

The QT MODELER™

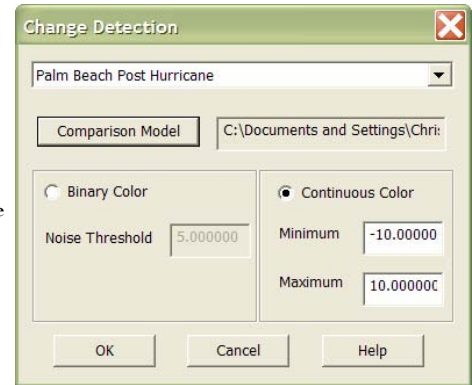
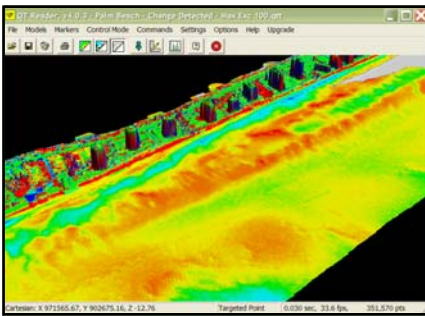
What's New with Version 4.0.3 ?

Introduction:

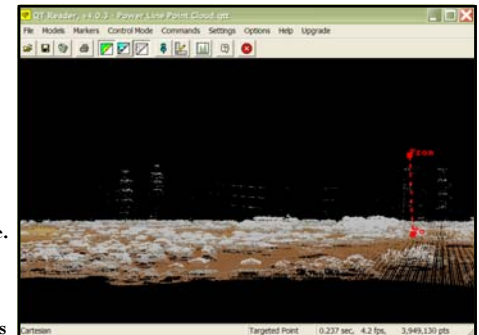
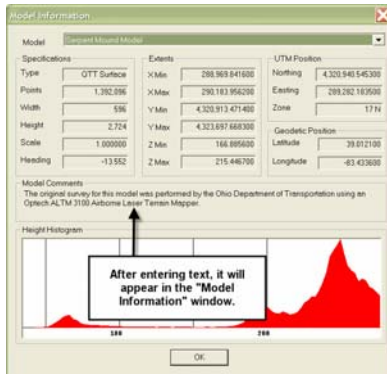
Thank you for using the QT Modeler. Based on your feedback, we have incorporated new features into our interim release of Version 4.0.3. Please keep the good ideas and the excellent feedback coming.

QT Modeler Version 4.0.3 Changes:

1. **Continuous color change detection:** In addition to the binary (i.e., change/no change) methodology that already existed in the QT Modeler, we now have the ability to color the changes in a continuum. To use this new tool, simply call up the change detection tool in the Overlays Menu, then select the "Continuous Color" method. Select the range of change to color by entering values. In the example to the right, we are seeking changes from negative 10 feet to positive 10 feet. The result is shown to the left. The coastline is colored red where the altitude is lower, blue where it is higher, and the rest of the colors gradations in between. This tool can be used in conjunction with volume calculations to determine large scale changes in terrain (e.g., beach sand) volume.



2. **"Point Query" Mensuration:** We added the ability to perform mensuration to/from individual points in a point cloud. This is particularly useful for measuring vertical obstructions. To begin the mensuration, hold the shift key down and move cursor until a red square appears on the desired point. Press the "S" key to begin the mensuration. You will see the mensuration line begin to "jump" from point to point. When the mensuration line is on the correct point, type "E" to end the line. A mensuration window will appear. The example to the right shows a power transmission tower being measured relative to the surrounding ground surface.



