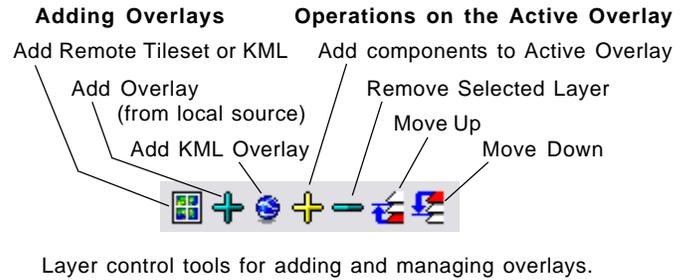


Managing Custom Overlays for Geomashups

The Assemble Geomashup process in TNTmips (Main / Assemble / Geomashup) allows you to mashup your own tilesets with geodata layers from remote sources for viewing in a web geobrowser (Google Maps, Bing Maps, or Google Earth). An overview of this process is provided in the Technical Guide entitled *Geomedia Publishing: Introduction to Geomashups*. You can add one or more local or web tilesets as either *base maps* or *overlays*, which are treated differently in a geobrowser. A geomashup can include more than one base map, but only one can be displayed at a time in a geobrowser. Overlays provide more viewing flexibility, as multiple overlays can be displayed simultaneously, and each overlay can be provided with controls allowing the viewer to toggle it on/off and to dynamically vary its transparency. Setting up and managing base maps for a geomashup are discussed in the Technical Guide entitled *Geomedia Publishing: Managing Custom Base Maps for Geomashups*.

Adding and Managing Overlays

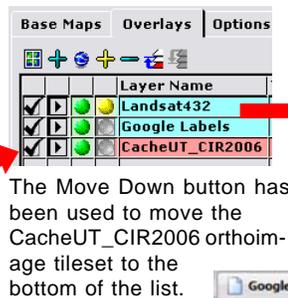
The Assemble Geomashup window has separate tabbed panels for managing Base Maps and Overlays. Each panel can list multiple layers in the geomashup. When you make a geomashup for Google Maps, the proprietary Google Labels overlay (which includes roads and place name labels) is automatically shown in the Overlays list. You can add other custom overlays to use in addition to, or in place of, the Google Labels overlay. Bing Maps provides no proprietary overlay, and the Google Earth API does not allow a geomashup to access their proprietary overlays. As a result, Assemble Geomashup lists no proprietary overlays when you choose either of these Web Mapping APIs.



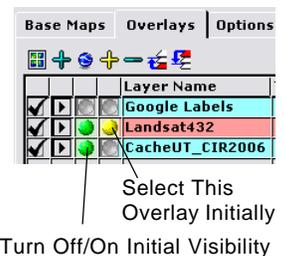
The controls for adding and managing layers on the Overlay panel are illustrated above. The custom overlays you add to the geomashup can be tilesets or KML files from remote (web) or local sources. Clicking on a layer entry in the Overlays list makes it the active layer (highlighted in red; see illustrations below). The active layer is the one operated on by the controls for moving a layer up or down in the list or removing an overlay layer. The order of overlay layers in the list in the Assemble Geomashup window determines the order in which the overlays are listed and rendered in the geobrowser view (see illustrations below).



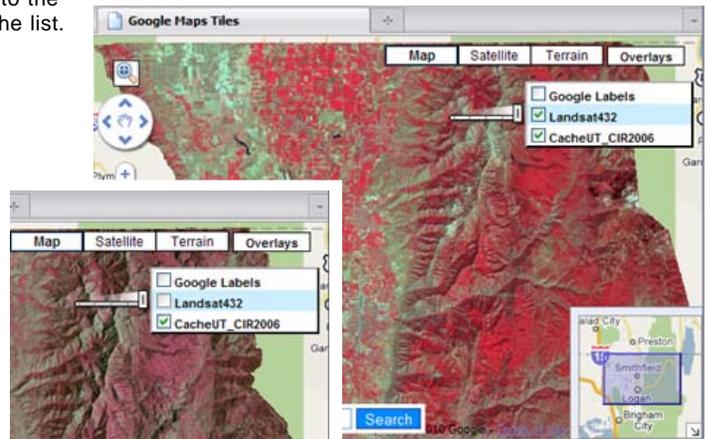
Overlays tabbed panel for a Google Maps geomashup listing the proprietary Google Labels overlay (bottom layer in list) and two custom overlays added from local tilesets. Left-click on the Layer Name field of a layer (or any of its other fields) to make the layer active, which highlights it in red (middle layer in this example).



In the illustration to the right, Initial Visibility has been turned off for the proprietary Google Labels overlay and the Landsat432 overlay has been set to be initially selected.



The geomashup can set which overlays should be visible and which should be turned off when it is first opened in the geobrowser. The Turn Off/On Initial Visibility toggle in the Overlays list of the Assemble Geomashup window sets this condition individually for each overlay (a green ball icon indicates that the overlay will be initially visible). One overlay is also always “selected” in the geobrowser view. In geomashups using the default overlay controls (see illustration to the right), the selected overlay is highlighted in blue in the overlay control list and has a slider control to vary its transparency. The *Select This Overlay Initially* radio buttons in the Overlays panel of the Assemble Geomashup window set which overlay (indicated by the yellow ball marker) will be initially selected in the geobrowser. On the Options tabbed panel you can choose the type of overlay control and other controls to include in the geomashup (see the TechGuide entitled *Geomedia Publishing: Geomashup Controls and Options*).



