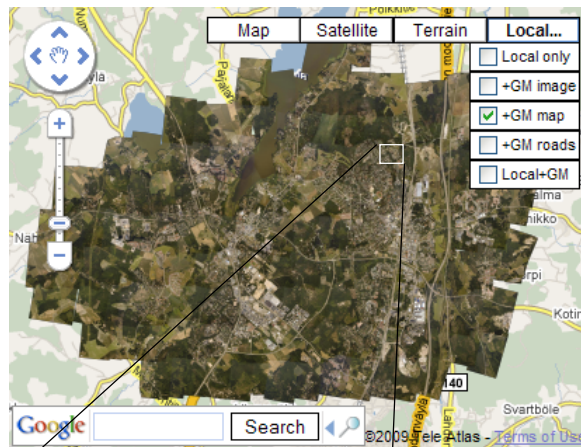


What's New in TNTmips 2009?

View and Publish Geodata in Google Maps

Google Maps can be used to publish and view your TNT image and map geodata. Using Google Maps insures that unique project materials prepared in TNTmips will be viewed by anyone in a widely familiar web application. TNTmips converts your geodata into the standard Google Tile Overlay structure while providing a wide suite of tools to prepare your materials for this conversion. A Tile Overlay is the most efficient input to Google Maps as it exactly matches at all scales, tile-for-tile, the multiresolution tileset structure that Google uses for their own global map and image layers.



Google Maps Tile Overlay of orthoimagery created by the Auto Mosaic process in TNTmips and published using its companion HTML file.

TNT Coverage 2006



Google Maps Coverage circa 2000



Detail of TNT Tile Overlay at full resolution (25 cm cell size) not available in Google Maps coverage. Complete Tile Overlay is over 385,000 tiles and 7.4 GB in size.

(over)



Google's Tile Overlay is the only practical way to publish and view your large image and map layers in Google Maps. There are a number of other utilities for projecting layers into Google Maps. Some of them are even free. Most limit the file type, size, and number of input geodata layers. Most are also slow, require multiple steps, and may or may not use tiles. These are utility routines and not part of a comprehensive geospatial system such as TNTmips. For example, they may support only files from one input format or allow only a single input image. They may not be able to reproject images from common spatial reference systems to the specialized Spherical / Web Mercator reference system used in Google Maps. They usually have no ability to handle irregularly shaped areas defined by null cells in the input materials and can only create a rectangular coverage. These kinds of utilities are suitable only for experimentation and use with small project areas. Your large project layers can be viewed much faster when they are published in Google's rigorous tileset structure. Furthermore, the speed that anyone can view your maps or images as a Tile Overlay is independent of the size or resolution of the layer.

The Auto Mosaic process in TNTmips can create the Google Maps standard Tile Overlay structure. This operation provides many familiar mosaic options. You can select 1 or 1000s of input orthoimages in various formats, including TNT tilesets. The inputs can have different cell sizes and different Coordinate Reference Systems. You can even select multiband images and choose the color combination to be used in the tileset from among the many bands (e.g., natural color, color infrared, infracolor, some other combination of 7 Landsat TM bands, or ...). A single mosaic operation applies all these flexible transformations and outputs a high-resolution Tile Overlay of 10s or 100s of gigabytes covering a city or even an entire province.

A companion HTML file is also created by Auto Mosaic for each Tile Overlay. This sample HTML can be used to immediately publish the Tile Overlay for use in Google Maps from your own or rented web site. It can also be used to open a Google Map view of your Tile Overlay distributed on a DVD, portable hard drive, or other media. Prove this for yourself by trying one of the 10 to 20 gigabyte sample Tile Overlays of 20 centimeter imagery of Finnish cities at www.microimages.com/gallery/googleTilesets. You will be viewing each Tile Overlay using its companion HTML page, both prepared in a single operation by Auto Mosaic and then simply copied to the proper location on MicroImages' web site. What could be simpler? Its as easy as 123: mosaic, copy, publish HTML!

Auto Mosaic also provides options to output very large maps and images to other standard tileset structures including those used by Google Earth and the TNT products. Support is scheduled to be added to Auto Mosaic in version 2010 to produce the tileset structures defined for Virtual Earth, WorldWind, OpenStreetMap, and OSGeo's Tile Map Service. You can try these new options as they become available in the Development Version of TNTmips 2010.



Auto Mosaic can also create KML Super-Overlay tilesets for perspective viewing in Google Earth and the Google Earth browser plugin. Here a Super-Overlay of color-infrared orthoimagery created in Auto Mosaic is viewed in perspective in Google Earth over Google's natural-color imagery.



(continued on next page)

- Create and publish your geodata in the same Tile Overlay structure Google Maps uses for its global map and image coverage.
- Publish all kinds of materials not available from Google or other sources:
 - newer dates of imagery,
 - higher resolution and more detail,
 - unique image color enhancements (band ratios, color-infrared, ...),
 - custom or scanned maps,
 - historic maps converted from local Coordinate Reference Systems,
 - transparent overlays,
 - coverage that is irregular in shape and has holes,
 - and many others -- use your imagination.
- Immediately publish on the Internet by copying the Tile Overlay and companion HTML file to your web site.
- Control access to your Tile Overlays by distributing them on a large hard drive, USB flash drive, ...
- Viewing from slow media such as SD card or DVD is fast since every view is built by always reading only a few, small compressed tiles.
- Use the companion HTML file to launch Google Maps and Tile Overlay from any portable storage media.
- Overlay your irregularly shaped Tile Overlays onto Google's map or image layers to provide a familiar geographic visual reference.
- Overlay Google Maps proprietary transparent map layers on your Tile Overlay.
- Locate the local area of interest in your Tile Overlay using Google's address lookup.
- Performance of Google Maps in viewing your Tile Overlay is independent of its size (10 megabytes or 100 gigabytes).
- Extend resolution tiers to show finer detail than typically provided in Google's global standard tilesets.
- Output 256 by 256 tiles for browser use or 128 by 128 tiles for cell phone use.
- Publish materials from special local Coordinate Reference Systems by conversion to the required Spherical Mercator.
- Tile Overlays are created by automatic transformations in Auto Mosaic process:
 - input many georeferenced image and map components,
 - mix inputs in popular formats,
 - mix inputs with varying cell sizes,
 - mix inputs with different Coordinate Reference Systems,
 - specify cell selection logic in overlap areas,
 - clip area used from each input with a region or mask,
 - use null cells and other features, and ...

