

GRID TOOLS FOR ARCVIEW 3.X

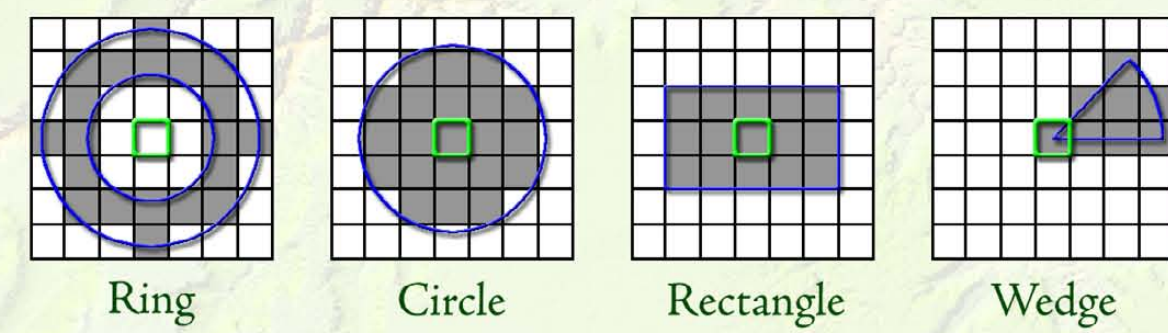
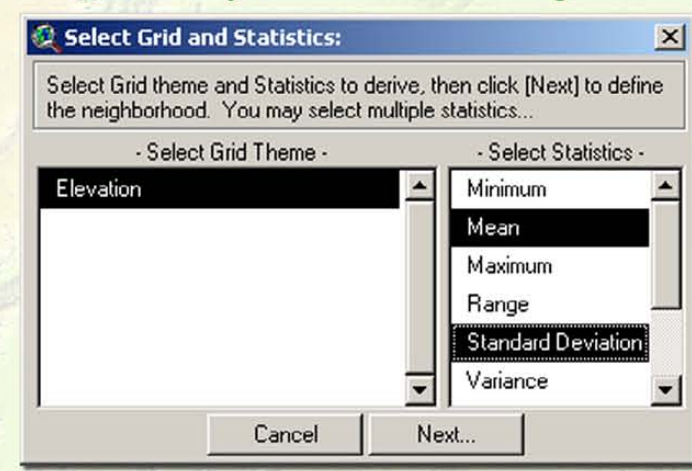
TOOLS FOR ANALYZING, DISPLAYING, CLIPPING AND COMBINING GRIDS

Jeff Jenness, Jenness Enterprises

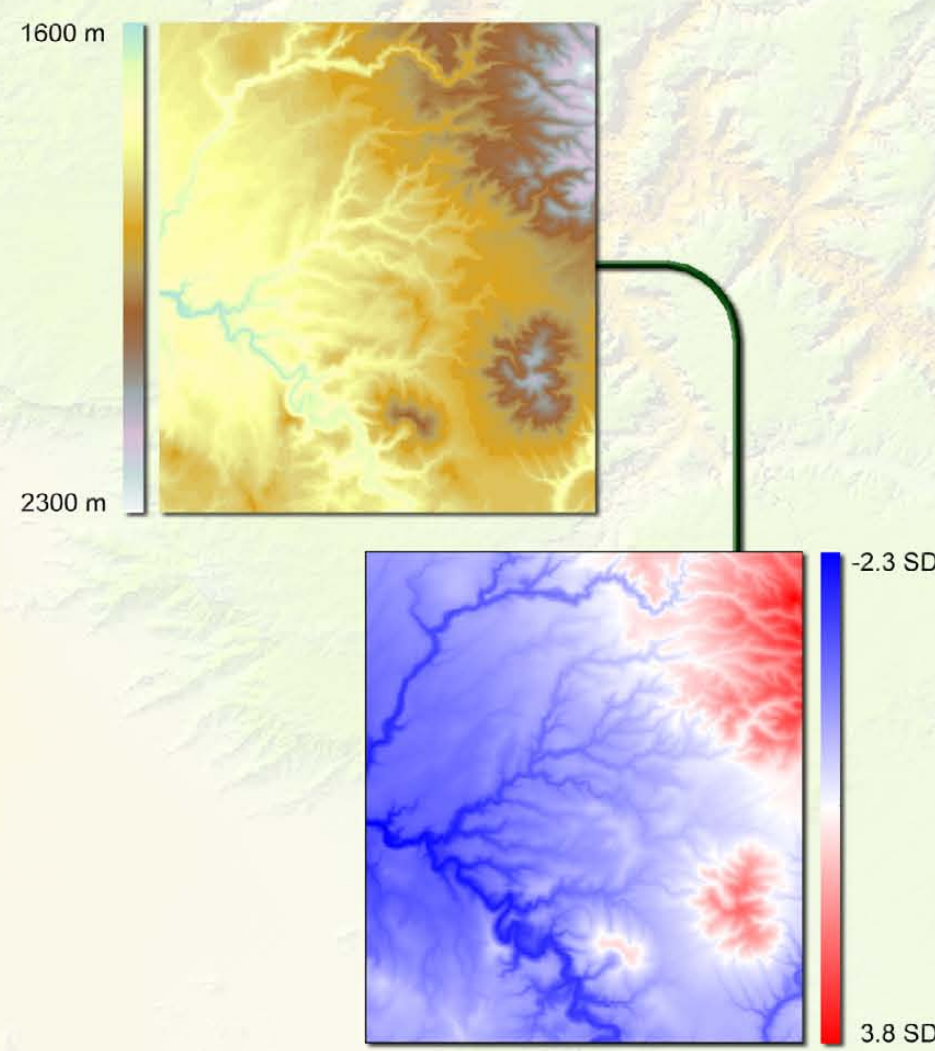
<http://www.jennessent.com> · jeffj@jennessent.com · 3020 N. Schevene Blvd. · Flagstaff, AZ, USA 86004 · (928) 607-4638

