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FRAR: Extending FRBR Concepts to Authority Data

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Abstract:
The IFLA FRANAR Working Group is charged with extending the concepts of the IFLA Functional Requirements for Bibliographic Records to authority data. The paper reports on the current state of the Working Group's activities.

Convergence in 1998

- FRBR — "the need to extend the model … to cover authority data"
- IFLA Working Group on Minimal Level Authority Records and ISADN
- International Conference on National Bibliographic Services

The year 1998 seems to have been a point of convergence for several authorities-related activities:

First, the publication of the Functional Requirements for Bibliographic Records recognized "the need to extend the model at some future date to cover authority data."[1]

Second, the Working Group on Minimal Level Authority Records and ISADN addressed for authority data part of what FRBR does for bibliographic data — the specification of a basic level of data to be included in authority records that are shared.

Finally, there were several recommendations related to authorities that came from the International Conference on National Bibliographic Services held in Copenhagen late in 1998.

In response, the IFLA Division of Bibliographic Control and the Universal Bibliographic Control and International MARC Program appointed the IFLA Working Group on Functional Requirements and Numbering of Authority Records.

Working Group Members

- Françoise Bourdon
- Christina Hengel-Dittrich
- Olga Lavrenova
- Andrew MacEwan
- Eeva Murtomaa
- Glenn Patton

- Henry Snyder
- Barbara Tillett
- Hartmut Walravens
- Mirna Willer

- Tom Delsey
- Marie-France Plassard

The ten members of the Working Group are listed above. Seven countries are represented: Croatia, Finland, France, Germany, Russia, the United Kingdom, and the United States. Françoise Bourdon served as chair until January 2002 when Glenn Patton became the chair. We had excellent assistance from Marie-France Plassard, Director of the UBCIM Programme, until her retirement in 2003. Since October 2001, Tom Delsey has served as consultant, bringing the group his long experience with modeling and his service as a consultant to the FRBR Study Group.

The FRANAR Working Group agreed to 3 terms of reference proposed by Françoise Bourdon:

- to define functional requirements of authority records, continuing the work that the "Functional requirements for bibliographic records" initiated.

- to study the feasibility of an International Standard Authority Data Number (ISADN), to define possible use and users, to determine for what types of authority records such an ISADN is necessary, to examine the possible structure of the number and the type of management that would be necessary.

- to serve as the official IFLA liaison to and work with other interested groups concerning authority files

Liaison Activities

- ISO/TC46
- Consortium of European Research Libraries
- International Council on Archives
- <in*d*ecs> and INTERPARTY
- MALVINE/LEAF
- DELOS/NSF Actors and Roles Working Group
- Dublin Core Agents Working Group
- HKCAN
- HKUST XML Name Access Control Repository
- MACS
- METAPERS
- AFNOR Working Group on Authority Metadata
- VIAF
- FRBR-CRM Harmon-ization Group
- IME/ICC

The liaison aspect of the group's activity has proved to be the easiest to achieve.

Several organizations were specifically mentioned in the charge, including <in*d*ecs>, ICA Committee on Descriptive Standards, ISO/TC46, and CERL. Others have started their activities during the same time frame or have come to our attention because of our work with related organizations.

A portion of each of our meeting agendas has been devoted to reports of these liaison activities and much information has been shared via email. In some cases, the working group has had the opportunity to comment on work in progress in these other organizations. ISO/TC46 and the proposed International Standard Text Code and the International Council on Archives' revision of the *International Standard Archival Authority Record for Corporate Bodies, Persons, and Families* are examples. I'm pleased that, in the latter case, the Working Group's input has influenced the 2nd edition of the ISAAR, which was published in 2004.

More recently, we have become involved with the FRBR-CRM Harmonization Group. This joint effort of the IFLA Cataloguing Section and the International Committee for Documentation of the International Council of Museums is attempting to harmonize the CIDOC Conceptual Reference Model for cultural heritage information with the FRBR model for bibliographic information. The initial meeting of the group provided an opportunity for discussion of the FRANAR working group's model with representatives of the museum information community.

