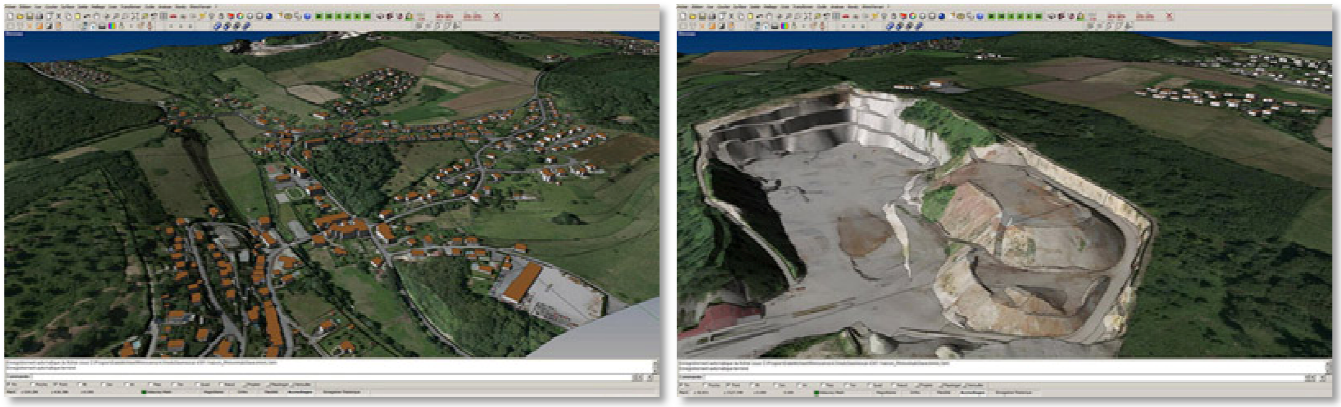
What's NEW

RhinoTerrain

Create, import, analyze, present and print your digital terrain models

Features

Enter into the universe of realistic digital terrain creation! Version 1.5 of RhinoTerrain has new and improved commands for data handling, analysis and rendering of your projects. Increase your productivity with even more realism than before!



CAPM Montbéliard

New Commands

Import Arcinfo ascii grid
(RtArcGridImport)

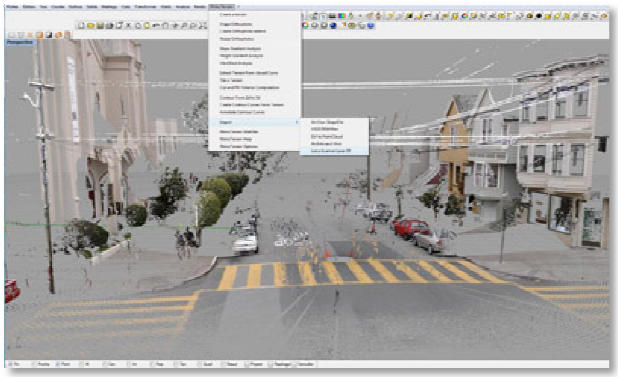
Import Arcinfo ascii files as a cloud of points (option centered value or corner value).

Import dxf point
(RtDXFtoPointCloud)

Import .dxf files as a point cloud.

Import Leica Scanner Laser 3D
(RtImportLaserLeica)

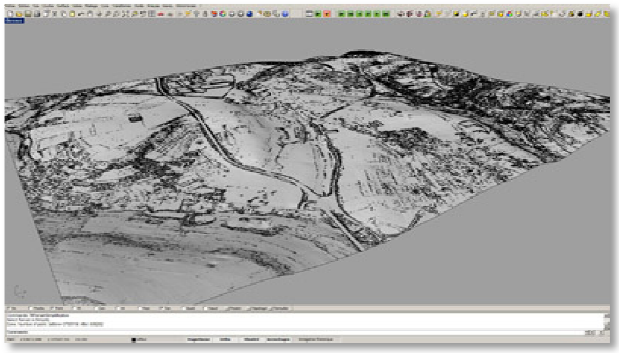
Import ".pts" files created by Leica 3D scanners. Creates a colored (RGB) point cloud.



