Name Authority Control: from Conceptual Model to Linked Data

Content and Objectives of the Lecture and Group Work on the Lecture Topic:

Libraries maintain and provide for their users verified and authorized metadata, which value is authenticated by internationally agreed standards. Such approach to serving users’ needs should be continued by designing next generation libraries’ services – services adapted to the Semantic Web and Linked Data environment. The goal of this lecture is to present issues related to processes of updating the current international standards to the requirements of the Semantic Web.

The concept, standards and techniques, and the envisioned function of the Semantic Web and Linked Data, as well as IFLA standards’ role in the “Universal Bibliographic/Web Control” will be briefly presented; for background readings please consult the appended list.

The lecture will focus on the research on representing IFLA standards for name authority control in the de facto standard of the Semantic Web (W3C) – RDF (Resource Description Framework). It will discuss the positioning of UNIMARC format for authorities (UNIMARC/A) in relation to UNIMARC format for bibliographic data, and conceptual models FRAD (Functional Requirements for Authority Data) and FRBR (Functional Requirements for Bibliographic Records) in the process of representing UNIMARC/A elements (fields, subfields, character positions) in RDF.

RDF statement (in MARC context, a record’s segment: content designator – field, indicator, subfield, and (bibliographic/meta) data for a described resource, e.g., 205##$a3rd ed.) is defined as a, so called, triple statement. The structure of a triple is: subject – predicate – object, with the subject identifying what the statement is about (the thing in general, e.g., a resource – a book), the predicate identifying the specific aspect of the subject being described (the relation between subject and object, which always has to be defined as two-directional, e.g., a resource has edition statement), and the object identifying or presenting the value of that aspect (e.g., 3rd ed.; the object can be a value which is further identified by a controlled vocabulary, such as a personal name authorized by a specific authority file, or a literal string, such as “3rd ed.” or a personal name without external authentication).
The issues that will be discussed are: the question of UNIMARC/A namespace (does
UNIMARC/A require its own identified “space” as an IFLA branded standard), what is, i.e., what
should be defined as an RDF class (subject of a triple) for UNIMARC/A (UNIMARC types of
entities or FRBR/FRAD entities, such as person, family, corporate body), what are RDF
properties (predicate of a triple) for UNIMARC/A (UNIMARC fields, subfields etc. or
FRBR/FRAD attributes and relationships), and can UNIMARC/A re-use existing FRAD/FRBR
namespaces or should it represent all UNIMARC/A elements and link to existing FRAD/FRBR
classes and properties as appropriate. The additional asset of this exercise is the re-evaluation of
IFLA models and standards themselves, as the work on their representation in RDF informs back
on their accountability in presenting the bibliographic/web universe.

Assignment:

It is expected that student understands the basic concept of the name authority control, has
acquaintance with FRAD/FRBR models, and an insight into the 3rd edition of UNIMARC
Authorities format. The student is encouraged to bring examples of cases of personal names
which call for special attention of authority control such as variant forms of a personal name due
to their use through time and/or in different languages/scripts, changes of names in different
functions of a person, pseudo-names, etc.

Readings:

http://www.w3.org/History/1989/proposal.html

Berners-Lee, Tim (with Mark Fischetti). Weaving the Web: The Past, Present and Future of the

Berners-Lee, Tim; James Hendler; Ora Lassila. The Semantic Web. // Scientific American, 17

Bizer, Christian; Tom Heath, Tim Berners-Lee. Linked data – the story so far. // International

Dunsire, Gordon. UNIMARC, RDA and the Semantic Web. // International Cataloguing and
Bibliographic Control (ICBC), vol. 39, no. 2 (April/June 2010). Based on a paper presented to the
World Library and Information Congress: 75th IFLA General Conference and Assembly, 23-27
August 2009, Milan, Italy. Also available at: www.ifla.org/files/hq/papers/ifla75/135-dunsire-
en.pdf

Dunsire, Gordon; Mirna Willer. Standard library metadata models and structures for the Semantic
http://dx.doi.org/10.1108/07419051111145118

Dunsire, Gordon; Mirna Willer. UNIMARC and linked data. To be presented to the World
Library and Information Congress: 77th IFLA General Conference and Assembly, 13-18 August
2011, San Juan, Puerto Rico; available at:


Open Metadata Registry. Available at: http://metadataregistry.org/