Our work has also influenced the work of the International Meeting of Experts on an International Cataloging Code, especially in the glossary which accompanies the draft International Principles.

All of these liaison activities have had some effect on the working group's discussions.

Feasibility of an ISADN

- International Standard Authority Data Number first proposed in the 1980s
- Assigned to a heading or to a record?
- Focus shifting away from a single form of heading for an entity
- Focus shifting away from sharing physical records

Now, to turn to our second charge:

The idea of a standard number for authority data has been around, at least, since the publication of *Guidelines for Authority and Reference Entries* in 1984 where it is noted as "under discussion". During all of its history, there has been a fundamental question of whether such a number is assigned to a heading or to a record.[2]

During the time that the Working Group has been active, two changes in the international environment have added further complications.

First, the focus of international authority control has been shifting away from a single form of entry universally used for an entity to the potential for multiple forms depending on the needs of the user. And, the focus is shifting from the physical sharing of records toward a sharing of the intellectual product of authority activities.

The Working Group ultimately has agreed to defer the question of an identifier until we have completed the functional requirements and the model.
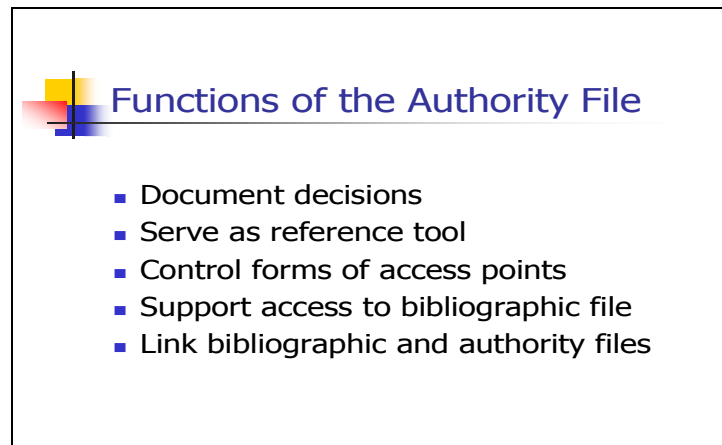
The Goal of the FRANAR Model

- To provide an understanding of how authority files function currently
- To clarify the underlying concepts to provide a basis for refining and improving on current practice in the future

During all of the Working Group's activities, we have been guided by these two objectives:

To provide an understanding of how authority files function currently
To clarify the underlying concepts to provide a basis for refining and improving on current practice in the future

These are similar to the FRBR model objectives of understanding **why** catalogers do what they do and **how** the bibliographic information that is recorded as part of the cataloging process is actually used by users of online catalogs and to provide a rational basis for improving the cataloging process.

Functions of the Authority File

- Document decisions
- Serve as reference tool
- Control forms of access points
- Support access to bibliographic file
- Link bibliographic and authority files

As a step toward understanding how authority files are used currently in the library context, the group has identified five functions of an authority file:

The authority file documents decisions made by the cataloger when choosing the appropriate access points for a new bibliographic record and when formulating new access points. (It should be noted here that the Working Group is using the term "access point" as defined in *Guidelines for Authority Records and References*: A name, term, code, etc., under which a bibliographic or authority record or reference will be searched, found and identified.[3])

Information in an authority file serves as a reference tool for those same two functions as well as providing information that can be used in distinguishing one person, corporate body or work from another. It may also serve to help the cataloger to determine that none of the access points in the authority file is appropriate and that a new access point is needed. It can also serve a broader reference function for other library staff.

The authority file can be used to control the forms of access points in bibliographic records and, in an automated environment change those access points when the authority record itself is changed.

An authority file supports access to bibliographic records by leading the user from the form of name as searched to the form of name used in the bibliographic file.