3. **"Model Text" editing capability:** This tool gives the user the ability to insert up to 1000 characters to describe a model. Simply go to the Models menu, select "Edit Model Text" and type in the desired text. Some useful information might include the surveyors name, date of the survey, any editing that was performed on the model, client's name, or any other relevant information

4. **GeoTIFF Export Configuration Control:** Because different applications look in different places for specific geographic information, the QT Modeler v 4.0.3 offers a flexible interface for specifying the attributes of exported GeoTIFFs. The first choice the user has is whether to write the .tfw file (aka World file) associated with the GeoTIFF. Applications such as ESRI Arc GIS may look for the .tfw file to determine the geographic information. If you require a .tfw file, please check the first box. Note that the .tfw file does not hold as much information as the standard GeoTIFF header. For example, the coordinate system (e.g., UTM vs. Geodetic) is stored in the GeoTIFF header but not in the .tfw file. The second choice is whether to write the GeoTIFF tags into the TIFF header. If this box is unchecked, a simple TIFF will be generated without the geographic information in the header. The third choice is in how to handle rotation. The two choices are a.) Use the GeoTIFF Model Transformation Tag. This is the default and complies with the GeoTIFF standard. Or b.) Use multiple GeoTIFF tie points. This provides explicit coordinates for the corners of the GeoTIFF. While this is not a standard, it may be useful for applications that do not support the standard method of representing GeoTIFF rotation.

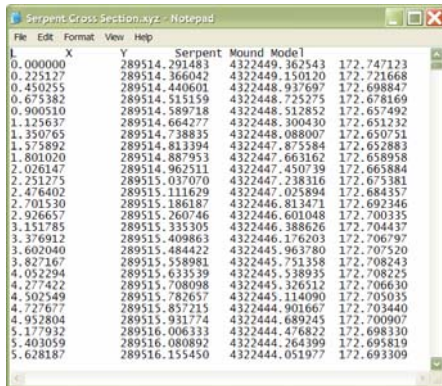
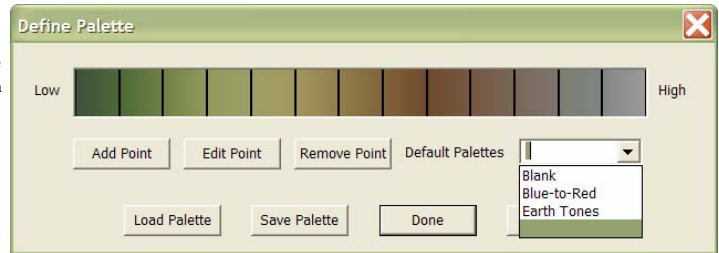


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QT Modeler Version 4.0.3 Changes (Continued):

5. **Palette Editor Changes:** We have added an earth tone palette. Simply click on the “Configure Height Coloration” button, press the “Edit Palette” button, then choose between the default palettes from the pull down menu. See illustration to the right.



6. **Columnated format for Cross Section Export:** The text file of cross section export is now in a column format, facilitating easier import into other applications. See illustration to the left.

7. Enhanced Support for Cartesian Coordinates

- **What are Cartesian coordinates?** With respect to the QT Modeler, coordinate systems break down into three categories: Geodetic, UTM and Cartesian. Cartesian works with every type of XYZ coordinate system. Some examples are all State Plane coordinate systems in the USA.
- Fixed issues with marker placement in Cartesian models.
- Fixed profile display for Cartesian models.
- GeoTIFF, FXYZ, FLT and LAS imports support Cartesian coordinates

2. Miscellaneous

- We fixed issues importing ERDAS Imagine GeoTIFFs. Some ERDAS-generated TIFF's were being imported with incorrect color information due to nonstandard values in the GeoTIFF header. We have adapted to this format.
- We fixed ESRI Grid ASCII null value support.
- QT Modeler now automatically toggles off height colors when performing change detection.
- We enhanced ASCII ZGRID (ESRI GridASCII) support: null values, autopopulate fields, geodetic coordinates, .qtc and expo on import.
- QT Modeler now exports the ASCII ZGRID (ESRI GridASCII) file format from .qtc surface models.
- We created a more memory-compact format for Geodetic DTED's. This will enable manipulation of larger Geodetic DTED models.
- QT Modeler now saves the following settings to the INI file: default import format, model type, “Convert DTED to UTM” and “Match Report Directory”. Saving these values to the initialization file streamlines repetitive tasks.
- Users now select units (meters, feet, degrees) on ASCII import. This is particularly important when setting grid spacing in geodetic models. In previous releases, the user needed to input an angular value for grid spacing. Now, users simply input the value in meters.
- We fixed contour generation for .qtc models. Previous versions of QT Modeler had trouble with contour lines in point clouds.