the FRANAR's tasks (1999)

The aim is not to define ideally an ISADN but to examine the feasibility of an international number for authority records. That is to say to identify the possible uses and users of such a number, to determine for what types of authority records an ISADN should be necessary, and to think about how to structure and manage this number.

1.1.2. The need for functional requirements for authority records

- the FRBR does not deal with authority records on an exhaustive way (1998)

Parallel to these reflections/hesitations on ISADN, an IFLA Working Group on Functional Requirements for Bibliographic Records was created early in the 1990s and submitted its final report in 1998 (7). We can read in the introduction that all attributes and relations, which are normally expressed in authority records, are not completely taken into account in the FRBR model. In the model, entities, which constitute the main concern of authority records (persons, bodies, concepts), are defined and relations between these entities and bibliographic records are described. But for example, the report does not analyze either the additional data which are usually gathered in an authority record or relations which exist between these authority records and which are expressed through the network of links within the catalogue. The need to extend the model to authority records appears among the studies mentioned by the FRBR Working Group to complete the model.

- to define the functional requirements for authority records is one of the FRANAR's tasks (1999)

The aim is to define entities which should be the subject of an authority record, to identify the data elements which constitute an authority record, to study the relation between these elements and between authority records, and to verify at what extent all that meets the needs of users.

1.1.3. The need to keep in touch with the current international studies

One of the FRANAR's tasks is to liaise with the other IFLA working groups and with other international organizations or initiatives which show the same interest for authority data, especially with :

- the INDECS Project (Interoperability of Data in E-Commerce Systems) (8) set up in the framework of the Info2000 Programme and supported by the European Commission. INDECS took place from November 1998 to February 2000 and was very active when FRANAR was created in April 1999. Its ambition was to put coherence into different kinds of metadata created by different sectors working on intellectual property. One of the deliverables expected at the end of the project was a "Dictionary of parties", which is a collection of data necessary to identify uniquely the "participants" in a creation process as creators, producers or users, and the transactions relative to the intellectual property. The Dictionary was considered as a tool that should allow interoperability between authority data created by the collecting societies and those created by libraries, but it is just one example.

- the Commission on Descriptive Standards of the International Council on Archives which published in 1996 an *International Standard Archival Authority Record for Corporate Bodies, Persons and Families* (9). A joint meeting of IFLA/ICA was devoted to this standard in August 1995 in Beijing when the development of the text was in progress.

- ISO/TC46 "Information and Documentation", and more precisely the sub-committee 9 "Presentation, identification and description of documents" (10), in charge of the definition of international standard numbers for identification, such as the well-known ISSN, ISBN, but also

International Standard Audiovisual Number (ISAN), International Standard Work Code (ISWC), etc., from which we could take our inspiration to define ISADN.

- the Consortium for European Research Libraries (CERL) (11) which manages an union catalogue of hand-printed book between 1455 and 1830 (Hand Press Book Database) comprising separate files produced by several institutions but searchable at one time. A "Thesaurus" was in project when FRANAR was created, in order to manage the variant forms of place and author names, as a help in searching.

So the terms of reference of the FRANAR Working Group are:

- feasibility study on an International Standard for Authority Data Number (ISADN)
- definition of functional requirements for authority records
- liaison with other international organizations and initiatives in the field of authority data.

1.2. Who are the FRANAR members ?

FRANAR has 10 members plus Marie-France Plassard in her capacity as director of the IFLA UBCIM Programme. Some other experts will be contacted later to examine the work done by the Group. Most of the members are deeply involved in the Standing Committees of IFLA Sections and as such have taken part in the preparation of the different reports mentioned above. When FRANAR was created, all of us were involved in one of the international initiatives in progress on authority records.

Françoise Bourdon, Bibliothèque nationale de France (section on bibliography, MLAR, Permanent UNIMARC Committee since 2001)

Christel Hengel-Dittrich, Die Deutsche Bibliothek

Olga Lavrenova, Russian State Library

Andrew McEwan, The British Library (INDECS, MLAR)

Eeva Murtomaa, Helsinki University Library, Finland (section on bibliography, MLAR, liaison with ICA/CDS)

Glenn Patton, OCLC (section on cataloguing)

Henry Snyder, University of California at Riverside, USA (section of rare books, CERL)

Barbara Tillett, Library of Congress (section on cataloguing, FRBR, MLAR)

Harmut Walravens, International ISBN Agency, Germany (section on newspapers, ISO/TC46/SC9)

Mirna Willer, National and University Library, Croatia (chair of the Permanent UNIMARC Committee, CERL, MLAR, section Information Technology since 2001)

How this Working Group get organized to aim its goals ? What are the results of its activities two years after its creation ?

