FRBR and the publication statement: the problem of identification of relationships and attributes of the entity Manifestation

Barbora Drobíková, Marie Odehnalová, Ema Juranová, Kristýna Králová, Ladislav Svatoš

Ústav informačních studií a knihovnictví, Filozofická fakulta, Univerzita Karlova v Praze

Recenzenti:
Mgr. Edita Lichtenbergová
PhDr. Jiří Stodola, PhD.

Abstrakt:
The aim of the study is to make a proposal for cataloguing selected relationships and attributes of the entity Manifestation concerning the publication area. The cataloguing code RDA: Resource Description and Access lists publication statements representing the publication attributes of the entity Manifestation among core elements. The identification of relationships concerning publication activities (i.e. responsibility for publication) is dealt with by the RDA code too but in the cataloguing practice is mostly ignored. Our study focuses on relationships and attributes of the entity Manifestation concerning publication areas (especially the name of a publisher and occasionally the place of publication). There is the content analysis method of bibliographic records used. Based on the theoretical foundations of the bibliographic universe and results achieved by the content analysis, we propose a new way of cataloguing and identification of attributes and relationships of the Manifestation instances concerning publication area for the cataloguing practice also outside the Czech Republic.

The study results from a research of the Institute of Information Studies and Librarianship dealing with trends of bibliographic description in the digital environment. A group of students have participated in the research within a project course Information and Library Services. We would like to express our acknowledgement to Petra and Petr Žabička who have provided us with an export of bibliographic records of printed books published in the Czech Republic in 2014 and also to Dr. Martin Souček who has helped us with processing bibliographic data.

Keywords: *FRBR, Manifestation, attributes, relationships, publication statement*

Introduction

Much has been written about the FRBR model. In the Czech Republic, most cataloguers should be already familiar with it. The RDA cataloguing code: Resource Description and Access introduced in 2015 into the Czech cataloguing practice has been structured according to this model.

One of the main impacts of the implementation of this model in the practice of cataloguers is an increasing interest in the identification of attributes and relationships of **Work** and **Expression** entities (their instances[1])**.** The model has shown a very important role of the entities **Work** and **Expression** in the bibliographic universe. [2] It is therefore possible to assume that presently, Czech cataloguers learn to identify attributes and relationships for instances of entities Work and Expression practically. It is quite complicated to reflect all core elements listed in RDA, including elements concerning Work and Expression entities in a bibliographic record. It might be caused by the lack of experience in this field and the long-term use of the format MARC 21 which is not suitable for the representation of multi-layered relationships among instances of entities.

In our article, however, we focus on the entity Manifestation as per the FRBR model. Most cataloguers are familiar with this entity (its instances). It represents physical (particular) editions of information resources. Although in former cataloguing codes the terminology of FRBR was not used, particular publications (editions) were in the centre of their attention. If we may afford a certain simplification: formerly only instances of Manifestation or items were catalogued. The Work or Expression level was reduced to an identification of a relationship between an author of the work and/or a contributor. From this point of view it would be possible to state that cataloguers have had a long practice in cataloguing instances of Manifestation. But how does the reality of cataloguing look like? What is commonly identified in bibliographic records in the present days?

In our study we would like to show week points of the identification of instances of Manifestation on the example of the publication statement.

Methodology

For our purposes we have used the content analysis of bibliographic records of printed books published in the Czech Republic in 2014. With help of this analysis we show possible ways for identification of relationships and attributes of instances of this entity. In our study we follow many studies dealing with attributes and relationships according to FRBR (e.g. studies published in the special issue 5-7 of Cataloging and Classification Quarterly, vol. 50, 2012; authors Patrick le Boeuf, Maja Žumer, Pat Riva, Martin Doerr, Chris Oliver and many others). However, we do not know any study focusing directly on our problem. The main author of this study (Barbora Drobíková) participated in the meeting of the Joint Steering Committee for Revision of RDA in Edinburgh (October, 2015). Members of this board are interested in this problem (attributes and relationships of Manifestation in the publication area) and have discussed it extensively. Our study constitutes one part of a more complex research plan of the author dealing with the role of bibliographic description in the digital environment.