File courtesy of Leica Geosystem France

Filter a terrain
(RtTerrainFilter)

Decimate terrain data, reducing the number of points while at the same time maintaining integrity. Ideal for dealing with very large point clouds created with 3D scan data (ex: Lidar Data).



Bheren - www.guelle-fuchs.com

Grid a terrain
(RtGridFromTerrain)

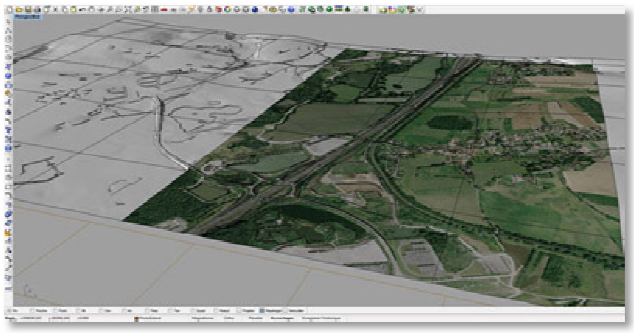
Create a point grid from an existing terrain model. The resulting point cloud can be used to create a new terrain.

Resize OrthoPhoto
(RtOrthoPhotoResize)

Modify the size of a set of orthophotos in order to optimize video memory use

Create Orthophoto exend
(RtOrthoPhotoExtend)

Generate a set of georeferenced rectangles in order to apply a set of orthophotos



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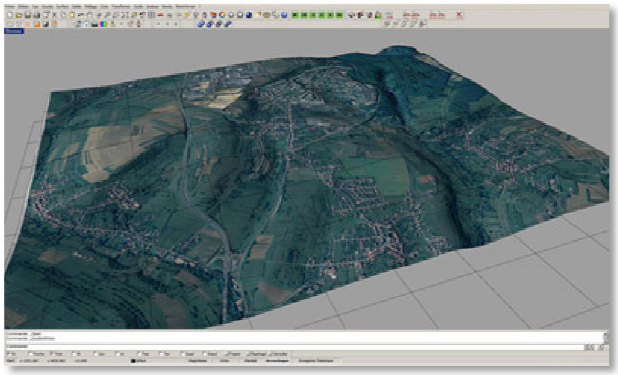
Tile a terrain
(RtTileTerrain)

Split a terrain model in a rectangular grid of tiles and assign a set of orthophotos automatically.



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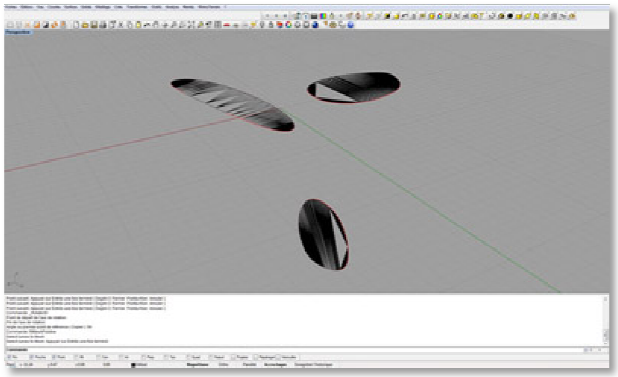
Mesh Closed Polylines
(RtMeshPolyline)

Create a mesh from closed polylines. This multi-core aware function is much faster than the Rhino native function for complex objects. Also works on non-planar polylines.



