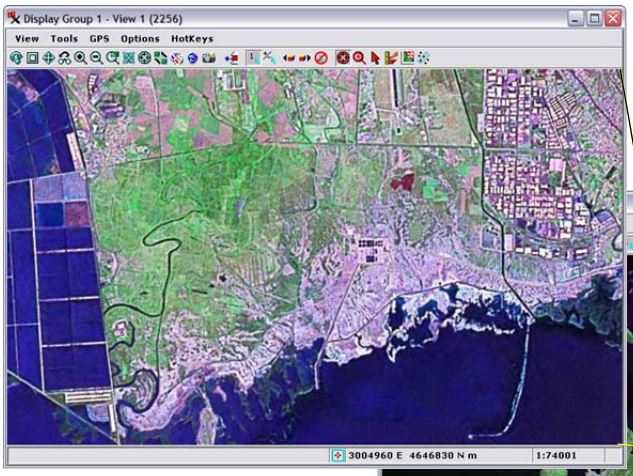
Spatial Display

~10-meter Global Image Coverage

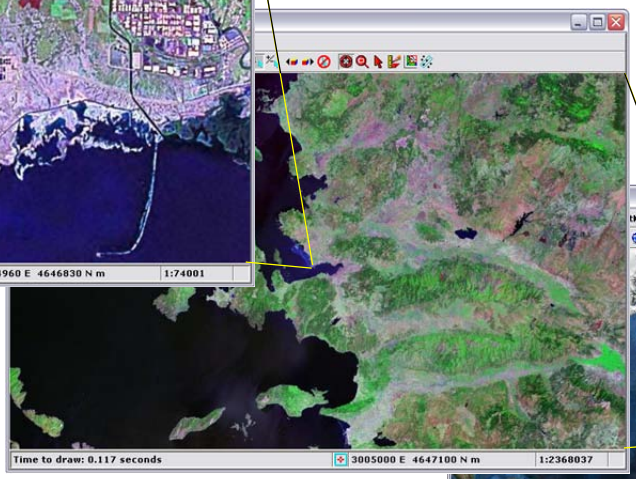
Add as layer in any TNT display!

MicroImages has used publicly available imagery to create a Google Maps and Bing Maps global tileset using the tileset creation, management, and publication features available in every TNTmips. Any user of TNTmips with Internet access can directly select and view this global image coverage as a reference layer in TNTmips at any resolution and scale approaching 10 meters at the equator. It can also be directly viewed as an overlay with adjustable transparency in your browser in Google Maps or Bing Maps.

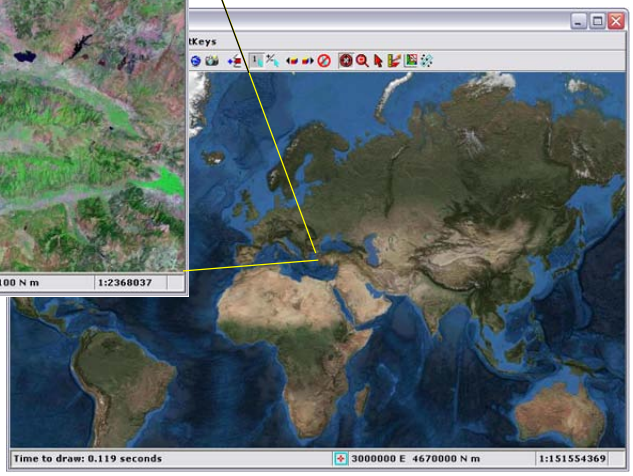
Zoom Level 13: Landsat 742 (19-m pixel size at equator)



Zoom Level 8: Landsat 742 (611-m pixel size at equator)



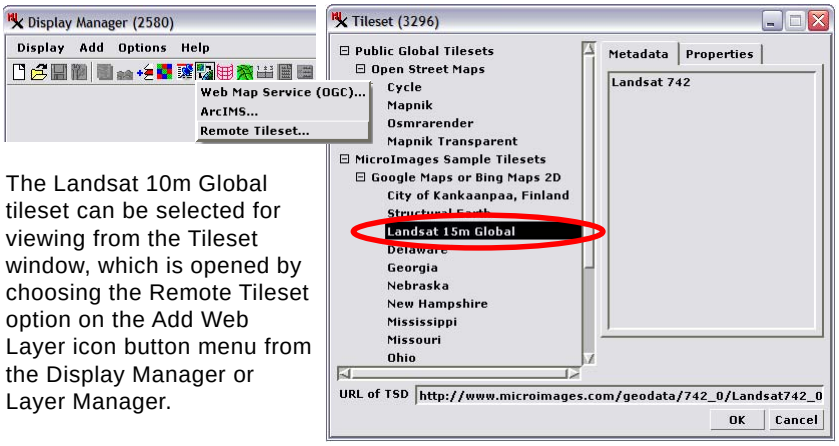
Zoom Level 2: Structural Earth (39-km pixel size at equator)



