KTF software

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Ground Modelling, Road Design and Land Survey software for Civil Engineering, Environmental and Landscape applications working within CAD.

Extend or extrapolate a model

The objective here is to increase the plan area covered by a model by "projecting" or extrapolating triangles at its edges. One reason for doing this would be to provide a surface for the embankment program to work with (note that for the embankment program to work the 3D Polyline that the embankment is calculated from must be within the plan extents of the model that it is working with).

Step 1
Draw the triangles and represent locations where surface is to be extended as 2D Polylines.
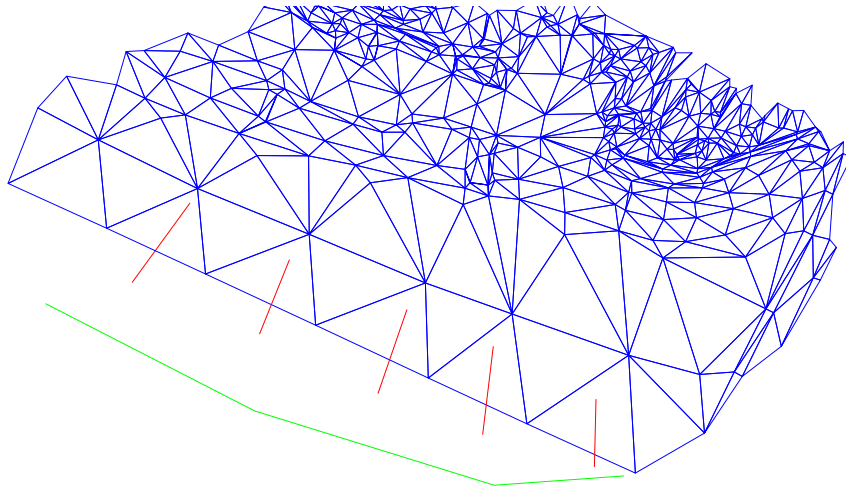
2D Polylines shown in red, the surfaces will be extended to the green 2D Polyline

Step 2
Drape the red 2D Polylines
Ground Modelling, Drape, Drape entities
The red 2D Polylines will now become 3D Polylines ending at the model edges.
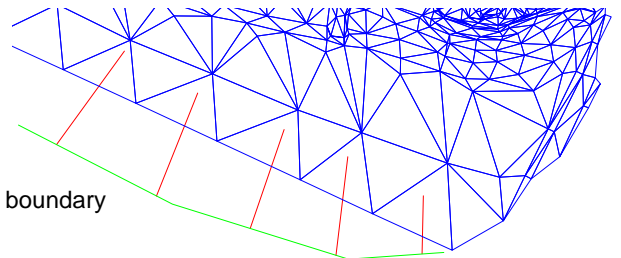
Step 3
Extend the 3D Polylines created in step 2
Polyline utilities, Extend 3D Polyline
At the "Extended point's level from boundary edge or 3D Polyline's gradient" prompt enter "G".
At the "Include 3D Polyline's last vertex" prompt enter "N".
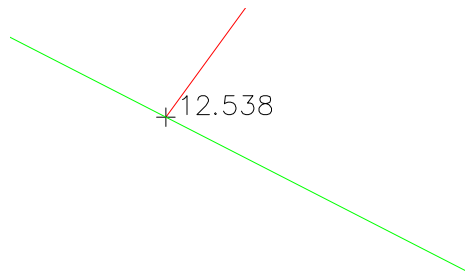Select the boundary (the green 2D Polyline) and pick the red 2D Polylines.

3D Polylines extended to green boundary

Create the "extended model"
Digitising and Draw, Levels
To locate levels at the ends of the extended 3D Polylines created in step 3.

The extended red 3D Polylines have now served their purpose so may be deleted or their layer frozen. The "extended" model can now be created from the original 3D drawing information plus the levels added above.

IMPORTANT WARNING   The greater the distance that the extension takes place over the more inaccurate the level is likely to be compared to the real ground or strata level.

Note that existing strata, water table or ground levels can be added to the drawing with menu item *Levels, Levels*