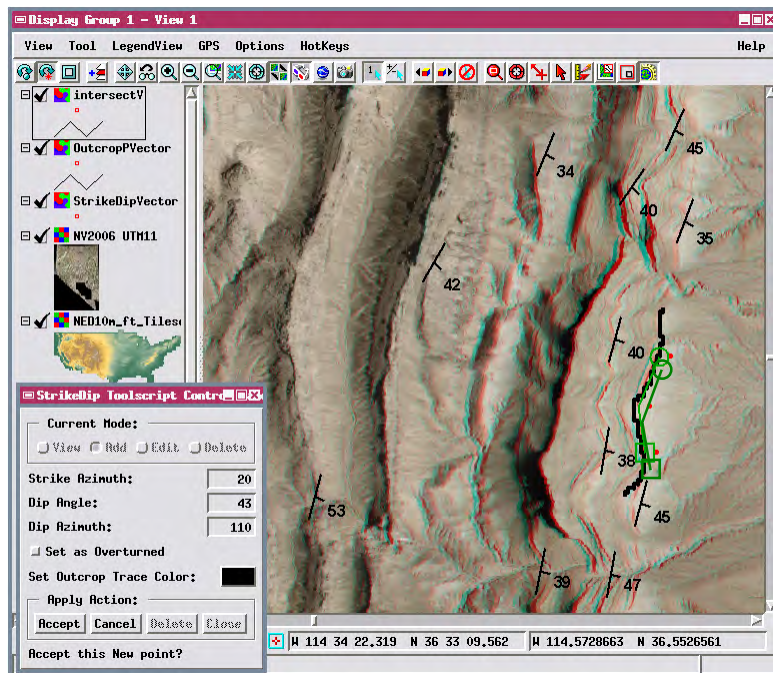# Strike/Dip Tool Works with Any Georeferenced Image

MicroImages has 90-meter global (including all of Canada) and 30- and 10-meter conterminous USA digital elevation models for use in the TNT products. You can use these tileset raster objects to provide elevations for the Strike/Dip Tool Script and use any georeferenced image as an overlay for geologic interpretation. These DEMs also allow you to view your image in stereo while using this tool (anaglyph or other 3D viewing device). Using these materials, this tool script assists you in applying your geologic skills in 3D to locate and record the orientation (strike and dip) of any interpretable rock layers for any area in the world.
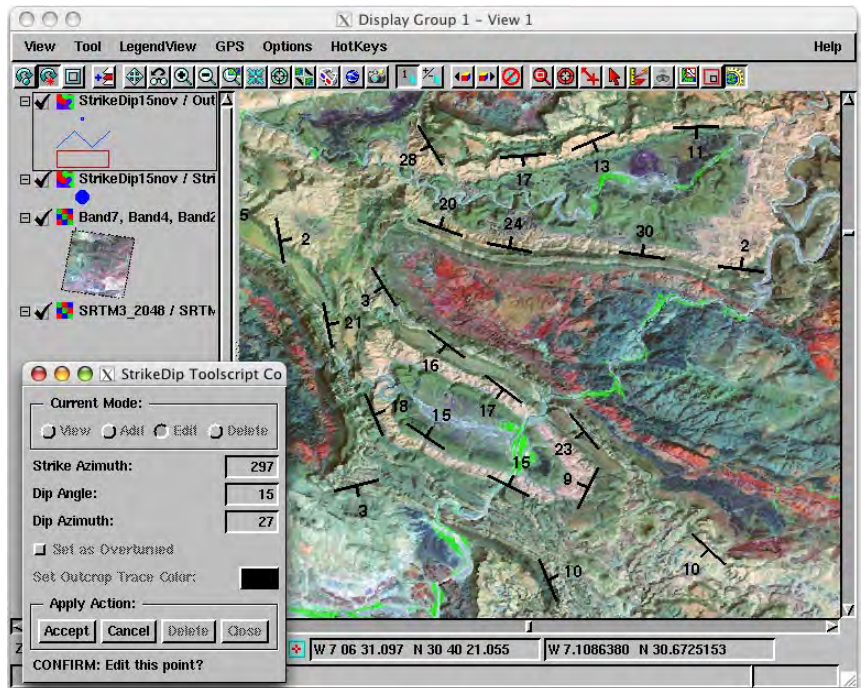
This SML tool script is described in more detail in the Technical Guide entitled *Sample Tool Script: Measure Strike/Dip of Geologic Features*. It provides a tool for placing three non-colinear points on the trace of a planar geologic surface. From these points the script computes the orientation of the plane and its local intersection with the surface (outcrop trace) and creates a vector point attributed with the measurements. As noted above, recent improvements allow the script to be used with any georeferenced image and DEM of any location in the world.

Strike/Dip measurements created with the Strike/Dip tool script using outcrop patterns in a Landsat image of the Anti-Atlas Mountains, Morocco. The 90-m Global SRTM Elevation TNT tileset was used directly as the first layer in the group to provide the elevation values needed for the strike/dip computations.

MicroImages Elevation Datasets

Any of your local, private georeferenced imagery can be used directly without alteration with this tool script and the global and USA single tileset elevation raster objects described in these Technical Guides:

- *Global 90-Meter Elevation Data (SRTM90)* (extended to include all of Canada)
- *U.S. 30-Meter Elevation Data (NED30)*
- *U.S. 10-Meter Elevation Data (NED10)*

You can also easily use your private, local, higher-resolution DEM as the base for 3D viewing and interpretation with this tool script. Your local image overlay can be in any directly supported format and of any size, including huge TNT tilesets such as the 51.9 GB Nevada statewide orthoimage tileset of 1-meter resolution illustrated to the left.

Any Georeferencing

Correct attitude measurements are computed from any georeferenced DEM using any supported map coordinate system:

- any projected map coordinate system
- geographic (latitude/longitude) coordinates
- any coordinate units (meters, feet, ...)

Any Elevation Units

The DEM can provide elevation values in any units (meters, feet, decimeters, ...). Simply set the cell value scale for the DEM (in Project File Maintenance) to the value needed to rescale the DEM elevation units to meters.

Strike/Dip measurements created with the Strike/Dip tool script. The image overlay (displayed in anaglyph stereo) is a TNT tileset created from a 1-meter natural color orthoimage mosaic covering all of Nevada. The US 10-Meter NED Elevation Data (NED10), a TNT tileset with elevations in feet, was used directly to provide the elevation values needed for the strike/dip computations and as a terrain layer for the stereo display.

Download the updated Strike/Dip Tool Script from www.microimages.com/downloads/tool&macro.htm