FRAD: the bright new future?
Part 2

• Helsinki 29.11.2007
• Eeva Murtoomaa
• National Library of Finland
Functional Requirements for Authority Data, FRAD

- FRBR … ”the need to extend the model … to cover authority data”

- IFLA Working Group on Functional Requirements and Numbering of Authority Records, FRANAR was established in 1998

- world-wide review in 2005 and 2007
FRAD, Functional Requirements for Authority Records

Number to identify entities (ISADNs – International Standard Authority Data Numbers) / prepared for the IFLA Working Group on Functional Requirements and Numbering of Authority Records by Barbara B. Tillett; edited by Glenn E. Patton

ISO TC 46/SC 9
ISNI, International Standard Name Identifier
Members of the IFLA Working Group on Functional Requirements and Numbering of Authority Records

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Glenn Patton, chair, USA
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Hartmut Walravens, Germany
Mirna Willer, Croatia

Consultant
Tom Delsey, Canada
conceptual model is designed

• to analyse functional requirements of authority data that is required to support authority control

• to provide a frame of reference for relating the data that are recorded in authority records to the needs of the users of those records

• to assist international sharing and use of authority data both within the library sector and beyond
who are the users?

- the users of the authority data include both
  - the authority data creators
  - the end users
- who use the authority information either through direct access to authority files
- or
- indirectly through the controlled access points and reference structures in library catalogues, national bibliographies, etc.
user tasks

FRBR  to find  FRAD  to find
to identify to identify
to select an entity to contextualize
to obtain access to justify
to the entity described
**USER TASKS**

*to find* an entity or set of entities corresponding to the user’s stated search criteria

*to identify* an entity i.e. to conform that the entity represented corresponds to the entity sought, and to distinguish between two or more entities with similar characters

*to contextualize*: to place a person, corporate body, work etc. in context and to clarify different kind of relationships between those entities

*justify*: document the reason for choosing the name or form of name
<table>
<thead>
<tr>
<th>Attributes</th>
<th>Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Known by&quot; relationship</td>
<td>Dates of person</td>
</tr>
<tr>
<td>&quot;Assigned&quot; relationship</td>
<td>Title of person</td>
</tr>
<tr>
<td></td>
<td>Other designation associated with the person</td>
</tr>
<tr>
<td></td>
<td>Real name relationship    *</td>
</tr>
<tr>
<td></td>
<td>Pseudonym relationship    *</td>
</tr>
<tr>
<td></td>
<td>Secular name relationship name</td>
</tr>
<tr>
<td></td>
<td>Name in religion relationship name*</td>
</tr>
<tr>
<td></td>
<td>Earlier name relationship name*</td>
</tr>
<tr>
<td></td>
<td>Later name relationship name*</td>
</tr>
<tr>
<td></td>
<td>Alternative linguistic form relationship name*</td>
</tr>
<tr>
<td></td>
<td>Other variant name relationship name*</td>
</tr>
</tbody>
</table>
e.g. TO CONTEXTUALIZE an entity

FAMILY

attributes
relationships

Places associated with family
History of family
Genealogical relationship ṃ family
Alternative linguistic form relationship ṃ name
entity-relationship methodology

• the first step is to identify the entities, that are of interest to the users

• to identify the relationships between those entities

• to identify the attributes of each entity

• at a more detailed level also

• to depict the relationships that may exist between instances of entities
entities

- work, expression, manifestation, item
- concept, object, event, place
- person, family, corporate body
- name
- identifier
- controlled access point (constructed name)
- rules
- agency
entity

- key object of interest to the user e.g.
- Astrid Lindgren
search: Astrid Lindgren

- Astrid Lindgren Memorial Award
- **Hej Astrid!**
- 21.08.2007 Lese- und Ausstellungsprojekt zum 100. Geburtstag von *Astrid Lindgren*
- Event at *Astrid Lindgren Elementary School*
  September 8, 2005
- *Astrid Lindgren Association* which is an organization in operation to have *The Astrid Lindgren Club.*
search: Astrid Lindgren