Advanced Neighborhood Statistics

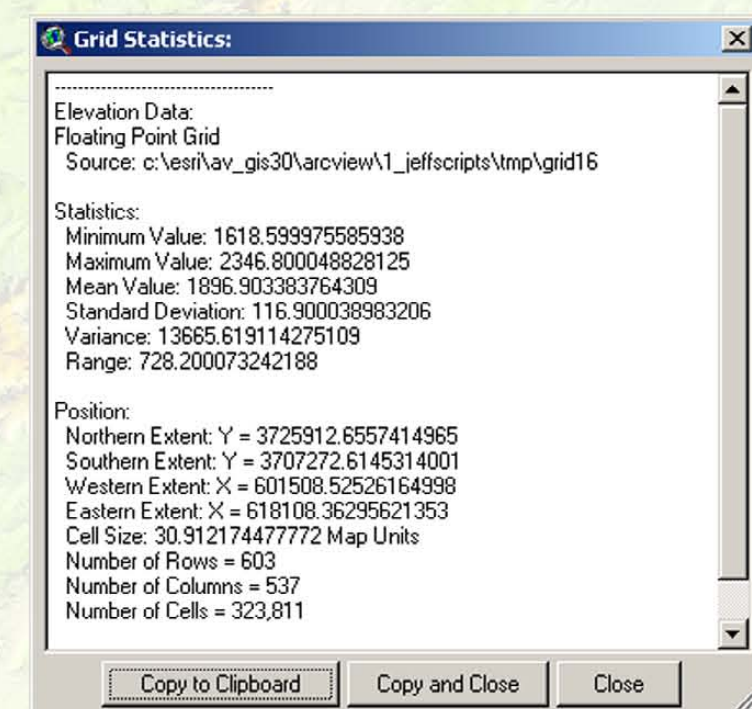
Options for several neighborhood statistics and multiple neighborhood types



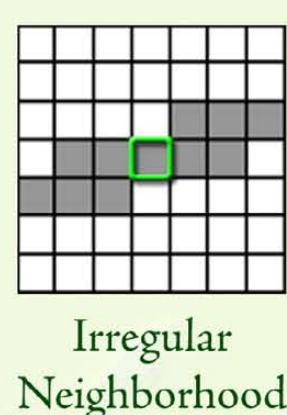
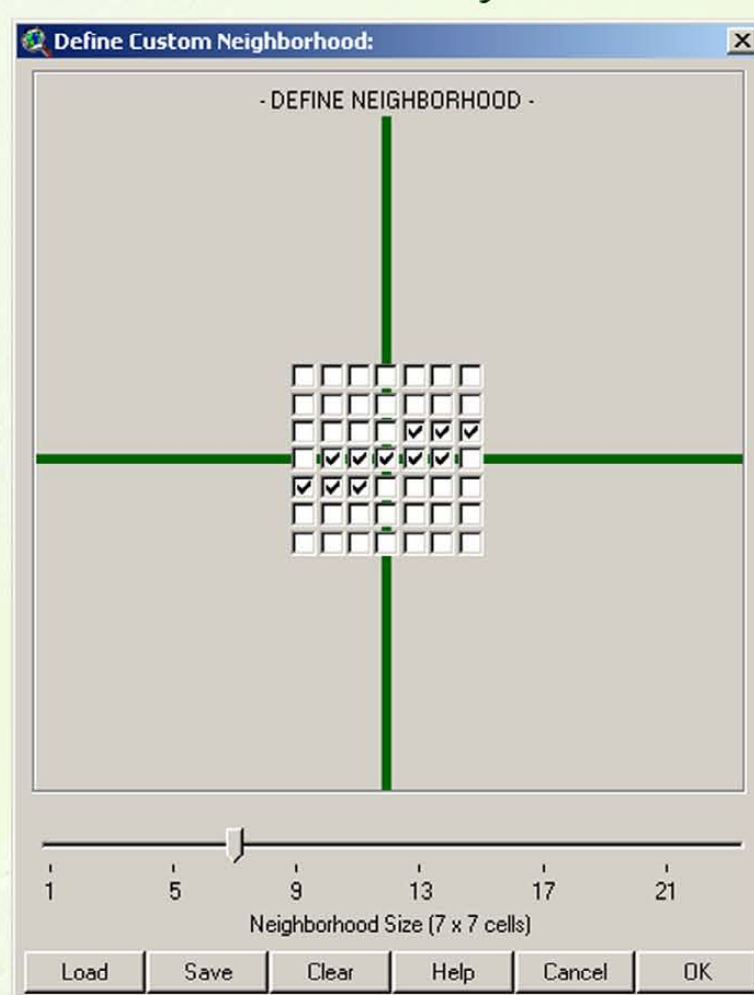
Includes a tool to standardize grids, such that each cell value represents the number of standard deviations away from the grid mean



Numerous General Grid Statistics

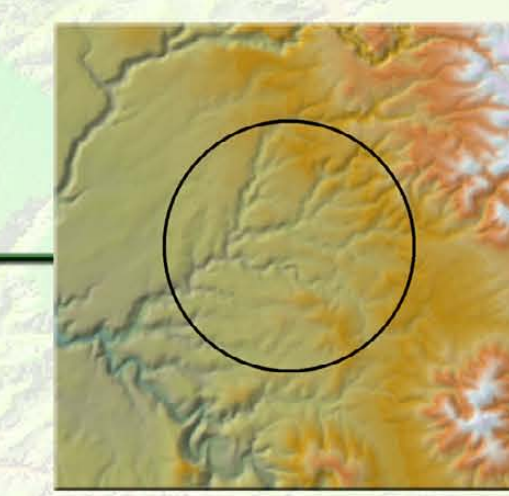
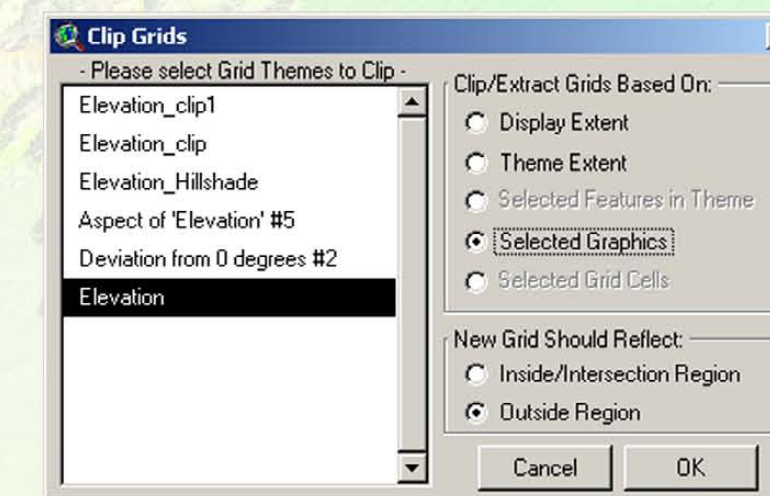


