



54th Release  
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# V6.9 New Features

**Highlight Features:** Global Geodata on DVD  
QuickBird/IKONOS Orthorectification  
Calibrated Color Display/Printing  
JPEG2000 Compression in Project Files  
64-bit OS support

**Global Reference Geodata on DVD** [ships with each V6.9].

Review illustrations of this Global Geodata, QuickBird Orthorectification, and Color Calibration on the attached color plates. Additional color plates demonstrating other new features in V6.9 can be found at <http://www.microimages.com/documentation/platecatalog.htm>.

1 km world 24-bit color image —

481 Mb MODIS mosaic in lossless GeoJP2 format with TNT link file.

1 km world elevation model —

146 Mb GTOPO30 mosaic in lossless GeoJP2 format with TNT link file.

1:1,000,000 world map features —

Created by merging 129,588 VMAP0 geodata files in 23,696 folders into 10 global Project Files and then applying considerable spatial cleanup and reorganization of attribute tables in the Spatial Data Editor.

The 10 Project Files total 2.36 Gb with each file containing several global vector objects each of a particular theme (for example, various hydrography layers all in 1 Project File, boundaries in another Project File, transportation, elevation, industry, physiography, population, utilities, vegetation, and data quality).

Each vector object (for example, rivers) covers the entire world.

View via global TNTAtlas for faster, meaningful, scale-controlled vector layer display.

Use and export of this data without restrictions.

Access restricted to V6.9 or later of the TNT products.



## ***New Operating Systems.***

### *64-bit Support for:*

- Sun's Solaris 9.x for SPARC processor.
- Apple's Mac OS X 10.3 for G5 processor.
- SUSE Linux 9.x for AMD's Athlon F64, FX64, and Opteron.
- Windows XP beta for AMD's Athlon F64, FX64, and Opteron.

### *32-bit Support for:*

- Apple's Mac OS X 10.3 for G3, G4, and G5 processor.
- Windows 2000 and XP for AMD Athlon F64 and FX64.

### *Floating Licenses.*

(supported platforms include Mac, Windows, Linux, and Unix)

- Use any supported platform for a TNT license manager.
- Float a TNT client license to any supported platform.
- Retain a set of default preferences for each client using a TNT product.

## ***System Level.***

### *TIFF.*

- Auto link (directly use) any TIFF format, not just grayscale and RGB.
- Use a TIFF file containing more than 1 image.
- Select multiple TIFF files.
- Export multiple raster objects to a single TIFF file.
- Set DPI (Dots Per Inch) desired when exporting.

### *JPEG2000.*

- Export larger JP2 files using improved memory management.
- Use GeoJP2 (internally georeferenced JP2 files):
  - Directly link to and display as layer.
  - Import and export.
- Use internal JPEG2000 compression:
  - Choose JPEG2000 compression for raster objects.
  - Choose compression level—lossless or lossy specifying amount.
  - Apply throughout TNT products (display, edit, extract, mosaic, ...)

### *Project File Information (Support Process).*

- View "last modified" time for each subobject.
- Show cell size/scale computed from last-used georeference subobject.
- Show cumulative cell counts for histograms.
- Create or recreate Element ID tables when validating vector object.

### *Miscellaneous.*

- Use antialiasing with width hinting for thin lines.
- Improve recovery of corrupted objects.
- Link to an Oracle Spatial layer and directly use it, for example, as a layer in display.
- Set an accuracy for line densification.

### ***2D Display.***

- Compact LegendView (vertically) for better visibility.
- View readouts in two coordinate systems simultaneously.
- Add Tool Scripts and Macro Scripts to menus only (which means, omit icons from tool bar).
- Attach, save, and load Tool Scripts and Macro Scripts with layouts.
- View object extents in selected units and/or selected latitude/longitude format.
- Copy object extents dialog information using traditional copy and paste methods.

### ***3D Display.***

- Select fast, new surface model combining dense triangulation and ray casting.
- Select fast, new surface model using new variable triangulation model (varies front to back).
- Use mipmapping for smooth texture overlay in both models.

### ***Enhanced Label Styles.***

- Add frames for labels (rectangle, rounded rectangle, circle, and ellipse).
- Set frame margins around labels.
- Style frames (color, line width, ...).
- Select color and transparency for inside of frames.
- Style leader lines (color and width).
- Use open, or balloon (triangular) style leader lines.

### ***Calibrated Color Displays and Printing.***

- Use sRGB (standard RGB) color space supported by Microsoft, Apple, HP, ...
- Display and print sRGB using ICC or ICM color profiles of these hardware devices.  
(ICC = International Color Consortium's profile used by the Macintosh)  
(ICM = Integrated Color Management profile used in Windows)
- Specify how to handle out-of-range sRGB colors (out-of-gamut) of the display/printer.  
Choose rendering from absolute or relative colorimetric, perceptual, or saturation.
- Soft proof to display the colors of the View the printer will produce using its ICC or ICM profile.
- Review in "alarm color" in soft proof each RGB pixel to be altered by printing (out-of-gamut).
- Get improved color without calibration when bypassing Windows printer support.
- Use 6 color printers (CMYKcm) via Windows or Mac drivers.

