

## THE PRESENT STATE OF RECONSTRUCTING A 150 YEAR OLD GLOBE

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A 132 cm diameter manuscript globe made by the Hungarian László Perczel in 1862 globe received the Gold Award of the 3rd International Geographical Congress held in Venice in 1881. This large earth globe is a part of the Hungarian cultural heritage and it is also an internationally recognized product. The globe, which was badly damaged during the world wars, is kept in the National Széchényi Library in Budapest. The authors of the present paper had already published reports on the project that initiated its reconstruction. This paper describes the state of its digital reconstruction, which pays special attention to a story written about the globe fifty years ago.

The aim of the project is executing the digital virtual restoration of the 150 year old globe. For this purpose, two different digital virtual globes will be made.

1) A digital virtual globe that registers the present state of the piece. This virtual facsimile globe has already been completed and it can be seen in the Virtual Globes Museum of the Department of Cartography and Geoinformatics (<http://vgm.elte.hu>).

2) A virtual globe that presents the state of the globe at the time of its making (original or contemporary facsimile globe). This will be a kind of digital reconstruction as the result of the digital restoration and digital recreation of the globe. The authors have been working on this phase of the project to show the original beauty and high cartographic quality of this unique product. A detailed description of the large ball published five decades ago is of great help to understand the original state and content of the globe.

Both digital versions of the globe will be placed in the Virtual Globes Museum to serve safeguarding and communicating cultural heritage in Hungary and abroad. There are several museums and libraries that store valuable terrestrial and celestial globes from the old past. Many of them are carefully closed from visitors and are kept in boxes to keep away the dust and light. The mission of the Virtual Globes Museum of the University (established in 2007) is to collect a great variety of globes and to keep the Museum open for anyone. The images of the globes can be easily viewed, rotated and enlarged by a mouse. The language of the descriptions of items is Hungarian, English and German.

The methods developed during the project will be useful not only for making virtual facsimiles and virtual contemporary facsimiles, but also for the virtual restoration of the damaged surfaces or illegible parts of the globes without any risk. Even the complete creation of the globe (the digital virtual reconstruction) may be necessary in the case the state of the original is so poor that its physical restoration is dangerous or practically impossible.

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