

## **FRBRoo Based Approach to Heterogeneous Metadata Integration**

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In this paper we adopt FRBRoo as ontology to integrate heterogeneous metadata, and transform human-understandable format into machine-understandable format for semantic query. Two use cases with museum artifacts and literary works were exploited to illustrate how FRBRoo can be used to re-contextualize the semantics of elements and the semantic relationships embedded in those elements. The shared ontology was then RDFized and examples were explored to examine the feasibility of the proposed approach. This paper finds that FRBRoo can play a role as *inter lingua* to align museum and library metadata for achieving heterogeneous metadata integration and semantic query without changing either of the original approaches to fit the other. This is the first study to elaborate how FRBRoo can play a role as a shared ontology to integrate heterogeneous metadata generated by museums and libraries. This paper also shows how the proposed approach is distinct from the Dublin Core format based crosswalk in re-contextualizing semantic meanings and their relationships, and further provides four new sub-types for mapping description language.