Includes a tool to define custom neighborhoods

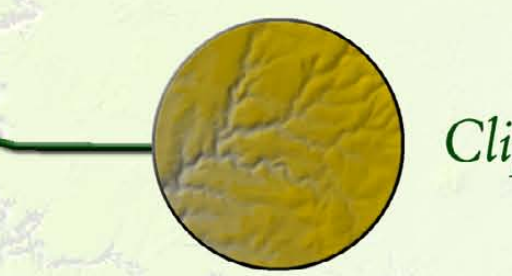


Clip and Combine Grids

Clip grids according to a variety of criteria

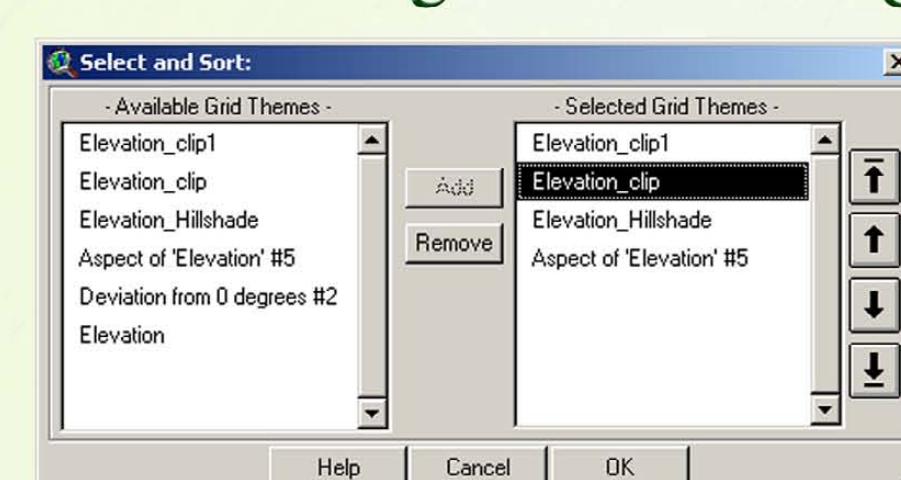


Clip Inside

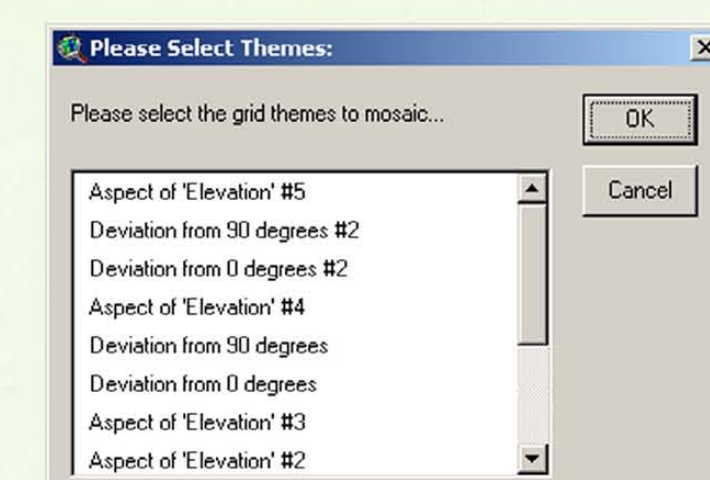


Clip Outside

