An Ontology Based Tour Design Support to Extend Tourist’s Cultural Interest

Krich Nasingkun, JAIST/SIIT/NECTEC, Prathumthani, Thailand
Gun Srijuntongsiri, Sirindhorn International Institute of Technology, Thammasat University, Khlong Nung, Thailand
Thepchai Supnithi, National Electronics and Computer Technology Center, Prathumthani, Thailand
Mitsuru Ikeda, Japan Advanced Institute of Science and Technology, Nomi, Japan

ABSTRACT

This article describes how culture-based tourism is a way to learn different cultures and gain appreciation of the inner value of heritages. However, to fully realize those values, visitors need extensive knowledge in several aspects that are scattered in domains; culture-based tourism thus does not gain much attention as other types of tourism. In this article, the authors propose a support system to assist in extracting and linking implicit values of cultural heritages for tourists. With a carefully designed ontology, cultural tourist sites are linked with aspects based on common properties to create a knowledge map to open visitors’ viewpoint on cultural values. The usage experiments done by random samples reveal that the system helped participants to learn of unknown sites and to experience novelty connectable insight information of the heritages. The provided details of the generated results inspired those participants to consequently visit the sites following a story of their preferred aspect.

KEYWORDS
Cultural Aspect, Extend Viewpoint, Mixed Initiative Search, Ontology, Tour Design Support

INTRODUCTION

Traveling is one of the most anticipated activities. It does not only give travelers a sense of relaxation, but also a chance to learn new things and to experience different cultures. Recently, traveling has been targeted at several types such as natural based traveling, cultural based traveling and adventure traveling. In Thailand, the campaign of cultural based traveling has been raised to promote Thai cultural heritages. In cultural touring, a visited site may contain many interesting contents in several aspects. These include tangible heritages such as product, objects and building, and intangible culture heritages such as traditional performance and festival. For tangible heritages, each site has its own story worthy of learning for tourists in terms of cultural importance. The story may involve several aspects such as its creator, its former place, related tales, etc. These are background knowledge of heritage to connect tangible and intangible cultures together that are able to implicitly provide travelers with experience of surrounded cultural knowledge.

However, background of the heritages is apparently scattered in museums and in tales of their surrounding areas. Only historical or cultural experts accumulate the knowledge while typical tourists can rarely access the information and lack opportunity to fully appreciate the cultural heritages in these aspects. For cultural-based travelers, their points of interest can be individually different; some may enjoy sightseeing of heritages based on their favorite characters (such as famous poets or kings).

DOI: 10.4018/IJKSS.2017100101

Copyright © 2017, IGI Global. Copying or distributing in print or electronic forms without written permission of IGI Global is prohibited.
while some may follow their religious belief for the sacred artifacts according to the tales (such as a tale of Naga, mythical being in South East Asia worshiped to reward in prosperity). Despite their favorite, very few people visited all related heritages or missed to learn the related details because of the lack of cultural story knowledge. Hence, transferring knowledge in these cultural aspects is crucial in promoting cultural tourism activities.

In Thailand, there has been a project to collect information of cultural heritages and digitally store them as cultural archive. The project, Digitized Thailand Project (see www.digitized-thailand.org), was supported by the Ministry of Culture and the National Electronics and Computer Technology Center, Thailand. The archive is a collection of multimodal information including images, locations and detailed history for public access for over 100,000 entries. This can be a reliable resource for relating cultural heritages to create multi-aspect knowledge for cultural tourist activities. With the knowledge and personalized point of interest of travelers, a tour design support of visiting destination can be implemented. Using this approach, users and the system collaborate in a mixed-initiative process, users are allowed to keep control of the interaction and to inform details and select their interests among choices while the system provides the relevant information by offering easy ways to explore the options without the need to specify and modify the information search. This can enable the users to consume as much information as they want.

The aim of this work is to connect cultural heritages with their relations in several aspects. The goal is to inform about the relations for the users to learn more about cultural aspects hidden within heritages’ history and let them fully experience the culture-based traveling despite the lack of initial background knowledge of the tourist site. Furthermore, it can also help to promote the hidden values of heritages and motivate the users to learn more about the related heritages since they learnt some insightful details.

BACKGROUND

Cultural Tourism

Culture is a term in arguing for a concrete definition. In his publication, Raymond Williams viewed the term “Culture” as one of the most complicated words in the many languages with several meanings in interpretation (William, 1983)”. Littrell defined the meaning as “culture can be viewed as comprising what people think (attitudes, beliefs, ideas and values), what people do (normative behavior patterns, or way of life) and what people make (artworks, artifacts, cultural products) (Littrell, 1997)”. Moreover, many philosophers such as Tylor (1871), Hofsted (1997) and Harvey (2001) proposed a different definition of culture. However, the well-accepted definitions are given by Roshan Cultural Heritage Institute as “Culture refers to the following Ways of Life” (see http://www.roshan-institute.org). A scope of the meaning includes the following.

- **Language**: The oldest human institution and the most sophisticated medium of expression.
- **Arts & Sciences**: The most advanced and refined forms of human expression.
- **Thought**: The ways in which people perceive, interpret, and understand the world around them.
- **Spirituality**: The value system transmitted through generations for the inner well-being of human beings, expressed through language and actions.
- **Social Activity**: The shared pursuits within a cultural community, demonstrated in a variety of festivities and life-celebrating events.
- **Interaction**: The social aspects of human contact, including the give-and-take of socialization, negotiation, protocol, and conventions”.

In summary, culture cover all activities that related to lifestyle or multitude of people in the society. Include spoken and written language, behavior, lifestyle, customs, heritage, ideology and
Help System for Creating Educational Resources for Arabic
[www.igi-global.com/article/help-system-for-creating-educational-resources-for-arabic/224958?camid=4v1a](www.igi-global.com/article/help-system-for-creating-educational-resources-for-arabic/224958?camid=4v1a)

Exploring the Enterprise Value of Wikis through Media Choice Theories
Christian Wagner, Andreas Schroeder, Wing Wong and Anna Shum (2012). *Systems Approaches to Knowledge Management, Transfer, and Resource Development* (pp. 216-227).
[www.igi-global.com/chapter/exploring-enterprise-value-wikis-through/68220?camid=4v1a](www.igi-global.com/chapter/exploring-enterprise-value-wikis-through/68220?camid=4v1a)