Finally, an authority file can be used to link bibliographic and authority files in ways that, for example, allow the conversion of data elements into languages and scripts most appropriate to the user's needs.
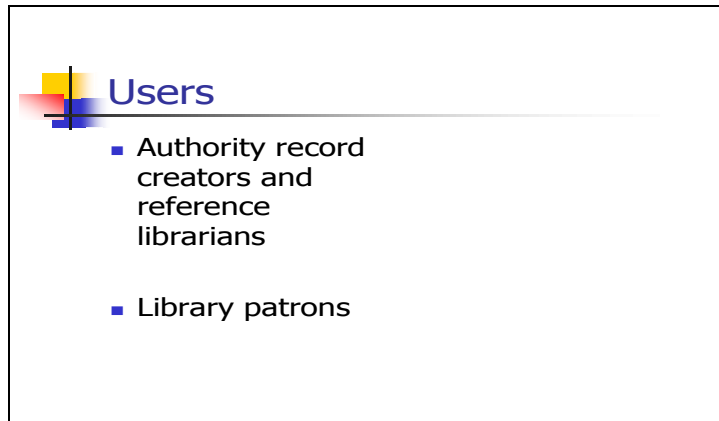
The model also defines user tasks and maps the entities, attributes, and relationships to those user tasks. In considering the user tasks, Working Group members first defined two groups of users:

- authority record creators and reference librarians who create, maintain and use authority files directly

- library patrons who use authority information either through direct access to authority files or indirectly through the access points (i.e., authorized forms and references) in library catalogues, national bibliographies, etc.
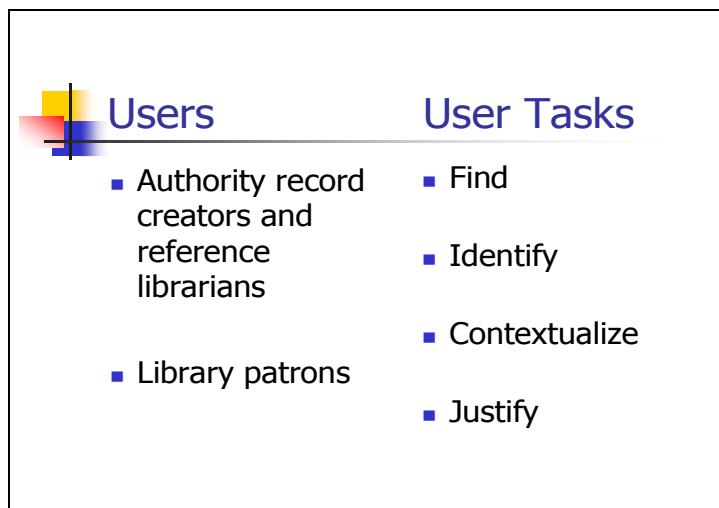
We have also defined a list of User Tasks. These are related to the FRBR user tasks but are specific to what catalogers do in working with authority data. The first three tasks relate to both groups of users while the fourth task relates solely to the first group of users.

Find: Find an entity or set of entities corresponding to stated criteria (i.e., to find either a single entity or a set of entities using an attribute or relationship of the entity as the search criteria).

Identify: Identify an entity (i.e., to confirm that the entity represented corresponds to the entity sought, to distinguish between two or more entities with similar characteristics).

Contextualize: Place a person, corporate body, work, etc. in context; clarify the relationship between two or more persons, corporate bodies, works, etc.; or clarify the relationship between a person, corporate body, etc. and a name by which that person, corporate body, etc. is known.

Justify: Document the authority record creator's reason for choosing the name or form of name on which an access point is based.

I want to turn now to a diagram that represents the entity-relationship model that is central to the working group's activity (see Figure 1).[4]

Depicted in the upper half of the diagram are the entities on which authority records are focused (that is, the ten entities defined in *Functional Requirements for Bibliographic Records* (FRBR)—***person, corporate body, work, expression, manifestation, item, concept, object, event,* and *place***—plus one additional entity— *family,* which came out of our involvement with the archival community).[5]

The lower half of the diagram depicts the ***names*** by which those entities are known, the ***identifiers*** assigned to the entities, and the ***access points*** based on those names and identifiers that are registered in authority files. The diagram also highlights two entities that are instrumental in determining the content and form of access points— ***rules*** and ***agency***.

