In this edition we explore simplicity, robustness, choices, and the power of colour.

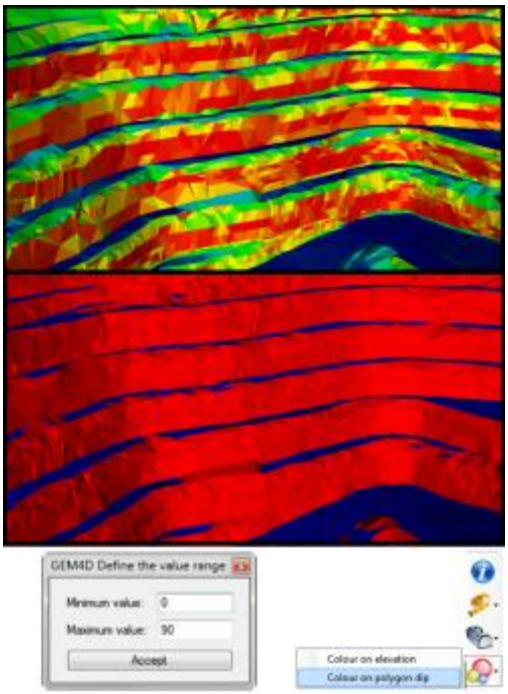
"Simplicity is the ultimate sophistication"
Leonardo Da Vinci

What's new? - Coordinating actors

Much happened from the previous newsletter, see my blog for a detailed discussions on updates: http://www.basrock.com/page2.htm:

1. Started a Facebook-page http://www.facebook.com/basrock4u. This page is used to inform about updates, archive the monthly newsletters, and general notes on using the software.
2. Trajec3D had one update to Version 1.4.1 and now correctly accommodates large coordinate systems (>100 000).
3. GEM4D had four updates that improve many aspects such as: support for large coordinate systems, object selection in the scene, copying and moving objects, support for WRL and OBJ files formats, improvements to the loading and saving of DXF-files, and colouring polygons on their dip angles. The last addition has many potential applications, and an example is discussed below.

All ten BasRock software packages are currently available free of charge.

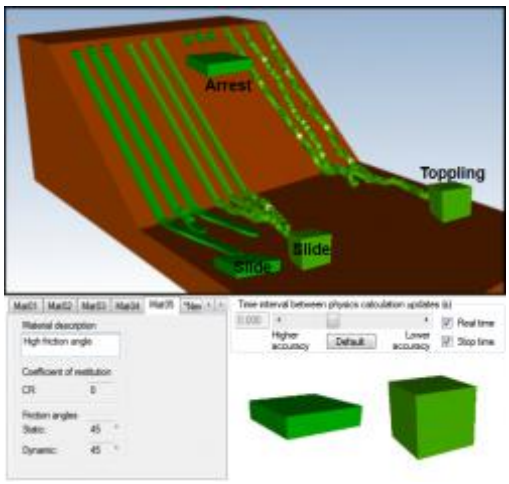


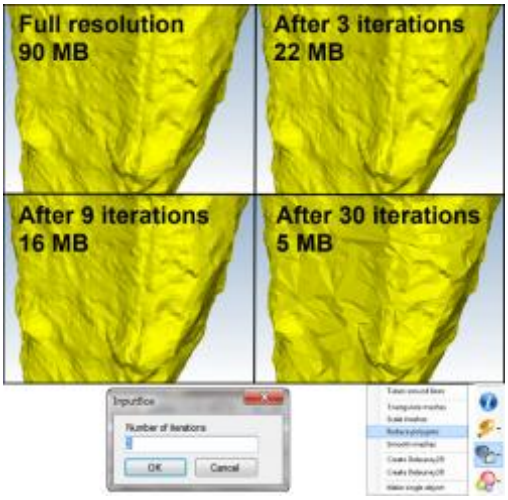
GEM4D - Rainbow your pit

Reconciliation of achieved pit slopes against the design is a time consuming exercise, as comparisons are made on individual sections. GEM4D now has an easier way for this analysis; colour the polygons by their dip-angle, and the catchment capacity on each berm becomes obvious. The full pit can be assessed in a single pass, and multiple berms evaluated in the context of the catchment capacity of the berms directly above and below. For more details see the posting of February 3 on My Blog.

Trajec3D: To slide or topple, that's the question

A little experiment to determine the impact of friction angle and shape on the anticipated fall body motion. A 40 degree slope was created with the build-in "Build a custom slope" option. Two fall body shapes were then selected, a flat box and cube, and given friction angles above and below the slope angle. As illustrated in the image, the behaviour of the fall bodies of the four combinations resulted in three outcomes.





Random facts **- Simplicity follows complexity**

GEM4D can effectively reduce the polygon count of triangulations. The only selection required is the number of iterations, where more iterations result in less polygons. Many users use the "Reduce polygons" function to load multiple very large files. The image shows polygon reductions and the file size after each simplification. In this instance, reducing the file size from 90MB to 16MB had very little impact on the visual appearance of the triangulation.