[1] An instance – it is an element of an entity

[2] The bibliographic world is a world of recorded knowledge; it is a universe of all information resources. It is possible to understand the model FRBR as a conceptual one. It is a model which represents part of a reality, in our case a real world of information resources.

Methodological questions

- Under the FRBR model, is it necessary to identify relationships of an instance of Manifestation and an instance of Person/or Corporate Body responsible for publishing of an instance (an information resource)?
- Does the recent cataloguing code enable the identification of the relationship of an instance of Manifestation and an instance of Person/or Corporate Body in the publication area?
- Do authority records exist for at least some Czech publishers?
- Do cataloguers use the field 928 (format MARC 21 – a Czech national field) to better identify the publisher and its relationship to an instance of Manifestation?

A speculative question

- Would it be possible to implement an administration of authority records for publishers into the cataloguing practice and use preferred forms of names for them in bibliographic records?

Manifestation

> *The entity defined as Manifestation encompasses a wide range of materials, including manuscripts, books, periodicals, maps, posters, sound recordings, films, video recordings, CD-ROMs, multimedia kits, etc. As an entity, Manifestation represents all the physical objects that bear the same characteristics, in respect to both intellectual content and physical form* (FRBR, 1998, chapter 3.2.3).

Manifestation in the basic FRBR model is an entity representing editions of publications – the same edition of a publication. It is a physical entity (opposite to entities Work and Expression). Manifestation includes unpublished documents too available only in one copy (e.g. theses) or digital documents (remote access).

The FRBR model has been developed into an object-oriented one - FRBRoo (FRBRoo, 2015). The entity Manifestation has been divided into two distinct classes in this new model "corresponding to the two possible ways of interpreting the ambiguous definition provided for Manifestation in FRBRer[3], namely F3 Manifestation Product Type and F4 Manifestation Singleton. Whereas F3 Manifestation Product Type is declared as a subclass of the CIDOC CRM[4] class E55 Type, and therefore as a subclass, too, of the CIDOC CRM class E28 Conceptual Object (a merely abstract notion), F4 Manifestation Singleton is declared as a subclass of the CIDOC CRM class E24 Physical Man-Made Thing, and therefore as a subclass, too, of the CIDOC CRM class E18 Physical Thing" (FRBRoo, chapter 1.2.2). This division represents various types of editions, embodiments or publications of an Expression instance. The F3 Manifestation Product Type class represents further the whole set of items within an edition of a publication and we can understand it as an abstract class. The F4 Manifestation Singleton represents often only one existing copy (exemplar) – e.g. a thesis.

[3] FRBRer – FRBR model in the former entity-relationship form (published 1998)

[4] CIDOC CRM - „The CIDOC Conceptual Reference Model (CRM) provides definitions and a formal structure for describing the implicit and explicit concepts and relationships used in cultural heritage documentation"[2016].

Relationships of Manifestation

The FRBR model does not define many relationships for the entity Manifestation. We can list the following basic relationships (according to FRBRer, 1998, chapter 5 a 5.3.4):

- relationship to an instance of Expression (embodiment);
- relationship to an instance of Item (representation);
- relationships between various instances of Manifestation of the same instance of Expression (alternative, reproduction);
- relationship to an instance of Person/or Corporate Body which publishes the instance of Manifestation (responsibility);
- the whole/part relationship (hierarchy).

Identification of Manifestation relationships in the cataloguing work

If we want to identify a relationship of two instances of entities (Person – Work; Corporate Body – Work; Expression – Contributor) it is necessary to make an authority record for every instance of any entity in the cataloguing practice. We can then connect authority records and bibliographic records together. With help of an authority record we can identify unambiguously a particular instance (of any entity). It is suitable to support the unambiguous identification of an instance of any entity with an unambiguous identificator (e.g. authority record number).

As far as the publication area is concerned, we could consider a link between a bibliographic record of a Manifestation instance with a preferred name of a publisher from an authority record. It would also be possible to link authority records of a place to the publication and the name of a publisher. Authority records for geographic names are created regularly.

Attributes of Manifestation

There are many attributes of the entity Manifestation listed in the chapter 4.4 (FRBR, 1998):

- Title of the manifestation;
- statement of responsibility;
- edition statement;
- publication statement – place, publisher, date;
- fabricator/manufacturer;
- series statement etc.