The Landsat 15m Global tileset switches seamlessly from natural-color Structural Earth imagery at low resolution (Google/Bing Maps zoom levels 0 to 7) to false-color Landsat Geocover 742 imagery at higher resolution (zoom levels 8 to 14). These views of the tileset at three different zoom levels center on an area on the west coast of Turkey. TNTmips treats the fixed zoom levels in the tileset in the same manner as the stored pyramid tiers in a standard image, automatically computing and displaying any required intermediate zoom level.

The higher resolution levels in this tileset (Google Maps zoom levels 8 to 14) were constructed from false-color pan-sharpened Landsat imagery with a spatial resolution of 14.25 meters, while the lower resolution levels (zoom levels 0 to 7) utilize the natural-color Structural Earth tileset also created by MicroImages (see the Technical Guide entitled *Geomedia Publishing: Publishing Your Professional Geodata Via Google*). You can view this web layer in the TNTmips Display process and use it as a reference layer for your work in other TNT processes such as Georeference and the Spatial Editor (see illustrations on the reverse of this page). Details of the construction and deployment of this tileset can be found in the TechGuide entitled *Tilesets: Google and Bing Maps in a "Box"*.

The source imagery for the higher-resolution levels in this global coverage is the compressed Landsat mosaic available from NASA (https://zulu/scc.nasa.gov/mrsid). This mosaic utilizes Landsat Enhanced Thematic Mapper (ETM+) scenes acquired circa year 2000. These scenes were orthorectified, pan-sharpened, and contrast-enhanced by NASA to provide a seamless mosaic. Each false color mosaic utilizes ETM+ band 7 (middle-infrared) as the red component, band 4 (near-infrared) as the green component, and band 2 (green) as the blue component. This band combination allows good discrimination of vegetated areas, bare rock and soil, urban areas, and other ground features. A guide to interpretation of colors in this false-color imagery is included on the reverse of this page.



The Landsat 10m Global tileset can be selected for viewing from the Tileset window, which is opened by choosing the Remote Tileset option on the Add Web Layer icon button menu from the Display Manager or Layer Manager.

(over)

