Poster Abstract:
Conceptual Framework of Metadata Scheme Development for a Digitized Inscriptions Collection Management

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Keywords: metadata scheme; inscription; digital collection; digitization

1. Research Background

An inscription is a cultural heritage artifact that records archaeological intellects and accounts of a nation such as history, language, medicine, etc. Although inscriptions are the most reliable primary historical evidence, accessibility to, and understanding of them are restricted due to their dispersion, their deteriorating conditions, and the complications of the ancient language itself. Nevertheless, digitalization is a possible means that enables users to acquire the bodies of knowledge in inscriptions. At present, digitalization allows digital collection of metadata that in turn explains inscribed digital data. Digitized inscription collection of metadata, however, requires the development of metadata scheme appropriate to the inscriptions' physical characteristics and contents. It has to be in line with the usage behaviors, requirements and expectations of the users. The development of metadata scheme for management of cultural heritage is the topic of interest.

2. Literature Review

2.1. Metadata and Metadata Scheme

Metadata as "structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage information resources. Metadata is often called data about data or information about information" (NISO, 2004, p.1). Metadata plays three important roles in information resources in the context of digital environments, namely, (1) resource discovery and access (2) administration and management of resources, and (3) interoperability. In the preparation of metadata for information resources, it is necessary to rely on metadata scheme— the set of metadata elements and rules for users that have been defined for a particular purpose, such as describing the physical characteristics of a document, exchanging a document, or preserving a document. A computer can be used to reasonably process such information (NISO, 2004). Metadata Scheme must be composed of three major components: (1) semantics, (2) content rules, and (3) syntax of a scheme (Caplan, 2003; NISO, 2004; Haynes, 2004).

2.3 Metadata Models

A conceptual model of metadata provides a framework that allows one to examine the metadata elements and their relationships and provide guidelines for the extraction and use of appropriate metadata elements (Han, Lee & Jeong 2006). The efficient development of metadata scheme to meet the objectives of various operations requires the developer to become aware of the prerequisites for developing metadata models. The models will enable users to analyze the

metadata elements and their relationships, which are significant for a clear and holistic description of information resources (Haynes, 2004). Metadata models for cultural heritage could be applied from FRBRoo (Functional Requirements for Bibliographic Records object-oriented version, harmonised with CIDOC CRM) that emerged from the two collaborating projects between two international organizations: IFLA, a library professional organization and ICCOM, a museum professional organization. Attempts have been made to combine CIDOC Conceptual Reference Model used in the museum circle with FRBRER used in the library circle in order to obtain the formal ontology dubbed FRBRoo for usage of compiling and presenting semantic referential information. Interoperability will result along with exchanges of museum, library, and archive information. (Doerr, Bekiari, & Bekiari, 2008). At present, the models have been developed into Version 1.0.2 of 2012. This research would also hopefully determine if FRBRoo can be applied for inscriptions in Thailand, which are different from ancient western documents.

3.Conceptual framework

The metadata scheme to be developed will be an innovative and reliant on R&D approach.The research framework is divided into three stages based on Metadata Development Lifecycle: (1) requirements analysis—to set the characteristics of metadata scheme for digital inscription collections; (2) metadata scheme design and development; (3) metadata scheme testing and evaluation. The conceptual framework consisting of the related theories and concepts is show in Figure 1.
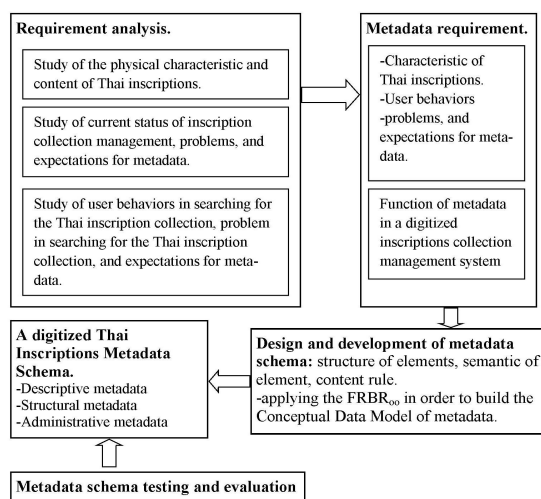

FIG. 1. Conceptual framework of Metadata scheme development for a
digitized Inscriptions Collection Management.

4. Expected Outcomes

The research findings will indicate the present situation of inscription management and the behaviors of interested information community users. This forms the basis for the development of metadata with appropriate efficiency for use in real contexts. The metadata scheme for organizing the knowledge in inscriptions is obtained.

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