### ***Orthorectification of QuickBird and IKONOS Images.***

- Produce orthoimage using Digital Globe's QuickBird Ortho Ready Standard Product.
- Produce orthoimage using Space Imaging's IKONOS Geo Ortho Kit Product.
- Use the Rational Polynomial Coefficients supplied with these products.
- Start with a suitably accurate DEM to be available.
- Simply add a few accurate 3D ground control points in improved georeferencing procedure and resample image using new Rational Polynomial model in Raster Resampling process.

### ***TNTsim3D.***

- Select any overlay layer and interactively select (highlight) a point in it in any view (for billboards and stalks, points-of-interest, and positions of volumes).
- Drag the selected point to a new position.

- Drag point referenced to surface and it will stick to it even when vertical exaggerations used.
- Copy the selected point and insert it at a new position.
- Delete a selected point.
- Manually edit the record of a selected point (for example coordinates, name, ...).
- Save all the above alterations to an overlay layer as a new overlay layer.
- View Multiline DataTips defined in TNTmips when cursor is near a point in the selected layer.
- Edit the DataTips.
- Add analysis features via SML Tool Scripts and Macro Scripts.
- Access basic tools used in Main View via icons in tool bar.
- Select from various symbols (arrow, flag, ...) to mark Points-Of-Interest.
- Manually edit the name and position of the record defining any Points-Of-Interest.
- Show detailed point element attributes via Single Record dialog.
- Toggle on/off Point-Of-Interest locations in all views.
- Render holes in polygons in extruded shapes.

#### ***Tabular Views of ODBC Linked Tables.***

- Manually refresh using button on dialog.
- Periodically refresh at selected time interval.
- Automatically refresh for tables modified by VB, JAVA, and/or C++ programs via ActiveX call-back via SML.

#### ***Import/Export.***

- Import/Export point symbols for ArcView shapefiles.
- Use improved support for SDTS, ENVI, and NITF formats.
- Use geodetic datum information for PCI image format.

#### ***Import Oracle Spatial Layer.***

- Specify that vector object be planar, network, or polygonal in topology.
- Automatically create standard attribute tables.
- Auto name vector objects for multiple input Oracle Spatial layers.

#### ***New Datums Supported.***

- Choose datum for Japan-19 Plane Orthogonal System.
- Apply Libyan 1979 datum.
- Apply Nahrwan 1967 Qatar datum and conversions.
- Apply Hermannskogel datum for Croatia, Serbia, and Bosnia-Herzegovina.

#### ***Render To SVG.***

- Transfer and use DataTips in file (for example for highlighted element in browser).
- Render or print JPEG images into file (formerly only PNG images).
- Optimized for use in Adobe Illustrator.
- Convert only area of view.

#### ***Vector Editing.***

- Label single lines or "attribute joined" lines based on their length.
- Reverse line direction for Selected or All Lines.



### ***Customizing TNTAtlas for X.***

- Take icons on/off display tool bar to simplify or generalize an atlas's use.
- Add ability to include interface customization setting with atlas.
- Allow end-user to customize interface toolbars and menus.
- Detect areas of possible navigation when "hand" cursor is exposed (Windows version also).
- Plug-in SML Tool Script and Macro Script by associating them with a layout.
- Add external VB, JAVA, and C++ operations via SML Tool Scripts and Macro Scripts incorporating ActiveX callbacks.

### ***TNTserver.***

- Serve SVG, PNG, and JP2 to TNTclients.

### ***SML.***

- Start and communicate to/from external VB, JAVA, C++, ... programs via Active X.
- Control external program that can redisplay views, add layers, pin map, change internal tables, and perform other SML-supported geospatial operations.
- Create an RGB raster in a display group.

### ***Miscellaneous.***

- Use virtual fields (computed fields) or nodes.
- Convert CAD blocks to point symbols.

### ***Local Languages.***

- 5 language resource files (interface, messages, help, ...) merged into 1 reference file.
- New multilingual editor provided to official translators for this reference file.

### ***Tutorial Materials.***

#### ***New Booklets.***

- Building Dialogs in SML.
- Installation and Setup Guide.
- Glossary for Geospatial Science.

#### ***Major Revisions.***

- Navigating.
- Writing Scripts with SML.
- Making Map Layouts.
- Creating and Using Styles.
- Sharing Geodata with Other Popular Products.
- Constructing an Electronic Atlas.