The relationships depicted in the diagram reflect the inherent associations between the various entity types. The lines and arrows connecting the entities in the upper half of the diagram with those in the lower half represent the relationships between *name* and *identifier* and the bibliographic entities with which they are associated (*person*, *family*, *corporate body*, *work*, *expression*, *manifestation*, *item*, *concept*, *object*, *event*, and *place*). A specific instance of any of those bibliographic entities may be "known by" one or more *names*, and conversely any *name* may be associated with one or more specific instances of any of the bibliographic entities. Similarly, a specific instance of any one of the bibliographic entities may be "assigned" one or more *identifiers*, but an *identifier* may be assigned to only one specific instance of a bibliographic entity.

The relationships depicted in the lower half of the diagram represent the associations between the entities *name* and *identifier* and the formal or structural entity *access point*, and the association between that entity and the entities *rules* and *agency*. A specific *name* or *identifier* may be the "basis for" an *access point*, and conversely an *access point* may be based on a *name* or *identifier*. An *access point* may also be based on a combination of two *names* and/or *identifiers*, as in the case of a name/title access point representing a *work* that combines the name of the author with the name (i.e., the title) of the work. *Access points* may be "governed by" *rules*, and those *rules* in turn may be "applied by" one or more *agencies*. Likewise, *access points* may be "created by", or "modified by" one or more *agencies*.

It should be emphasized that the Working Group is consciously using the more general term *access point*, rather than more specific terms such as *authorized form of name* and *variant form of name*, which might more traditionally be used to describe data elements found in an authority record. The working group agreed to this terminology in recognition of authority files in which all forms of name recorded in the authority record are treated as a cluster with none of the forms being designated as an *authorized form of name*.
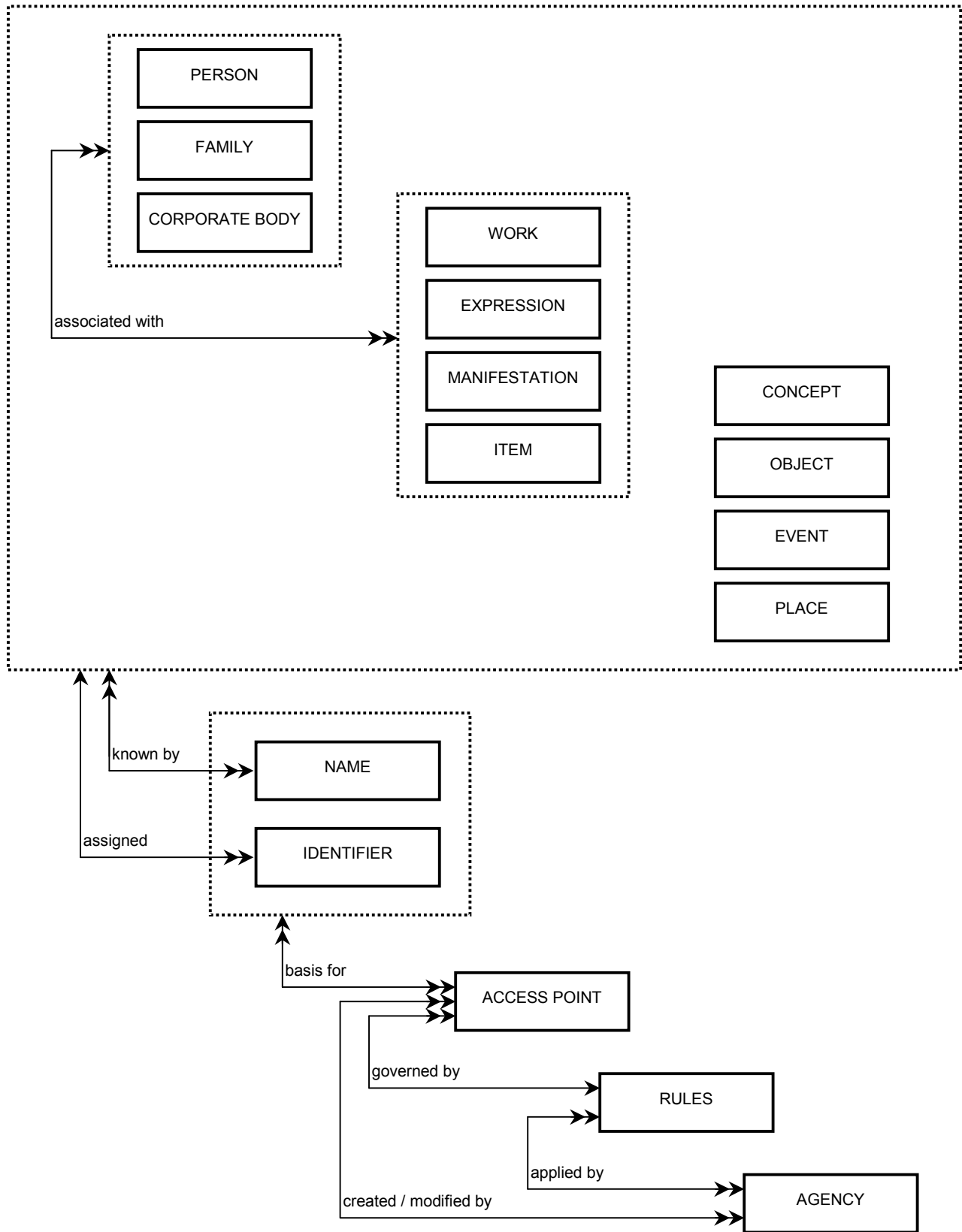
Figure 1: Current FRAR Entity-Relationship Model