Combine grids via Merge, Mosaic or combining attribute tables



The "Merge" function allows you to select and sort your grids. Grids on top take precedence over grids below.



The "Mosaic" function attempts to edge-match adjacent grids.

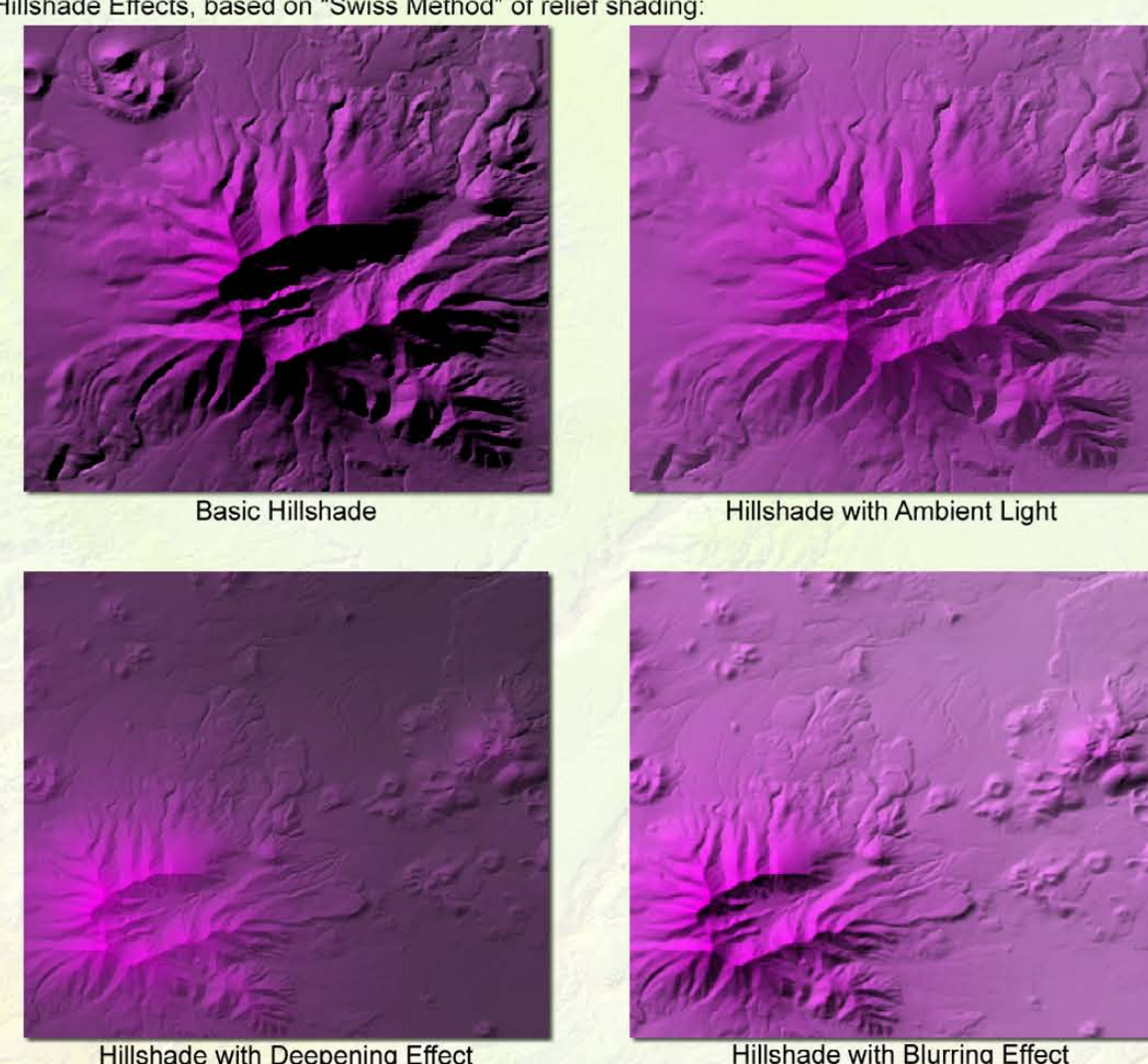
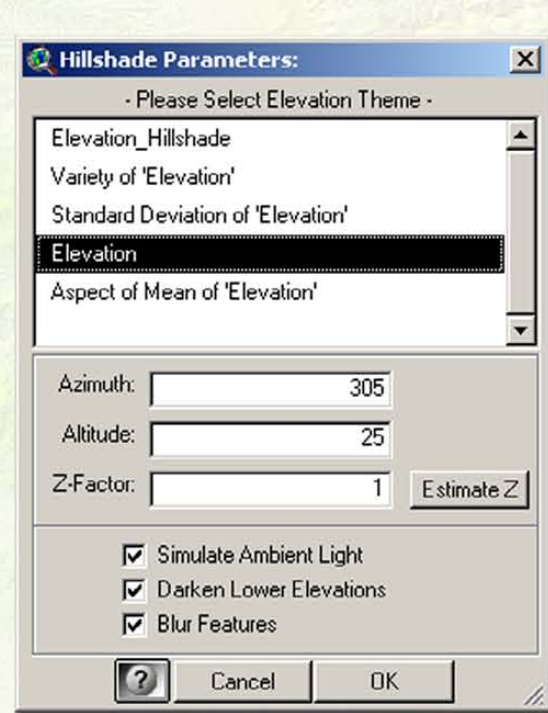


