Metadata & Discovery Group

Linked data and OCLC Meridian

a collaboration between OCLC and the Metadata and Discovery Team at the University of Southampton Library

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ABSTRACT

In early 2025 the Metadata and Discovery Team at the University of Southampton Library embarked on a project in partnership with OCLC, engaging with their Meridian linked data entity management system. This article describes the project from conception to completion and assesses the benefits of linked data both for the library community and for users.

KEYWORDS linked data; entity management; OCLC Meridian

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Introduction

As metadata specialists, it will not have escaped any of us that the metadata landscape is changing. More recently, the narrative of change has become more assertive. Those of us with long careers behind us are still absorbing the idea that "MARC must die" (Tennant, 2002). Despite the riposte that BIBFRAME must also die (Edmunds, 2024), it appears likely that the future of metadata lies in BIBFRAME and linked data, with an opportunity, finally, to realise the full benefits of RDA.

Against this background, our interest in actively exploring metadata futures was piqued in early 2025 by a combination of circumstances: attendance at an OCLC Webinar in which the team at West Virginia University Libraries demonstrated a shift from a focus on NACO (Name Authority Cooperative Program) records towards a relationship with OCLC and their linked data entity management system, Meridian (Fidelman and Washington, 2025); a presentation from Yale University Library, facilitated by OCLC, showcasing their Lux catalogue, and demonstrating the potential of linked data to revolutionise the user experience and the way in which we perceive collections (Sanderson and Thompson, 2025); and, finally, an attempt by the team at Southampton to complete NACO training, and our subsequent withdrawal when we realised that the required level of commitment didn't align with the workload of a small team.

As a team, we became curious and started to ask questions about the future of metadata.

As users of OCLC WMS, we had experienced the frustration of not being able to edit PCC (Program for Cooperative Cataloging) records or add new authorised 1xx/7xx headings. Having to request changes via OCLC gave us a sense of cataloguing FOMO (Fear Of Missing Out). Were we being left behind in the skills race by not completing NACO training?

Now, however, we started to ask if there will be space in the new linked data ecosystem for traditional authority control and, by association, NACO training.

At the same time, we became interested in exploring some of the issues raised by Richard Urban in his article, *Identity management beyond the LC/NACO Authority File*, namely, whether identity management platforms could achieve savings in terms of staff training and time, whilst being sufficiently reliable to rival LC/NACO authorities (Urban, 2023).

That FOMO we had about authority management began to shift to a fear of getting left behind in helping to shape the future of linked metadata.

Finally, the decision by OCLC to add entities to 1xx and 7xx fields in WMS/WorldCat records added to the sense that the 'flat' structure of MARC was on the way out in favour of a more connected metadata ecosystem designed for the semantic web. Was "Linky MARC" the first evolutionary step towards a future with linked data and, ultimately, BIBFRAME?

In this context a tentative idea emerged: Would OCLC grant us temporary access to their Meridian linked data entity management system to assess its functionality, test the impact on the user experience, present our findings and build expertise within the team?

Project planning and objectives

Our initial excitement when OCLC agreed to allow us access to Meridian for a month to work on (as yet undetermined) collections at Southampton was tempered by the realisation that we now had a defined time to build on our limited expertise in linked data and upskill the team.

Accordingly, there followed an intense period of training, underpinned by excellent support from OCLC, facilitated by the team in the UK and delivered by Anne Washington and the team in the US. This was supplemented by engaging with webinars, sharing articles and making use of our regular Cataloguing team meetings to inform and upskill staff working with metadata across three service areas.

The decision to work collaboratively across sites and teams is what led to the identification of two unique and distinctive collections that could benefit from the addition of linked data entities:

- a set of Visionaires (nominated by the team at Winchester School of Art Library), and
- a collection of Holocaust memoires, a subset of the Parkes Library for Jewish studies (identified by the Special Collections Team at Hartley Library).

More staff resource was assigned to the latter collection owing to its size and physical proximity to the main metadata team. As the bulk of the work was in creating and curating entities for the Parkes Library, we have also made it the main focus for this article.