Astrid Lindgren
entity

relationship

name entity
Astrid Lindgren
bibliographic entities

names and/or identifiers

Ericsson, Anna
Lin'gedeng, Aosirui
Lin'gelun, Asitelide
Limdgren, Astrid
...
ID-number 999 999 999 999-7

controlled access points
Lindgren, Astrid, 1907-2002

ENTITY-RELATIONSHIP DIAGRAM’
fundamental basis for the conceptual model
Lindgren, Astrid, 1907-2002
Lindgren, Astrid, 1907-2002

Lindgrenová, Astrid, 1907-2002
Lindgrenova, Astrid, 1907-2002
Lindgren, Astrid, 1907-2002
Lindgren, Astrid, 1907-2002
Lindgren, Astrid, 1907-2002

attributes:
14.11.1907
28.1.2002
author
female
Vimmerby
Stockholm
Sweden
Swedish
Children’s literature
Right Livelihood Award 1994
H.C.Andersen Award

NAME AUTHORITY FILE

Lindgren, Astrid

• relationships between an entity and specific instances of the "name" by which that entity is known

an authority record is defined as the aggregate of information about an instance of an entity whose name is used as a controlled access point for bibliographic records in a library catalogue or bibliographic file
<table>
<thead>
<tr>
<th>Name</th>
<th>Birth Year</th>
<th>Death Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lindgren, Astrid</td>
<td>1907-2002</td>
<td></td>
</tr>
<tr>
<td>Lindgrenová, Astrid</td>
<td>1907-2002</td>
<td></td>
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<td>Lindgrena, Astrid</td>
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<td>1907-2002</td>
<td></td>
</tr>
<tr>
<td>Lindgrin, Astrid</td>
<td>1907-2002</td>
<td></td>
</tr>
<tr>
<td>Rindoguren, Asutoriddo</td>
<td>1907-2002</td>
<td></td>
</tr>
<tr>
<td>Rinduguren, Asut'uridu</td>
<td>1907-2002</td>
<td></td>
</tr>
<tr>
<td>Lingelun, Asitelide</td>
<td>1907-2002</td>
<td></td>
</tr>
<tr>
<td>Lindgrenová, Astrid</td>
<td>1907-2002</td>
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<tr>
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<td>1907-2002</td>
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<td>1907-2002</td>
<td></td>
</tr>
</tbody>
</table>

**NAME AUTHORITY FILE**

Lindgren, Astrid, 1907-2002

**management of the identification of the entity,**

which is known by one or several names, name variations, name forms etc.

As a result users are able to get at the same time the aggregate of names or name forms related to the entity and identify the entity.
Lindgren, Astrid, 1907-2002

Relationships

*earlier name*
Ericsson, Astrid

*variant name*
Ericsson, Anna

*later name*
Lindgren, Astrid

*variant names and alternative linguistic forms*
Lindgren, Astrid (Anna Emilia)
Lin'gedeng, Aosirui
Lin'gelun, Asitelide
Limdgren, Astrid
Rindüğüren, Asūṭũridū

Authority record:
authorized form of name for the entity as the preferred form

variant forms of name and related names also used as controlled access points
Names and identifiers are treated as entities because this method allows more clarity in showing the relationships between the entities on which authority data are focused and the names and/or identifiers by which those entities are known and on which the controlled access points for those entities will be based.
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 instance 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.
Why persons, families, corporate bodies (bibliographic entities) and the names and identifiers are treated as entities?

- **for getting much more flexibility** in the controlled naming

- **for eliminating redundancies** that would occur if these entities were modeled as attributes

- because **the names** e.g. for the entities persons and corporate bodies **can be controlled in an authority record and linked to other authority records or to bibliographic records or holding records as needed**
attributes

• are defined at a "logical" level i.e. as characteristics of the entities to which they belong

• in certain cases, the characteristics of a given entity may change over time
  • (e.g. the field of activity in which a person is engaged).