The "Combine" function combines attribute tables, and therefore is only valid for integer grids. This function adds fields to the attribute table.

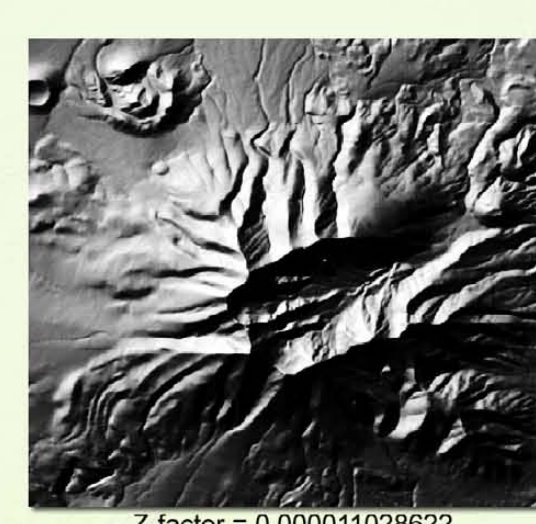
Advanced Surface Analysis

Advanced Hillshade Functions

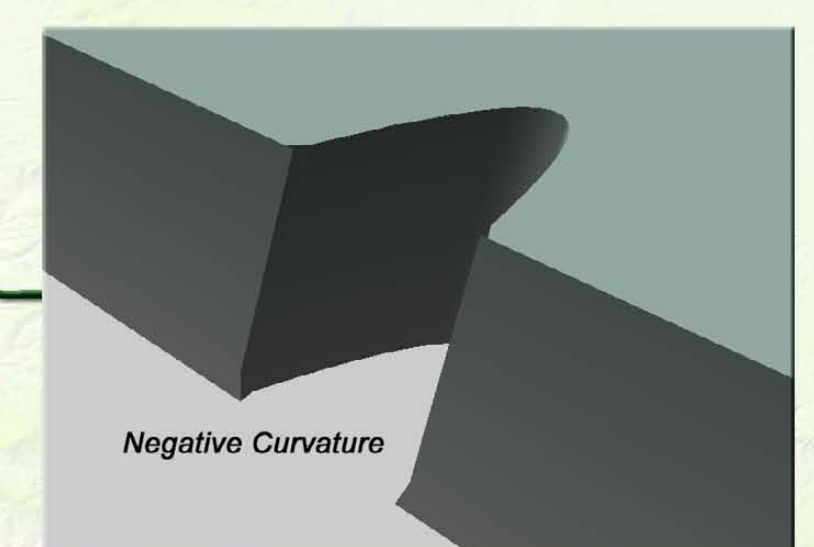
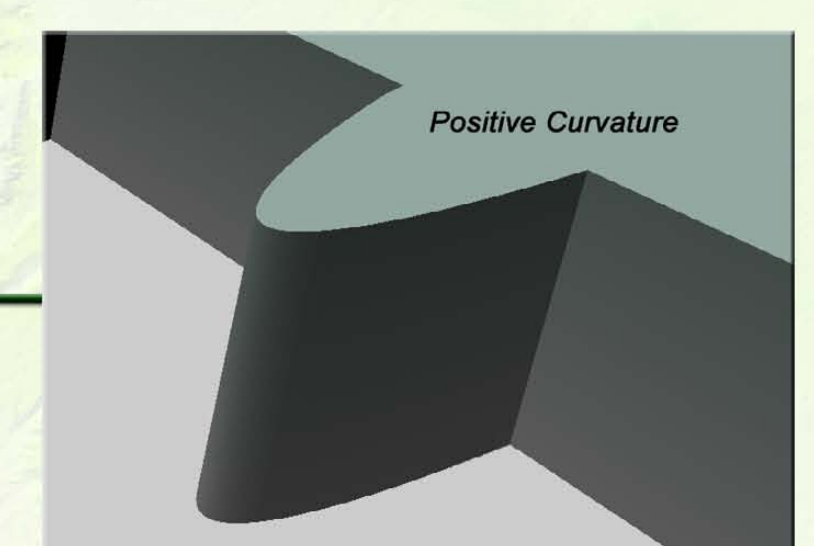
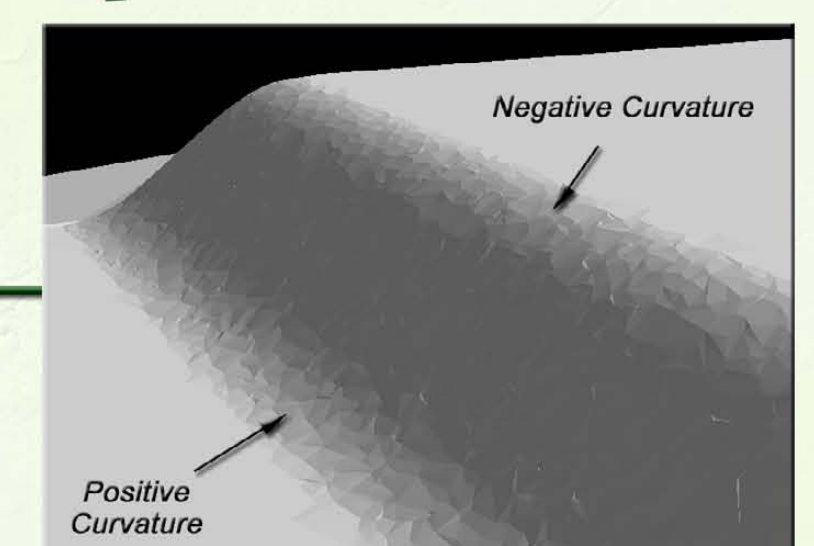
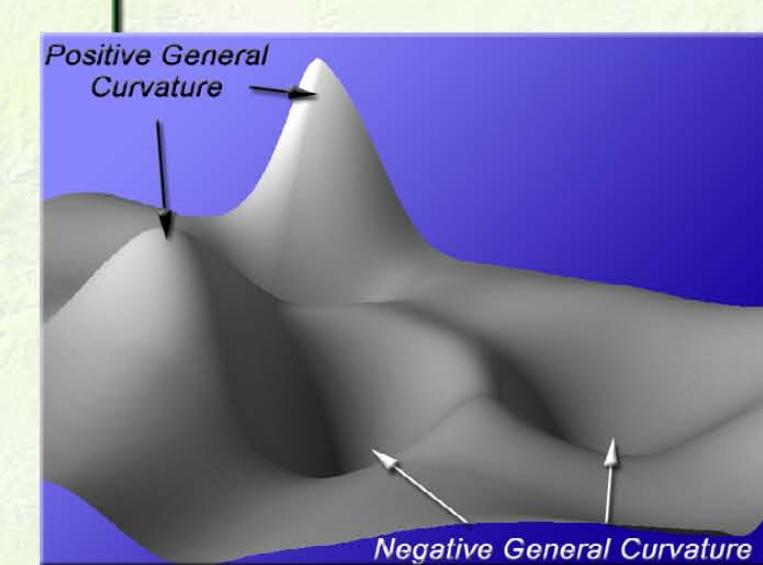
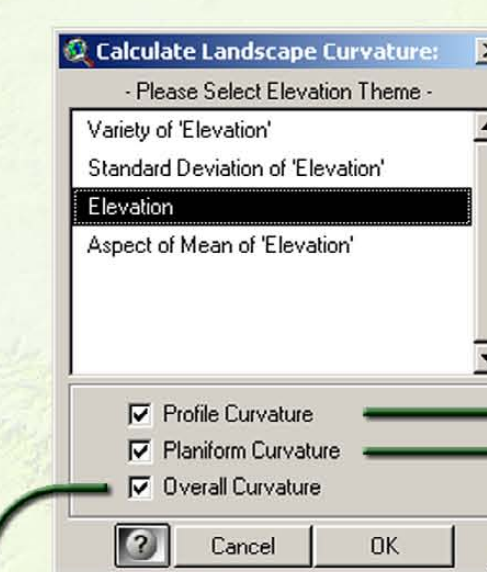
Hillshade Effects, based on "Swiss Method" of relief shading.



Includes a tool to estimate and adjust the Z-factor, producing accurate hillshades on unprojected grids