To relate the more general form of the model to one that is aligned more closely with traditional library authority files and to the IFLA *Guidelines for Authority Records and References*, the group has included a pair of diagrams (and accompanying text) as an Appendix.

This first diagram (Figure 2A) is the equivalent of the upper portion of the more general model.

The second diagram (Figure 2B) expands the lower portion of the more general model and focuses on the formal or structural entities that come into play when a ***name*** or ***identifier*** is used to formulate an ***access point*** and the access point is subsequently registered in an authority file as an ***authorized heading*** or a ***variant heading*** in an ***authority record*** or ***reference record***, or as an ***explanatory heading*** in a ***general explanatory record***. Also included in this second diagram are the two entities that are instrumental in determining the content and form of headings, references, and records—***rules*** and ***agency***.
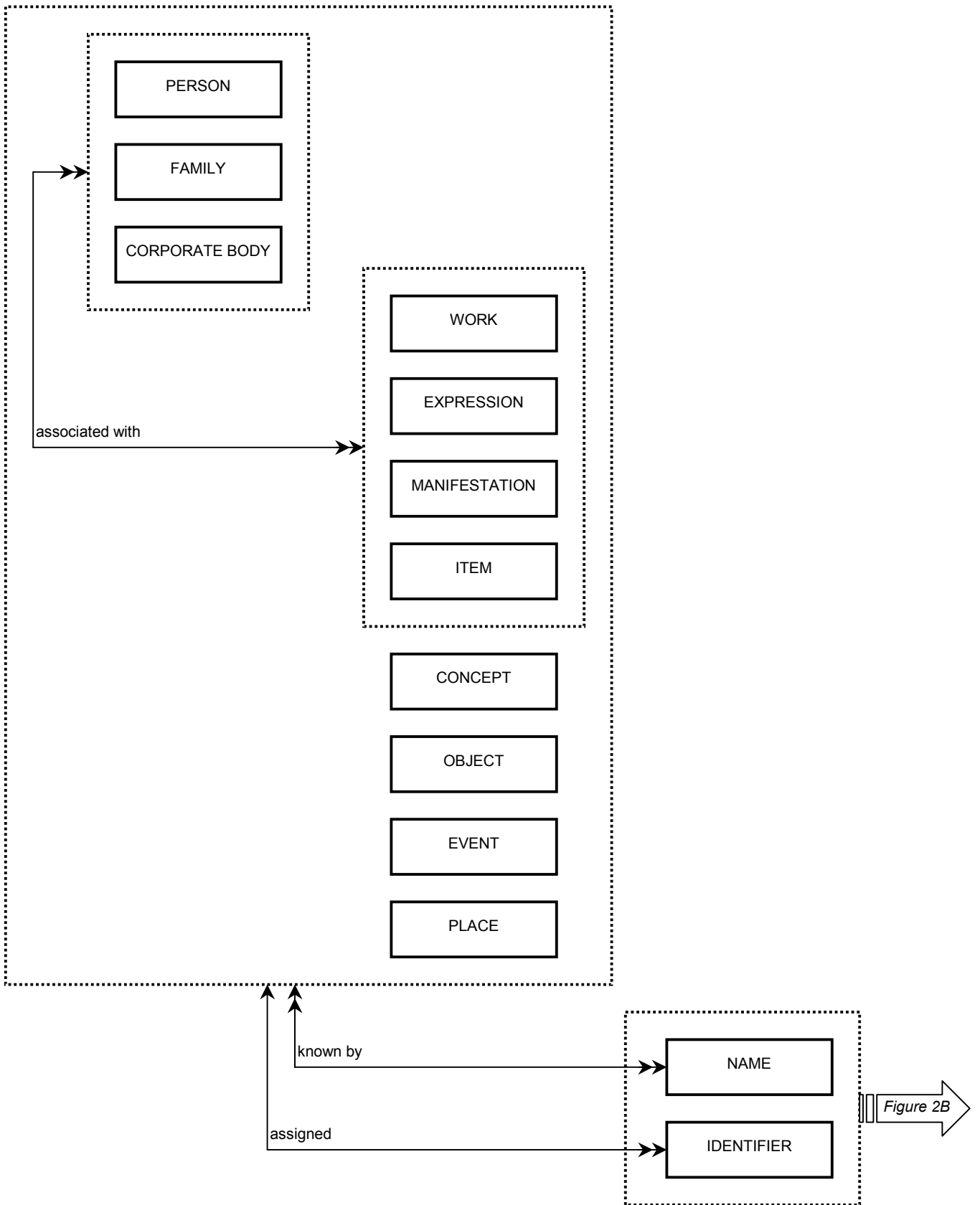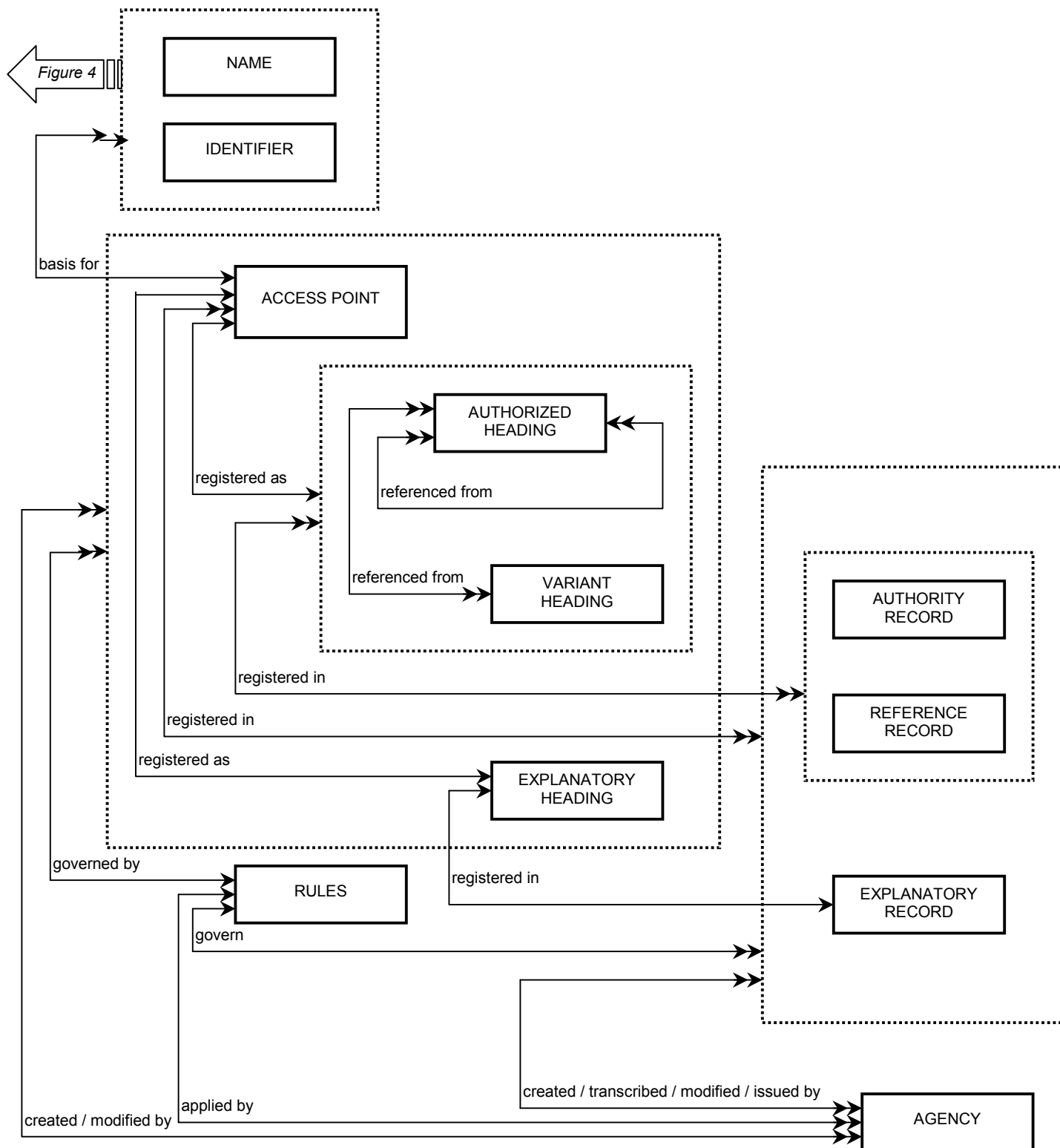
Figure 2A: Entity Names and Identifiers   10