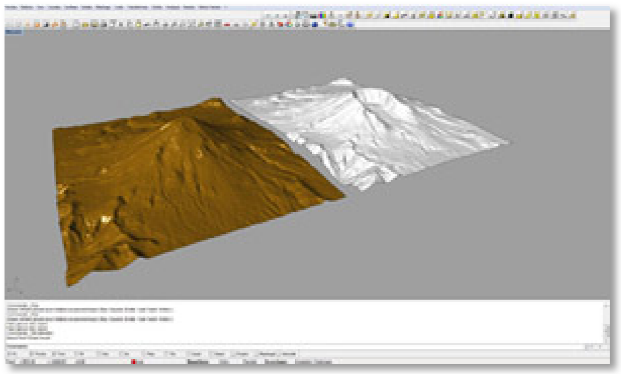
NURBS triangulation

Convert Curve To Polyline
(RtConvertCurvesToPolylines)

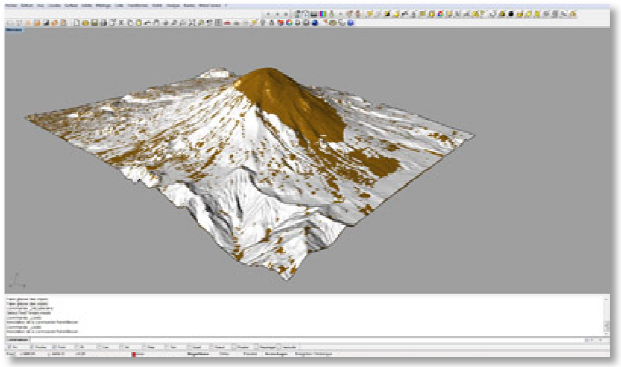
Convert splines into polylines for faster calculation of terrain models composed of a great number of NURBS contour curves.

Cut and Fill Volume Computation
(RtCutAndFill)

Calculate the cut and fill volume between two terrain models describing the same area (before and after grading, etc).



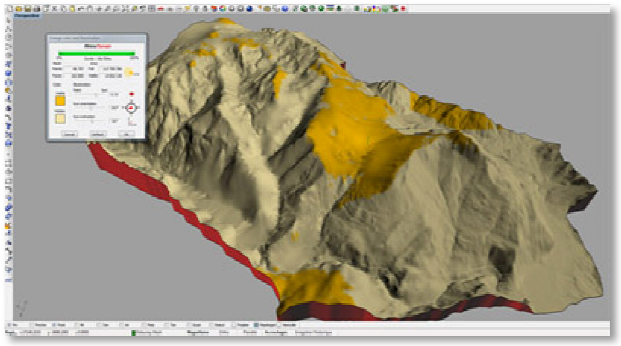
Mt St Helens before and after 1980 eruption (USGS)



Mt St Helens Cut and fill computation

ViewShed Analysis
(RtViewShed)

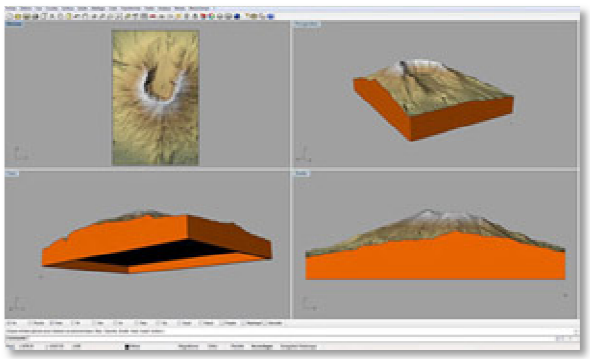
See the visible and invisible areas of a terrain model from a particular point of view. Shows the "shadow" areas of a broadcast antenna or what an observer can and cannot see from a particular observation point.



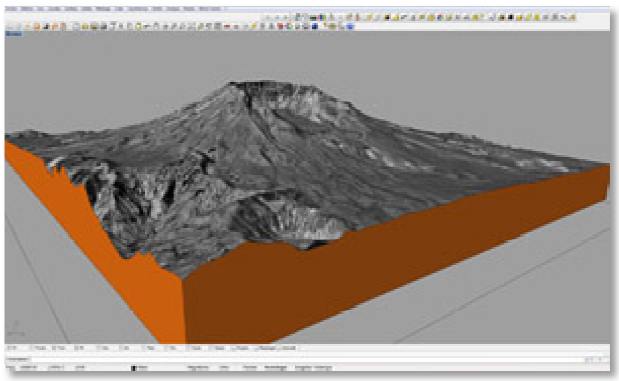
Les 2 Alpes - France

Extract Terrain from Closed Curve
(RtExtractTerrain)

Extract a part of a terrain model enclosed by a closed convex curve. Model can be "hollowed-out" simultaneously. Ideal for exporting a .vrml model for printing with a ZCorp 3D printer.