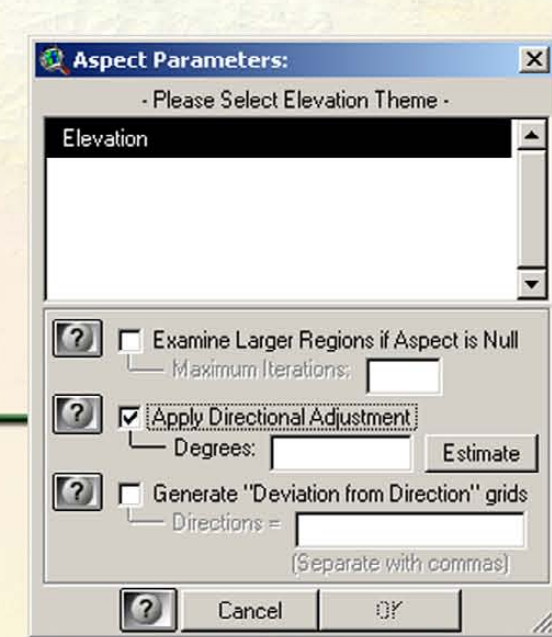


3 Measures of Landscape Curvature

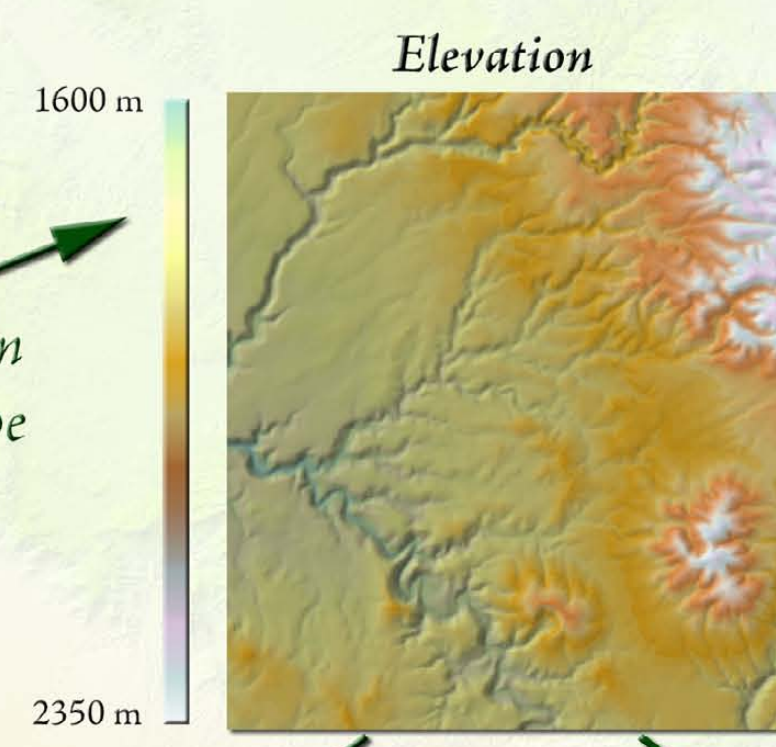


Advanced Aspect Functions

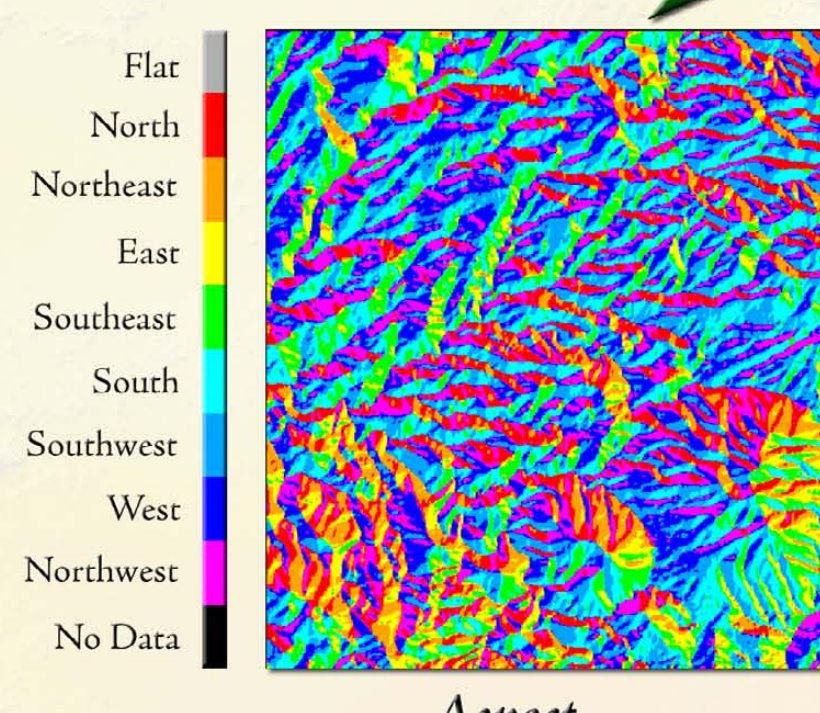
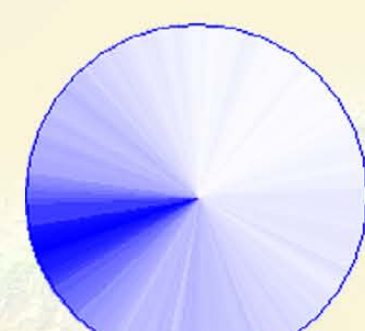
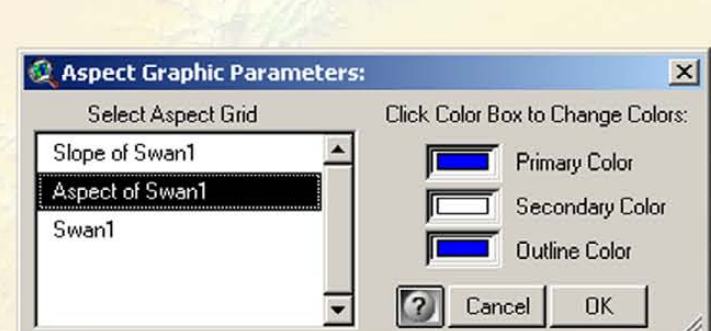
Includes a tool to estimate and adjust the general aspect, based on distortion caused by projection



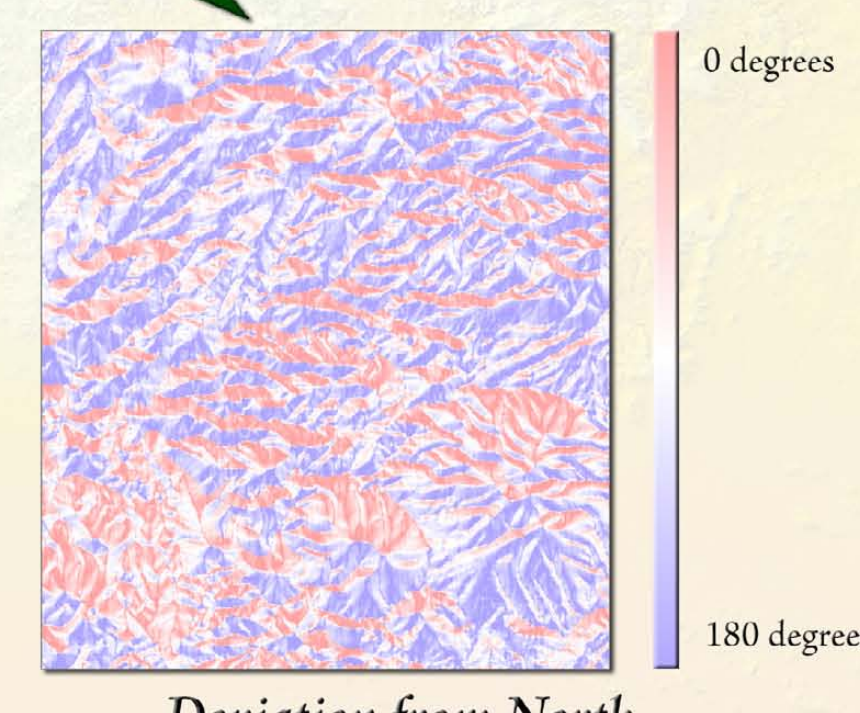
Includes a tool to define aspect in terms of how much the landscape deviates from any direction



