

3D visualization and outreach of subsurface geological information using multi-layered miniature produced by 3D plotter

SHIBAHARA, Akihiko^{1*}

¹Geological Museum, National Institute of Advanced Industrial Science and Technology

In recent years, people can access to geological information quickly and easily with the help of information technologies. However, it is difficult to recognize three dimensional distribution of geological structure without professional training of map reading. To solve this problem, several techniques were established to build up finely-detailed miniature with rapid prototyping and projection mapping. There are extremely small contours on the surface of the miniature. These contours are used for marker to calibrate projection. This miniature, called Highly realistic Projection system (HiRP system) is used for outreach and research activities in museums, schools, geoparks etc.

I, the present writer, will report about 3D visualization about subsurface geological information using multi-layered miniature. A number of geological datasets, such as borehole datasets, 3D subsurface structure model published by Geological Survey of Japan (GSJ) are also used to modeling interior structure of the model. I will also report about interactive miniature coupled with GIS, and global trends in rapid prototyping.

Keywords: Geological information, 3D model, Rapid prototyping, Projection mapping, 3D plotter, Geopark

