

Reflections and Plans for Moving Forward

Submitted by
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October 17, 2004

As we prepare for our meeting in Washington, DC on October 25, I would like to propose a strategy to move forward in Working Group 10 (WG 10) to develop an abstract holdings schema and a corresponding XML schema. In the past few months, I have faced a number of challenges in moving this work forward. As I have reflected on this, I concluded that we need to be guided by answers to several key questions to begin the process of reviewing/revising the existing Z39.50 abstract holdings schema. The face-to-face meeting on October 25 provides an opportunity for discussing these questions and proposing answers.

The charge to the WG 10 included the following characteristics that the abstract schema and associated XML schema should emphasize:

- Functionality
- Clarity
- Simplicity
- Compatibility, with:
 - existing version (1.4)
 - other initiatives: e.g. MODS
 - ISO 10324 Holdings statements -- Summary level; ANSI/NISO Z39.71-1999 Holdings Statements for Bibliographic Items
 - MARC format
 - The respective roles of, and relationship between, the abstract and XML schemas
 - XML style

In developing an appropriate and useful schema, we may find that some of these emphases are in tension or conflict (e.g., simplicity and functionality). It may be that one or more of these emphases will be of higher priority for consideration. That priority will likely be determined by a frank discussion of requirements.

The current abstract holdings schema was developed in the context of Z39.50 to enable the exchange of holdings information between systems. The schema was also informed by the MARC format for holdings data. It reflects the developers' interest in providing very detailed holdings information as well as status information at a piece level. The application and information landscape continues to change. For example, work is underway by NISO and EDItEUR on serials holdings messages in XML.

One of the first concerns we should address is identifying the applications that could potentially use holdings data. Therefore, I suggest we begin our discussion with questions such as:

- What are the likely applications that will be processing holdings data?
- What holdings data are required by these applications?
- What is the level of detail and structure in the data that these applications require?
- To what extent do organizations have the data in a form that can be used to populate records at the level of detail and structure required by the applications?

It may be that various applications require different levels of detail and structure, and it will be an engineering decision whether to develop a master holdings schema from which sub-schemas can be

derived, or whether to provide for the development of separate schemas specific for the applications without regard to compatibility.

Having an understanding of the applications and requirements will provide a context for reviewing the current Z39.50 abstract holdings schema. The goal of the review should be to determine the extent to which the current schema addresses the requirements. During the meeting, we will take time to begin this review.

During the summer, one of my research assistants attempted to map the MARC 21 Format for Holdings Data content designation to the Z39.50 Abstract Holdings Schema elements. In part, we undertook this exercise because of the statement in the WG 10 charge to address compatibility with the MARC format. The documents related to that review are available on the project website under Resources <<http://www.unt.edu/xmlholdings/Resources.html>>, specifically:

Version of MARC 21 Holdings Format with all content designation listed, definitions, and mapping to the Z39.50 holdings schema elements. Available in Excel file or PDF file.

<http://www.unt.edu/xmlholdings/Resources/MARCHoldingsFieldListOct2004Moen.xls>

<http://www.unt.edu/xmlholdings/Resources/MARCHoldingsFieldListOct2004Moen.pdf>

Another document presents a slightly more condensed view of the mapping from MARC 21 Holdings Format to the Z39.50 holdings schema elements: *A Mapping from MARC 21 Holdings Format to Z39.50 Abstract Holdings Schema Elements*, available in a Word file at:

http://www.unt.edu/xmlholdings/Resources/MappingMARC_Z3950HoldingsSchema17Oct2004.doc

We also developed a document that shows the mapping from the Z39.50 abstract holdings schema elements to MARC; the document also indicates the use of the schema elements by the danZIG profile. You can review the document:

Z39.50 Holdings Schema, Version 1.4 (November 2002) with a mapping to MARC 21 Content Designation and indication of use by danZIG Profile

http://www.unt.edu/xmlholdings/Resources/HoldingsSchema1.4_TableOfElements.pdf

The mappings in the documents are in draft form, reflecting on our best effort to understand the elements in the schema and the MARC 21 format and their common semantics. Our exercise, however, pointed out another deficiency with the current holdings schema – the lack of complete semantics for each of the elements. Part of the effort with the MARC 21 mapping in the Excel spreadsheet was to capture the definitions from the MARC content designation as a point of departure for definitions of holdings schema elements. Poul Henrik Jorgensen has suggested that we consider a formal ontology for the relevant holdings data elements and possibly specifying the ontology by means of the W3C OWL Web Ontology Language. I believe a discussion on specifying semantics to be an important task for our meeting.

Last week I was in Halifax, Nova Scotia at a conference of library technologists and others. I took advantage of a “Birds of a Feather” session to discuss with about 10 people their ideas and thoughts about the requirements for interchanging and acting on holdings data. Many of the participants deal with the need to search remote library catalogs, retrieve holdings data, initiate interlibrary loan requests with data retrieved, etc. That discussion pointed out the challenges of building consensus on a functional, clear, and simple holdings schema that provides compatibility with MARC, etc.

I believe we can make progress at our meeting on October 25 towards our goal of a revised abstract schema for holdings information. Our progress will be based on your active participation.