Attributes of the entity Manifestation relate to a self-presentation of an instance (of a publication). In a practical cataloguing - if we identify e.g. a title from a title page (from a publication), we copy the title as it is, the edition statement, publication statement and other attributes as well. We identify all attributes as they are presented in the publication. We are not allowed to act otherwise. This approach has a long cataloguing tradition, it has evolved into a method of the bibliographic description and constitutes a very important part of the International Standard Bibliographic Description (ISBD) used all over the world although the FRBR model itself originated just on the end of the 20th century. In the FRBR model, publication attributes are listed among the Manifestation attributes. Many cataloguers of recently published documents (not only in the printed form) are a bit confused concerning this approach. From the users point of view it would be more useful to make the publication statement data searchable. The identification of attributes alone is absolutely insufficient for this purpose. If cataloguers respect the "self-presentation" of an instance of Manifestation and copy exactly the publication statement, they make the search for publishers (and publication places) impossible, because forms of publisher names (and places) vary in publications very often.

Example No. 1 – various forms of names of the same publisher in Czech publications:
Nakladatelství Lidové noviny
NLN - Nakladatelství Lidové noviny
NLN
NLN - Nakladatelství Lidové noviny, s r. o.
Lidové noviny

RDA and Manifestation

The cataloguing code RDA: Resource Description and Access is structured exactly according to the FRBR model. It is possible to follow the paragraphs concerning the identification of entities, attributes and relationships. We can find paragraphs dealing with Manifestation attributes in the 1st section. Paragraphs for the identification of relationships of the Manifestation are located in the 5th and 6th section. Chapter 21 is devoted to the identification of relationships of publishers (Persons/or Corporate Bodies) and instances of Manifestation.

The code defines so called core elements – elements which have to be included in bibliographic records whenever possible. Within the core elements we can find attributes of Manifestation – publication statement (RDA 0.6.5). Elements which would identify relationships for publishers (or publication places) and instances of Manifestation are not covered by the core elements. As these elements are not obligatory, cataloguers do not use them.

New linked data environment – BIBFRAME and publishers

As mentioned earlier (Drobíková, 2014; or Drobíková, 2013) the new exchange format for bibliographic data Bibframe is based on a simple model consisting of the following core classes – creative work, instance, authority and annotation. A publisher and a place of publication are included into authorities. So this new format supports an unambiguous identification of publishers and other Persons/or Corporate bodies responsible for publishing/manufacturing/distribution of information resources. When thinking about format transition, we should think about how to migrate data on publishers and places which could be considered as authoritative ones.

Publication statement in the MARC 21 format

For a full notion it is suitable to say which MARC 21 field are used for the publication statement and other data relating to publishers, places of publication etc.
The field 260 was formerly used for a publisher/distributor and a place of publication. With the implementation of RDA, the field 264 has been introduced for publication statement. Both fields (260 and 264) serve for the identification of attributes concerning publication activities. It means that the exact form of the publisher´s name and the place of publication are copied into the bibliographic record from the catalogued document – a descriptive form is used. It is not possible to use these fields for the identification of a relationship between a publisher and a catalogued document or for an unambiguous identification of the publisher or the place of publication. However, cataloguers do not agree with such a limitation, nor do they understand it and try to create a formalized form of a name of a publisher in the field 264 (earlier the field 260) in addition without the support of an authority record.

Authority records for publishers (Persons or Corporate bodies which are responsible only for publishing of a document and do not hold any other role to the relevant instance of Work or Expression) are not commonly created in the Czech cataloguing practice. The situation might be the same in other countries using RDA. In fact everybody (a Person/ or a Corporate body) can hold the publishing role. We can find quite easily Persons/or Corporate bodies within publishers for whom authority records are created because they hold other roles to instances of Work or Expression too: e.g. universities, scientific institutions, various organizations, companies or non-profit institutions.

Therefore we often have an authority record of the particular publisher but we do not use the preferred (formalized) form of its name in the bibliographic record, we use only the descriptive one. We enable the identification of the attribute (publication statement) but not the identification of the relationship, respectively the unambiguous identification of the publisher itself.

