Clipping to a Project Boundary

TNTmips Pro can prepare standard web tilesets (Google Maps, Google Earth, Bing Maps, and NASA World Wind) and also TNT raster object tilesets (accessed via TNT Project Files), all of which can be used in the TNT products. When you create or process tilesets in the Export Raster Tilesets, Auto Mosaic, Merge Tilesets, or Extract Tilesets processes*, you can designate a project boundary to simultaneously limit the extents of all of the output tilesets. You specify this project boundary (bounding region) by designating a previously-created geometric object that defines one or more polygons. The object you choose can be a vector, CAD, shape, or region object in any coordinate reference system. If you choose an object that includes more than one adjoining polygon, the outline of the union of these polygons (i.e., the outer boundary excluding islands) is used t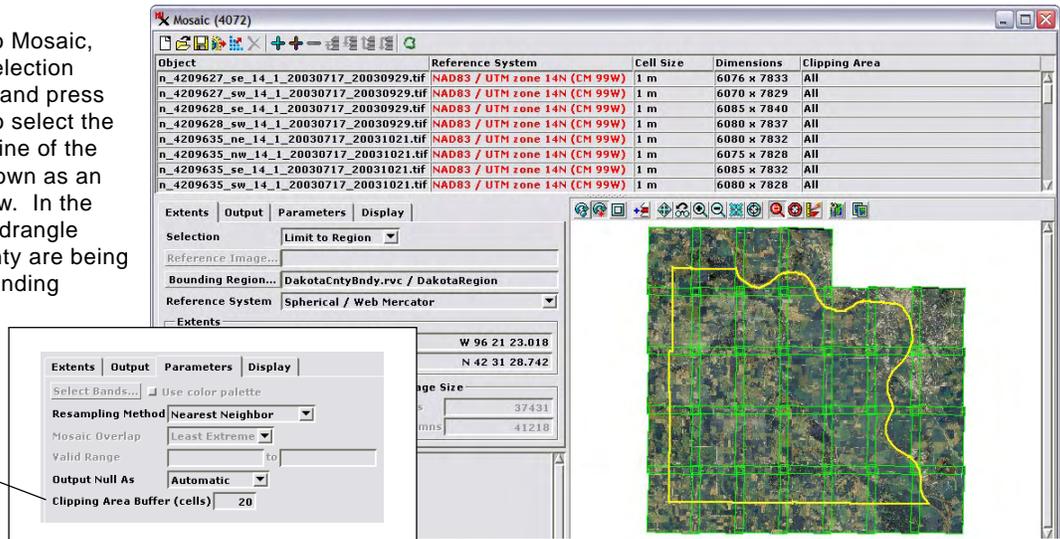o define the bounding region. The interface controls used to select the object for the bounding region are illustrated for each of these processes below and on the reverse. You can also use standard drawing tools to manually draw a polygon in the process window's view and save it as a region object to define the bounding region, also as illustrated on the reverse.

Regardless of the method used to define the bounding region, you have the option to apply an outer buffer zone to this region. The buffer distance is specified in raster cells, as illustrated for the various processes. In each of these processes you can also designate individual clipping areas for any of the input images (in Auto Mosaic and Export Raster Tilesets) or input tilesets (in Extract Tilesets and Merge Tilesets). The Technical Guide entitled *Tilesets: Clipping Input Images* describes procedures for designating input-specific clipping areas.

Auto Mosaic Process

To apply a project boundary in Auto Mosaic, choose Limit to Region from the Selection menu on the Extents tabbed panel and press the Bounding Region pushbutton to select the desired geometric object. The outline of the selected object is automatically shown as an overlay in the Mosaic window's view. In the illustration to the right, quarter-quadrangle orthoimages from a Nebraska county are being mosaicked to a tileset, and the bounding region is the county boundary (shown here in yellow).
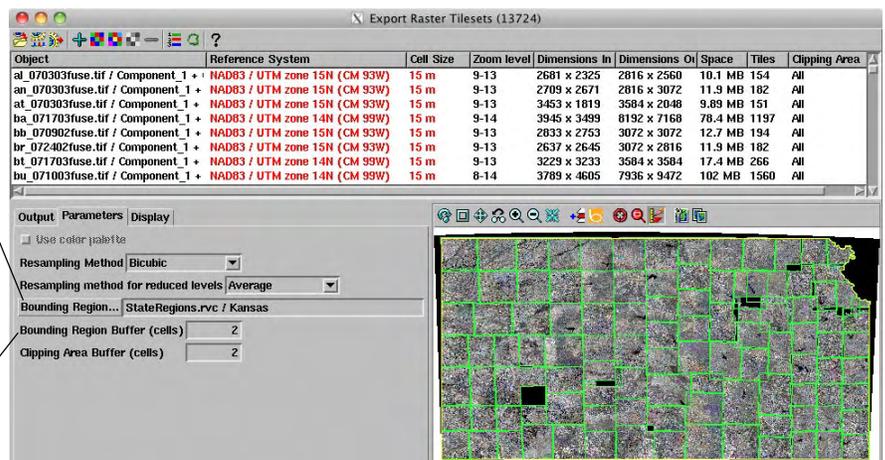
In Auto-Mosaic the same buffer zone setting is used for clipping areas and the bounding region. Set the buffer zone width in cells in the *Clipping Area Buffer* field on the Parameters tabbed panel.

