



TerraModeler New Features

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New Public Functions

- `int FnSetSurfaceName( int Id, wchar_t *Name)` sets name of TIN model
- `int FnSaveSurface( int Id)` saves TIN model
- `int FnSaveAllSurfaces( void)` saves all new or modified TIN models



Triangulate Breaklines and Mass Points



- Creates TIN model:
 - (Optional) Collects vector breaklines already in the CAD vector file
 - Selects breakline like points from ground point cloud loaded into TerraScan
 - Selects mass points from ground point cloud loaded into TerraScan
- Advantage compared to model keypoint classification
 - Breaklines and model keypoints integrated into one computation
 - Less preparation work needed
 - Better point selection logic – creates smaller model with same accuracy

The screenshot shows a software dialog box titled "Triangulate Breaklines and Mass Points". It contains several input fields and checkboxes. The "Type" dropdown is set to "Ground". The "Name" field contains "Break+mass" and the "File name" field contains "break_mass.tin". The "Classes" field is set to "2" with a ">>" button to its right. The "Mass point spacing" is "5.000 m", "Tolerance" is "0.150 m", and "Breakline length" is "10.000 m or longer". There are two checked checkboxes: "Adjust elevations to recude mismatch" and "Flip edges to reduce mismatch". The "Vector elements" checkbox is also checked. The "Rule file" field shows "e:\mining_site\breakline_rules.txt" with a "Browse..." button. The "Vector margin" is "0.250 m". At the bottom are "OK" and "Cancel" buttons.

Triangulate Breaklines and Mass Points

Type: Ground

Name: Break+mass

File name: break_mass.tin

Classes: 2 >>

Mass point spacing: 5.000 m

Tolerance: 0.150 m

Breakline length: 10.000 m or longer

☒ Adjust elevations to recude mismatch

☒ Flip edges to reduce mismatch

☒ Vector elements

Rule file: e:\mining_site\breakline_rules.txt Browse...

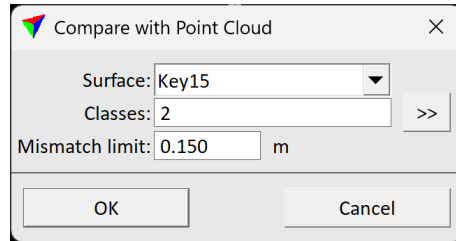
Vector margin: 0.250 m

OK Cancel

Compare with Point Cloud



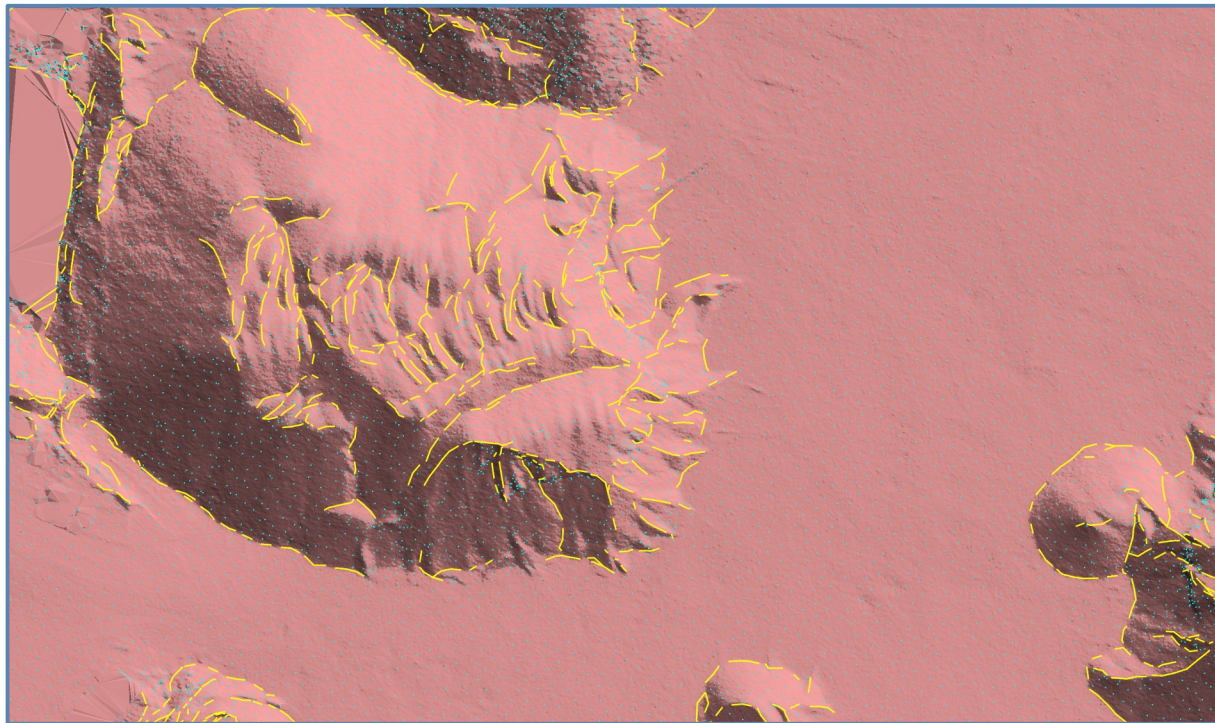
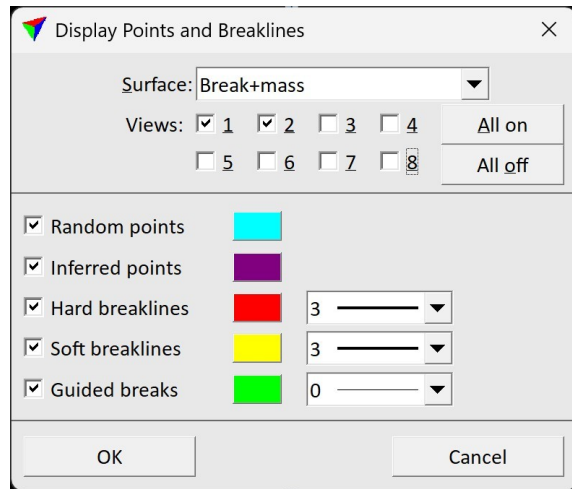
- Menu command in **Surfaces** window for checking how accurately TIN model matches point cloud loaded into TerraScan
- Reports mismatch distances using shortest distance between point and triangle (not dz)



```
Surface       : Key15
Surface points : 966478
Cloud points  : 22384865
Outside surface: 872
Inside surface : 22383993
Mismatch points: 1927
Max difference : 1.228
Ave difference  : -0.004
Ave magnitude   : 0.031592
```

Display Points and Breaklines

- New display method
- Displays TIN model points and breaklines in preview mode



Find Stockpile Boundaries

- Creates base polygons for stockpiles inside selected shape(s)
- User must draw polygon(s) along smooth ground around stockpile(s)

Find Stockpile Boundaries

×

Classes: 2

>>

Iteration angle: 1.80

deg

Minimum area: 50.0

m²

Vertex spacing: 3.0

m

Numbering: Decreasing area

▼

Prefix:

First number: 1

Text size: 4.0

m

OK

Cancel

