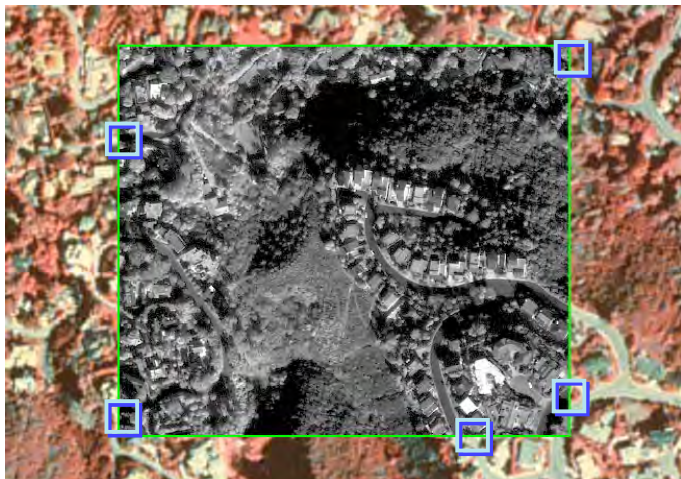


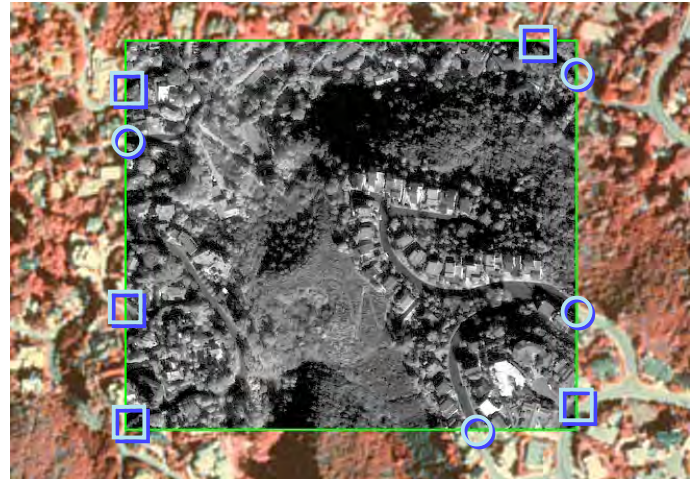
Small area (630 m wide) of regeoreferenced and orthorectified image overlaid by 10-foot topographic contours (5-foot contours omitted for clarity). Green rectangle shows location of View-In-View box in subsequent illustrations.

# Orthorectification Results for IKONOS

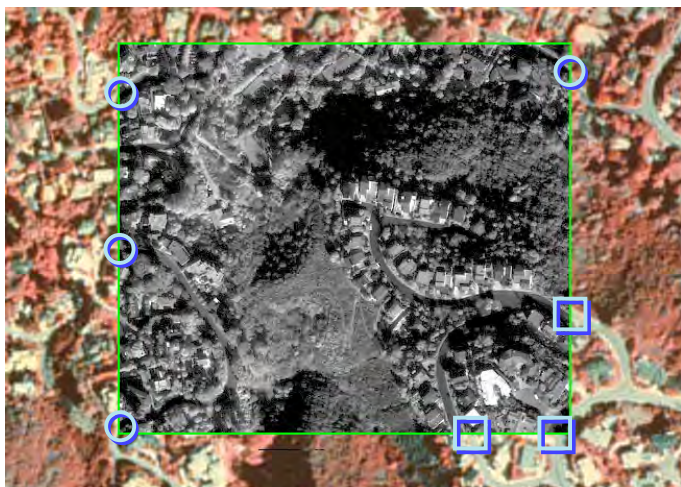
The illustrations on this page show Rational Polynomial Coefficient (RPC) orthorectification results produced in the TNTmips Automatic Resampling Process for an IKONOS Ortho Ready Kit sample image provided by Space Imaging, Inc. The 1-meter panchromatic image covers about 30 square kilometers around La Jolla, California, an area with about 820 feet (248 meters) of topographic relief. We rectified the image using 1) the nominal (approximate) georeferencing provided with the image and 2) georeferencing from 19 accurate ground control points acquired by a GPS (Global Positioning System) survey. The available USGS elevation models for this area have a spatial resolution of 30 meters; to more accurately rectify the image we created an elevation model with 1-meter cell-size by surface fitting 5-foot topographic contour data purchased from SanGIS, a joint agency of the City and County of San Diego. A small portion of each image is compared here in View-In-View displays with a 1-meter color-infrared USGS Digital Orthoquarter Quad (DOQ).



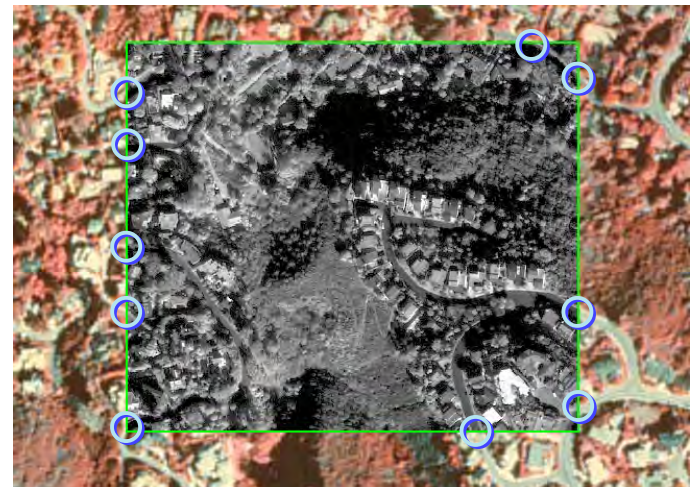
Unrectified IKONOS pan image (with nominal georeferencing) and reference color DOQ. Shadow and tone differences make position comparisons difficult, but boundary mismatches of up to 20 meters are evident (blue squares).



IKONOS pan image with nominal georeference after RPC orthorectification. Positioning is somewhat improved, as evidenced by some apparent boundary matches (circles), but some boundary mismatches are still evident (squares).



Unrectified IKONOS pan image georeferenced with GPS control points. Improved positioning over nominal georeferencing is shown by some boundary matches (circles), but mismatches due to terrain relief remain (squares).



Re-georeferenced IKONOS pan image after RPC orthorectification shows excellent registration with the DOQ, with most ground features matched to within meters (circles).