

GeoCue Integrating the Geospatial Workplace

# New Features in TerraModeler

What's New in Terrasolid v014?  
Webinar  
13 February 2014

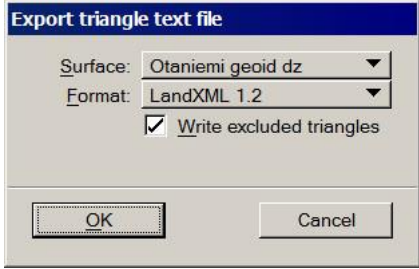
Darrick Wagg  
GeoCue Corporation  
9668 Madison Blvd., Suite 202  
Madison, AL 35758  
+1 (256) 461-8289  
[support@geocue.com](mailto:support@geocue.com)  
[www.geocue.com](http://www.geocue.com)

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## LandXML 1.0 / 1.2 Export


- **File / Export / Triangle text file** menu command in **Surfaces** window can write TIN model into LandXML 1.0 or 1.2 format



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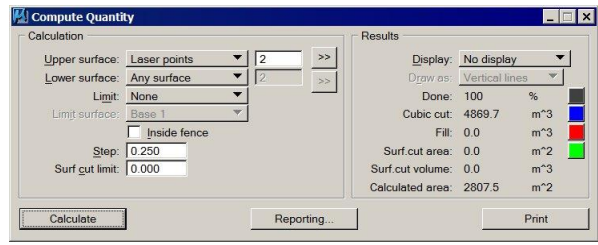

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## Compute Quantity & Laser Points

- **Compute Quantity** can use laser points directly as surface
- Can compute volume between:
  - Two triangulated surface models
  - One triangulated model and laser points in given class(es)
  - Laser points in to different class(es)

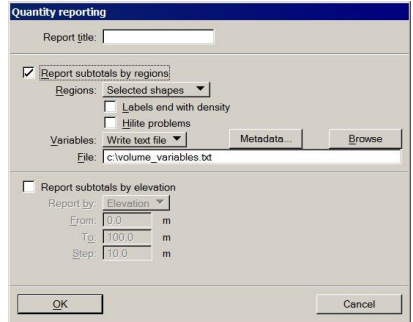

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## Quantity Reporting Automation

- Automates repeated production of a quantity report document
- You can write a report document in OpenOffice or similar
- Compute quantity can write results to a variable text file
- You can run a utility such as **OpenOffice Writer Find and Replace** to replace variable occurrences in the document with result values

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Airborne LiDAR Survey #DATE  
Processed by #PROCESSOR

## 3D Laser Mapping

Stockpile	Volume m <sup>3</sup>	Area m <sup>2</sup>
A1	#A1_CUT	#A1_AREA
A2	#A2_CUT	#A2_AREA
A3	#A3_CUT	#A3_AREA
<b>Total</b>	<b>#TOTAL_CUT</b>	<b>#TOTAL_AREA</b>

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## Validate Linear Elements

- Tool for checking selected linear elements for geometrical flaws
- Good for validating:
  - Vector data (such as building footprints) from existing maps before using those for classification or vectorization
  - Vector data you have created before you deliver to the customer

**Validate linear elements processing**

Duplicate point       Sharp 3D turn

Self-intersection       Sharp z turn

Intersection between elements       Sharp xy turn

Touching       Break in complex element

Retrace

Stroking:        Exclude crossings

Touching:

Angle:

z-Angle:

OK      Cancel

➔

**Validate linear elements**

Index	Element type	Problem type	Status	Vertices	Min. elevation
0	Shape	Intersection	Active	6	0.000000
0	Shape	Sharp xy turn	Active	6	0.000000
1	Shape	Self inter	Active	6	0.000000
1	Shape	Sharp xy turn	Active	6	0.000000
1	Shape	Touching	Active	6	0.000000
2	Shape	Intersection	Active	5	0.000000
2	Shape	Touching	Active	5	0.000000
3	Shape	Intersection	Active	7	0.000000
3	Shape	Sharp xy turn	Active	7	0.000000
3	Shape	Retrace	Active	7	0.000000
4	Shape	Intersection	Active	7	0.000000
5	Complex shape	Break	Active	9	0.000000
6	Complex shape	Break	Active	118	0.000000

Show    Identify    Approve    Reactivate    Drop    Select

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6

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## Validate Linear Elements

Duplicate points      Self-intersection

Intersection between elements      Touching

Retrace      Sharp turn      Break in complex element

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## Fix Touching Elements

Fix Touching Elements

Stroking tolerance: 0.0010

Touching tolerance: 0.0200

OK      Cancel

- Tries to fix selected linear elements in places where elements intersect or almost touch each other
- Result is elements which are 'snapped' to each other

Original      Result

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Drawing Utilities

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## Fit to Tile Elevation Coloring

- Fits scheme to each tile – uses full color range in each tile
- In **Produce lattice files** select **Fit to tile** in **Range** field
- In **Produce triangles** select **Elevation – Fit to tile** in **Color by** field

**Produce lattice models**

**Model settings**  
Model buffer: 100.000 m around tile  
 Save each model

**Model data sources**  
 Laser points  
Project: D:\jvaskyla.prj  
Classes: 8  
 Survey elements  
 Vector elements

**Lattice files**  
Grid spacing: 0.500 m  
File format: Shaded GeoTIFF  
Values at: Cell center  
Range: Fit to tile  
Sun azimuth: 45.0  
Sun angle: 25.0 deg above horizon  
Color scheme: Default  
Color cycles: 1

**Lattice file naming**  
Directory: c:\  
Name prefix: ground  
Extension: tif

OK Cancel

**Produce triangles**

**Model settings**  
Model buffer: 100.000 m around tile  
 Save each model

**Settings for drawing triangles**  
Draw triangles: Center inside tile  
Color by: Elevation - Fit to tile  
Level: 50  
Colors...

**Design files to create**  
Seed file: c:\terrasolid\seed\seed3dcm.dgn  
Directory: c:\  
Name prefix: tubos

**Model data sources**  
 Laser points  
Project: E:\jvaskyla\_airborne\laser\jvaskyla\_2011\_500\_GK26.prj  
Classes: 2  
 Survey elements  
 Vector elements

OK Cancel

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## Fit to Tile Elevation Coloring

*Uniform elevation coloring*

*Fit to tile elevation coloring*

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