Figure 2B: Access Points and Authority Records in a Library Context
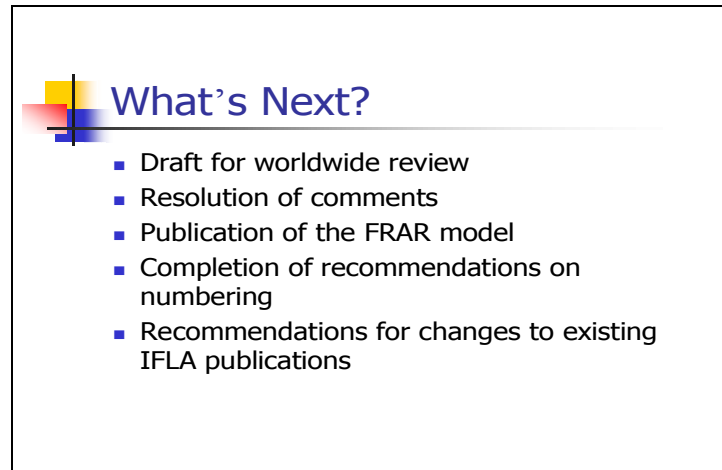
The entities depicted in the upper half of Figure1 (*person*, *family*, *corporate body*, *work*, *expression*, *manifestation*, *item, concept, object, event,* and *place*,) are bibliographic entities. As such, they reflect intellectual constructs or concepts that are integral to the rules used to create library catalogues, and what is perceived as a specific instance of a particular entity type may vary from one set of rules to another. Under some cataloguing rules, for example, authors are uniformly viewed as real individuals, and consequently specific instances of the bibliographic entity *person* always correspond to individuals. Under other cataloguing rules, however, authors may be viewed in certain circumstances as establishing more than one bibliographic identity, and in that case a specific instance of the bibliographic entity *person* may correspond to a persona adopted by an individual rather than to the individual himself. Similarly, most cataloguing rules require the establishment of new heading for a corporate body each time the body changes its name.