Many cataloguers are aware of the descriptive function of the 260/264 fields and would like to enable the unambiguous identification of publishers. They use therefore the Czech national field 928 (1st indicator – value 9) for a formalized form of names of publishers which unfortunately are not supported with authority records. In addition the field 928 does not offer a deeper granularity in MARC 21 (Pole bloku 9XX/UNIMARC a MARC 21, 2015).

Content analysis of bibliographic records with focus on publication area

We have divided our research into two parts. In the first part, students chose four library catalogues[5]. They used a random selection and found 155 various publishers which published at least one printed book in the Czech Republic in 2015. They avoided the following types of publishers: universities, faculties, scientific institution, and civil service authorities. We can assume they have an authority record. Students compared chosen publisher names with the Czech authority database (AUT) and with the publisher database (NAK). Both databases are administered by the Czech National Library.

Results of the first part

We have analysed 155 publisher names.
73 publishers have no authority record in the AUT database. One half of publisher names from our sample has an authority record.
Only 14 publishers are missing in the NAK database. It means the most publishers are listed in the NAK database and a formalized form of their name is for disposal.

After a very careful comparison we can state that forms of publisher names vary not only between the descriptive one in 260/264 fields and the authority database AUT but also between AUT and NAK (publisher database). The result is not surprising as it origins, inter alia, from different principles of the used cataloguing code.

[5] Jiří Mahen Library in Brno, Municipal Library in Tabor, Municipal Library in Kladno and Research Library in Olomouc

Examples of different forms of publisher names in a common bibliographic record, AUT database and NAK database:

MARC 21, field 260/264 $b	AUT	NAK
Argo	Nakladatelství Argo	Argo, spol. s r.o.
Grada	Grada Publishing	Grada Publishing, a.s.
Fortuna Libri	Fortuna Libri (nakladatelství)	Fortuna Libri, spol. s r.o.
Paseka	Nakladatelství Paseka	Nakladatelství Paseka, spol. s r.o.
Triton	Nakladatelství Triton	Juhaňák Stanislav – Triton

Second part of our research

In the second part we have analysed an export of bibliographic records of printed books published in the Czech Republic in 2014 from the Moravian Library.[i]

We have analysed 15916 bibliographic records with 260 or 264 fields for publishers (and places of publication). After de-duplication we have counted 3055 various forms of publisher names and 644 various names of places of publication – Prague e.g. in 9 various forms.
There are 3328 various combinations of a publisher name and a place of publication.

e.g. Prague – A. Opekarová or Praha – A. Opekarová

The 928 field was used in 2731 bibliographic records and it was possible to de-duplicate 2509 various forms of publisher names. There are institutes of Academy of Science, universities, faculties, civil service authorities and other institutes in a non-structured form of name within this list. We can assume an authority record for them as mentioned above.

Answers to methodological questions

- Under the FRBR model, is it necessary to identify the relationship of a Manifestation instance and an instance of Person/or Corporate Body in the publication area?
    - The FRBR model supposes an existence of relationships between Persons/or Corporate bodies and other entities of the first group – Work, Expression, Manifestation and item. By the Work, Expression and Manifestation we can model a creative relationship to Persons/or Corporate bodies. All these relationships are main or primary. No relationship is considered less important or unnecessary one.
- Does the recent cataloguing code enable the identification of the relationship of an instance of Manifestation and an instance of Person/or Corporate Body in the publication area?
    - Yes, it does. The cataloguing code RDA enables an identification of relationships of Manifestation instances and Persons/or Corporate bodies instances for the publication area. The use of these paragraphs is recommended only according to practice of the cataloguing agency. It is not mandatory.
- Do authority records exist for at least some Czech publishers?
    - Yes, authority records for Czech publishers exist and not only for institutions which hold various roles to a publication and a Work and Expression instance contained – e.g. universities, faculties, scientific institutions, civil service authorities. Authority records have been also created for corporate bodies acting almost exclusively as publishers.

- Do cataloguers use the field 928 (format MARC 21 – a Czech national field) to better identify a publisher name and its relationship to a Manifestation instance?
    - The 928 field is still used for better identification of a publisher name. In our sample the 928 field was used in 13% of bibliographic records. Unfortunately, the 928 field is used also for corporate bodies' names for which an existing authority record is assumed as mentioned above.

