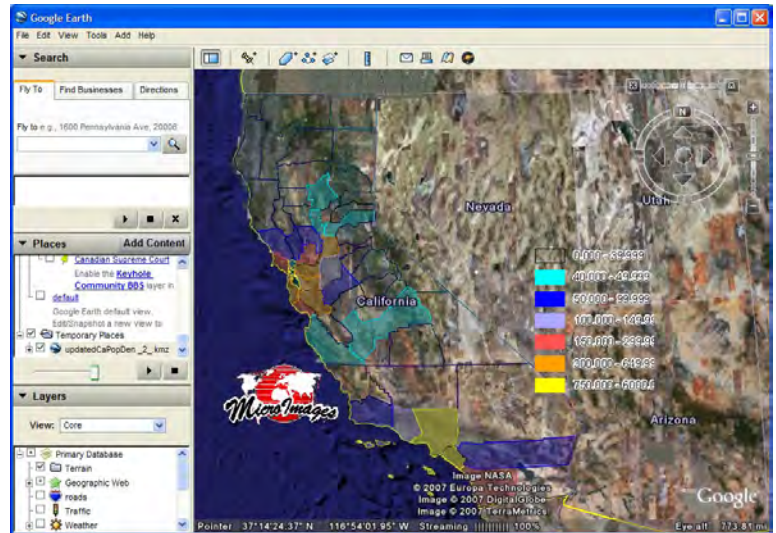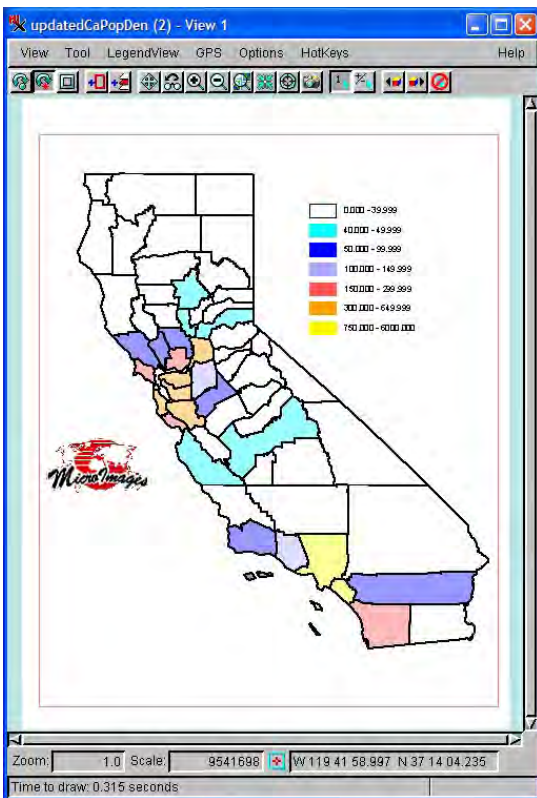# Render Graphics to KML/KMZ

You can include graphics, such as your logo or other nongeoreferenced TNT objects, in the groups or layouts rendered to KML/KMZ. Since these layers are not tied to the ground, Google Earth will render them as screen overlays. As screen overlays, they remain in the plane of the screen when you use Google Earth's pan, tilt, and 3D features. They also remain the same static size and in the same position if you resize the view or zoom in or out.

The simplest application of rendering a graphic to a screen overlay might be to embed your logo into a KMZ file along with your geodata layers. All the nongeoreferenced components of your layout, including legends, scale bars, and text can be rendered to a KML/KMZ file. It is up to you to determine which layout components will be rendered, where they are positioned, and how they will look as screen overlays in Google Earth's imagery. See the Technical Guide entitled *Spatial Display: Render Map Layouts to KML* for more information on the settings for this rendering process.

When the KML/KMZ file is opened in Google Earth, you zoom to an area slightly larger than the geographic extents of your layout. Note how the use of enhanced text makes the legend labels visible over a variety of backgrounds. You can design a layout so that it only includes components that are suitable for use as screen overlays. Alternatively, you can turn unwanted components off before rendering to KML; hidden, nongeoreferenced layers are not rendered. Hidden, georeferenced layers are rendered to KML but initially hidden when opened in Google Earth. Alternatively, you can render all components to KML and turn off unwanted screen overlays in Google Earth.

This simple layout was rendered to KMZ for display in Google Earth. In more complex layouts you might not want to render all of the groups to KML. For example, the north arrow would not be pointing north at any orientation other than north to top in Google Earth (unless georeferenced), and scale bars do not resize as you zoom in and out. Any text groups to be rendered in a TNT layout should have an enhanced text style using light and dark colors so the text is visible over any background.

You can turn individual georeferenced or nongeoreferenced groups and layers on/off in your Google Earth view after rendering your layout to KML/KMZ. If you change your view so that the California polygons no longer show, you can simply turn the legend off.

Your screen overlays remain upright when the image is tilted.