

# **Enhancing Accessibility to Heterogeneous Sri Lankan Cultural Heritage Information across Museums through Metadata Aggregation**

Student No: 201425006  
Name: Chiranthi Jayampathini Wijesundara

Cultural Heritage Information (CHI) is an essential resource which exhibits values of a society. Memory institutions play the main role of delivering CHI to the public. This study focuses on CHI of Sri Lankan cultural heritage collected by museums. Museums usually handle heterogeneous information compared with other memory institutions. Due to these heterogeneity museums tend to adopt unique standards according to their institutional requirements. Developing countries like Sri Lanka still does not possess strong CHI delivery portals for cultural objects and artefacts within the country, and their standards are still under development. Nevertheless, museums outside Sri Lanka that own Sri Lankan cultural objects provide valued CHI that can be retrieved through online collections. This study sought to find an approach to aggregate Sri Lankan CHI across museums in and out of the country and deliver them to the patrons with more contextual information. The study also seeks a method to eliminate the disparity in museum standards through a metadata crosswalk approach between museum vocabularies. This target was achieved by investigating over 2600 object records across four museums, namely, British Museum, Victoria and Albert Museum, Metropolitan Museum of Art and a teaching museum attached to the University of Peradeniya, Sri Lanka. The mapping was based on the *object categories* of the museum objects and the key vocabulary used was the Getty Art and Architecture Thesaurus (AAT). In this thesis, the mappings are presented as RDF graphs to show the relationships between the AAT terms and the museum vocabularies. The metadata-level aggregation models were developed to show the relationships through *spatial*, *temporal* and *thematic* terms related to the cultural objects and the information was enriched through Linked Open Data (LOD) resources. The final outcome of the research was a metadata model which aggregates Sri Lankan CHI. The main platform of this aggregation model depended on the vocabulary crosswalk approach mentioned above. The resulting mapping derived through the crosswalk provided enhanced meaning to the cultural objects and the same approach can be extended to develop more comprehensive level metadata vocabulary mapping and metadata aggregation across Sri Lanka and South-East Asian memory institutions in the future.

Academic Advisors: Principal: Shigeo SUGIMOTO  
Secondary: Mitsuharu NAGAMORI