The various ways in which bibliographic entities are treated by different sets of cataloguing rules becomes even more complex when one considers similar models that might be developed to reflect practices in archives, museums, and rights management organizations. To the extent that practices in those sectors differ from those in the library sector (for example with respect to the recognition of separate "bibliographic identities" established by individuals and groups), there is the potential for asymmetric relationships between the entities on which library authority records are centred and those on which records created in other sectors are centred. Where those asymmetric relationships exist, there is, in turn, the potential for assuming that a specific instance of an entity recognized in one sector is the same as a specific instance of a similar entity recognized in another sector when in fact it is not.

Although the authority files created by archives, for example, center on entities referred to as persons, families, and corporate bodies, it is unlikely that those entity types as defined in an archival context would parallel directly the similarly named entities in the library model. Concepts reflecting the cataloging practices of libraries, such as "bibliographic identity", are unlikely to have a direct parallel in archival practices.

Hence, in an archival context, it is unlikely that one individual would be recognized as two or more persons, as may be the case in a library context. Similarly, in rights management organizations, the entity referred to as a work may be defined quite differently than in a library context, given that the function of the rights management organization relates directly to the work as a legally defined entity associated with copyright law, whereas in a library context the work is seen from a different perspective.

What's Next?

- Draft for worldwide review
- Resolution of comments
- Publication of the FRAR model
- Completion of recommendations on numbering
- Recommendations for changes to existing IFLA publications

What's next for the Working Group?

The next goal for the Working Group is to complete work on the draft functional requirements document so that it can be made available for worldwide review. Following that review, the group must, of course, respond to comments received and make needed revisions.

Then, we must return to the issue of numbering before we can complete our work. It is our intention to produce a separate document on this issue.

It has also become clear during the Working Group's discussions that, as a result of the analysis that we have undertaken, revisions to some existing IFLA publications may be necessary. Thus far, we have identified *Guidelines for Authority Records and References*, *Mandatory Data Elements for Internationally Shared Resource Authority Records,* and the *UNIMARC Manual - Authorities Format* and there may be others for which we need to recommend changes.

I encourage you to watch for announcements of future reviews and to help us complete these important tasks. The FRANAR Working Group got its start because the FRBR Study Group recognized the need to extend that model to cover authority data. Just as FRBR has changed how we think about bibliographic data, we hope that our work will bring a clearer understanding of authority data and its relationships to the catalog.

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[1] Functional requirements for bibliographic records : final report / IFLA Study group on the Functional Requirements for Bibliographic Records. München : K.G. Saur, 1998, p. 5

[2] For further information about this aspect of the Working Group's charge, see: Françoise Bourdon. Functional requirements and numbering of authority records (FRANAR): to what extent authority control can be supported by technical means? In: *67th IFLA General Conference and Council, August 16th-25th, 2001, Boston, USA* [on line]. The Hague: International Federation of Library Associations and Institutions, 2001. Available from World Wide Web: http://www.ifla.org/IV/ifla67/papers/096-152ae.pdf; and Tom Delsey, "Authority Records in a Networked Environment," *International Cataloguing and Bibliographic Control*, 33, no. 4 (2004), p. 71-74.

[3] Guidelines for authority records and references / revised by the Working Group on GARE Revision. Second edition. München : K.G. Saur, 2001. p. 2.

[4] For further discussion of previous versions of the FRAR entity relationship model, see: Glenn Patton, "FRANAR: A Conceptual Model for Authority Data," *Cataloging & Classification Quarterly* 38, no. 3/4 (2004), p. 91-104, and Glenn Patton, "Extending FRBR to Authorities," *Cataloging & Classification Quarterly*, 39, no. 3/4 (2005), p. 39-48.

[5] The description of the entity-relationship models is adapted from text prepared for the Working Group by Tom Delsey.