

Prejudice is a great time saver. You can form opinions without having to get the facts.

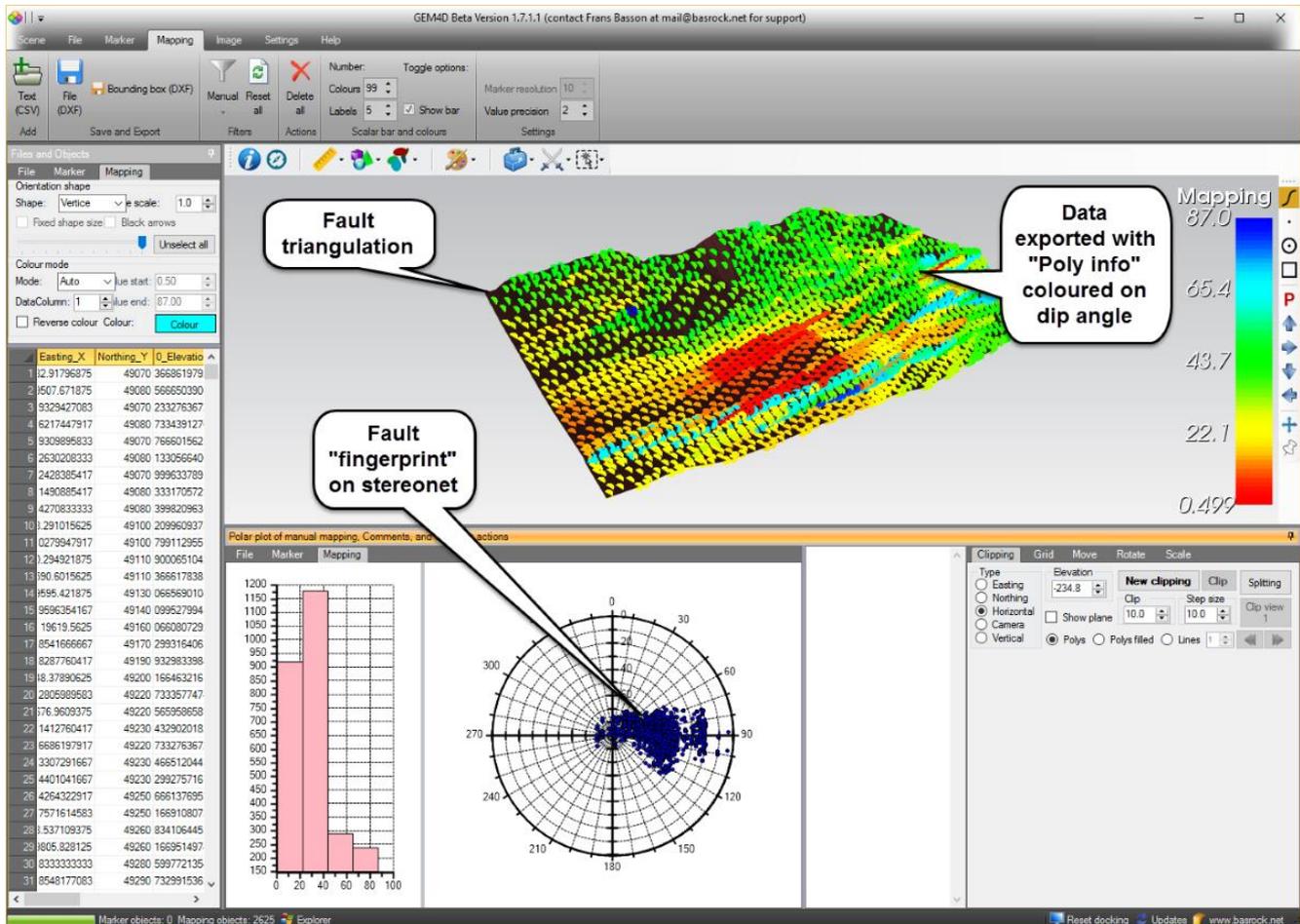
E.B. White

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# NEWSLETTER

## 2016 Quarter 1



"**Ribbon** => **File** => **Export** => **Poly info**" exports polygon data as a CSV-text file that can directly be loaded as Marker or Mapping data. Many CSV-export options are available, but the main export button is "**Poly info**" that provides the following columns:

1. Poly center coordinate - **Easting, Northing, Elevation**.
2. Poly orientation - **DipAngle, DipDirection**.
3. Poly dimensions - **DiagLength, TotalArea, PlanArea**.
4. Object number - **Object**.