Export Raster Tilesets Process

In the Export Raster Tilesets process, use the Bounding Region pushbutton on the Parameters tabbed panel to select the geometric object to define the bounding area for all of the output tilesets. The outline of the selected object is automatically shown as an overlay in the Export Raster Tilesets window's view, and the source extents overlays in the view are automatically clipped at this boundary. In the illustration to the right, tilesets are being created for county images of the state of Kansas, and the bounding area is the outer boundary of the state (shown here in yellow).

To create a buffer zone around the bounding region, enter the desired value in cells in the *Bounding Region Buffer* field on the same tabbed panel.

* These tileset processes are documented in the following Technical Guides:

Tilesets: Creating a Standard Web Structure *Tilesets: Merge Structures*
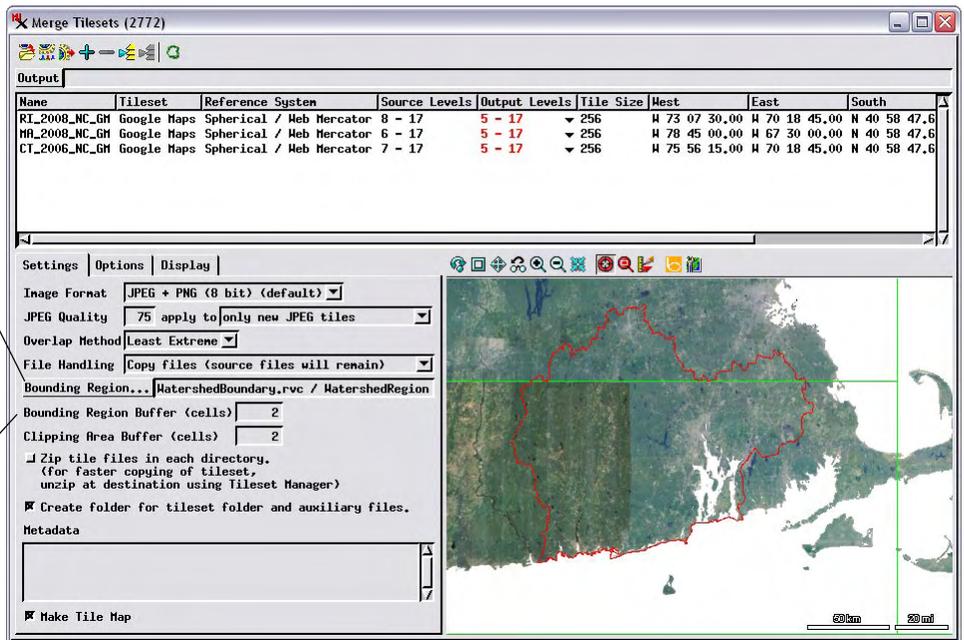*Tilesets: Mosaic to Google Maps Tile Overlay* *Tilesets: Extract Structures*

(over)

