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To: Joint Steering Committee for Development of RDA

From: Tom Delsey, RDA Editor

Subject: RDA Database Implementation Scenarios

Attached are updated versions of the RDA database implementation scenarios. The scenarios depicted are intended simply to illustrate some of the potential implementations of RDA data in various database structures.

RDA Implementation Scenarios

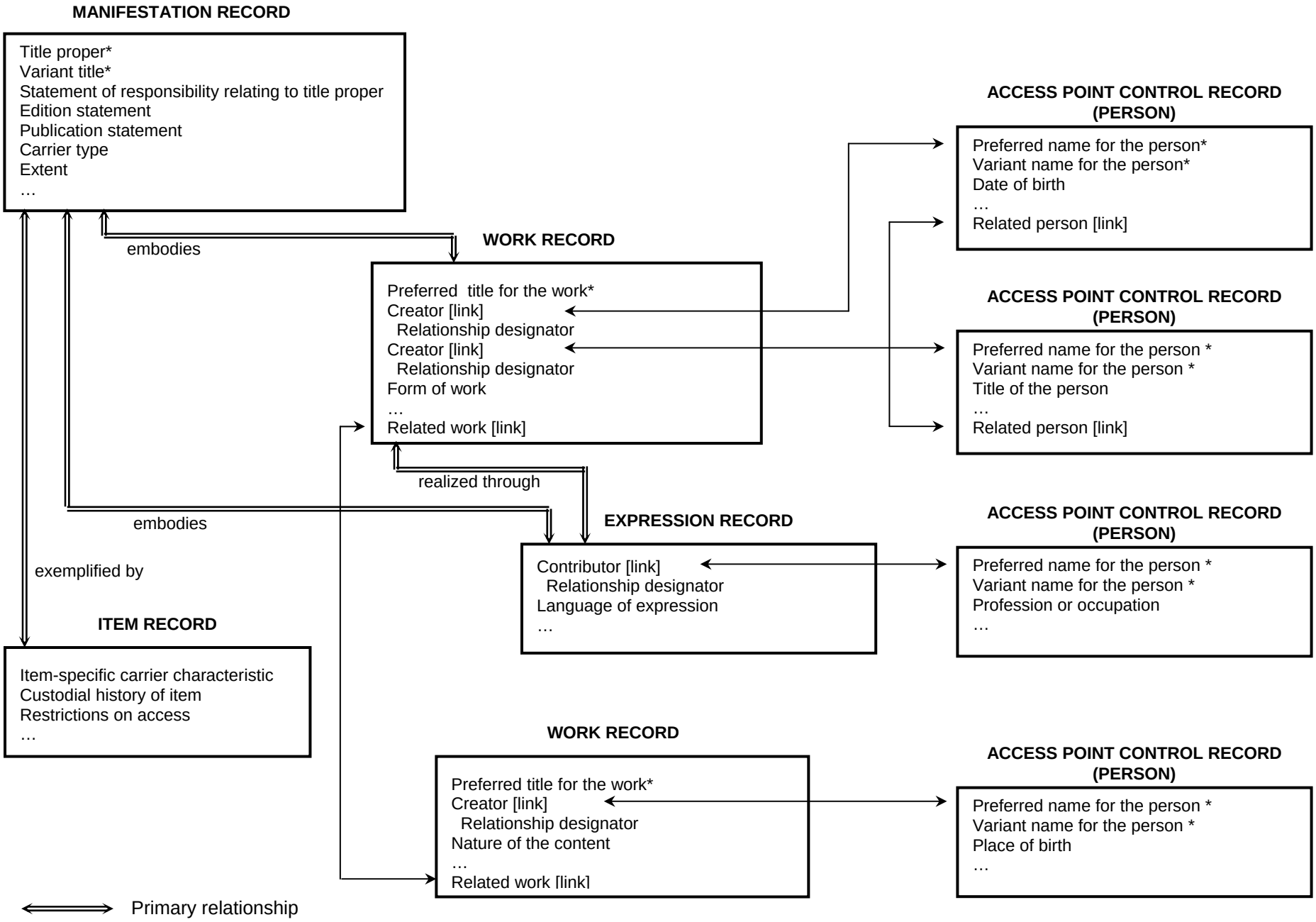
The attached diagrams illustrate three potential implementation scenarios for RDA data.