• but, this model does not make an explicit distinction between such attributes and those that are not subject to change
entity: person

attributes of a person
- dates associated with the person
- title of person
- other designation associated with the person
- gender
- place of birth
- place of death
- country
- place of residence
- affiliation
- address
- language of person
- field of activity
- profession/occupation
- bibliography/history

entity: name

attributes of a name
- type of name
- scope of usage
- dates of usage
- language of name
- script of name
- transliteration scheme of name

"known by" relationship
The "title of work" is treated as an attribute of the name by which that work is known. Through the relationship, however, the attributes of name and identifier function in the same way as if they were defined as attributes of the associated entity.
Relationships between persons, families, corporate bodies and works
<table>
<thead>
<tr>
<th>Entity Type</th>
<th>Sample Relationship Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person δ Person</td>
<td>Øpseudonymous relationship Øattributive relationship Øcollaborative relationship Øsibling relationship Øparent/child relationship</td>
</tr>
<tr>
<td>Person δ Family</td>
<td>Ømembership relationship</td>
</tr>
<tr>
<td>Person δ Corporate Body</td>
<td>Ømembership relationship</td>
</tr>
<tr>
<td>Family δ Family</td>
<td>Øgenealogical relationship</td>
</tr>
<tr>
<td>Corporate Body δ Corporate Body</td>
<td>Øhierarchical relationship Øsequential relationship</td>
</tr>
<tr>
<td>Work ð Work</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>≡ equivalence relationship</td>
<td></td>
</tr>
<tr>
<td>≡ descriptive relationship</td>
<td></td>
</tr>
<tr>
<td>≡ whole/part relationship</td>
<td></td>
</tr>
<tr>
<td>≡ accompanying relationship (part-to-part)</td>
<td></td>
</tr>
<tr>
<td>≡ sequential relationship</td>
<td></td>
</tr>
<tr>
<td>≡ derivative relationship</td>
<td></td>
</tr>
<tr>
<td>≡ shared characteristic relationship</td>
<td></td>
</tr>
</tbody>
</table>
relationships between persons

pseudonyms relationship

• under some cataloguing rules
• entity person as 1) real individual

• under other cataloguing rules
• 2) a specific instance of the bibliographic entity person may correspond to a persona adopted by an individual

• Person \(\leftrightarrow\) Persona

• The relationship between a persona Kristian Korppi and that person's real name Mika Waltari

• usually expressed in authority data through links between authorized names given to each entity (see also references) and/or information notes
relationships **between persons**

- Person A  Person B  Persona

- Mika Waltari  Armas J. Pulla  Kapteeni Leo Rainio

  shared pseudonym
other relationships between persons

• attributive relationships
• collaborative relationships
• sibling relationships
• parent/child relationships
relationships between persons and families

- **Membership relationship**
- The relationship between a person and a family of which the person is a member.
- **Example**
relationship between persons and corporate bodies

- Corporate Body fl \(\notin\) Person
- Group fl \(\ni\) Person
relationships **between families**

![Genealogical Relationship Diagram]

- **Progenitor Family**
- **Descendent Family**
- **Descendent Family**
- **Descendent Family**

*genealogical relationship*
relationships between corporate bodies

Hierarchical relationship
sequential relationship

Body A  Body B  Body C
sequential relationship

- Split Body

Body A

Body $A^1$

Body $A^2$
### Relationships between Names and Persons, Families, Corporate bodies, and Works