There are many uses for these CSV-text exports:

- Each polygon in a fault triangulation can be viewed as a mapping point, thus exporting the mesh polygons in a CSV-file provides orientation information that could be added to a mapping database. As these fault meshes are typically created from many drillholes, they typically provide good averaged orientation values.
- Export a fault plane triangulation file and load as Mapping data to visualise the fault "fingerprint" on the Mapping stereonet - see screenshot above.

- Use "**Top toolbar => Dotted square icon (far right) => Delete inside rubberband**" to delete the stope wall and floor triangulations from a mesh. Then export the roof mesh with "**Poly info**" and use the "**PlanArea**" column to determine the surface area of each object for HR -calculations.

### GEM4D keyboard shortcut keys:

1. "**c**" copy scene to the clipboard to paste into a report.
2. "**b**" cycles through the scene background colours - white, black and default.
3. "**i**" initialises the scene in plan view.
4. "**o**" to open a DXF-file.
5. "**v**" cycles through the views - north, east, south, west and plan.
6. "**Space**" starts the scene auto-rotation.
7. "**Escape**" stops the scene auto rotation.
8. "**Shift**" allows multiple selections in the scene when in "**Information Mode**" (when the top toolbar left button "**i**" is highlighted).
9. "**Control**" temporarily disables the selected action to allow changes to the scene orientation after an action was selected.

## Training sessions

I had many requests for training sessions lately, and cannot accommodate all on an individual basis. Please make use of the hyperlinks below if you are interested in attending a GEM4D GoToMeeting session on the following dates:

- [16 April \(Saturday\) at 08h00am Perth time](#)
- [20 April \(Wednesday\) at 16h00pm Perth time](#)

[GoToMeeting](#) enables online screen sharing, and I will forward a link to the meeting if you express an interest to attend. The process is very simple, just click on the provided link, accept the default options that will install a small browser plug-in, and you will be able to see my screen on your computer. Voice will be done via a telephone conference call. The training will be around 30-40 minutes, and we can then discuss any questions from the attendees.

## Run BasRock software from memory stick

All BasRock software can be run from a memory stick. Just install the program on any computer and copy the installation folder across to a memory stick (or another computer). Create your desktop shortcuts manually and you are good to go.

## Main additions to GEM4D

Development during this quarter was on GEM4D and PhotoCoreLog, but the PhotoCoreLog changes are still in an early stage.

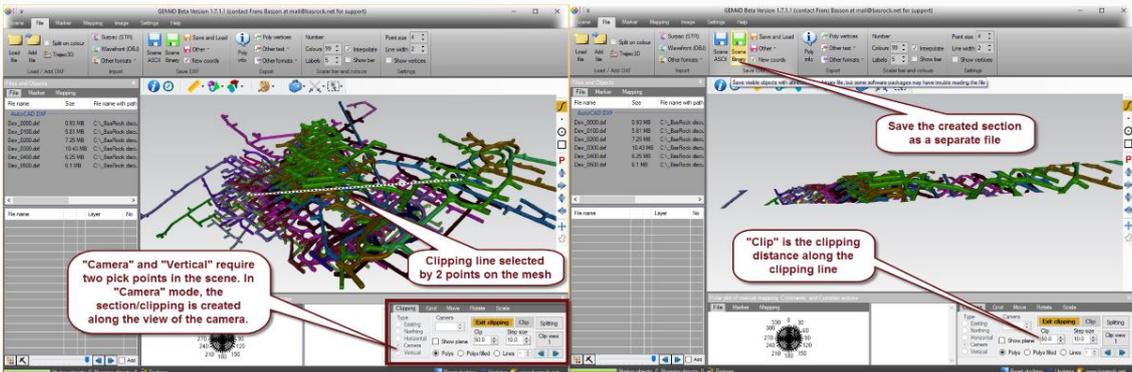
1. Data filtering relative to meshes.
2. Data filtering based on mapping data relative to pit or stope walls for planar, wedge and toppling failure - thus a simple spatial kinematic analysis.
3. Mesh repair tool that automatically fill holes in meshes - apparently superior to many of the mine design software tools.
4. Colour meshes on the PPV from seismic events.
5. Colouring clipped (section) objects is now possible without first saving the meshes.
6. Ability to fine tuning the iso-surface parameters from Marker-data, the form come up automatically. If you are unsure of the parameters to select, just accept the default values.
7. Improve robustness of Marker and Mapping data readers.
8. Add new columns to "**Poly Info**" CSV-export file that enable hydraulic radius calculations.