Includes tool to create a summary graphic illustrating the general aspect



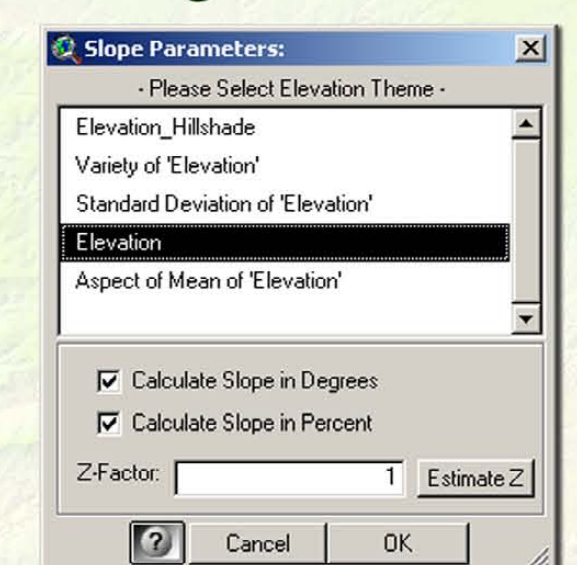
Aspect



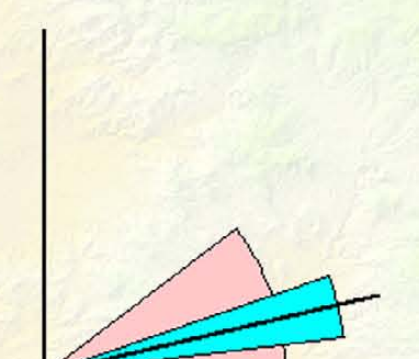
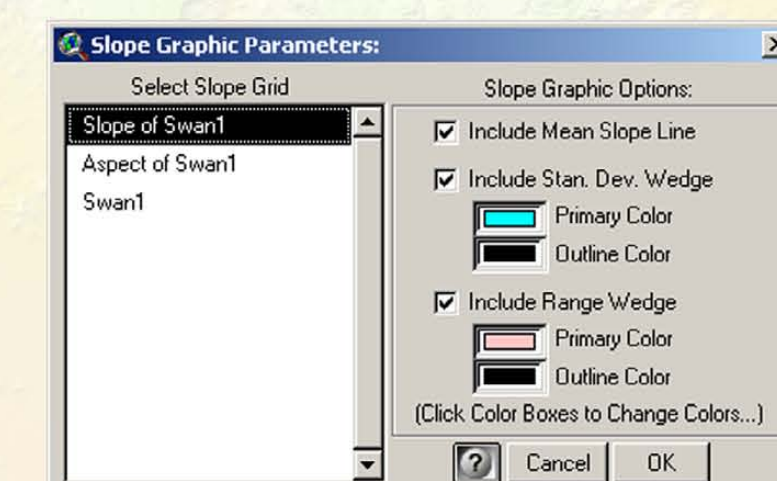
Deviation from North

Slope, in both Percent and Degrees

Includes a tool to estimate and adjust the Z-factor, producing accurate slopes on unprojected grids

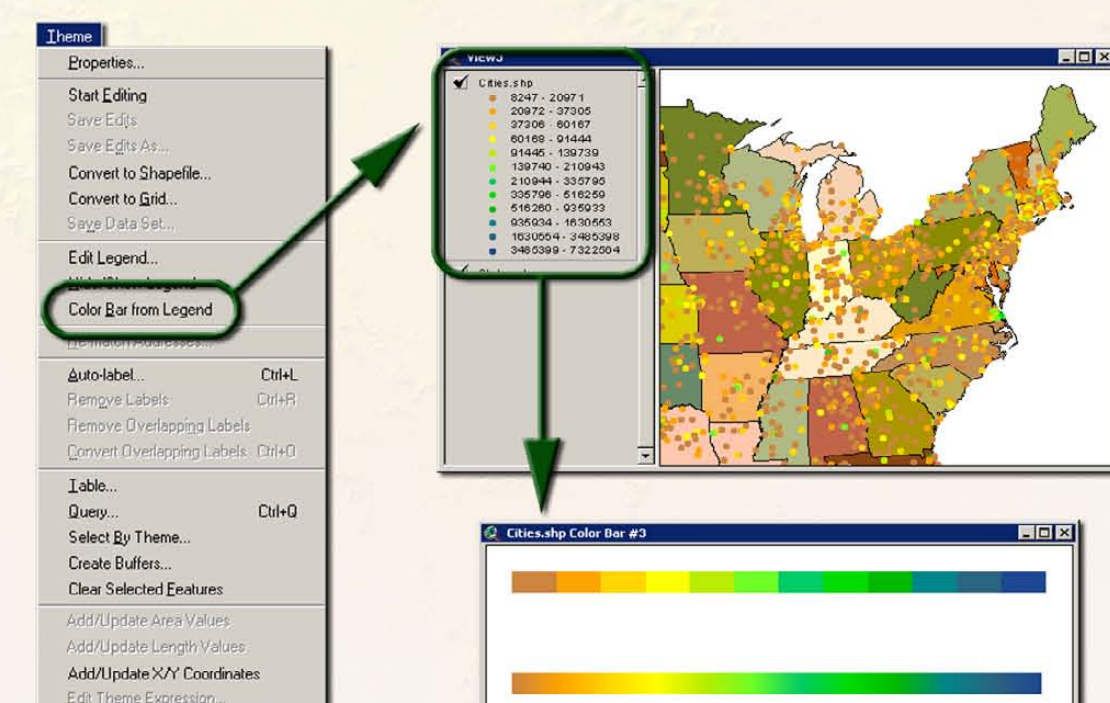


Includes tool to create a summary graphic illustrating the general slope

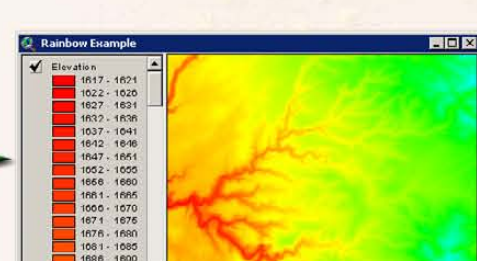
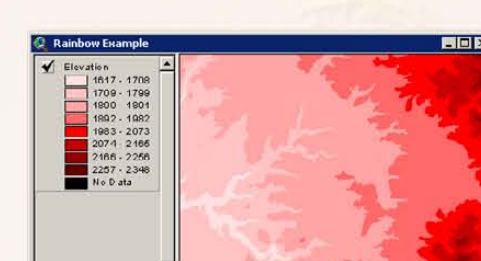
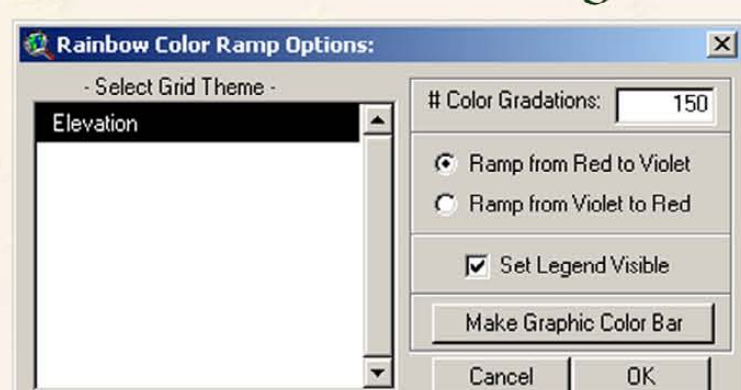


