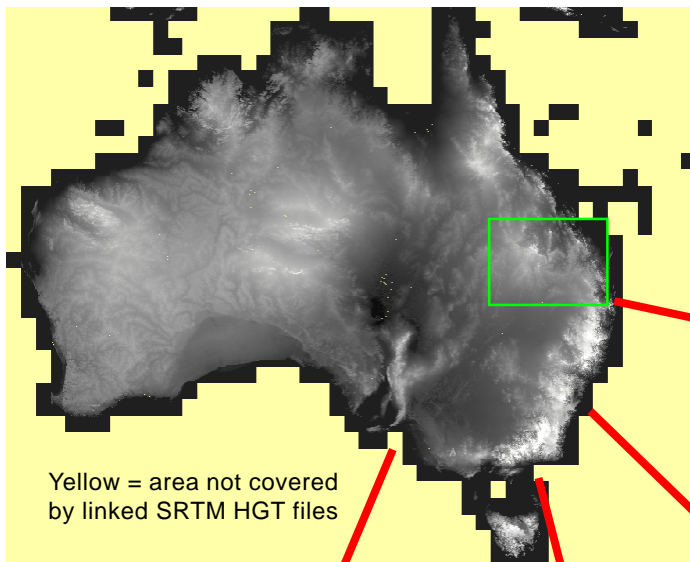## System

Using the Multifile Raster Object

A multifile raster object links simultaneously to multiple tiled external raster files (see the color plate entitled *Import: Linking to Create a Multifile Raster*). A multifile raster appears to TNT processes as a single raster object, and it can be displayed and used in processes just like conventional TNT raster objects.

As an example, consider a multifile raster created by linking to multiple Shuttle Radar Topography Mission (SRTM) height files. As shown by the illustrations on this page, you can design and save contrast tables and color palettes for the grayscale
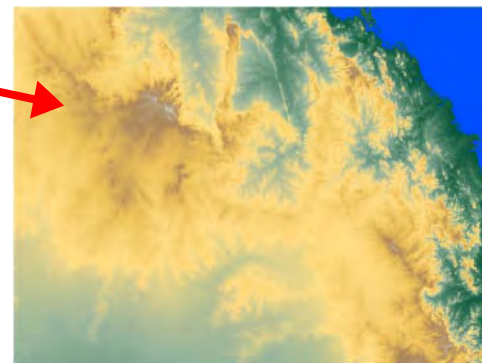
multifile raster to enhance its display. You can also use standard tools in the GeoToolbox, such as the Profile View, to explore the data contained in the raster. You can use the multifile raster as input to various processes that compute derived properties, such as the slope, aspect, curvature, and relief shading in the Terrain Properties process. (Raster processes that use a multifile raster as input create conventional, nonlinked raster objects as output.) You can also use the Raster Extract process to extract an area out to a conventional raster object.

Yellow = area not covered
by linked SRTM HGT files

Multifile raster object linked to a disjunct set of SRTM elevation files covering Australia and island groups to the north. The yellow areas in this illustration have no linked elevation file. This multifile raster is made up of 870 linked elevation files (format HGT), each of which is 1201 lines by 1201 columns in extent (with approximately 90-meter cell size). These linked files total 2.34 GB of data (870 x 1201 x 1201 x 2 bytes/cell). Creating this multiraster object took less than 5 minutes (including selecting the SRTM files) on a 1.8 GHz G5 PowerPC Mac.
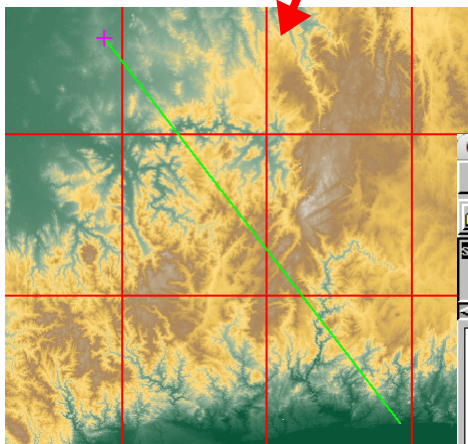
Extract Raster

Produce Slope, Aspect, Shading, Curvature Rasters

Display with Color Palette

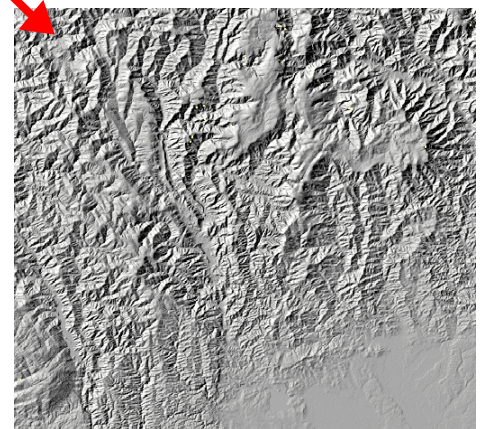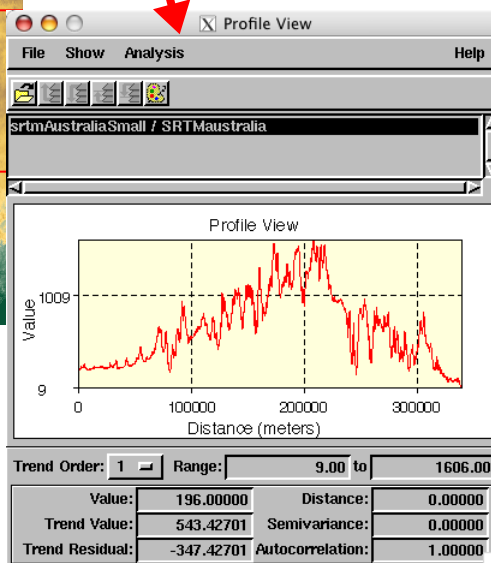**Compute Elevation Profile**

Conventional raster extracted from the multifile linked raster (area outlined by the green box in the illustration at left) using the Raster Extract process.

Multifile raster displayed with a color palette and overlaid with a red map grid indicating the boundaries of the component SRTM tiles. The green line was drawn across several tiles using the GeoToolbox ruler tool to designate a profile line for the Profile View shown at right.

Trend Order:	1	Range:	9.00 to	1606.00
Value:	196.00000	Distance:	0.00000	
Trend Value:	543.42701	Semivariance:	0.00000	
Trend Residual:	-347.42701	Autocorrelation:	1.00000	

Portion of a relief shading raster computed directly from the multifile linked raster using the Terrain Properties process.