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Todd
Carpenter

TODD CARPENTER

Charting a Course through a New Exchange Environment: The NISO Bibliographic Roadmap Initiative



The current bibliographic exchange environment is nearly 50 years old and it is showing its age. Since its pioneering development in the 1960s, the MARC record system has proven exceptionally adept at providing a convenient lingua franca of exchanging bibliographic content between libraries and library systems. Momentum has slowly been gathering over the past five years toward replacing that system, and development work is now underway within the Library of Congress (LC) to develop a new Bibliographic Framework (or BIBFRAME as it is often described). A great deal of energy and discussion has circulated around the initiative and effort by LC.

However, the BIBFRAME initiative is focused only on one aspect of the ecosystem surrounding bibliographic information exchange, namely the data model describing resources. While this is a critical component of managing and exchanging bibliographic information, it is by no means the only node in the web of exchange. In 2011, The Andrew W. Mellon Foundation generously funded the National Information Standards Organization (NISO) to undertake a community effort to describe those other elements and put forward a roadmap of additional work that might need to be undertaken before a transition to a new environment can be executed.

The NISO *Bibliographic Roadmap* initiative has the goal of identifying what are critical gaps in the foundation that need to be eliminated in order for the bibliographic exchange environment

to transition to a new method of data exchange. Beyond the data model, there need to be interchange methodologies, trust and provenance frameworks, financial incentives to invest in new systems development or purchase, staff planning and training, as well as legal and operational policies to govern this new environment. While it is too early in some cases to advance work on these larger issues, it is certainly not too soon to advance the discussions about what may be necessary and to begin laying the groundwork for the future development of those research initiatives, best practice developments, business policy frameworks, or exchange standards.

NISO began this initiative by hosting a public discussion about the goals of the initiative. Along with some online discussion sessions, the outline of a two-day discussion symposium was

developed. That meeting, held in April 2013 in Baltimore, MD, attracted 36 people from around the world and was also live streamed via the Internet to a larger and broader community than just those in the room. As an “unconference,” the session’s content was driven by the interests of the attendees. Several attendees gave short lightning talks about their respective institution’s work in fostering or developing linked data tools, exposing their data, utilizing linked data in their services. This primed the thinking of the participants in their brainstorming of what issues need to be addressed to advance a new ecosystem of bibliographic data exchange.

Ideas from that meeting have been posted into an online community feedback system that allows comment and voting; this allows an even broader community to provide input and feedback as well as

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identify priorities of these potential work topics. Interested parties can provide feedback through the end of January 2014. A series of small discussion groups with invited experts will also be used to help frame and refine the potential work areas for identified workstreams.

The areas identified during the in-person meeting ranged from focusing attention on adoption barriers and business models to prototyping and developing interaction standards. Not surprisingly, the list of potential ideas and topics was diverse, wide-ranging, and in some cases, not fully defined. Some of this uncertainty is a result of the somewhat mutable state of what we mean when we say that library data exchange needs to be transformed. Some take that to mean linked data and the Semantic Web. Some conjure a system upon which MARC records are extended in some way using FRBR principles. And others envision a completely different environment with data systems sharing and linking from a variety of sources to craft a discovery and management environment. When even this basic understanding of the future we are moving toward is still so unsettled, precisely defining what next steps are necessary for this “foggy” future is complicated. That said, regardless of the structure of such a new bibliographic exchange ecosystem, several themes did emerge from the discussions that are worthy of additional exploration.

These themes could be grouped broadly into a few categories:

- » value proposition and business models;
- » data exchange and interoperability;
- » data quality and authority; and
- » education and communication.

Data exchange is reliant, of course, on a clear understanding of what is being transmitted and how. One idea was to foster prototype development, once progress on a data model has been achieved. Exploring the methods and rules for how data will be shared and exchanged efficiently and reliably was another suggested area of focus. Such efficiency and reliability requires some measures of authority and trust to be built into the system. Other identified areas of focus centered on the value that these new approaches would bring to both the users of the data and the libraries and content creators providing the data. This value proposition leads directly to the business models and economics surrounding development, deployment, and adoption of new library systems, which need further study and consideration. Along the way, barriers to development, exchange, and adoption would benefit from analysis and forethought on how to overcome them. Finally, communicating these identified benefits of the new solutions or tools was identified as a critical success factor to the overarching effort.

There were a great deal more specific ideas, both large and small, which surfaced during the meeting. All of the notes from the various discussion groups, as well as recorded videos of most of the meeting are available on the NISO Bibliographic Roadmap project webpage. The initiative will continue to

gather feedback from the community until the final report is prepared for the Mellon Foundation in early 2014. A follow-up webinar occurred in early December and a discussion meeting will be held at ALA Midwinter in Philadelphia in January 2014. If anyone has any input to share, comments are welcome and should be directed to the NISO office or added to the online feedback forum. We expect that the final report will be distributed to the community around April 2014.

The true shape of this new environment is nearly impossible to predict precisely, because, as previously noted, the community is not yet settled on a single approach to bibliographic data sharing. The various approaches will have their pros and cons and their advocates and opponents. At least in the short term, it is likely that there will be multiple approaches, with a period of both experimentation and overlap until a consensus approach is defined. Even well after that, some community members will continue using legacy systems for an extended period.

It is NISO’s hope that by fostering these conversations now about the larger environment of data sharing, adoption of these new systems, once they are ready for the market, will occur more rapidly. It also makes sense to begin laying the groundwork for what social or technological structures we will need in place once the new bibliographic ecosystem begins to develop. There is a very diverse community that will be impacted by a new bibliographic data ecosystem, one that goes far beyond the traditional library community of users. By identifying and considering the needs of a variety of affected stakeholders and defining the roadmap to meet these needs, our new bibliographic framework and supporting systems and infrastructure will have a much greater change of common acceptance and adoption. And ultimately, bibliographic data sharing will be fully integrated into the greater web of knowledge and information. | *NR* | doi: 10.3789/isqv25no4.2013.07

TODD CARPENTER (tcarpenter@niso.org) is Executive Director of the National Information Standards Organization.

NISO Bibliographic Roadmap project webpage
www.niso.org/topics/tl/BibliographicRoadmap/

NISO Online Bib Roadmap Feedback Forum
bit.ly/1hxr16P

Library of Congress Bibliographic Framework Initiative
www.loc.gov/bibframe/

FRBR: Functional Requirements for Bibliographic Records
www.ifla.org/publications/functional-requirements-for-bibliographic-records



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