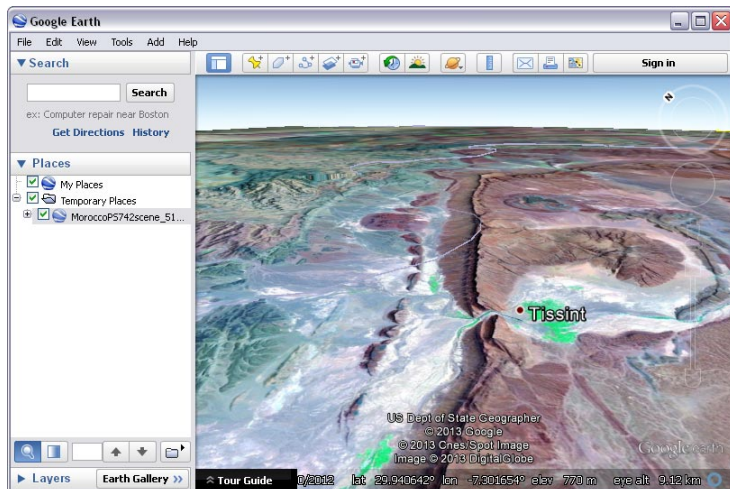# Create Google Earth Tilesets as KMZ

When you create a Google Earth image tileset in TNTmips for local use on a desktop computer or tablet, you have the option to package the entire tileset in a single KMZ file that can be used directly in Google Earth. Packaging the tileset in a KMZ file makes moving the tileset between drives and computers simpler and much faster. (The compression used to create the KMZ file does not significantly compress the image tiles, so the stored size of the tileset is not reduced.) The option to *Compress to KMZ* is available when you choose Google Earth as the tileset target in the Export Raster Tilesets, Subset Tileset, or Mosaic to Image Tileset processes.

> **Note**: if you are making a tileset for use in a web page on the Internet using the Google Earth browser plugin, DO NOT use the Compress to KMZ option. Only uncompressed Google Earth tilesets can be used in the Google Earth browser plugin via their accompanying HTML file.
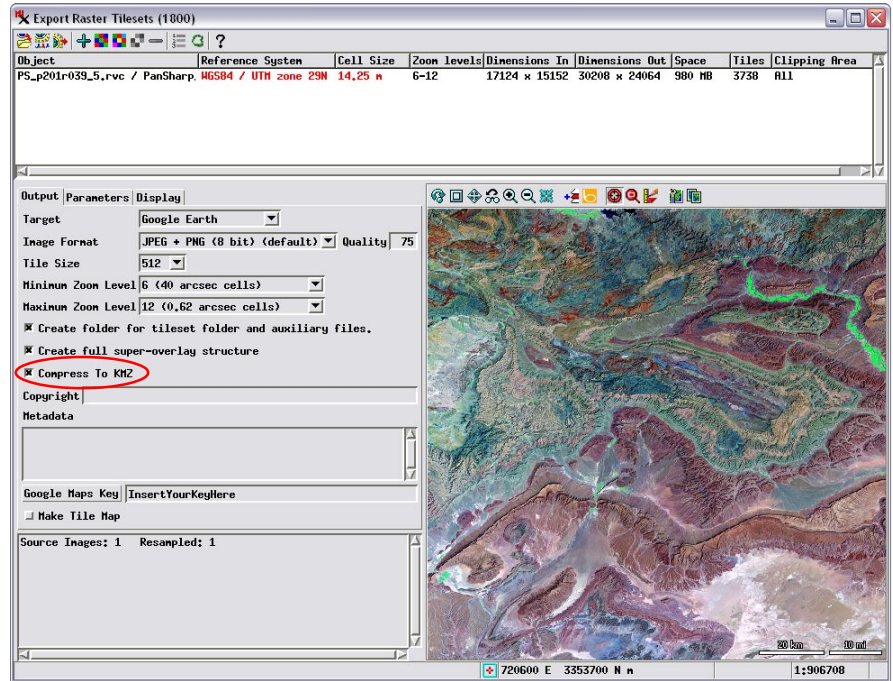
When you choose Google Earth from the Target menu in the Export Raster Tilesets process (illustrated above) or the Subset Tileset or Mosaic to Image Tileset processes, you can turn on the *Compress to KMZ* toggle to package the entire tileset in a single compressed KMZ file that can be easily copied and can be used directly in Google Earth. In the illustration above, an RGB display of pan-sharpened Landsat satellite image bands is being exported to a Google Earth tileset in a KMZ file.

Loading large tilesets as KMZ files in Google Earth may have negative effects on Google Earth performance. The decompression required to read tiles from the file can result in a significant pause as Google Earth initially loads the tileset. You may also experience delayed loading of individual tiles, jerky motion when navigating in the 3D space, or even failure to load the tileset. These effects are dependent not only on the tileset size, but on the amount of physical RAM available to Google Earth. MicroImages has found that KMZ tilesets up to about 100 MB in size can be used in the Google Earth Android app on tablet computers without significant performance effects. Even

larger KMZ tilesets can perform well on some desktop computers. A 700 MB KMZ tileset performed well in Google Earth on a PC with 6 GB of RAM. However, the same tileset failed to load in Google Earth on a PC with only 2 GB of RAM. Uncompressed Google Earth tilesets of similar or larger size perform well regardless of available RAM.

The KMZ file format also has limits on file size and the number of contained files (see box below). The TNTmips tileset processes provide a warning prior to processing if it is likely that your settings will produce a tileset that exceeds the KMZ file limits. If a KMZ file limit is exceeded during processing, the result is an uncompressed standard Google Earth tileset that is immediately useable in Google Earth.

Google Earth display of a tileset stored in a KMZ file. This tileset consists of 2383 tiles at 7 zoom levels. The KMZ file containing this tileset is about 125 MB in size.

> **KMZ File Size and File Count Limits**
>
> A KMZ file is a ZIP 2.0 file with a .kmz file extension. Google's use of the ZIP format limits the maximum KMZ file size and limits the number of component files that can be contained within a KMZ file, as follows:
>
> **Maximum KMZ File Size: 4 GB**
> **Maximum Number of Contained Files: 65,535**
>
> In a Google Earth tileset, each image tile (JPEG or PNG file) has a matching KML file, so the total file count is at least twice the number of tile files.