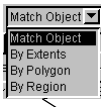
Vector Analysis

Generating Vector Grids

The TNTmips Vector Grid Generation process subdivides larger areas into smaller regular polygon cells and allows you to save the polygon cells generated as a vector object for further use. You can specify an area for subdivision by using the full extents of an existing geospatial data or by manually defining the extents in a desired coordinate reference system. You can also generate grid cells for the vector polygons or a region. You can choose from a number of shapes to generate the grid cells and adjust cell size parameters based on the shape you selected. There is also an optional feature for automatic creation of a database table storing the grid references.

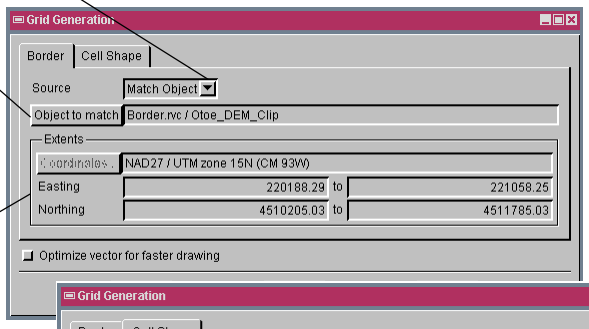
The Grid Generation window provides two separate panels to specify the extents of the area to be subdivided and set the cell shape parameters. The Border tabbed panel allows you select any geospatial object to use its full extents for grid generation. Once you select a source object, the object is displayed in the Grid Generation Viewer window along with the Object Extents layer. The coordinate reference system and the extent information automatically appears on the Borders tabbed panel. Instead of using the extents of the source object, you can define an area for subdivision by manually entering the extents in a desired coordinate reference system. The Cell Shape tabbed panel lets you generate grids in the following shapes: Triangle, Rectangle, Hexagon, Random Rectangle or Parallel. Once you select one of these shapes listed in the Cell Shape menu, you can adjust the parameters for the selected cell shape to determine the size of your grids. You can control the direction of the grid cells either by manually specifying snap mode, angle, and origin values on the Cell Shape tabbed panel or interactively set the direction of grid cells by mouse in the Grid Generation Viewer window. When you are satisfied with the cell grids you have designed in the Grid Generation Viewer window, you can permanently save the grid cells as a vector object.

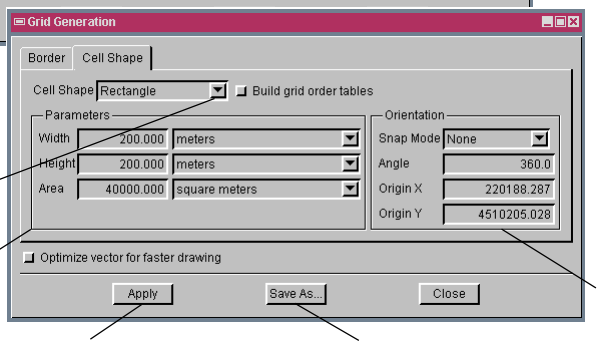
Click to select a source for specifying the area to be subdivided by the Grid Generation process.

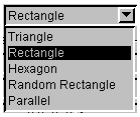


Click to select the source object. Note that the name of this button varies according to your selection from the Source menu.

This section is automatically filled out when a source object is selected.







Click to select the shape of the gridcell.

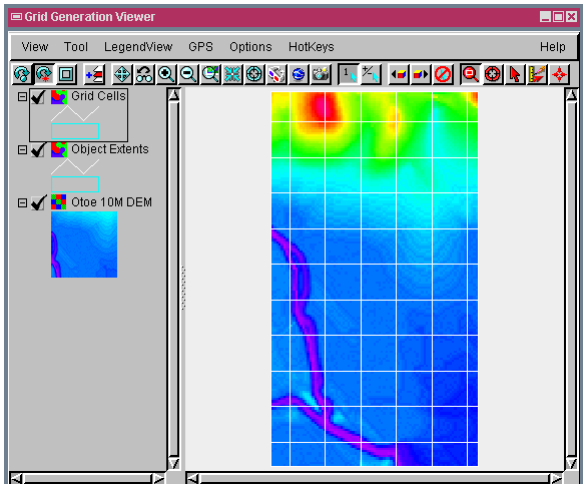
Change parameters to define the size of the cells. Different parameters are provided for the cell shape selected.

Click to generate grid cells as specified and view the results in the View window.

Click to save grid cells as a vector object.

Change the orientation variables to set the direction of the grid cells. The values in this section is automatically adjusted if the grid cell direction is set interactively.

Use the Orientation tool to interactively set direction of the grid cells.



The illustration to the left shows the rectengular grid cells generated using the extents of the raster object (Otoe 10m DEM). The illustration to the right shows the hexagonal grid cells generated using the polygons in the vector object (Farm Boundary).