Answer to the speculative question

- Would it be possible to implement an administration of authority records for publisher into the cataloguing practice and use preferred forms of names for them in bibliographic records?
    - Yes, it would be possible and sometimes it probably happens. We have found many authority records for publishers (or corporate bodies holding the publisher role). With use of the 928 file cataloguers express their effort to form the publisher name in a formalized form. The cataloguing code RDA does not forbid this practice.

Recommendations for the cataloguing work

We are aware of a high workload of cataloguers creating authority records. Nevertheless, taking into account recent developments the future of cataloguing will be probably based on intellectual activities connected with authority work (authority records for any entity instance). With respect to a possible format transition we recommend creating authority records for publishers as only authority records in the bibliographic work enable the unambiguous identification of publishers and their relationship to a Manifestation instance. We recommend this practice especially for the contemporary published information resources. But how to create a preferred form of a publisher name is a question for further studies and professional discussions. It would be appropriate to cooperate with e.g. the archival community, with company indexes where official names of companies or organizations and unique identifications of companies (VAT number) are listed and use them in authority records. It would be suitable probably to use the database NAK as a basis for authority database.

Conclusion

We have shown opportunities of identification of attributes and relationships of Manifestation instances for the publication area. We have shown the FRBR model approach and RDA principles as well. We have tested the contemporary state of use of authority records for publisher names and formulated recommendations for cataloguing practice.

Cited resources

Cataloging & Classification Quarterly, 2012, vol. 50, issue 5-7. Special Issue: The FRBR Family of Models.

DOERR, Martin, RIVA, Pat and Maja Žumer. FRBR entities: identity and identification. *Cataloging & Classification Quarterly*, 2012, vol. 50, issue 5-7, p. 517-541.

DROBÍKOVÁ, Barbora. 2014. RDA a BIBFRAME : budoucí standardy bibliografické kontroly? [RDA and BIBFRAME: future standards of the bibliographic control?] In: *Knihovny současnosti 2014*. Ostrava: Sdružení knihoven, 2014, p. 109-118.

INTERNATIONAL Council of Museum [CIDOC CRM]. *The CIDOC Conceptual Reference Model* [online]. International Council of Museum, [cit. 2016-02-23]. Available from: http://www.cidoc-crm.org/index.html.

INTERNATIONAL Federation of Library Associations and Institutions. IFLA Study Group on the Functional Requirements for Bibliographic Records. IFLA, 1998. *Functional requirements for bibliographic records : final report*. München : K.G. Saur, 1998. ISBN 978-3-598-11382-6. Available from: http://www.ifla.org/publications/functional-requirements-for-bibliographic-records.

INTERNATIONAL Working Group on FRBR and CIDOC CRM Harmonisation. FRBRoo, 2015. *FRBR object-oriented definition and mapping from FRBRer, FRAD and FRSAD* [online]. Version 2.1. Editors: Chryssoula Bekiari, Martin Doerr, Patrick Le Bœuf, Pat Riva. February, 2015 [cit. 2016-02-23]. Available from: http://www.cidoc-crm.org/frbr_drafts.html.

Le BOEUF, Patrick. A strange model named FRBRoo. *Cataloging & Classification Quarterly*, 2012, vol. 50, issue 5-7, p. 422-438.

Pole bloku 9XX/UNIMARC a MARC 21 [Fields 9XX/UNIMARC and MARC 21]. 2015. (ed.) Edita Lichtenbergová. Praha: Národní knihovna ČR, upd. 2015-02-23, [cit. 2016-04-24]. Available from: https://www.nkp.cz/o-knihovne/odborne-cinnosti/zpracovani-fondu/informativni-materialy/blok-9xxuni-m21#pole9xx.

RDA toolkit: Resource Description & Access [online]. American Library Association, c2010- [cit. 2016-02-23]. Available from: www.rdatoolkit.org.

RIVA, Pat and Chris OLIVER. Evaluation of RDA as an Implementation of FRBR and FRAD. *Cataloging & Classification Quarterly*, 2012, vol. 50, issue 5-7, p. 564-586.

[i] An exported and modified list of bibliographic records was provided from Petra and Petr Žabička. We thank very much for it. This list was exported from the database MZK which includes bibliographic records mostly (but not only) from the National Library in Prague, Research Library in Olomouc and the Moravian Library in Brno.