Preview of the geomashup created by the overlay settings shown above. In the larger view the Landsat432 and CacheUT_CIR2006 overlays are initially turned on (as indicated by checkboxes in the overlay controls in the upper right) and the Landsat432 overlay is selected (as indicated by the blue highlight color and the transparency slider control). In the inset, the Landsat432 overlay checkbox has been turned off to reveal in the view the underlying and coextensive orthoimage overlay CacheUT_CIR2006. (over)

Each layer in the Overlays list in the Assemble Geomashup window is provided with a checkbox in the far left column of the list that you can use to set whether the layer is to be included in or excluded from the geomashup (including previews). This feature allows you to create several geomashups with different combinations of the same set of overlays without having to delete and re-add any layers. All newly-added overlays are initially set to be included. You can also remove any overlay layer from the list on the Overlays panel by highlighting the layer and pressing the Remove Selected icon button.

When you add a custom tileset as an overlay, the Min Zoom and Max Zoom fields automatically show the minimum and maximum zoom level values available in the selected tileset. You can edit these values to alter the allowed zoom range for that overlay if desired. The Transparency field allows you to set an initial transparency value (between 0 and 100%) for each overlay. The geomashup can provide tileset overlays with a transparency control that allows you to independently vary the transparency of each overlay layer in the geobrowser view.

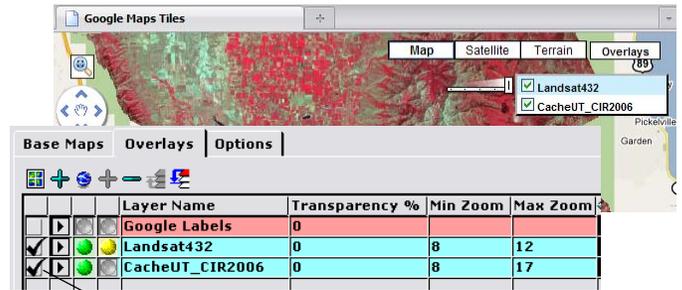
Controlling Initial Extents

Each layer on the Overlays and Base Maps panels has an Include Extents toggle. All layers with this toggle turned on are used together to determine the initial spatial extents and zoom level of the geobrowser view in previews and in the saved geomashup. The Include Extents toggle is turned on by default for each custom overlay or base map added to the geomashup. It is turned off by default for the proprietary Google Maps layers, which have global extents. When you have added several overlays covering different areas, you can therefore use these toggles to choose which layer(s) to use to set the initial view of the geomashup, as shown in the illustrations to the right.

Multicomponent Overlays

Selecting more than one local tileset at a time using the Add Overlay icon button adds the selected tilesets as components of a single overlay layer in the geomashup. (You can also highlight an existing custom overlay layer and use the Add Components to Active Overlay icon button.) For example, for one geomashup layer you could select several tilesets covering the same area that were created with different ranges of zoom levels from imagery or maps with different spatial detail. Or you could select several spatially adjacent tilesets with the same range of zoom levels. These components are listed separately in the Base Maps panel and highlighted in yellow below their master layer name (see illustrations to the right).

In the illustrations of the Overlays panel to the right, a set of tilesets have been selected to be components of a single overlay. Each of these tilesets represents a stream network at a single zoom level, and each was separately rendered from a different TNT vector object edited and filtered to provide a level of complexity appropriate to the target map scale. In the upper illustration the component list is expanded to show all of the selected tilesets. In the lower illustration the component list has been collapsed and the master layer has been renamed.



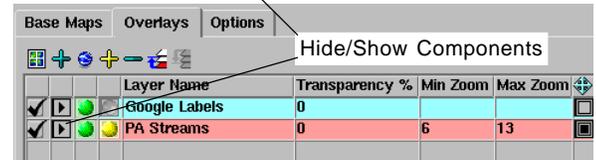
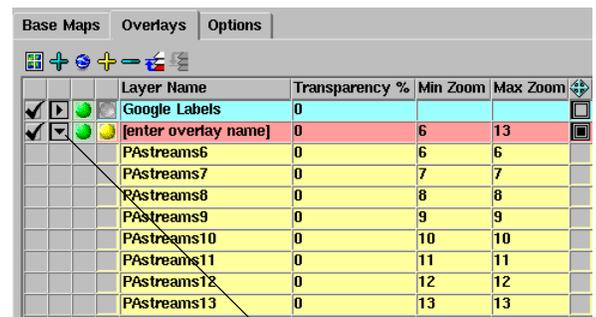
Include/Exclude in Output

The example Overlays listing shown above uses the same overlays as the examples on the reverse. However, here the Include/Exclude checkbox has been turned off for the proprietary Google Labels layer. As a result, the overlay controls in the resulting preview or final geomashup (background image) include only the two custom tileset overlays.



Include Extents toggle

A geomashup that includes as custom overlays a local color shaded-relief tileset of Pennsylvania and a web-based orthoimage tileset of the city of Philadelphia. In the illustration above, the Include Extents toggle is turned on (black square) for both custom overlays. The larger extents of the statewide tileset therefore control the initial extents of the geobrowser view in preview and in the final saved geomashup. The resulting zoom level is outside the range of the Philadelphia orthoimage tileset, so only the statewide tileset is initially rendered. In the illustration below, the Include Extents toggle has been turned off for the statewide tileset, so the geomashup opens zoomed in on the Philadelphia orthoimagery.



Hide/Show Components