## Development focus areas

The time frames are indicative only, as workloads and travel determine the available development time.

Double clicking the left mouse button with the cursor on any object in the scene makes that the centre of rotation. Double clicking on empty space center the objects in the scene.

1. Least squares fitting of different mathematical surfaces to data points in GEM4D (before the end of next quarter).
2. Basic creation of drillholes in GEM4D (before year-end), and a polished product (middle of next year).
3. Transfer PhotoCoreLog to the new ribbon interface (before the end of next quarter). Also some internal changes to allow for the expansion of the functionality.
4. The ability to accommodate more than one geotechnical zone on a photograph in PhotoCoreLog (by year-end).



### Saving sections (lines or polygons)

GEM4D manages clippings (or sections) differently than most other software packages. In nearly all software packages, a section is only a visual representation with fixed visual clippings. In GEM4D, clippings are separate objects that can be saved in the same way as a normal scene objects. If you have a clipping in the scene, just save with "**Ribbon => File => Save DXF => Scene ASCII/Scene Binary**".

Both "DXF ASCII" and "DXF Binary" save DXF-files that can again be loaded into GEM4D:

1. **DXF ASCII** - Creates text-files that all mine design packages can import.
2. **DXF Binary** - Creates binary files that are smaller and quicker to save and load, but many packages do not support binary DXF-files.

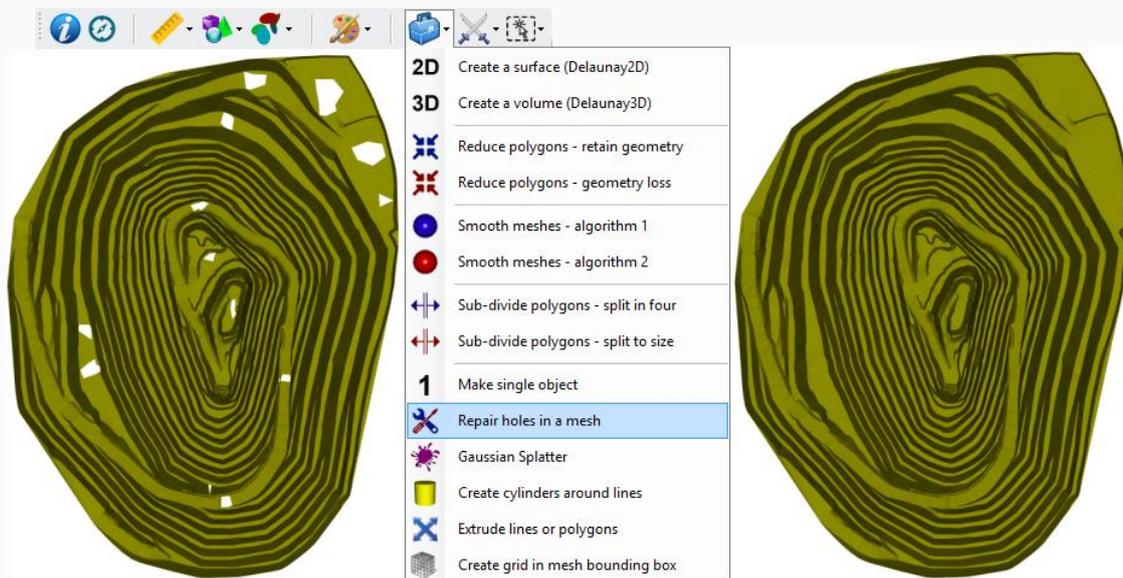
I use binary DXF files when working in GEM4D, and ASCII when transferring information to other software packages.



### Save high resolution images

Scenes can be captured to the clipboard with the keyboard shortcut key "**c**", or saved to a file with "**Ribbon => Scene => Save scene => Bitmap file (BMP)**". Irrespective of the method, the "**Magnification**" value determines the number of times the scene size will be multiplied internally to create

high resolution files - large values will take a while to process. Many use magnifications to create high resolution images for pin-up posters.



## Repair holes in meshes

Use "**Top toolbar => Blue toolbox => Repair holes in meshes**" to create a new mesh with repaired holes to a selected size. Many users make use of this function before calculating volumes in mine design software.



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