Mt St Helens ready for printing on a ZCorp 3D printer



Mt St Helens with orthophoto (usgs)

Existing command

Import ArcView ShapeFile
(RtShapeFileImport)

It is now possible to choose the attribute for curve height in the .dbf file.

Create a terrain
(RtDelaunay)

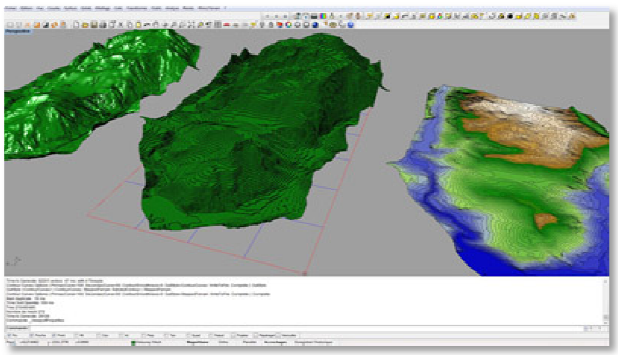
New option: UserBoundary
Constrains the terrain calculations to a user-defined boundary (closed polyline)

Improvements:
Will now triangulate with a very small number of points (less than 5)

Speed increase:
Up to 2 million triangles per second independently of the points arrangements.

Create Contour Curves From Terrain
(RtContours)

This function has been completely re-written:
Much faster calculation times and works on even larger data sets. Possibility to select multiple terrain models and generate contour curves simultaneously

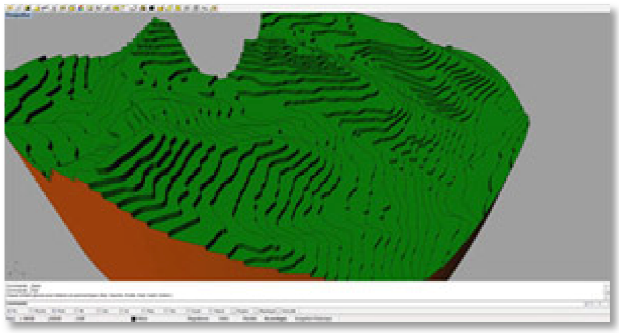


Contour curves computation

Three options are available:

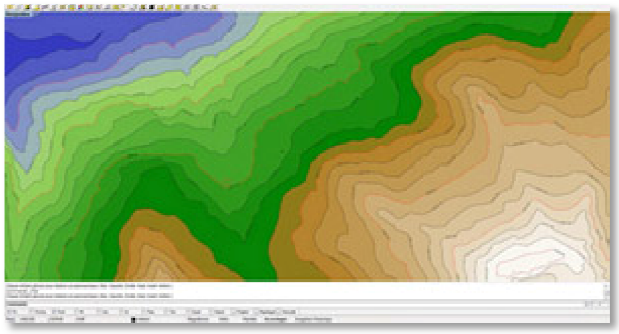
Contour curves creates only the contour curves (no model)

Stepped terrain creates a stair-step terrain model from the calculated contour curves.