In the first scenario, RDA data are stored in a relational or object-oriented database structure that mirrors the FRBR and FRAD conceptual models. Descriptive data elements are stored in records that parallel the primary entities in the FRBR model: work records, expression records, manifestation records, and item records. Data elements used for access point control are stored in records that are centred on the primary entities in the FRAD model: persons, families, corporate bodies, etc. Data elements indexed as access points (both controlled and uncontrolled) are marked with an asterisk. Relationships between the primary FRBR entities are reflected through links from one record to another. For example, the link from the manifestation record to the work record reflects the primary relationship between the manifestation and the work that it embodies. Similarly, a relationship between one work and another (e.g., a derivative relationship) is reflected in a link from one work record to another. Relationships between the primary FRBR entities and a person, family, corporate body, etc., are reflected through links from work records, etc., to access point control records for persons, etc. The relationship between one person and another, etc., is reflected in a link from one access point control record to another.

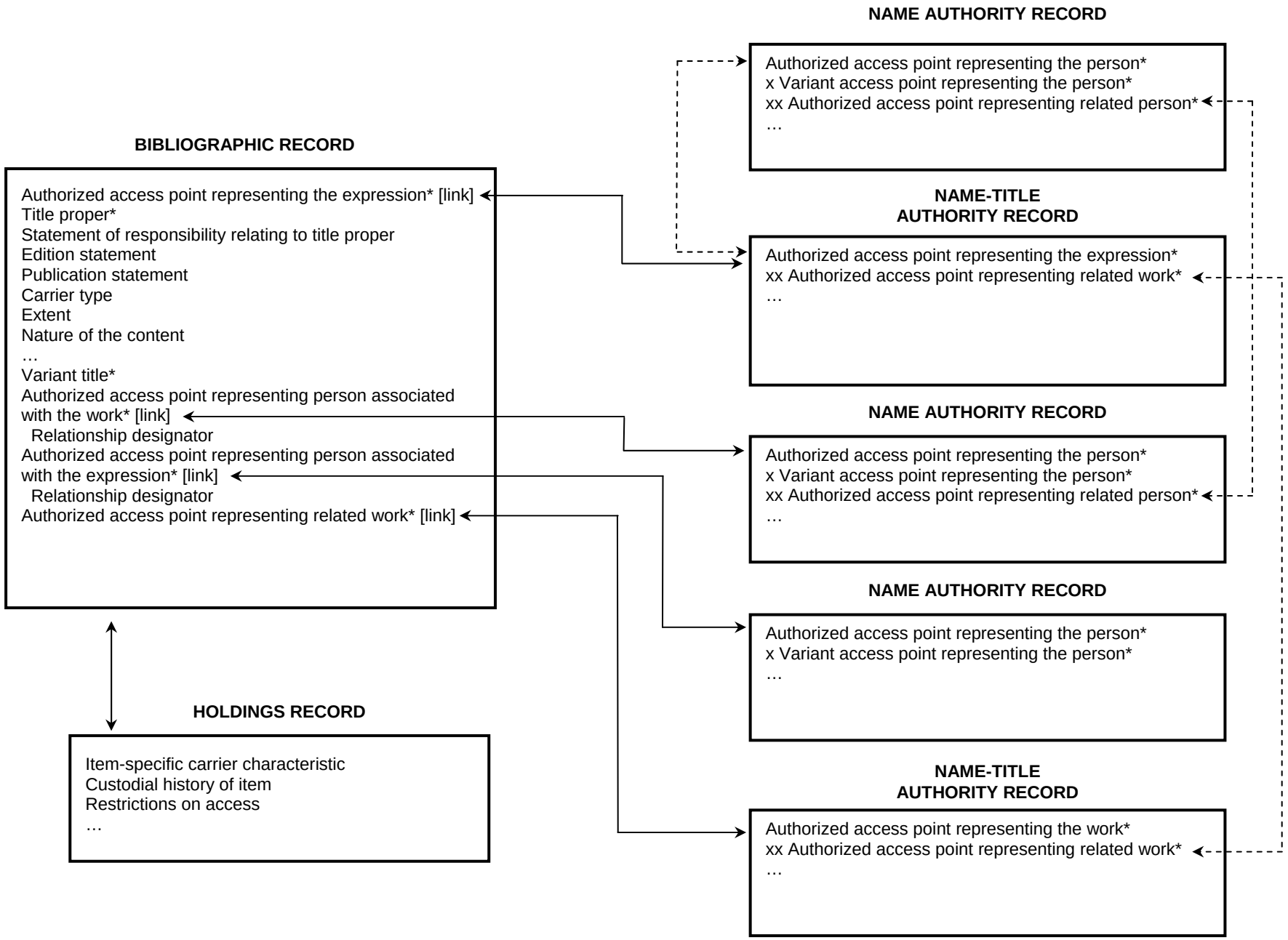
In the second and third scenarios, RDA data is stored in database structures conventionally used in library applications. In those structures, data is stored in bibliographic records and in authority records, and in some implementations in holdings records as well (as shown in scenario 2). Descriptive data elements are stored in bibliographic records. In implementations where bibliographic files and authority files are linked (scenario 2), the bibliographic record also contains links to authority records for persons, families, corporate bodies, etc., associated with the work, etc., embodied in the resource described. In implementations where bibliographic files and authority files are not linked (scenario 3), access points representing persons, families, corporate bodies, etc., associated with the work, etc., embodied in the resource described are stored in the bibliographic record along with the descriptive data. In both types of implementation, variant access points and other data used for access point control are stored in authority records.

