

New Features in TerraMatch

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Draw Observations

- Menu command in tie lines for drawing observation points into design file
- Useful in workflow for solving camera misalignment angles in mobile data:
 1. Solve laser misalignment angles and apply
 2. Find signal markers in laser data
 3. Draw signal markers position in laser data into design file
 4. Collect tie points in images using laser signal marker positions as known xyz points from same drive pass only
 5. Solve camera misalignment angle matching camera to laser data

Lever Arm Solution

- **Find Tie Line Match** can solve for lever arm x, y and z corrections for mobile scanners
- Written for Velodyne (Topcon) systems with possibly 64 laser heads

Find Tie Line Match

System: Mobile

Source: Tie line file

Tie lines: D:\topcon\mission\calibration.til Browse...

Trajectory dir: D:\topcon\trajectory_scan Browse...

Solve for: Whole data set

Scanners: Solution per scanner

Correct: All solution sets

<input type="checkbox"/> Heading shift	<input checked="" type="checkbox"/> Lever X
<input checked="" type="checkbox"/> Roll shift	<input checked="" type="checkbox"/> Lever Y
<input checked="" type="checkbox"/> Pitch shift	<input checked="" type="checkbox"/> Lever Z

OK Cancel

Apply Correction Keyin Parameters

- **Apply Correction** can be run using keyin for automation (another application can send the keyin command)

- **Parameters:**

- apply=points/project/tiefile/tielines/images
- trajdir=trajectory_folder (c:\vt6\trajectory_scan)
- project=project_file (c:\vt6\laser02\vt6.prj)
- writedir=result_folder (c:\vt6\laser03)
- corrections=correction file (c:\vt6\calib\fluct_xyz.tms)
- run=0/1

- **Example keyin command:**

```
apply correction apply=project/project=g:\vt6\laser06\vt6.prj  
/writedir=c:\backup/corrections=g:\vt6\calib\fluct_xyz1.tms/run=1
```

Find Rubbersheet Correction

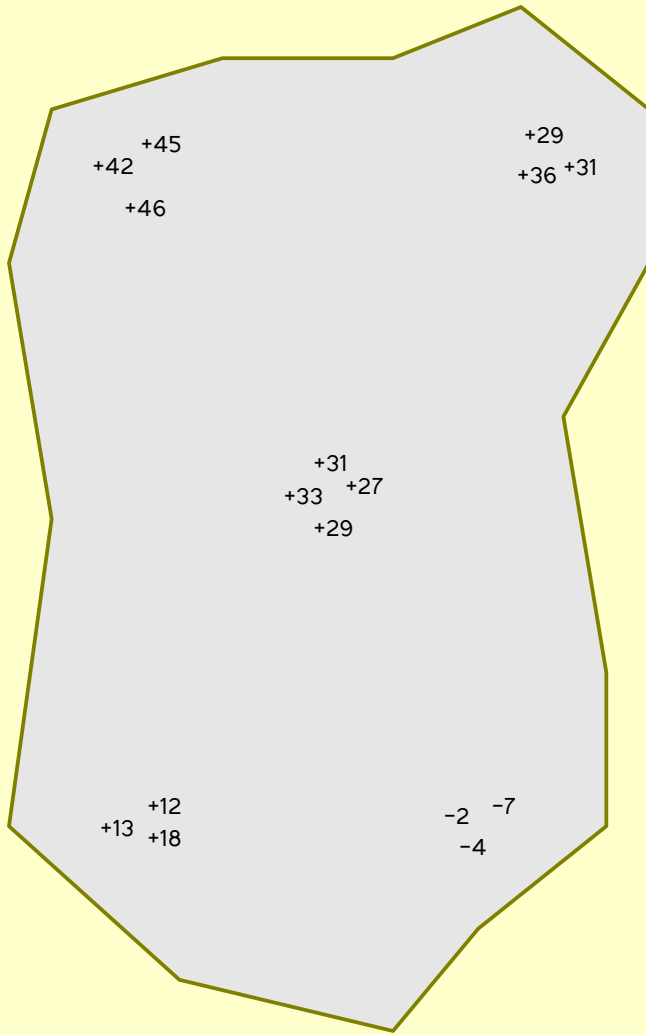
- Fixes data to match control points using a triangulated correction model for xyz, xy or z
- Observations come from tie lines
- Possible last adjustment step for aerial airborne data:
 1. Match data internally
 2. Match to control using rubbersheet

