

Preserving Malaysia's Culture and Heritage Objects – An E-Science/Culture Approach

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Malaysia is a country with rich and diverse culture and heritage where three major races namely Malay, Chinese and Indians live a harmonious life with many other indigenous races. It is imperative that an effort to preserve culture and heritage objects should be carried out or Malaysia risks of losing her cultural and heritage diversity due to modernization and adoption of foreign cultures and values.

The most important aspect of the effort is the transformation of these objects into digital form and the eventually organization to a final product a digital cultural and heritage objects archive. In turn, a crucial component in preserving and archiving of these objects are adequate computing resources and data storage. The greatest challenge is to the creation of these digital archives is the establishment of information infrastructure with the objectives of establishing standardized information reference guidelines for digital content creation, storage, and processing and also developing common and application-specific information processing infrastructure and tools. Digital archives must have reliable storage systems, effective content management with well-organized information structure, efficient and accurate information retrieval mechanisms, and also capable of addressing the needs of different types of users and stakeholders. Grid technology holds the key to a viable solution for long-term preservation and processing of highly heterogeneous and geographically distributed digital archives. Through Data Grid services, computational and data-intensive grid resources for data analysis can be realised requiring coordinated sharing of resources, processing and analysis of large amounts of data produced and stored by many institutions across distant geographical locations.

Universiti Putra Malaysia, together with partners in the EUAsiaGrid Project and University of Malaya as subject matter expert have been actively involved in activities relating to the Digital Culture and Heritage (DCH) application. An outcome of the project is the establishment of a database containing digital culture objects emphasizing on 3D Motion Capture data and culture performances. Towards the second half of 2010, a large number of digital objects on traditional dance called Mak Yong and traditional Malay martial arts called Silat are uploaded and stored in our BIRUNI Grid storage elements. It is organised using AMGA middleware to promote standardized sharing of resources among partners at different geographical locations. Updates of recent activities will be presented in the symposium.