<table>
<thead>
<tr>
<th>Entity Type</th>
<th>Sample Relationship Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person ᵉ Name</td>
<td>real name relationship</td>
</tr>
<tr>
<td></td>
<td>pseudonym relationship</td>
</tr>
<tr>
<td></td>
<td>secular name relationship</td>
</tr>
<tr>
<td></td>
<td>name in religion relationship</td>
</tr>
<tr>
<td></td>
<td>official name relationship</td>
</tr>
<tr>
<td></td>
<td>earlier name relationship</td>
</tr>
<tr>
<td></td>
<td>later name relationship</td>
</tr>
<tr>
<td></td>
<td>alternative linguistic form relationship</td>
</tr>
<tr>
<td>Family ᵉ Name</td>
<td>alternative linguistic form relationship</td>
</tr>
<tr>
<td></td>
<td>other variant name relationships</td>
</tr>
</tbody>
</table>
Relationships between Names and Persons, Families, Corporate bodies, and Works

• Corporate Body ᵃ Name
  • expanded name relationship
  • acronym / initials / abbreviations relationship
  • pseudonym relationship
  • alternative linguistic form relationship
  • other variant name relationships

• Work ᵃ Name
  • alternative linguistic form relationship
  • conventional name relationship
  • other variant name relationships
Relationships between controlled access points

- Entity Type
- Access Point
- Δ Access Point

- Parallel language relationship
- Alternate script relationship
- Different rules relationship
- Name/corresponding subject term or
- Classification number relationship
- Name/identifier relationship

Relationships in this category may be made explicit by means of linking devices such as linking fields and control subfields.
some examples
<table>
<thead>
<tr>
<th>creator – work/expression -relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lindgren, Astrid, 1907-2002</td>
</tr>
<tr>
<td>work/expression</td>
</tr>
<tr>
<td>Jul i Bullerbyn [Text], 1963</td>
</tr>
<tr>
<td>Wikland, Ilon, 1930-</td>
</tr>
<tr>
<td>subject</td>
</tr>
<tr>
<td>udk:839.7-3(024.7)</td>
</tr>
</tbody>
</table>
Lindgren, Astrid, 1907-2002

work/expression
Jul i Bullerbyn [Text] Finnish


Wikland, Ilon, 1930-
**collocating function**

Lindgren, Astrid, 1907-2002

<table>
<thead>
<tr>
<th>Title</th>
<th>Language</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul i Bullerbyn</td>
<td>Danish</td>
<td>1963</td>
</tr>
<tr>
<td>Jul i Bullerbyn</td>
<td>Dutch</td>
<td>1980</td>
</tr>
<tr>
<td>Jul i Bullerbyn</td>
<td>Greenlandic</td>
<td>1978</td>
</tr>
<tr>
<td>Jul i Bullerbyn</td>
<td>Icelandic</td>
<td>1968</td>
</tr>
<tr>
<td>Jul i Bullerbyn</td>
<td>Japanese</td>
<td>1967</td>
</tr>
<tr>
<td>Jul i Bullerbyn</td>
<td>Lithuanian</td>
<td>1970</td>
</tr>
<tr>
<td>Jul i Bullerbyn</td>
<td>Norwegian</td>
<td>1964</td>
</tr>
<tr>
<td>Jul i Bullerbyn</td>
<td>Polish</td>
<td>1985</td>
</tr>
</tbody>
</table>
conclusion

• FRBR and FRAD support together the idea to have access to the content of the works in the language, script and form, which is most convenient for the user

• Using this kind of data modelling technique
  • it is possible to provide data structure, which is as much as possible independent of today’s formats and systems

• and as such open for future systems
• The WG decided to replace the structured examples and GARR formatting with textual statements that describe the situation which the example illustrates. For example, the current example for “Secular name relationship” in section 5.4.1 Relationship between Persons and Names will be changed to the phrase “The relationship between the pope known by the name ‘Pope John XXIII’ and that pope’s secular name ‘Angelo Giuseppe Roncalli.’”
Relationships between persons and names

• For example, the French working group has noted that several of the relationships in section 5.4.1 \textit{Relationship between Persons and Names} (particularly the “Earlier name” and “Later name” relationships) are not Person-to-Name relationships but are really Name-to-Name relationships. The Working Group has not fully resolved this issue pending the recasting of examples described above.