

Domain Specific Considerations of Metadata for Cultural Heritage

Emad Khazraee
Drexel University, USA
emad@drexel.edu

Keywords: metadata; cultural heritage; domain analysis; intangible heritage.

1. Background

This poster proposes a theoretical framework for rethinking metadata for cultural heritage, and is motivated by the author's experience and observation of the challenges of descriptive metadata for cultural heritage. Descriptive metadata plays a key role in managing and providing access to cultural resources and in automatic reasoning on large data sets. Several metadata schemes are available in the domain of cultural heritage (i.e., VRA, CDWA, CCO, MIDAS, CIDOC-CRM, CIMI, SPECTRUM, and Object ID¹); however, most of them have not systematically addressed the domain specific requirements of metadata. Thus, it is useful to rethink how intellectual developments of cultural heritage affect domain specific requirements of descriptive metadata.

The concept of cultural heritage has evolved semantically and intellectually in the last fifty years. These developments have created different conceptions of what is perceived "cultural heritage". One of the consequences of these developments is the popularity of interpretive approaches to cultural heritage. Studying the requirements of these new approaches to cultural heritage reveals the insufficiencies of the existing descriptive metadata schemes. This study suggests that the systematic analysis of the new conceptions of cultural heritage and its different aspects provides a better insight for understanding domain specific considerations of descriptive metadata for cultural heritage.

2. Domain Analysis Method and Metadata for Cultural Heritage

Interoperability, modularity, extensibility, and simplicity are general requirements for any successful metadata scheme and been well addressed in the literature. In addition to the general requirements, domain specific requirements should also be considered for cultural heritage.

Domain analysis is a paradigm in Information Science (IS) that recognizes the study of knowledge-domains as the best way to understand the requirements of information organization (Hjørland & Albrechtsen, 1995). Following domain analysis method (Hjørland & Albrechtsen, 1995), this study argues that some of domain-specific considerations of metadata for cultural heritage can be derived from the study of different aspects of this domain; namely: Ontological aspects (objects of human activity within a domain); epistemological aspects (the process of obtaining knowledge and investigating in a domain); and sociological aspects (those groups of the people and institutions dealing with mentioned objects) (Hjørland & Hartel, 2003).

The consequences of semantic expansion of the concept of cultural heritage affect the three above mentioned aspects of the domain. The concept of cultural heritage has evolved from merely tangible heritage to the much more comprehensive concepts including intangible heritage. Furthermore, it is important to understand how the intellectual developments regarding the interpretation of cultural heritage may affect the documentation and description systems in this domain. This study recognizes two major approaches to cultural heritage: the traditional objective approach (dominant from mid-nineteen century), and the interpretive approach (emerged in the second half of the 20th century).

¹ We should differentiate between data structure standards and data content/syntax standards here.

The main characteristics of the traditional objective perspective are as follows: ontologically, the *scope*² of this perspective is the isolated individual movable objects (sometimes in collections) represented in the context of exhibitions. Its *domain* consists of the objects and their visual representations. Epistemologically, it is possible to assert objective facts about cultural objects, and established Western traditions of classification are usually used for the description and classification of culturally diverse resources. Sociologically, the main user groups of this approach are museums' staff and curators in public or private institutions as well as art historians and archaeologists.

Characteristics of the interpretive perspective are different; the *context* matters in this perspective and objects are seen as a part of their broader context. Ontologically, the subjects of study are very diverse. Subjects can vary from tangible movable objects and monuments to intangible rituals in the context of cultural landscapes (e.g. immaterial and oral culture are considered as cultural heritage). Consequently, the *domain* of resources in this perspective is also broader and consists of any form of information that can be documented and recorded. Epistemologically, any description of a given resource is only one of the possible interpretations and more subjective approaches are accepted. Interpretive perspectives respect wider vocabularies and cultural differences in the description and classification of resources. Sociologically, the audiences of these approaches are culturally diverse and are perceived in global context.

3. Research Findings

This poster presents that based on domain analysis method at least two major approaches to cultural heritage are identifiable. The traditional objective approach is still dominant in the documentation of heritage. This approach is modernist, restrictive and exclusive in nature, whereas the interpretive approach is less restrictive and more subjective in nature. The new approaches to cultural heritage encourage us to review the considerations of descriptive metadata for cultural heritage and to add the following considerations to our agenda:

- multilingualism/multiculturalism (calendars, scripts, different notions of time, different systems of name recording);
- less objective and restrictive descriptions; capability of subjective descriptions;
- interpretable descriptions instead of lengthy objective descriptions;
- polysemy in description;
- inclusive approach regarding scope and domain of cultural heritage documentation);
- possibility of non-textual descriptions in line with textual descriptions (images, multimedia, and hyperlinks as descriptions).

Any descriptive metadata scheme in cultural heritage should consider these requirements according to the specific considerations of the community that will use the scheme.

4. Future Works

- Ethnographic study of communities of practice in cultural heritage to address the sociological considerations of metadata practice.
- Designing an application profile for cultural heritage metadata based on Dublin Core considering the aforementioned requirements.

² *Scope* and *Domain* are used here according to: Bates, M. J. (1976). Rigorous Systematic Bibliography. *RQ* 16, 7-26.

References

- Hjørland, & Albrechtsen, H. (1995). Toward A New Horizon in Information-Science - Domain-Analysis. *Journal of the American Society for Information Science*, 46(6), 400-425.
- Hjørland, B. (2002). Domain analysis in information science - Eleven approaches - traditional as well as innovative. *Journal of Documentation*, 58(4), 422-462.
- Hjørland, B., & Hartel, J. (2003). Afterword: Ontological, epistemological and sociological dimensions of domains. *Knowledge Organization*, 30(3-4), 239-245.
- Vecco, M. (2009). A definition of cultural heritage: From the tangible to the intangible. *Journal of Cultural Heritage*, 11(3), 321-324.