

## How to convert a Hillshade (grid) to an image file and retain the color contrast and shading that demonstrates topography.

These instructions help users create a more dramatic looking image file out of an ESRI generated hillshade grid. It allows users to determine which cell values are most abundant in the grid file and only export those to an output image format.

### Step 1:

Create a histogram of the Hillshade grid file. Users can see distribution of cell values by using the **HISTOGRAM** command in grid. In the histogram, record at which value the cell count starts to dramatically increase (*lets say 124 for this example*) and what the maxim cell value is (*ie. 254*) of the hillshade. These numbers are used in step 2.

### Step 2:

Apply a linear stretch to the hillshade. A linear stretch rescales the cell values from their original range to a range from 0 to 255 (which is the maximum number of colors that can be simultaneously displayed on an 8-bit device). A linear stretch expands the cell values to a range of values from 0 to 255 to make use of the total range or sensitivity of the output device. Stretching increases the numerical distance between cell values that were initially in close proximity.

The **SLICE** command in grid will create a new grid with a different range and distribution of values based on the criteria of the linear stretch.

The usage the of the **SLICE** command is

Outgrid = slice (**HILLSHADE** [Ingrid], **EQINTERVAL** [linear stretch that slices data into fixed, specified intervals], **255** [nzones], **1** [base\_zones#, defines the lowest zone value of the outgrid, value of the cells will start with a value of 1], **124** [in\_max, the cell value where in the histogram of the hillshade the cell count start to dramatically increase], **254** [out\_max, maxim cell value of the hillshade])

Grid: Outgrid = slice(hillshade, eqinterval, 255, 1, 124, 254)

### Step 3:

Convert the outgrid that was created by the slice command into an image  
In ARC the command is **GRIDIMAGE**.