Working across teams had the added benefit of enabling us to share the workload, maximise efficiency, and to make the most of specific expertise and subject knowledge.

In the course of our preliminary work, we synthesised the aims of the project to an assessment of the following:

- Linked data entities as a viable alternative to LC/NACO name authorities, simplifying the creation, curation and maintenance of authoritative data.
- The potential of linked data to reduce technical and training overheads without compromising on quality.
- The impact of linked data on the user experience and discovery.
- The functionality of Meridian as a product for managing linked data (feeding back findings to OCLC).
- The speed and ease with which the team could be upskilled to work with linked data entities, and the impact of entity management on efficiency and cataloguing workflows.

Methodology

With access to Meridian limited to one month we set out to maximise input opportunities by collecting and collating relevant data in advance of system switch-on. Accordingly, workflows were designed around entering entity data into a (substantial) spreadsheet, pending transfer to the system. This had the added benefit of removing the pressure to gather data and input it simultaneously, whilst also trying to get to grips with a new system.

We knew that the spreadsheet design was key to the success of the project. We also knew that it would have to be iterative, with scope for adding further columns or worksheets as we discovered the need for additional data. For example, new worksheets were later adopted for recording data about concentration camps and

ghettos, and an additional sheet was created to record related persons and organisations that did not feature in the data download, cross-referenced with works.

Core bibliographic data was exported from WMS into a spreadsheet (1xx, 7xx, 245, 264, plus call number data and barcode from the local holdings record). Authors, editors and organisations were then disaggregated to create a line per potential entity. Duplicates were flagged, to prevent double entry. Columns were added to reflect the content of OCLC entities – persons, organisations, birth and death dates and places, occupations, and relationships (with persons organisations, places, and works).

The final piece of 'pre-work' was a baseline assessment of existing OCLC entities for quality and content, which enabled us to categorise entities in the spreadsheet by fullness, identify duplicate entries, prioritise persons lacking an entity, and paste URIs into the spreadsheet for speed/ease of access.

Data collection and collation now began in earnest. Materials were collected in batches from their home in Special Collections and issued to the Metadata Team. Each member of the team was assigned a section of the spreadsheet. The initial objective was to populate the spreadsheet for as many entities as possible in the period leading up to Meridian switch-on. Data would be pasted directly from the spreadsheet into entity records. Any outstanding entities would be completed 'live', so that a comparison could be made between the two methods. With additional time, we could also have tested automated data ingestion from the spreadsheet to Meridian using an API.

Alongside extensive project planning, the team engaged with OCLC’s excellent training, which not only included system demonstrations but a number of Q&A sessions and regular liaison with Anne Washington and the team in the US.

Challenges around data collection

At this point, it would be great to say that we each quietly perused our collection of books and populated the spreadsheet with data, but this would not do justice to the process we adopted. In many cases, data was not readily available in the usual places we would look – front and back covers, title page and verso, contents pages – resulting in time consuming skim reading of materials. Frequently, key data was absent, which necessitated lengthy research online, making use of registries such as Wikidata, ISNI (International Standard Name Identifier) and VIAF (Virtual International Authority File), as well as Library of Congress name authorities, Wikipedia and the Yad Vashem Central Database of Shoah Victims' Names (for the collection of Holocaust memoirs). This was supplemented by other credible sources, including obituaries, newspaper articles, TV interviews, and exhibition catalogues and galleries (for the Visionaires collection). One of the team admitted to watching an online sermon presented by a particularly elusive author, in the hope of finding out more about him!

Our quest for authoritative data was often frustrating, and was most definitely time-consuming, owing to the number and variety of sources that were available, the discovery of conflicting data across different registries, and a lack of data quality and consistency. Through an iterative process, we finally opted for primary reliance on the item in hand, verified with external sources online as necessary.

We also faced decisions around the granularity of data input: how much data was the right amount? How could we strike a balance between sufficient data to disambiguate, and the time required to obtain information? The team was spurred on by the data fullness percentage score displayed at the top of each entity – the quest for the highest score led to some rather unhealthy rivalry.

