

Personalized Project Space For Managing Metadata of Geography Learning Objects

Wenbo Zong, Dan Wu, Aixin Sun, Ee-Peng Lim, Dion Hoe-Lian Goh, Yin-Leng Theng,
John Hedberg, Chew-Hung Chang
Nanyang Technological University, Singapore 639798

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1. OVERVIEW OF G-PORTAL

Personalized project space is a key feature in G-Portal to allow its owner, the learner, to gather and organize metadata about geography-related learning objects relevant to his/her learning process. The ongoing G-Portal research has been focusing on the development of a web portal to manage geography learning objects on the web by storing metadata about these objects. Query, classification, annotation and map browsing are among the functions provided to manipulate these objects[1]. These functions are still available to personalized project space. On top of them, new functions to help acquiring new metadata content, synthesizing knowledge about the course topic, exporting personalized project content and creating (and referencing) project contexts are added to integrate more learning steps into G-Portal.

2. PERSONALIZED PROJECT

Personalized project is a project created for/by a specific user. Only the owner can modify the content of the project. When a personalized project is first created, new layers have to be created to display different sets of metadata records. G-Portal therefore supports user commands to create/delete layers. Each layer can be assigned one or more *metadata schemas* such that metadata of these schemas can be displayed under the layer.

G-Portal provides users the function to create their own metadata schema when metadata of new formats are needed. Each schema is represented as a tree structure with nodes representing metadata elements and multiplicity constraints. Users can also create new metadata records using the metadata editor window in G-Portal. Creating a new metadata

record only involves specifying the metadata schema to use and the editor will ensure that only valid metadata can be created.

Resources in the public projects are often useful for reference within a personalized project. To facilitate easy insertion of existing metadata, a *copy-and-paste* function is supported. Using the function, users can easily select metadata of interest from public projects and then paste them into their personalized projects. In the copy-and-paste process, metadata records are shared across projects.

3. G-PORTAL PROJECT VIEWER

G-Portal Viewer is a Java application designed for viewing personalized projects offline. The intention is to make personalized projects accessible when internet connection is not available or when the project is to be viewed by non-G-Portal users. Prior to offline viewing, one has to sign in the personalized project using G-Portal Viewer (this requires internet access) and export the project to local storage. The other functions provided by G-Portal Viewer are very much similar to G-Portal applet except that functions modifying project content are disabled to protect the integrity of project data.

Context is an important feature in G-Portal Viewer to register some map extent (a specific map area) and metadata records for future references. Despite some similarities with the bookmarks in web browsing, a context contains detailed settings such that the user can revisit at a later time. Each context is assigned a unique name for future reference. Referencing context can be done in two ways. The first is through the G-Portal Viewer where user can choose to visit one of the previously registered contexts. The second approach is to launch G-Portal viewer with a specified context by embedding a link to the context in some document, e.g. an MS-Word document. This approach is particularly useful when access to G-Portal server is not available and it provides a seamless access to personalized project from other applications.

4. CONCLUSION

In the paper, we summarize several key functions of G-Portal that support learning through personalized project space. With its users having the flexibility to create and manipulate personalized project content, we believe that a better integration between digital library content and learning activities can be achieved.

5. REFERENCE

- [1] E.-P. Lim, D. H.-L. Goh, Z. Liu, W.-K. Ng, C. S.-G. Khoo, and S. E. Higgins. G-Portal: A map-based digital library for distributed geospatial and georeferenced resources. In *JCDL2002*, Portland, July 2002.