A Web Service Platform for Web-Accessible Archaeological Databases⋆

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Abstract. Cultural heritage has been gaining more importance in the recent years in combination with sophisticated yet effective computer vision techniques. As a consequence, archaeological data, both in textual and image forms, has been considered in the development of database models. Archaeological sites are the primary source of archaeological data, and the findings are the primary targets for storage, querying and retrieval as well as exchange through appropriate mediums. This paper introduces a Web service platform design for various archaeological resources that are available for querying through the Web. This platform also allows archaeological data exchange. The Web service platform presented in this paper can be used by both archaeologists and non-technical users to query and retrieve archaeological information through various Web-accessible archaeological databases. Our work also focuses on supporting visual content-based queries for archaeological objects stored in databases. As an initial step, similarity search facility for image-based data is developed as an additional query task within our platform.

1 Introduction

In the recent years, cultural heritage has been gaining more importance especially when considered with the perspective of computer vision and image databases. Archaeological data and archaeological sites are among the trendy applications with this respect. To establish a system to serve as an archaeological database, we have developed a framework (MIDAS) [1] for storing vast amount of information to query archaeological data and to reconstruct the objects and archaeological sites. We have decided to develop a decentralized platform to facilitate the querying of multiple heterogeneous archaeological databases through the Web. The main motivation behind this work lies in the fact that most of the archaeologists have their own databases for their findings on top of a corresponding data model. It is for sure that the archaeologists have various data