Appendix E
Mapping of MARC Data Elements to User Tasks

Purpose

This table maps the data elements contained in the MARC format to a defined set of user tasks. The mapping is part of a functional analysis of the MARC format that is intended to serve as a means of establishing a frame of reference for future development of the format. This segment of the analysis is designed to identify the specific user task(s) that each data element defined in the format is expected to support.

Scope

The table lists all data elements defined in the MARC bibliographic and holdings formats, including data elements contained in the leader, and in field indicators and control subfields, as well as data elements contained in the variable control fields and variable data fields. Each data element is listed with the entity and logical attribute or relationship to which it corresponds (as defined in the extended model that was developed for this project), and is then mapped to one or more of the defined user tasks.

Symbols

≈	A wavy equals sign following an entity name indicates an inexact correspondence between the MARC data element and the entity attribute or relationship defined in FRBR or AACR. The anomaly is explained in an accompanying footnote.
⇨	An arrow preceding an entity name indicates that the MARC data element pertains to an attribute of a related entity, not the entity that is the primary focus of the record, or to a relationship between that entity and a related entity.
?	A question mark following the name of an entity indicates that clarification is required on the nature or scope of application of the MARC data element before its correspondence to the extended model can be confirmed.
???	A set of three question marks in place of the name of an entity or the attribute/relationship indicates that further analysis is required before the correspondence of the data element to the extended model can be established.
(33)	Numbers in parentheses following information in the *Attribute/Relationship* field refer to numbered notes.
*	An asterisk following information in the *Attribute/Relationship* field indicates that the attribute or relationship was not in the model defined in the original IFLA study but in the extended model described in *Functional Analysis of the MARC 21 Bibliographic and Holdings Formats.*

Terminology

The names of MARC data elements are taken directly from the format documentation. In some cases they have been abbreviated or shortened to fit within the table layout.

The names of entities, attributes, and relationships are taken directly from the extended model developed for this project. In some cases they have been abbreviated or shortened to fit within the layout of the table.

User Tasks

The mapping of data elements to user tasks reflects assumptions made in the design of the format as to the expected use of a data element, either in the automated processing of the data or in the course of consultation by a user. The user tasks defined for the purposes of this analysis are divided into three broad categories: (1) tasks pertaining to resource discovery, (2) tasks pertaining to resource use, and (3) tasks pertaining to data management. The twelve tasks are defined as follows:

Resource Discovery

Search   Search for a resource corresponding to stated criteria (i.e., to search either a single entity or a set of entities using an attribute or relationship of the entity as the search criteria).*

Identify   Identify a resource (i.e., to confirm that the entity described or located corresponds to the entity sought, or to distinguish between two or more entities with similar characteristics).

Select   Select a resource that is appropriate to the user's needs (i.e., to choose an entity that meets the user's requirements with respect to content, physical format, etc., or to reject an entity as being inappropriate to the user's needs).

Obtain   Access a resource either physically or electronically through an online connection to a remote computer, and/or acquire a resource through purchase, licence, loan, etc.

Resource Use

Restrict   Control access to or use of a resource (i.e., to restrict access to and/or use of an entity on the basis of proprietary rights, administrative policy, etc.).

Manage   Manage a resource in the course of acquisition, circulation, preservation, etc.

Operate   Operate a resource (i.e., to open, display, play, activate, run, etc. an entity that requires specialized equipment, software, etc. for its operation).

Interpret   Interpret or assess the information contained in a resource.

Date Management

Identify   Identify a record, segment, field, or data element (i.e., to differentiate one logical data component from another).

Process   Process a record, segment, field, or data element (i.e., to add, delete, replace, output, etc. a logical data component by means of an automated process).

Sort   Sort a field for purposes of alphabetic or numeric arrangement.

Display   Display a field or data element (i.e., to display a field or data element with the appropriate print constant or as a tracing).

*Note: Generalized key word searching is not reflected in the mapping. Only data elements used as part of a formal primary search key (e.g., names, titles, subject terms) are mapped to the "search" task. Data elements used as secondary search keys (e.g., elements used to qualify a primary search key or to narrow a results set) are mapped to the "select" task.

References

MARC 21 Format for Bibliographic Data (1999 edition, updated October 2002)
–http://www.loc.gov/marc/bibliographic/

MARC 21 Format for Holdings Data (2000 edition, updated October 2002)
–http://www.loc.gov/marc/holdings/