jDem846

Summary

jDem846 is a geospatial software application designed to produce high-quality two and three dimensional digital elevation model images. It takes in a digital elevation data raster provided by the USGS or other sources and produces a two dimensional graphical image. The data can also be output as resampled datasets using the internal algorithms combined with bilinear and cubic interpolation scaling. It uses gradient coloring methods to indicate relative elevations, namely hypsometric tinting. The software also has a configurable hill shading algorithm (primarily using dot-product calculations). The software was designed to be easily extensible by third parties, given simple ways to include additional output engines, colorings, etc.

In addition to elevation data, jDem846 has limited support for ESRI shapefiles for adding layers to the model. Shapefiles can be configured with specific styles to provide meaningful rendering upon the image.

The intended consumers of the software are primarily users in the academic and scientific communities. Because the perceived educational and scientific value of the software exceeds any likely business value (in my opinion), I am planning to release the source code as Free & Open Source Software.