

APPLICATION OF THE VIRTUAL REALITY MODELING LANGUAGE (VRML) TO GEOLOGIC REMOTE SENSING

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The advent and success of the World Wide Web has brought distributed computing to the desk top. In particular, we now have the ability to perform visual analysis of data using a standard PC and web browser. We have been investigating the use of the Virtual Reality Modeling Language (VRML) to analyze data sets comprised of Digital Elevation Models (DEM) combined with imagery acquired from satellite and aircraft. We will demonstrate the potential contribution of VRML to geological remote sensing using data sets from Mount St. Helens, and Hawaii.

VRML greatly simplifies data distribution since it runs inside the web browser. In addition, it gives the desktop computer user the ability to interactively study 3-dimensional data sets. VRML is a very extensible language, and we are particularly interested in modeling physical processes and visualizing the measurements from field instruments in near real-time. These techniques are facilitated by VRML's integrated support for the Java programming language. We believe that the Remote Sensing community will benefit from this new mechanism for doing economical web-based analysis.