Advanced Legend Functions

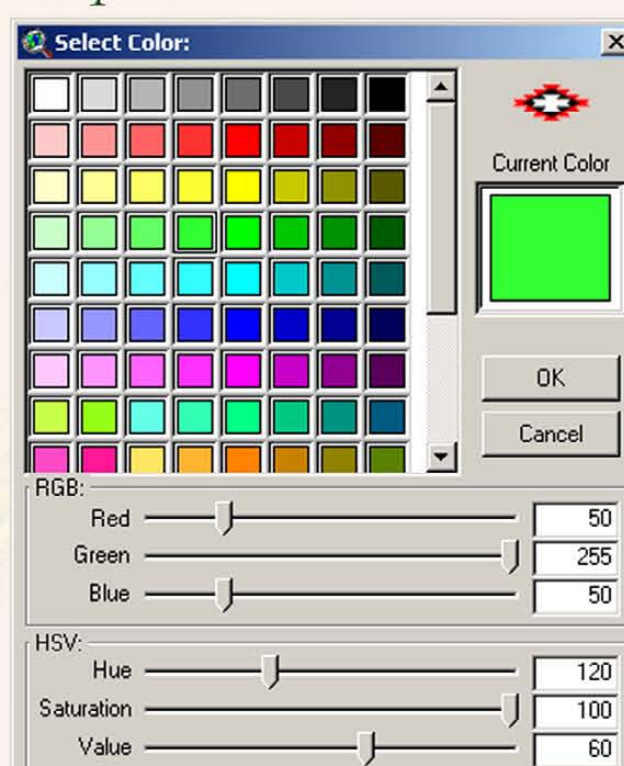
Generate Color Bars of any grid or feature theme legend, to add to layouts or printed maps



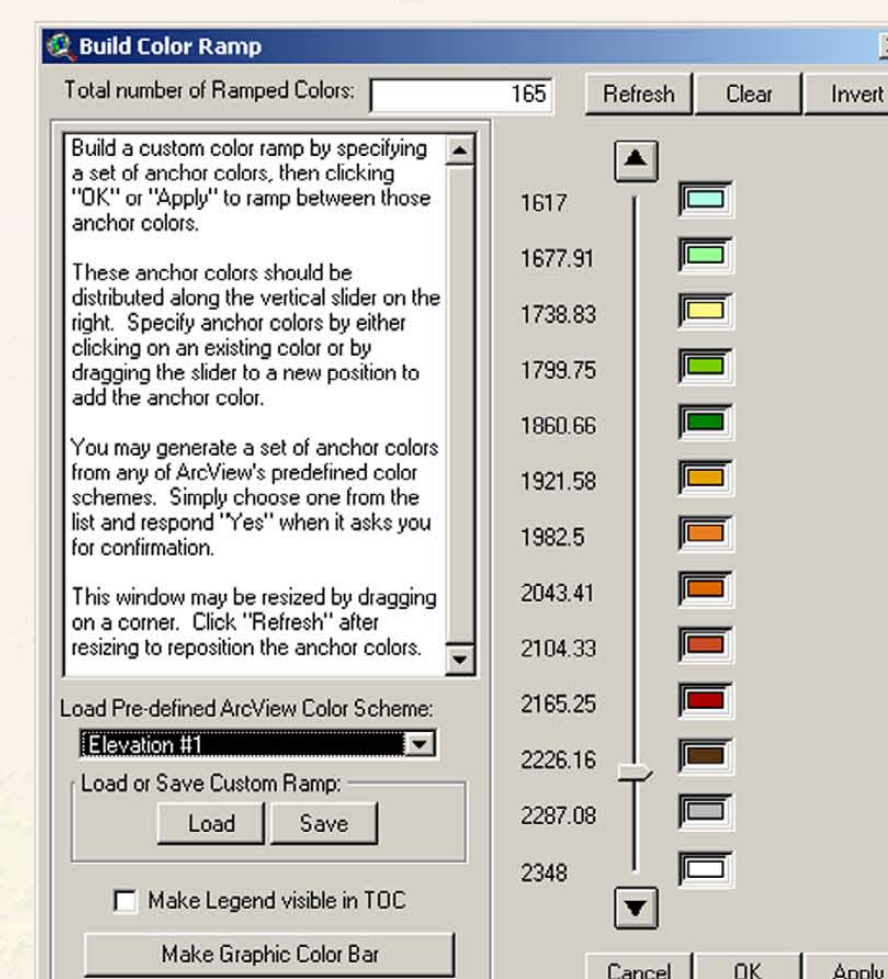
Generate Rainbow Legends



Sophisticated Color Tool



Build complex legends and ramp among all colors



References from Manual:

- Batschelet, E. 1981. Circular Statistics in Biology. Academic Press Inc. (London) Ltd. 371 pp. See especially Chapter 2.
- Beers, T. W., P. E. Dress, and L. C. Wensel. 1966. Aspect transformation in site productivity research. Journal of Forestry 64:691-692.
- Buckley, A. & D. Barnes. 2005. ArcGIS ArcMap and Cartography: Advanced Cartographic Effects. 2005 ESRI International User Conference Technical Workshop.
- Fisher, N.I. 1993. Statistical Analysis of Circular Data. Cambridge University Press. 277 pp. See especially Chapter 2.
- Jenness, J. S. 2006. Some Thoughts on Analyzing Topographic Habitat Characteristics. Originally published in the June 2005 issue of Remotely Wild (newsletter of the GIS, Remote Sensing, and Telemetry Working Group of The Wildlife Society). Available at http://www.jennessent.com/downloads/topographic_analysis_online.pdf.
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- Trimble, G. R. Jr., and S. Weitzman. 1956. Site index studies of upland oaks in the northern Appalachians. Forest Science 2:162-173.
- Wikipedia. 2006. Haversine Formula: http://en.wikipedia.org/wiki/Haversine_formula