RDA data can be readily mapped to any one of the implementation scenarios (or to variations on the three scenarios illustrated). In all implementations the data will support the functional objectives that RDA is designed to fulfil. The data structures used to store the data and to reflect relationships, however, will have a bearing both on the efficiency of data creation and maintenance, and on the ease and effectiveness with which users are able to access the data and navigate the database. For example, the use of records for works and expressions in the relational and object-oriented database structures ensures access not only to all works and expressions associated with a particular person, etc., but to all related works (adaptations, etc.) as well, regardless of whether the name of that person is used to construct the authorized access points representing those works or not.

Scenario 1: Relational / object-oriented database structure



Scenario 2: Linked bibliographic and authority records



Scenario 3: 'Flat file' database structure (no links)

BIBLIOGRAPHIC RECORD

Authorized access point representing the expression*
Title proper*
Statement of responsibility
Edition statement
Publication statement
Carrier type
Extent
Nature of the content
…
Item-specific carrier characteristic
Custodial history of item
Restrictions on access
…
Variant title*
Authorized access point representing person associated with the work*
  Relationship designator
Authorized access point representing person associated with the expression*
  Relationship designator
Authorized access point representing related work*

NAME AUTHORITY RECORD

Authorized access point representing the person*
x Variant access point representing the person*
xx Authorized access point representing related person*
…

NAME-TITLE AUTHORITY RECORD

Authorized access point representing the expression*
xx Authorized access point representing related work*
…

NAME AUTHORITY RECORD

Authorized access point representing the person*
x Variant access point representing the person*
xx Authorized access point representing related person*
…

NAME AUTHORITY RECORD

Authorized access point representing the person*
x Variant access point representing the person*
…

NAME-TITLE AUTHORITY RECORD

Authorized access point representing the work*
xx Authorized access point representing related work*
…