

Rebuilding a Surface Model that is Partially Working

Overview: Sometimes volumes won't compute using a surface model but track coordinates & contours work correctly. The surface model seems to have gone partially bad.

Solution: Rebuild a new surface model from the points & breaklines exported directly from the existing surface model. This can be done without having to turn layers on and off that have the correct survey points & breaklines. Take the steps to verify the new surface model for correctness.

Eagle Point Steps

Notation Method

Button to Press *Displayed Text* **Icon** Action {Text to Enter} *Menu Item...*

- From the main Eagle Point menu Click *System...* and Checkmark *Embedded CAD Menus...* to put the EP menu into the AutoCAD menus.

Export the Surface Model Points & Breaklines

- 1) From AutoCAD Click *EP... Surface Modeling*. (Surface Modeling menus will appear within the CAD menu.)
- 2) Click *Prepare... Export ASCII... Points...*
- 3) Pulldown the correct Surface Model Name. E.g. {*Ognd*}
- 4) Browse to the project folder and input a file name for the exported points. E.g. {BC26 Ognd Xpts.asc}
- 5) Select *Point#, N, E, Elev, Desc*
- 6) Click **Apply**. Click **Ok**. Click **Close**.
- 7) Click *Prepare... Export ASCII ... Breaklines...*
- 8) Pulldown the correct Surface Model Name. E.g. {*Ognd*}
- 9) Browse to the project folder and input a file name for the exported breaklines. E.g. {BC26 Ognd Xbrkl.txt}
- 10) Select *Point#, N, E, Elev, Line Ind*
- 11) Click **Apply**. Click **Ok**. Click **Close**.

Triangulate a New Surface Model from the Points & Breaklines External files

- 1) Click *Triangulate... Surface Model...*
- 2) Click **Manage Surface Model** and set up a 2nd version of the Surface Model (E.g. Ognd2) using the correct library and return to the Triangulate Surface Model Screen.
- 3) Pulldown Surface Model to the new name for the surface {*Ognd2*} & pulldown the Boundary method to match the method that was used for the original surface.
- 4) Checkmark *Use External Point File*
- 5) Click **Build File List...**
- 6) Click **New**
- 7) Browse to the Point file. E.g. {*BC26 Ognd Xpts.asc*}
- 8) Pulldown *Point#, N, E, Elev, Desc*

EP Surface Model Rebuild

- 9) Click
- 10) Browse to the Breakline file. E.g. {BC26 Ognd Xbrkl.txt}
- 11) Pull down *Point#, N, E, Elev, Line Ind*
- 12) Click Click
- 13) Click
- 14) Press since only external files are being used to create the surface model.
- 15) Select the Boundary as necessary.
- 16) Click

Verifying the New Surface Model

1. Click *Contours... Make Intermediate & Index...*
2. Verify the surface model name *Ognd2*
3. Usually no checkmarks are place in any of the boxes.
4. Click Contours will appear in CAD.
5. Click
6. Review the contours to determine whether the surface model is correct.

7. Click *Triangulate...Track Coordinates...*
8. Verify the surface model name *Ognd2*
9. Click
10. Move cursor around in CAD and elevations will be displayed.
11. Click

Locking the New Surface Model

- 1) Click *Prepare... Manage Surface Models...*
- 2) Highlight the new surface name (E.g. *Ognd2*)
- 3) Click the **lock** icon to lock the surface model data.
- 4) Click

- When done you can hide the COGO menu items: From AutoCAD Click *EP... AutoCAD*.

Use this new surface to calculate volumes and for projecting slopes.

Note: If you use a process to create a surface model from the triangles, you will NOT be able to use contour smoothing, even though the rest of the surface model & volume calculations would be identical.