Then there was what we would describe as "spider webs" of data – overlaps, intersections, relationships and connections. These are the very things that linked data is designed to surface, but we found ourselves having to create entities to add to other entities, which created a circular need for additional data.

Finally, we are a small team and, whilst we benefited from the assistance of staff from other areas of the service, there was nonetheless a tension between the project and the need to maintain business as usual. We were also aware of the time-limited nature of the project, with an urgency to complete as many entities as possible before access to Meridian was switched off.

Meridian

By the time access to Meridian was turned on in February 2026, we were in a position to input a substantial amount of data from the spreadsheet.

Meridian itself is well designed, generally intuitive, and easy to use. With practice, data input can be completed with reasonable speed, facilitated by drop-down menus and search boxes. We discovered a small number of glitches (for example, date format was designed to suit neither the US nor UK market) but the team at OCLC was commendably responsive, noting our feedback and allocating the staff resources to resolve any concerns.

The use of free text for entity descriptions led to some concern about consistency of data input, and there was initial confusion over how to categorise and describe concentration camps and ghettos. The team mitigated these by devising in-house data input standards and templates and documenting key decisions. Additionally, standards and data fullness across existing entities varied widely, and it appears that this was largely due to the source of the data in WorldCat Entities (data was obtained primarily from VIAF). If we were to move forward with permanent access to Meridian, we would determine minimum record content standards. The recently convened PCC Entity Management Cooperative program (EMCO) will draw on cataloguing community

expertise to address issues of data consistency and content across a number of registries including OCLC WorldCat Entities.

And what of the potential impact of this project on our users?

The immediate benefit is in the shift from string searching within the discovery layer to URI-driven discovery, which ensures greater accuracy. With new capacity to click on URIs to retrieve works by and about authors/editors, users are guaranteed an improved search experience. OCLC plans to extend this by making more of the data in entity records available to users in the form of a knowledge card that is visible in the discovery layer.

With this in mind, we would suggest that there is a particularly strong use case for entities for special and specialist collections. We can foresee a future where a single catalogue search could reveal complex, contextualised relationships across multiple library collections, offering users a rich discovery experience.

Entities transform catalogues into dynamic interconnected resources. This project brought to our attention some remarkable people, all of whom now have improved or new entities that reflect their lives, experiences, works and connections, which will be more readily surfaced as a result of our work.

Project conclusions

This project gave ample opportunity to assess the viability of Meridian as a product for the management of linked data entities, and we conclude that it is fit for purpose. Entity records are well structured and allow for rich data entry. URI generation is immediate. Meridian exceeded our expectations in terms of ease of use, requiring minimal training to acquire speed and accuracy of data input. In this sense, working with OCLC entities is a more inclusive process than engaging with LC/NACO authorities.

However, any gains in efficiency must be balanced against the time-consuming process of data acquisition. It is likely that this is no more impactful than the work required for LC/NACO records, but (for our small team at least) would necessitate selective creation and editing of entities. Should we choose to work with an entity management system in future, entities for special and specialist collections will be prioritised over those for standard reading list cataloguing – focusing work where it can be most impactful in surfacing collections and enhancing the user experience in an enriched discovery landscape.

In a linked data ecosystem, there is less impetus to train as PCC cataloguers, although work is necessary within the community to ensure the application of agreed standards and consistency in the management of entities. It is welcome news that this will be the work of EMCO going forward.

Through engagement with Meridian and OCLC Entities, the team has acquired new technical skills and an improved understanding of the potential benefits of linked data. We recently joined EMCO and are engaging with sector-wide projects relating to BIBFRAME and open linked data, taking us beyond the original objectives of the project.

We know that we will be working in a hybrid environment for the near future at least, but the next exciting step for us is the development of a broader strategic plan to build capacity for a future fundamental shift from MARC to BIBFRAME.

And this takes us back to that initial FOMO. Post-project, far from feeling that we are being left behind, we now feel part of part of something new, with the potential to facilitate fundamental changes to the metadata of the future and, in so doing, to revolutionise the user experience.

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