Merge Tilesets Process

In the Merge Tilesets process, use the Bounding Region pushbutton on the Parameters tabbed panel to select the geometric object to define the bounding area for the output tileset. The outline of the selected object is automatically shown as an overlay in the Merge Tilesets window's view. In the illustration to the right, three adjoining state orthoimage tilesets (Massachusetts, Rhode Island, and Connecticut) are being used as input. The red outline overlay is a bounding region outlining a group of watersheds (covering parts of the three states) that is being used to clip the output merged tileset.
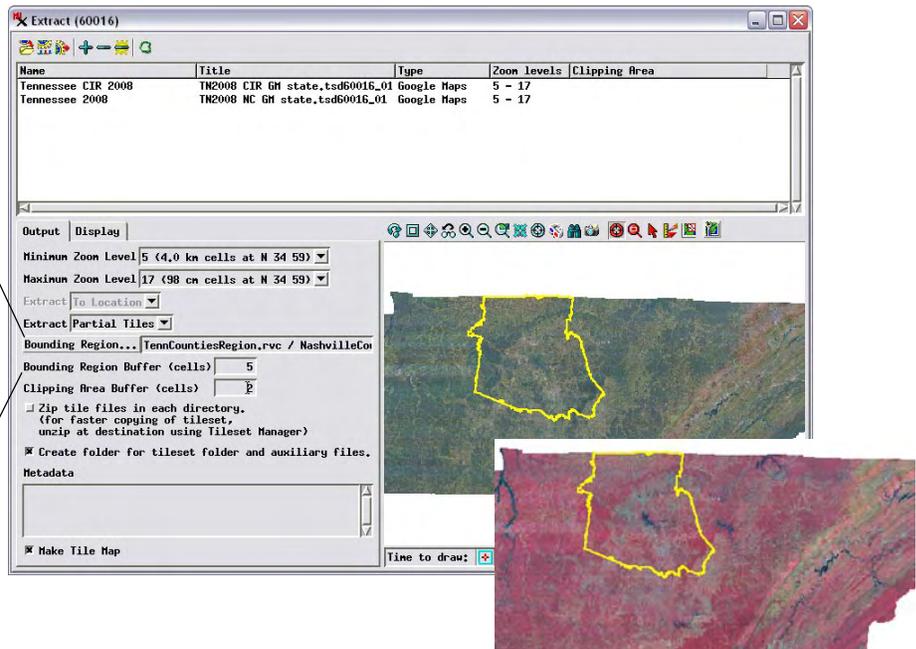
To create a buffer zone around the bounding region, enter the desired value in cells in the *Bounding Region Buffer* field on the same tabbed panel.
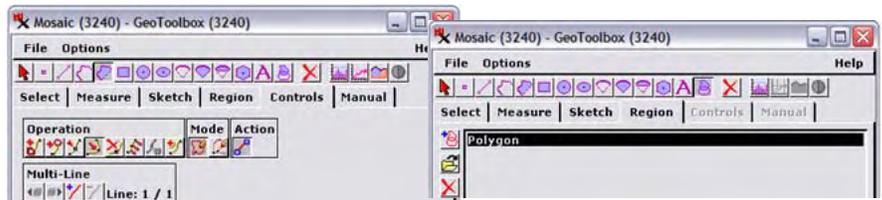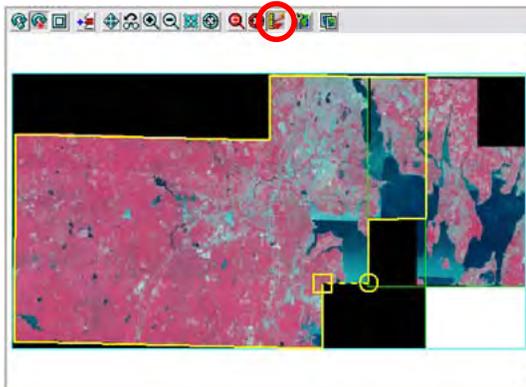

Extract Tilesets Process

In the Extract Tilesets process, use the Bounding Region pushbutton on the Output tabbed panel to select the geometric object to define a bounding area for all of the output tilesets. The outline of the selected object is automatically shown as an overlay in the Extract Tilesets window's view. In the illustrations to the right, a bounding region is being used to extract the same area from two orthoimage tilesets (one natural color, the other color-infrared) that each cover all of the state of Tennessee. The bounding region (shown here in yellow) is the boundary of a group of counties surrounding the city of Nashville.

To create a buffer zone around the bounding region, enter the desired value in cells in the *Bounding Region Buffer* field on the same tabbed panel.

Using the GeoToolbox to Draw and Save Regions to Define Bounding Regions

To manually define a bounding area, press the GeoToolbox icon button at the top of the view pane in the process window (circled in red in the illustration to the left). You can use the drawing tools in the standard GeoToolbox dialog to draw the desired area, create a temporary region from it, and save the region to a Project File. You can then use the procedures described above to choose that saved region object to define the bounding region for the process. Use of the GeoToolbox to define regions is described in the Tutorial booklet entitled *Interactive Region Analysis*.