2. What priorities ? What methodology ? A progress report August 1999-August 2001

The Group met for the first time in Bangkok in August 1999 in the framework of the IFLA annual conference. This kick-off meeting was devoted to a summary report on the IFLA activities in the field of authority data to make clear the context of the work, and to the approval of the terms of reference. Each participant introduced him/herself and expressed his/her expectation.

The terms of reference mentioned above were approved. During this first meeting, we spoke more about the ISADN than about the functional requirements, certainly because it was in abeyance for a long time. The formula "ISADN desperately wanted" gives a good idea of what was the state of mind of the Group when it began to work.

2.1. ISADN : myth or reality ?

During its first meeting, the Group unanimously adopted a basic principle : no additional standard number will be created, but we will try to re-use an existing number. But have we a so clear-cut an idea of what is the goal : what do we want to number and why ?

2.1.1. What existing numbers could be re-used ?

Because the Group had to enrich its reflections with the works carried out in the framework of international programmes, the following two reports were put on the FRANAR agenda for the Paris meeting in May 2001. They dealt with a possible re-use of existing identifiers: numbers automatically assigned by systems to the authority records, and international standardized numbers already defined by ISO. If ISADN is able to make use of an existing number, ISADN is a reality !

- MACS and the use of a number assigned by a system to an authority record

The European Project MACS (Multilingual Access to subjects) shows that it is possible to rely on control numbers assigned by local information systems to authority records (e.g. field 001 in MARC records) to identify by a same numeric identifier the same concept existing in subject fields of bibliographic records which pertain to different databases. So, subject headings which represent the same concepts in 3 different languages (French, German and English) are linked together, and it is possible to use a subject heading in German to search a catalogue in which the subject headings are in French ... and to obtain relevant results ! In fact, the numeric identifier is assigned to a kind of meta-record in which are gathered the control number (field 001 in MARC records) of each authority record corresponding to the concerned subject headings. Don't hesitate to read the MACS report on feasibility to understand all the subtlety of the system (12) ! We can say that the number of the MACS link is a kind of ISADN assigned to the concept which is concerned. But nothing is magic : first an important work to identify the headings to link together must be made, a machine to house the application which manages links is needed, and some librarians to supervise time to time the smooth running of the work are required.

- the ISO international numbers

When the ISO standard on the International Standard Work Code (ISWC) was put into ballot in January 2000, the attention of FRANAR was drawn up on all the set of standardized numbers (ISAN, ISRC, ISMN, etc.) which were developed in the framework of ISO by the managers of rights on intellectual property. In fact, the agencies which are responsible for the numbers will develop large databases to manage the variant forms of titles of works and these databases should have a lot in common with our authority files. So, it was interesting to study the descriptive metadata linked to each ISO number : are these data likely those we deal with in libraries to carry out authority control ?

Within FRANAR, the work was done by e-mail from January to April 2000 and a synthesis was presented during the meeting of the Group in Jerusalem in August 2000. The Group stressed the

lack of consistency in terminology from a standard to another and that definitions are missing especially for terms used with a different sense than they usually have in librarianship ; for example the words "work", "expression" and "manifestation" do not designate the same entities if we compare these ISO standards and the FRBR. This is all the more annoying since some of these international standard numbers could be used as unambiguous identifiers for some of the entities we manage or we could have to manage in our authority files.

Patrick Le Boeuf (Bibliothèque nationale de France) who was invited to attend the FRANAR meeting in Paris in May 2001 as an observer did get discouraged by this and reported on the results of his work in this field (13). If the FRBR entities "work" and "expression" would systematically be the subject of records having the status of authority records (something that is not in accordance with the current rules of cataloguing), perhaps we could assimilate ISADN with

- ISAN for audiovisual "work"
- ISWC for the "expression" of a musical work (e.g. a music score)
- ISRC for the "expression" of a musical work (e.g. a sound recording)
- ISTC for the "expression" of a textual work, etc.

But this is just the very beginning of the reflection starting from the principle that these ISO numbers were created to meet the same goals that we aim at. Is it exactly the case ?

2.1.2. What do we want to number ?

Defining an identification number even before having defined the data to which it is supposed to be assigned could be considered "putting the cart before the horse" !

- what experience could we derive from the work of ISO/TC46/SC9 ?

A meeting of the managers of the different ISO numeric identifiers took place at the Bibliothèque nationale de France in February 2000 at the invitation of the ISO/TC46/SC9, and I was able to attend as an observer. I learned that

- each international standard number has a goal which is its own and which has an impact on the way it is created, assigned and managed and this explains in part why the descriptive metadata which are associated with it were defined separately without any consistency being established with what has been done elsewhere for another number.
- many of these numbers were created just to facilitate "business to business" relations, and they are not supposed to be used as search criteria or as identification element in the bibliographic or authority databases managed by libraries.

It stands to reason that :

- the ISO identifiers perhaps will not serve for use in the authority databases managed by libraries
- it is absolutely necessary to have a definite goal to define a consistent international numbering system.