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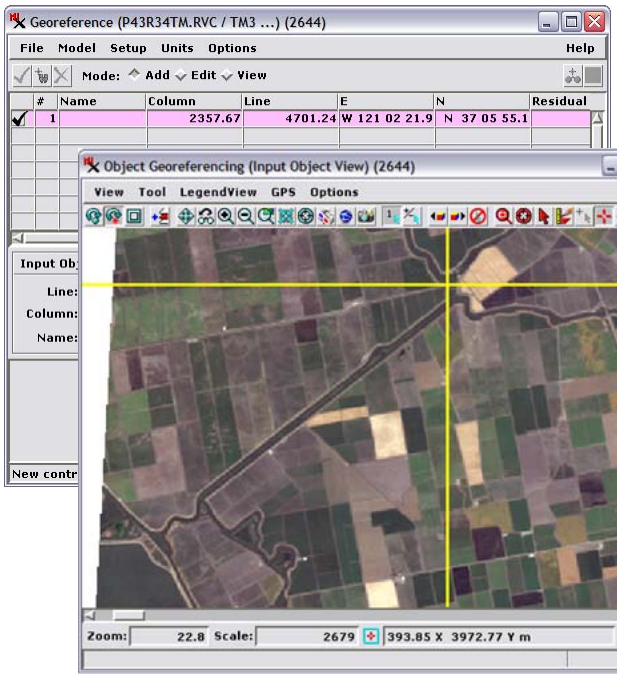
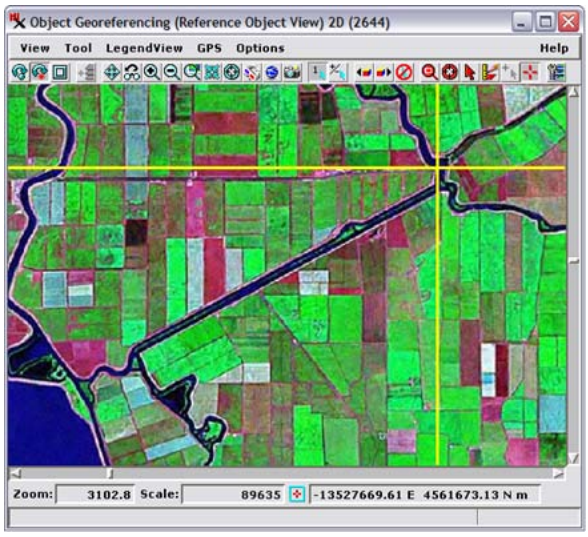
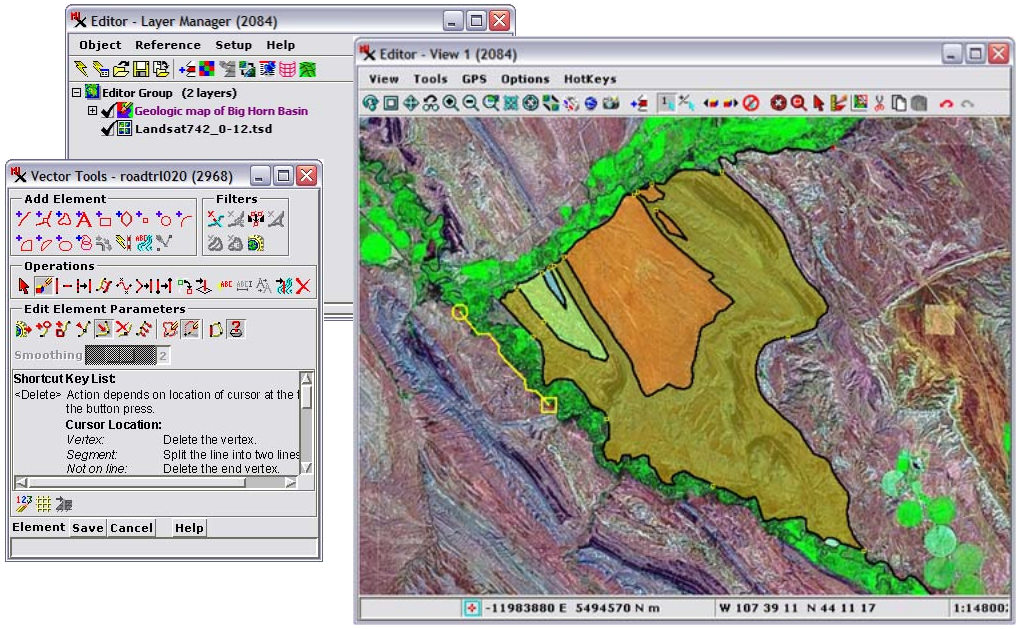


You can use the MicroImages Landsat 10m Global coverage as a reference layer in the Georeference process to create control points to georeference or refine the georeference for moderate-resolution imagery and map data.



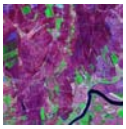
In the Spatial Editor you can use the Landsat 10m Global tileset as a reference layer for creating or editing geometric map data layers, such as the geologic map polygons shown in the Editor View illustration to the right.



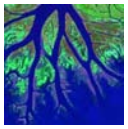
This global tileset consists of a set of fixed-resolution zoom levels consistent with those used in Google Maps and Microsoft Bing Maps. The spatial resolution of the original pan-sharpened Landsat imagery (14.25 meters) falls between the nominal pixel sizes of two of the fixed Google/Bing Maps zoom levels (level 14, 10-meters at the equator, and level 13, 19 meters at the equator). To preserve the detail in the original imagery, the tileset includes both of these zoom levels in low-latitude areas. Because of the Web Mercator coordinate reference system required for this tileset, the maximum zoom level needed to portray the full resolution of the source imagery is reduced at higher latitudes. Although only fixed zoom levels can be shown in Google Maps and Bing Maps, TNTmips treats these fixed tileset zoom levels in the same manner as pyramid tiers in a standard image, automatically computing and displaying any required intermediate zoom level.

Interpretation of Landsat Band 7-4-2 False Color Imagery

Forest
Shades of green



Bare Soil
Magenta, pale pink, lavender



Water
Black to dark blue

Snow / Ice
Cyan, medium blue

Crops
Shades of green

Rock
Magenta, pink, lavender, gray, brown

Urban Areas
Lavender

Clouds
White to pink

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