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INTERNET PORTAL FOR CULTURAL AND HISTORIC LANDMARKS

Abstract: Nowadays, there is more and more information about the cultural and historic heritage published on the Internet. However, for the moment the present materials are uncompleted, not well structured and internationalized, and scattered between many Web sites. Many cultural and historic details are not described while, on other side, users may find a lot of advertisements of nearby resorts, hotels and restaurants.

The goal of the present paper is to describe both software architecture and facilities of a newly developed Web portal for culture and historic landmarks in Bulgaria, where registered users can enter, locate on the map and edit multimedia information about geographical objects by using predefined metadata templates and, finally, publish it by choosing a suitable presentation transformation. The portal offers means for convenient search and landmarks localization on dynamic zoomable geographic map with good navigation, with opportunity for searching objects by location and types or other object characters. The object types and all templates with are to be defined by the portal administrators, without any limitation for any object type.

The portal supports three different user roles: unregistered users, editors and portal administrators. The administrators can create, describe and manage the object types, which define available landmarks type at the portal. The creation of a particular object is executed by editors, who may also edit or delete their objects after approval by administrators. Unregistered users have access to the entire information, but they do not have right to change it.

The object type itself is described by determining metadata multimedia attributes of objects (including image for visualization on the map) and by a XSLT style for representation of the object content (internally stored in XML). The process of creation of an object is separated into five steps: selecting the object type, determining the geographic location of the object, filling values for the objects attributes in supported languages (Bulgarian and English) and choosing of a style for representation of XML content.

The technology used for the development is Microsoft ASP .NET. For providing a dynamic map, GoogleMap API is used and in addition a second layer is laid over the picture. The layer contains data for settlement, rivers, roads, railroads and lakes in Bulgaria. The additional second layer is used in order to provide detailed information for faultlessly orienting of the users in the territory of Bulgaria. WMS (Web Map Service) of MapGuide is used to generate the layer. The database used is MySql 5.1 – open and free, and providing an easy and fast access to stored data.

In the portal covers the entire process of definition and publication of the objects types and the concrete objects but we plan its extension in near future. The main direction for future development is providing communication between the users, defining paths for visits and sharing pictures of the impressions from the visits of landmarks.

Key words: cultural heritage, metadata templates, portal, geographic maps