

# Publish Your High-Detail Imagery in Google Maps

High-resolution imagery, superior in detail to that in Google Maps, can be viewed as a Tile Overlay in Google Maps. An HTML file can then request that Google Maps fetch these tiles from your web site, or from other media, and display them in your browser alone or in combination with Google's own image and/or map tiles. Viewing your Tile Overlay from your web site or from local media, including DVDs, is fast since the Tile Overlay has exactly

A **Tile Overlay** is a map or image tileset that can be displayed in Google Maps. Its structure exactly matches, tile-for-tile, the multiresolution tileset structure that Google uses for their global map and image layers in Google Maps.



- Local Tile Overlay alone (no Google layers)
- Local Tile Overlay over Google satellite image layer
- Local Tile Overlay over Google map layer
- Local Tile Overlay with superimposed Google roads and labels
- Local Tile Overlay with superimposed Google roads and labels, over Google satellite image layer

High-resolution (19 cm) orthoimage Tile Overlay for Kankaanpää, Finland, added as a local layer to Google Maps. The default HTML file produced by the TNTmips Mosaic process creates a Local menu that provides various combinations (mashups) of the local Tile Overlay with native Google Maps layers, as annotated above. The default mashup overlays the local image over Google's map layer, as shown in this illustration.

the structure prescribed by Google for use as overlays in Google Maps. Any visitor to your web site can view your high-resolution image coverage using the familiar Google Maps viewing modes and performance. You can add tools and capabilities to your Google Maps mashups as desired, including address lookup, tools for drawing polygons and lines, measuring, adding points, and other features.

Your collections of high-resolution orthoimages can be transformed into Tile Overlays using MicroImages' TNTmips Auto Mosaic process (see the Technical Guide entitled *Mosaic: Mosaic to Google Maps Tile Overlay*). You can publish a Tile Overlay on your web site by simply posting and linking to the sample HTML file produced with the Tile Overlay by TNTmips. You can also modify the HTML and JavaScript in this file to add tools and capabilities to your mashup. In this example high-resolution (25 cm) orthoimagery for the city of Kankaanpää, Finland, has been converted to a Tile Overlay in TNTmips. You can view this Tile Overlay in Google Maps at [www.microimages.com/geodata/tilesets/googleMaps/Kankaanpaa.html](http://www.microimages.com/geodata/tilesets/googleMaps/Kankaanpaa.html).

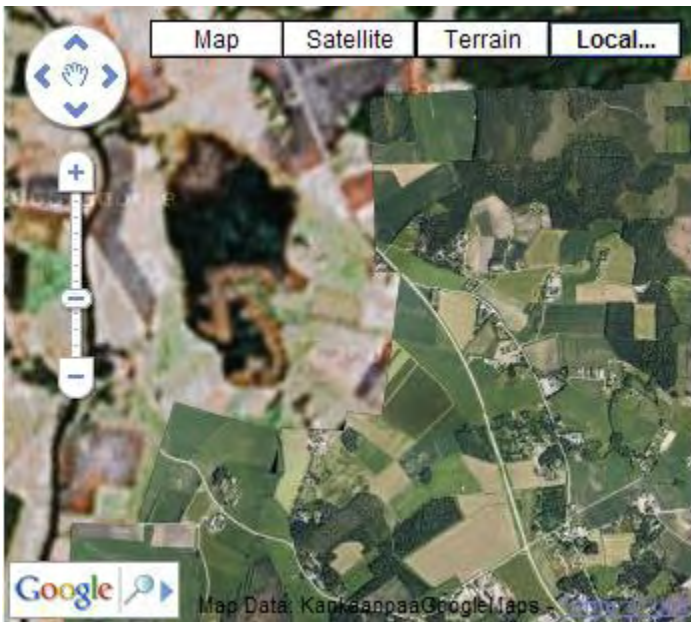


Kankaanpää orthoimage Tile Overlay displayed at its maximum zoom level (Level 19) showing the full detail of the orthoimagery, which is much better than that of Google's satellite image layer for this area.

(over)

The TNTmips Auto Mosaic process provides controls for setting the range of Google Maps zoom levels to include in your Tile Overlay. A set of tiles is created for each of these zoom levels. Tile layers can be built for any zoom level that Google defines and provides. Mosaic automatically determines and sets an appropriate default range of Google maps zoom levels from your collection of input images or maps. The maximum zoom level in the default range is automatically set to capture the full detail of your imagery or maps. If the resulting levels are of higher resolution than Google's, these additional higher-resolution tile levels are automatically used in Google Maps when you zoom in to higher detail. The default minimum zoom level is the level at which the image area in your overlay is no larger than that of a single 256 by 256-pixel tile. You can also the minimum and maximum zoom levels manually to cover a single level or your desired range of zoom levels.

You can also convert your high-detail imagery to Google Earth tilesets using the TNTmips Auto Mosaic process (see the TechGuide entitled *Mosaic: Mosaic to Google Earth Super-Overlay*). You can view a Google Earth tileset prepared from the Kankaanpaa orthoimage at [www.microimages.com/geodata/tilesets/googleEarth/Kankaanpaa.kml](http://www.microimages.com/geodata/tilesets/googleEarth/Kankaanpaa.kml).



Edge of the Kankaanpää orthoimage Tile Overlay (visible in lower right) over the Google Maps native satellite image layer (visible in upper left). Google's most detailed imagery in this area is older 28.5 meter Landsat imagery, shown here at the highest zoom level available from Google for that layer (Zoom Level 13, nominal pixel size = 19 meters).



Edge of the Kankaanpää Tile Overlay at Zoom Level 14 (nominal pixel size = 10 meters). The Google native satellite image is not available at this and higher zoom levels, so areas outside the Tile Overlay's image area are indicated by "no data" tiles (upper left). The local detail available for the area in the small white box is shown below at maximum zoom level (Level 19).

### Kankaanpää, Finland 2008 Orthoimagery

Mosaic of over 600 images acquired in 2008 by Mr. Hannu Vallas, Lentokuva Vallas Oy, Finland.

Images acquired with a Nikon D2X digital camera from altitude of approximately 1500 meters.

Each Nikon image is 2848 by 4288 pixels with a ground resolution of about 25 cm.

Image rectified and mosaicked by Mr. Pentti Ruokokoski, WSP Finland Oy, then georeferenced and converted into a Tile Overlay using TNTmips.

Tile Overlay has Google Maps zoom levels 10 to 19 for a total of 110,392 tiles and 2.7 GB.

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