Stepped terrain

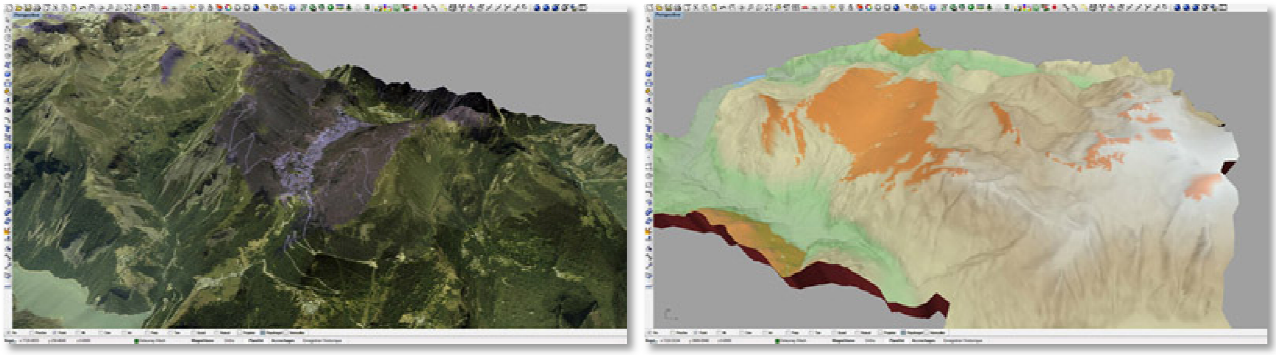
Shaded contour : projects the contour curves to 0 and creates a flat banded map with a color gradient applied. The color of each band corresponds with the height of the original contour. The result is a flat map colored to represent the height of the terrain. Ideal for printing contour maps.



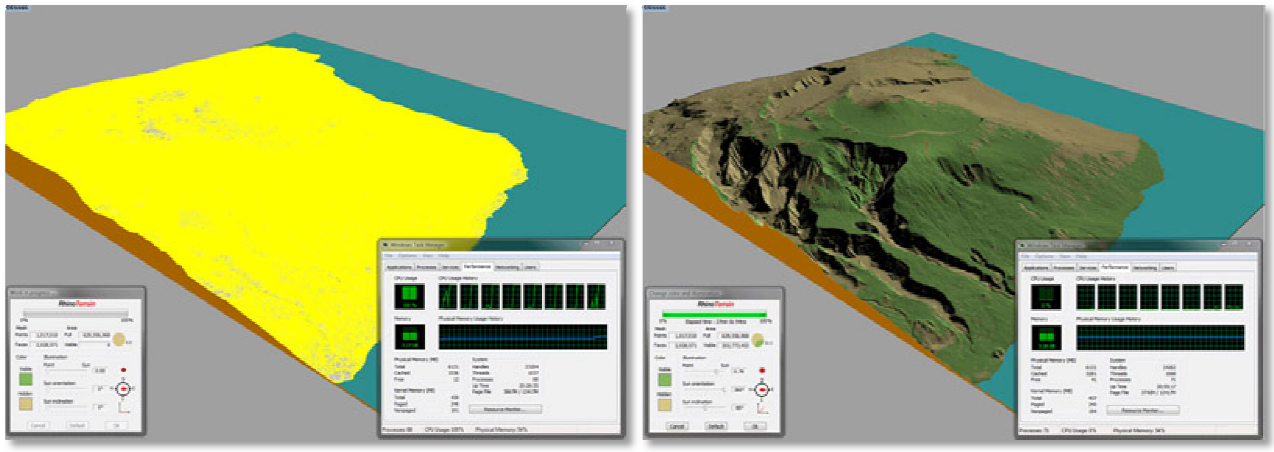
Shaded contour

Performance

Our passion is developing robust, high-performance algorithms which use the power of multi-core processing. Improve your projects efficiency by making the most of your computer through RhinoTerrain.



Combined thematic visibility analysis: left (orthophoto) right (z gradient)



Test made on an Intel Core I7 (8 threads) by SwissRhino

Printing

Make it real! With RhinoTerrain 1.5 you can 3D print your digital terrain model almost as easily as you print a text document. Our special functions will save you time and money by reducing the amount of material needed to print your model with a Z Corp 3D printer.

Printed by Axiatec (www.axiatec.com) on a Spectrum Z510 from Z Corporation (www.zcorp.com)

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