Definitely said : we must know exactly what we want. But, in this quest of the ISADN do we know exactly what we search for ? What are the goals we aim at ? (to help search ? to facilitate authority management ?) What entities do we expect to identify ? What are the data elements which characterize these entities ? What relations are capable to exist between the different entities on the one hand, and between the data elements pertaining to a given entity on the other hand ? Is the international standard numbering of authority data still fit for acceptance to-day ? Are other technical means possible ?

During its meeting in May 2001, FRANAR decided to move its work towards the definition of functional requirements for authority records. It seems more pertinent first to know more about nature and functions of authority data we want to manage before defining an international numbering system supposed to identify them.

2.2. Functional requirements of authority records

To define the functional requirements for authority records is a harder task than for bibliographic records because the references we have when we start the work are less rich:

- the bibliographic records describe a document or a set of documents the physical existence of which is without question: even for a document without support (e.g. an on-line document) we can define characteristics such as extent of the file for example. But authority records concern intangible entities and are even more difficult to define.

- there is no equivalent of the ISBD for the authority records: there is no preliminary agreement on their content or on the reference sources to use for identifying them.

- the bibliographic record is useful for describing, identifying and even locating documents. What is the real use for authority record ? Who are the users ? For what are they used ?

- the notion of the authority record is more recent than the notion of the bibliographic record: end of the 19th century for the pioneers (Library of Congress), early in the 1980s and even later for the majority of other libraries. In this field the experience is less important, and it is obvious that even the notion of "authority record" inserted in an "authority file" like we know to-day is just a step towards another more wide-open model for authority data.

FRANAR must answer the following questions which constitute its action plan for the next months :

2.2.1. What are the concerned entities ?

Entities which already exist in our authority files are concerned : names of persons, corporate bodies, uniform titles, subjects, etc. Others, less common but already defined in the second edition of the UNIMARC format for authority records published in March 2001 (14), are also concerned : "trademark", "place" and "form, genre or physical characteristics". And are the entities "work" and "expression" defined in the FRBR intended to be managed in authority records ? Should other types of entities be taken into account to meet the needs of users outside the library world, such as publishers, producers, archivists, rights managers, museum-users ?

2.2.2. What are the elements of data which constitute an authority record ?

GARE (1), then GARR (15), UNIMARC (2 and 14), and MLAR (5) list and define the elements of data, and recommend their presence and their structure in authority records, but a real study on recording and definition of elements of data which form an authority record according to their uses remains to be done: how to define the fullness of an authority record (full encoding level, core encoding level, minimal encoding level) ? What element of an authority record is an authority : only the heading or the set of elements ? only the elements the source of which is known, etc. ? Who settles it: the user, the manager, the context, etc.? Have the data to be organized in an authority record to be an authority ? Authority record, authority data, authority information: is this terminological shift expressed a real evolution in the definition, role and use of elements of data which are supposed to be an authority in systems more and more opened ?

2.2.3. What is the use of an authority record ? Who are the users of authority records ?

Created first to assist cataloguers in establishing and managing access points to descriptive records in a given catalogue, authority records are today offered to end-users both as an help for searching and as an additional value improving the bibliographical information. Because the supply has an effect on the demand, users certainly will urge us to think differently about authority records to better adapt their content to their expectations. According to the development of rights management in cultural institutions, because authority records are able to uniquely identify rights holders, works, etc., they find a new way to be used. Nevertheless an authority file is not a biographical dictionary, nor a corporate bodies directory, etc., but where is the boundary ?

2.2.4. What modelling for authority records ?

When the concerned entities, the elements of data which constitute authority records, and the real or possible users of these records have been defined, how should we organize them ? What are the characteristics of each entity, of each element of data, of each user ? How are these components linked together to finally create an information system ?

To work along these lines, FRANAR will keep in touch with international programmes in progress, for example :

- the INTERPARTY project which, if the European Commission accepted it, should take up and develop the "Dictionary of Parties" first proposed by INDECS in 2000 and aim at a unique identification of participants in e-commerce ;
- the LEAF project (Linking and Exploring Authority Files) started in Spring 2001 as a follow-up of the MALVINE project (Manuscripts and Letters Via Integrated Networks in Europe) and which will propose a distributed search system based on several authority files for persons and corporate bodies (16) ;
- The CERL Thesaurus (Consortium of European Research Libraries) which will allow to manage the variant forms of imprint places, author names and printers' names to make easier the access to the Hand Press Book database, but without any given authority form having priority over any other one (11) ;
- the MACS project (Multilingual ACcess to Subjects) carried on since 1998 on behalf of the CENL (Conference of European National Libraries) which proposed to develop a system for providing multilingual subject access for the end-user by mapping terms between existing 3 subject heading languages (English, French and German) (12) ;
- the "Encoded Archival Context " project, discussed in March 2001 in the framework of a meeting between archivists in Toronto and which should aim at defining a DTD XML to structure the contextual information being inspired by the ISAAR (CPF) (9).

