

Google Earth as geoscience data browser project

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Up to the present, various geochemical and geophysical data have been produced, and most of the data have been compiled into databases. We can accumulate a large amount of various data easily and quickly from these database systems on the Internet. Visual presentation of these various geoscience data together will be very useful for cross-disciplinary study on the Earth's interior. Each data set, however, has its own format and own presentation tool. To display the different kinds of the geoscience data together needs some procedures. In this study, we aim to provide a method to display various geoscience data together easily and quickly.

We adopt Google Earth as a common geoscience data browser. Google Earth is a 3 dimensional map viewer provided by Google. Google Earth makes use of an XML called KML to display graphical features over terrain view. We have developed software to convert various geoscience data to a KML file. At the last JPGU meeting, we introduced the conversion tools for seismic tomography model, geochemical data of rock provided by GEOROC and PetDB, navigation data of research vessels of JAMSTEC. By using these tools, the horizontal/vertical cross section of the tomography model can be displayed on Google Earth. The geochemical data of rock are displayed by bar graphs. Until now, we have improved these tools and added new features to them. For example, the legend of the bar graph for the geochemical data of rock came to be displayed. In addition, we have developed web application of the conversion tool for seismic tomography model and geochemical data of rock, which are now available on the Internet (<http://www.jamstec.go.jp/pacific21/TMGonGE/top.html>). We started to develop new conversion tool for the other data such as geomagnetic field model, seismic data of ocean floor by a large airgun array system.

We are going to support more data format and provide these conversion tools as web application or Java application.