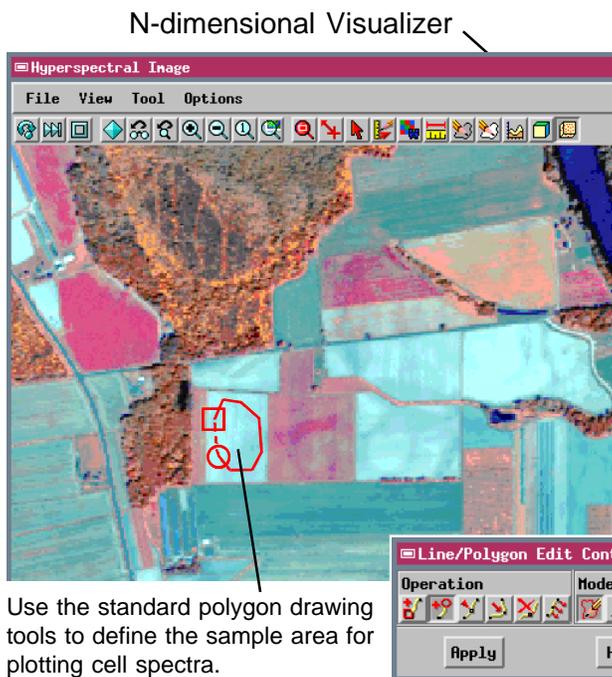


# N-Dimensional Visualizer in Hyperspectral Analysis

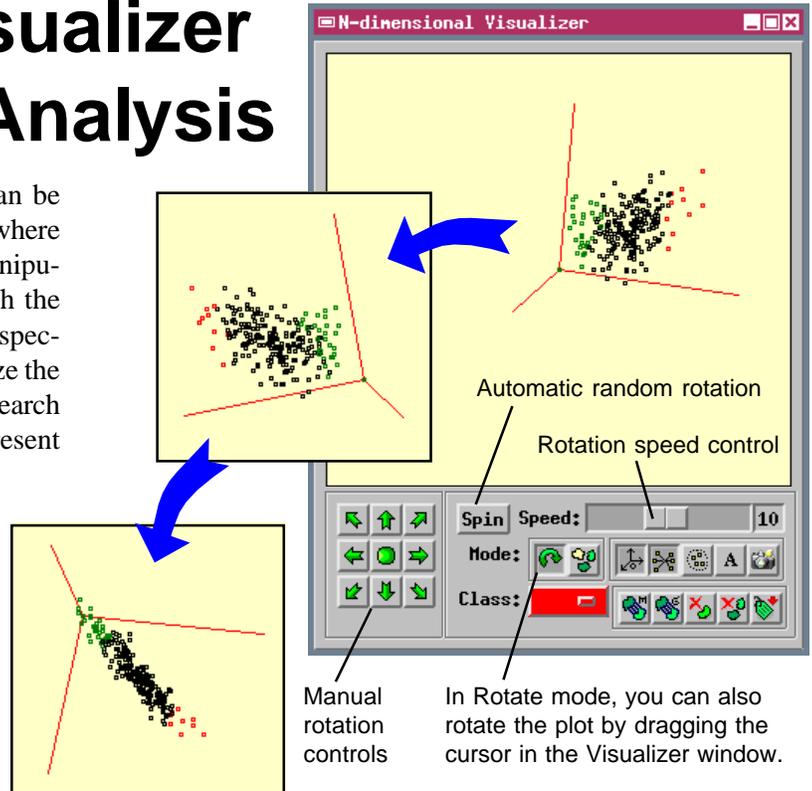
Spectra defined by cells in a hyperspectral image can be represented as points in N-dimensional spectral space, where N is the number of bands. Now you can view and manipulate N-dimensional scatterplots of image spectra with the N-dimensional Visualizer tool in the TNTmips Hyperspectral Analysis process. This tool can be used to visualize the spectral scatter of individual areas in the image, and to search for image cells with extreme spectral values that represent pure spectral end members.



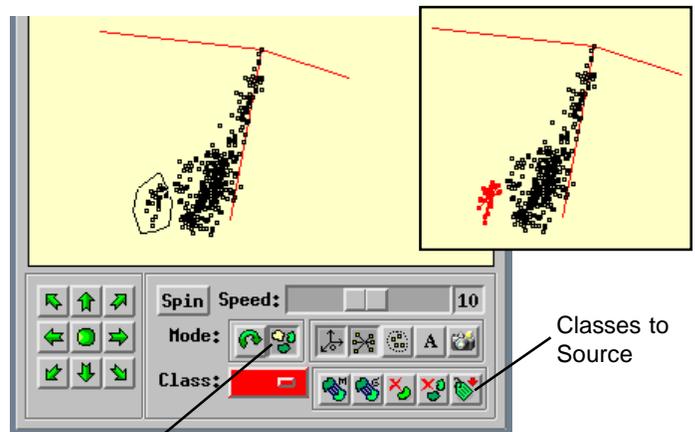
Use the standard polygon drawing tools to define the sample area for plotting cell spectra.

The N-dimensional Visualizer allows interactive or automatic rotation of the spectral scatterplot, as well as many additional features:

- define a sample area for plot using standard polygon drawing tools
- rotate plot manually with arrow buttons or by dragging cursor in window
- automatic random rotation with speed control
- optional display of band axes and axis labels
- select groups of cells from scatterplot and group into classes
- optionally merge classes with similar means or variance
- map classified cells in sample area of source image



The N-dimensional Visualizer allows you to view the spectral scatterplot from any direction in spectral space. You can rotate the plot manually, or use the Spin option to automatically rotate the plot in random directions.



In Classify mode, select a group of cells in the visualizer window by drawing a polygon around them, and right-click from the mouse to assign them to a class, using a color selected from the Class color option menu.

The Classes to Source function displays the selected sample cells in their class colors in the Hyperspectral Image window.

