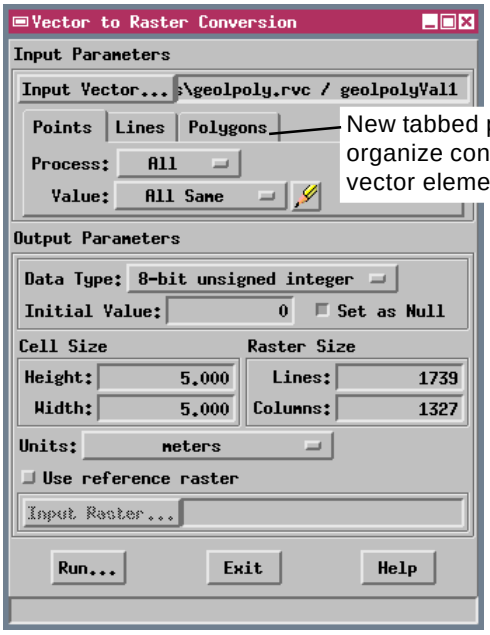
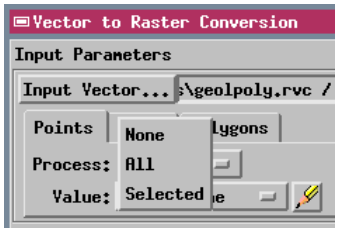
Improved Vector To Raster Conversion

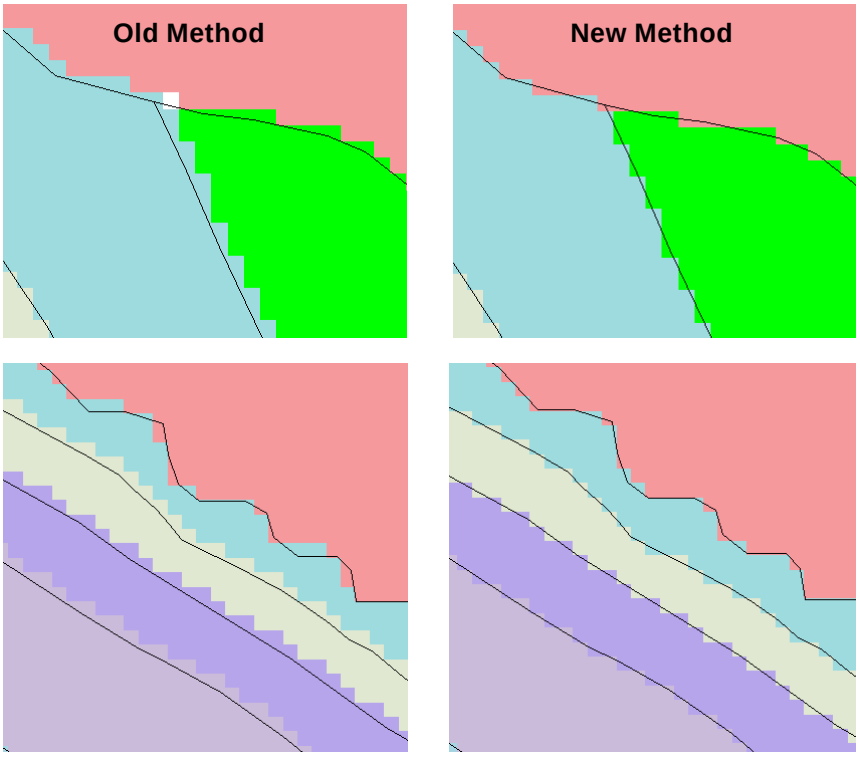


New tabbed panels organize controls for vector elements

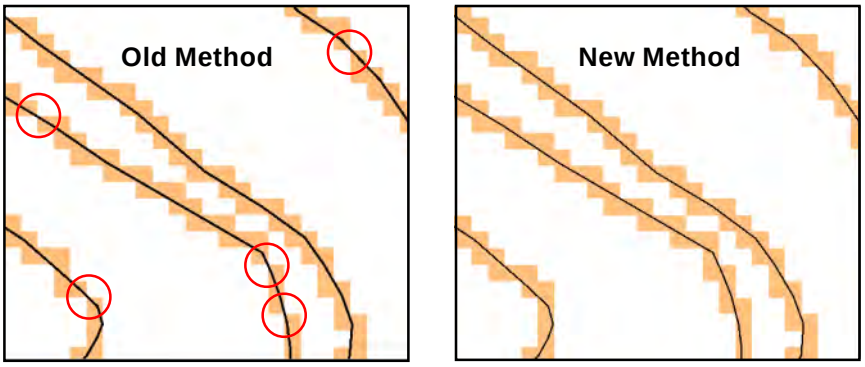
The Vector to Raster Conversion process (Process / Convert / Vector to Raster) provides several improvements for TNTmips 6.8. The most obvious is a new control window featuring separate tabbed panels with settings for Points, Lines, and Polygons. The process now also lets you take advantage of the standard selection tools available in the View and Layer Controls windows (manual selection and select by Query). For each element type you can choose to process all elements or only those elements you have selected.



There are additional improvements "under the hood". The methods used to rasterize polygons and lines have been rewritten to produce much more accurate results. Both methods now use the full floating-point precision of the vector coordinates in the rasterization. The polygon conversion now assigns a cell to a polygon if the cell center is inside the polygon boundary. This method produces more spatially accurate boundaries between the rasterized polygons. The line conversion method assigns a cell to a line if the vector line transects any part of the cell. This procedure ensures edge-to-edge contacts between all cells in the rasterized line, resulting in greater visual continuity.



Comparison of old (left) and new (right) methods of assigning cells to polygons in the Vector to Raster conversion process. Black lines are vector polygon boundaries. Using the old method, rare cells along polygon boundaries were left unassigned (white cell in upper left illustration) and some boundaries were offset in the conversion. The new method assures that all cells in the output raster are assigned to a polygon and creates a more spatially accurate representation of the polygon boundaries.



Comparison of old (left) and new (right) methods of assigning cells to lines in the Vector to Raster conversion process. Using the old method, some segments of the rasterized lines might connect only at cell corners (indicated by red circles). The new method enforces edge-to-edge connections between cells in the rasterized lines, making the lines appear more continuous.

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