Little by little all these projects bring to light a new way to conceive authority control, in which technical means play a more and more important role . To what extent authority control can be supported by technical means ?

Conclusion : FRANAR good and bad points

There are more questions than answers in this paper and one could deduce that the outcome is poor, that FRANAR is progressing slowly, too slowly ! Why ?

FRANAR members are well experienced professionals, that is a good point. But all of them are from the library world, which is not surprising for an IFLA working group, but that is a

disadvantage : it would be better to be joined by professionals from archives, museums, and by rights managers.

FRANAR is taking advantage of the work that went into FRBR, that is a good point. But the FRBR working group rested on sound basis (ISBDs) and was able to appoint consultants. Concerning authority records, the starting deal was less wealthy and FRANAR cannot afford to work with a consultant. That is a major disadvantage because data modeling is a special technique and FRANAR members are not familiar with it. FRANAR is monitoring technological development, but without being able to make profit of this activity by regularly meeting and sharing information to enrich its own reflection.

Nevertheless, even if FRANAR is not profiled and has no grant to define a data model able to have such an important impact as the FRBR, FRANAR is a promising focal point to discuss and to exchange. Carry on thinking, modeling and suggesting : something will come out !

References

(1) *Guidelines for Authority and Reference Entries*, recommended by the Working Group on an International Authority System : approved by the Standing Committee of the IFLA Section on Cataloguing and the IFLA Section on Information Technology (London : IFLA International Programme for UBC, 1984)

(2) *UNIMARC / Authorities : Universal Format for Authorities* / recommended by the IFLA Steering Group on a UNIMARC Format for Authorities ; approved by the Standing Committees of the IFLA Sections on Cataloguing and Information Technology. - München : K. G. Saur, 1991 (UBCIM Publications : New series, vol. 2)

(3) *International Cooperation in the field of Authority Data : an analytical Study with recommendations* / Françoise Bourdon ; translated from the French by Ruth Webb. - München : K. G. Saur, 1993. - UBCIM Publications : New Series, vol. 11)

(4) "Authority control in an International Context" / Tom Delsey, in *Cataloguing and Classification Quarterly*, vol. 9, n. 3, 1989, pp. 13-27

(5) Seminar "The function of bibliographic control in the global information infrastructure", Vilnius, 17-19 June 1998, *International Cataloguing and Bibliographic Control*, vol. 28, n°1, Jan-March 1999, p.2

(6) *Mandatory data elements for internationally shared resource authority records : report* / of the IFLA UBCIM Working Group on Minimal Level Authority Records and ISADN.- [Frankfurt-am-Main] : IFLA UBCIM, 1998. <<http://ifla.inist.fr/VI/3/p1996-2/mlar.htm>>

(7) *Functional requirements for bibliographic records : final report* / approved by the Standing Committee of the IFLA Section on Cataloguing. - München : K. G. Saur, 1998. - (UBCIM Publications : New Series, 19) <<http://www.ifla.org/VII/s13/frbr/frbr.pdf>>

(8) <http://www.indecs.org>

(9) ISAAR (CPF) : *International Standard Archival Record for Corporate Bodies, Persons and Families*. - Ottawa : Secretary of the ICA Commission on Descriptive Standards , 1996
<<http://www.ica.org/isaarf.html>>

(10) ISO/TC46/SC9 <<http://www.nlc-bnc.ca/iso/tc46sc9/>>

(11) <http://www.cerl.org>

(12) The presentation was made by Elisabeth Freyre et Max Naudi, co-pilotes of the MACS Project at la BnF. The feasibility study of the MACS project is available in English on the web : <http://www.bl.uk/information/finrap3.html>

(13) " Of numbers and entities : FRBR, authority control and international standard codes" / Patrick Le Boeuf [paper presented in the framework of the FRANAR meeting in May 2001 at the BnF [non published]. P. Le Boeuf is an AFNOR delegate in the ISO working group created in May 2000 to define an International Standard Textual Code (ISTC)

(14) UNIMARC Manual : Authorities Format. - 2nd rev. and enl. ed. - München : K. G. Saur, 2001. - (UBCIM Publications : New Series, vol. 22)

(15) *Guidelines for Authority Records and References* / revised by the IFLA Working Group on GARE Revision. - Second ed. - München : K.G. Saur, 2001. - (UBCIM Publications : New Series, vol.23)

(16) "Cooperation in Practice : MALVINE and LEAF. Gateways to Europe's Cultural Heritage" / by Jutta Weber in *International Cataloguing and Bibliographic Control*, vol. 30, n°2, April-June 2001