CONTEMPORARY AND COLLABORATIVE WEB CONCEPTS AS PART OF A GEO-KNOWLEDGE TOOL TO ASSIST PARK MANAGEMENT

ELSLEY M., CARTWRIGHT W.
RMIT University, MELBOURNE, AUSTRALIA

An existing data archive of a park management organisation is not used as effectively as it could. A research project is investigating if access to the predominantly georeferenced data can be enhanced through the concept of a geo-knowledge tool. The design of the tool, a digital knowledge system, includes concepts of emergent Web 2.0 and other Web applications and it will be assessed if these can contribute to an effective interface for data access to assist park management.

The participatory and collaborative nature of Web 2.0 results in user contributed information and gives rise to a collective intelligence. If captured, this has the potential to enrich existing information. There are also digital public data repositories on the Web, made available by media, libraries and other organisations and through social media (Web 2.0) sites, comprising information that could be useful and relevant to park management. The research project will therefore further investigate if these non-traditional information sources can potentially benefit the existing park management data archive and fill any information gaps.

Having commenced the implementation phase, the research is using a case study to develop a conceptual geo-knowledge tool and evaluate the theory with a demonstration prototype. The case study focuses on one national park and a selection of the organisation's existing data relating to fire management.

Initial results of case study related tasks illustrate the decision making process and range of data requirements involved in fire management activities. This is, in effect, the basis for the geo-knowledge tool to which non-traditional data sources are to be added. A preliminary analysis of six digital public data archives highlights that there is a range of information available on the Web that may be relevant to the focus areas of the case study – the national park and fire management. However, an assessment model, still to be developed, will be beneficial to help assess the potential quality and usefulness of these non-traditional data sources. Lastly, a visitor survey has also been conducted as part of the case study to establish park visitors' perceived willingness to participate and contribute information. An initial analysis of the responses to three key questions reveals that visitors would most likely participate if it was for a specific purpose, a one-off event with a particular goal or task to be completed. However, most would only participate around or during a trip to the park. Bearing this in mind, although only around two thirds of park visitors would participate in principle under the right circumstances, a collaborative crowdsourcing project organised by park management with a specific task and purpose could be successful and result in potentially useful contributions from park visitors.

With the research project over the half way mark, work on the development of the conceptual geo-knowledge tool and a demonstration prototype is continuing.