

AGH University of Science and Technology in three-dimensional web world

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In recent years, the number of geoportals was constantly increasing all over the world. In Poland, the main reason of growth is implementation of the INSPIRE Directive. The most important goal of creating geoportals is to provide Spatial Data for the Polish Spatial Infrastructure (Głowacki et al. 2005). Theirs architecture is oriented to services and interaction with any user (Akinci & Cömert 2008). All technological solutions should give the user the possibility of using data from many sources in one platform (Nowacki & Opach 2009). Most of Geographic Information Systems represents only the view of the “bird’s eye” without giving the possibility of three dimensional viewing of the actual situation on the ground. What you can see is the land surface as an object map or orthophotomap. However, currently a demand of GIS applications designed for fully three-dimensional data is growing. This approach is commonly used for presentation and spatial analysis (Scianna 2013). Thanks to the modern capabilities, ensuring high quality of three-dimensional models is easy (Shioda 2000).

Geoportal AGH – Spatial Information System of the AGH University of Science and Technology – was established in order to provide updated data, allowing moving around the campus. This functionality has been ensured by the construction of site (geoportal). The combination of a vector map along with a number of tools allowing searching

by attribute makes it possible to search for any building or room available for students’ classes. Geoportal AGH will also include data on the news and current events related to the life of the university, for example: repairs of roads, conferences and recruitment. All this is available in a modern, interactive application that was created based on the latest technologies for maximum usability and support for each user.

Now in progress is the creation of three-dimensional model of the AGH campus and its implementation on the mentioned above server www.gis.agh.edu.pl becoming its integral part. The work involves the use of data obtained from surveying and external facade images of objects in order to create a model resembling the real and its rendering.

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