

Retaining Metadata in Remixed Cultural Heritage Objects

Jamie Wittenberg
University of Illinois at
Urbana-Champaign, USA
wttnbrg2@illinois.edu

Keywords: metadata; semantic web; remixing; linked open data

1. Context

Memory institutions have been working to incorporate features into their digital collections that empower users to take ownership of cultural narratives. The advent of technologies like annotation tools and crowdsourced tagging have allowed libraries, archives, and museums to promote user content as part of an institutional narrative, albeit a somewhat tertiary one (Salomon, 2013). Collecting institutions including the Smithsonian, MoMA, Australian Museum, and British Library have been developing initiatives that encourage users to remix openly available digital content. A remix appropriates components of existing resources and incorporates them into a new work.

This movement towards user-generated remixed content is cost effective for institutions and engaging for patrons. Increased interactivity is emblematic of the changing role of libraries, archives and museums (Reiskind 2012, pp. 6). The future of cultural memory institutions will be one that embraces collection diversity and incorporates user-generated material into institutional narratives. This is already happening in social media, crowdsourced tagging, API development, and remixing. Work to ensure that associated metadata is harvested along with media content is still in its naissance. Increased endorsement of remixing as a way of engaging with cultural heritage material requires a metadata infrastructure that can support description of remixed content in a way that is comprehensive, interoperable, and scalable.

2. Existing Standards

There are two primary obstacles preventing the development of such a model. The first is that even when comprehensive metadata is documented and available, current metadata standards do not describe content with sufficient specificity. Because remixes appropriate segments of items, rather than the entire item as a collection does, remixes require descriptions that are more granular. In order to accommodate the clipping and cropping nature of remixing, a more robust system of detailed object description is necessary.

The second obstacle is that metadata is often unidirectional. It is created for new items that may express relationships to existing records, but less commonly updated in existing records. To create metadata for remixes, metadata for original material would first need to be evaluated for its relevance to the new content. Metadata for each appropriated component part that makes up the remixed content should at minimum contain provenance, attribution, and descriptive information.

2.1. Descriptive Metadata Standards

In widely used descriptive metadata standards such as MODS and Dublin Core, relationships between items are FRBR-type hierarchical relationships. Remixes seem to occupy an unspecified space within the FRBR universe, because they appropriate and reuse items, rather than works or expressions. Remixes take a single physical instance of a manifestation and modify it. MODS and Dublin Core provide enough room in their structure that with some manipulation, it would be possible to approximate a description of a remix. This is especially true if the remix is an expression of the original work. However, some remixes might only incorporate minutiae of

existing content, drawing it together to create an entirely new work. Neither the MODS RelatedItem attributes nor the Dublin Core Relation Type attributes express the relationship between source content and a remixed object that is a new work (LOC 2013; DCMI 2012). There is no possibility to include metadata touching on remixing actions, cardinality, or provenance. Given that this form of cultural production is not only becoming increasingly popular, but is being adopted into institutional narratives, there is a need for a metadata infrastructure that explicitly addresses remixed material (Fisher, 2007).

2.2. Event-Based Metadata Standards

Event based metadata standards such as CDWA, CIDOC-CRM and LIDO orient representation towards changes in the state of the item. These standards are better equipped than descriptive metadata schemas to manage the lifecycle data associated with cultural heritage material (Coburn 2010, pp.3-4). While event based standards offer the necessary process and provenance support to a remix metadata model, the scope of such standards is steered towards chain of custody-type changes such as the CIDOC-CRM Activity subclasses of Acquisition, Transfer of Custody, and Curation Activity (ICOM/CIDOC 2013 pp. 5). Remixed cultural heritage objects require a description that targets state changes in content production as well as lifecycle events after accession.

5. Future Work: Linked Data and Annotation Standards

Metadata for remixed objects must enable consistent description and attribution for all aspects of the work. Exploring Linked Open Data conceptualizations of aggregation and annotation such as the Open Annotation Data Model and the OAI-ORE Abstract Data Model offers insight into possibilities for structuring metadata associated with remixed cultural heritage objects (OAC 2013; OAI 2008). Such a structure must provide a descriptive framework for each component of a remix and would require an extensible model flexible enough that elements could be included from across domains. A standard that builds on Semantic Web concepts like the graph data model has the potential to provide that flexibility. This is an area that requires further research.

6. Conclusion

The profile of the heritage institution of the future is beginning to take shape, and it is characterized by ever-increasing interactivity, user customization, and widespread dissemination. Libraries, archives, and museums will be participatory, collaborative spaces with room for alternative narratives of heritage. Metadata structures and standards must adapt with these institutions. It is essential to the integrity of cultural heritage institutions that as traditional unilaterally created corpuses transition into inclusive and dynamic collections, descriptive infrastructures transition as well (Bertacchini, 2013, pp. 60). The movement towards enabling remixes of cultural heritage materials threatens existing metadata models because it requires systemic change in the granularity of descriptive metadata and in metadata creation workflows. The development of a metadata structure that can accommodate remixed content will help to ensure that libraries, archives and museums continue to fulfill their roles as stewards of cultural heritage content.

References

- Bertacchini, E., & Morando, F. (2013). The Future of Museums in the Digital Age: New Models for Access to and Use of Digital Collections. *International Journal Of Arts Management*, 15(2), 60-72.
- Coburn, E., Light, R., McKenna, G., Stein, R., Vitzthum, A. (2010). *LIDO - Lightweight Information Describing Objects Version 1*. Retrieved from <http://www.lido-schema.org/schema/v1.0/lido-v1.0-specification.pdf>
- DCMI. (2012). *Dublin Core Metadata Element Set, version 1.1*. Retrieved from <http://www.dublincore.org/documents/dces/>.

- Fisher, M. & Twiss-Garrity, B.A. (2007, March). Remixing Exhibits: Constructing Participatory Narratives With On-Line Tools To Augment Museum Experiences. *Museums and the Web 2007: Proceedings*. Toronto: Archives & Museum Informatics.
- ICOM/CIDOC Documentation Standards Group. (2013). *Definition of the CIDOC Conceptual Reference Model*. Retrieved from http://www.cidoc-crm.org/docs/cidoc_crm_version_5.1.2.pdf
- Library of Congress. (2013). MODS Elements and Attributes. *MODS User Guidelines ver. 3*. Retrieved from <http://www.loc.gov/standards/mods/userguide/generalapp.html>
- Open Annotation Community Group. (2013). Open Annotation Core Data Model. Retrieved from <http://www.openannotation.org/spec/core/20130208/index.html>
- Open Archives Initiative. (2008). ORE Specification - Abstract Data Model. Retrieved from <http://www.openarchives.org/ore/1.0/datamodel>
- Reiskind, A. (2012). extraMUROS and the 21st century image library. *VRA Bulletin*, 38(2), 1. Retrieved from <http://online.vraweb.org/vrab/vol38/iss2/4>
- Salomon, D. (2013). Moving on from Facebook. *College & Research Libraries News*, 74(8), 408-412.