The screenshot shows the 'Find Rubbersheet Fit' dialog box with the following settings:

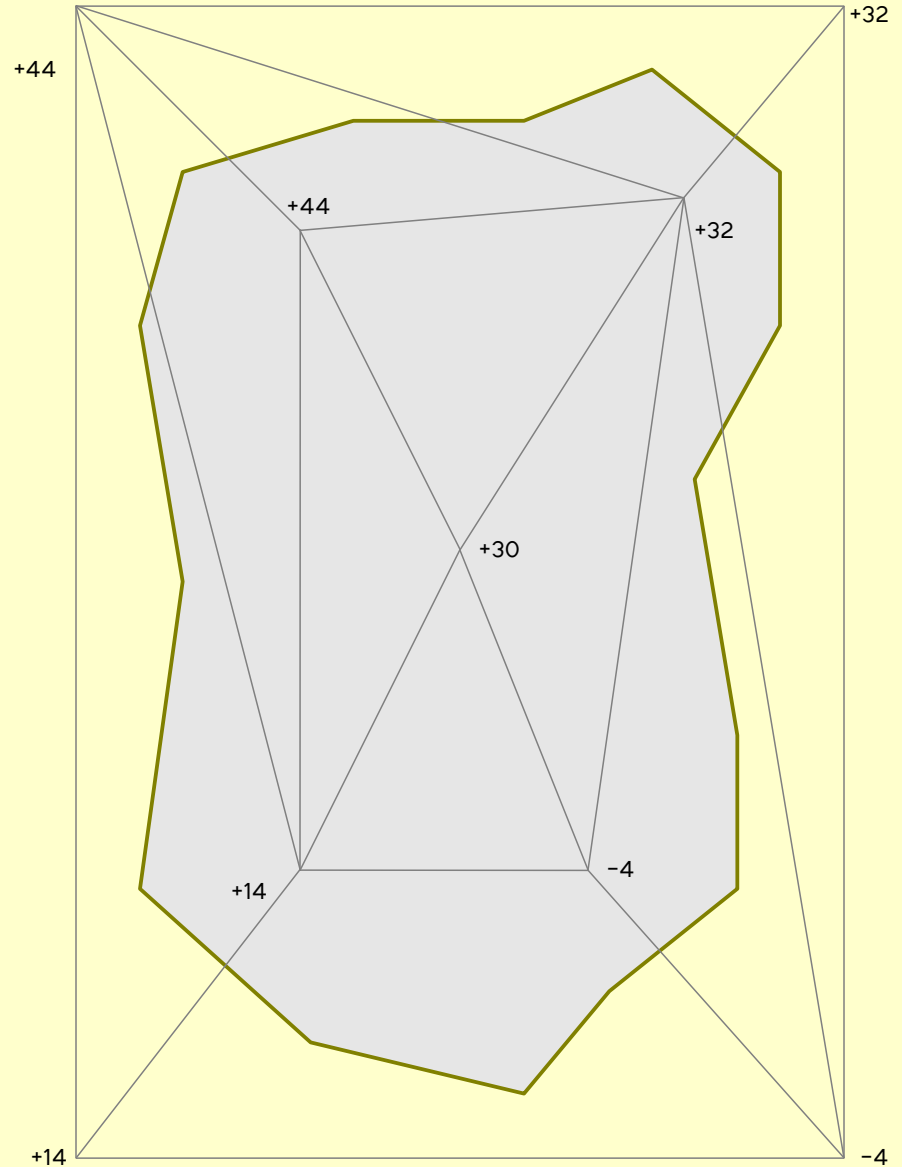
- Source:** Active tie lines
- Trajectory dir:** E:\jyvaskyla_airborne\trajectory (with a 'Browse...' button)
- Solve:** Z
- Expand model:** Closest correction
- Averaging:**
 - Max count: 15 (closeby points)
 - Max distance: 50.0 m
 - Merge final correction points

Buttons at the bottom: OK and Cancel.

Find Rubbersheet Correction



Elevation differences to control



Correction model