



Executive Summary

D2.3 – Upper-level cultural heritage data structure & ontology

The D2.3 presents the results of a collaborative effort of the project partners, which took place in months M2-M8 of the project and focused on the delivery of a generic upper-level conceptual structure that captures common concepts and relationships across the four pilots. The deliverable is focused on: i) reviewing the upper-level ontology requirements, ii) investigating ontology standards relevant to the project, iii) defining the ontological arrangements of the upper-level ontology, and iv) creating mappings between the project pilots' metadata and the ontology. The first section of the deliverable overviews the upper-level ontology requirements and highlights relevant ontology standards. It then discusses the rationale leading to the definition of the upper-level ontology entities. The deliverable concludes with a set of example mappings drawn from pilot scenarios.

The CrossCult (CC) ontology is defined as a generic upper-level conceptual structure that captures common concepts and relationships across the four pilots of the project. As such, the ontology delivers formalisms that describe the “world” of CrossCult, which accommodates common conceptual arrangements and enables augmentation, linking, semantic-based reasoning and retrieval across disparate data resources. In the process of defining the ontological arrangements, the project reviewed the pilots' datasets and engaged in a series of meetings before concluding to a set of requirements and shared semantics across the four pilot scenarios and data. The results led to the definition of the CC Upper-level ontology which reuses terminology and maintains full compatibility with the widely-used standard in cultural heritage documentation CIDOC-CRM (ISO 21127:2006), while incorporating elements from the SKOS and FOAF ontologies for supporting the semantic interoperability of the model.

The Upper-level ontology accommodates the range of shared semantics of the following commonly identified concepts across the four pilots: a) Physical items, as is any museum artefact, painting, venue item or landmark, b) Digital (audio-visual) content relating to one or more Physical Items, c) Places of spatial focus, which could refer to the location of an object, a place of an event or a depicted place on a painting, d) Time related definitions such as date and periods, e) Actor as a person or organisation related to a physical item by properties of ownership creation and illustration and f) Reflective Topics carrying the semantics of subjects and topics of interest that drive the reflection and reinterpretation qualities of the application. It provides flexibility for the integration of concepts across the Upper-level ontology.

The deliverable demonstrates the applicability of the Upper-level ontology to accommodate the semantics of separate scenarios originating from the four CrossCult pilots. Entities and relationships of interest were extracted from the scenario descriptions which were then mapped to formal ontology semantics of classes and properties. The current version of the CC Upper-level ontology is subject to further refinement and improvement for addressing any emerging semantic interoperability requirements of the project. The process of CC ontology development will further investigate the scope and structure of the Reflective Topic class and its relation to the controlled vocabulary,

narratives and reflection proposal. In addition, CrossCult Knowledge Base will be enhanced with an additional two ontological structures for accommodating the modelling requirements of User and Venue data