

# Potent v4.16.07 release notes

February 2018

## Features

### Allow user to choose polygon tessellation method

When drawing a polygonal prism as a solid object the rendering utilises triangle tessellation, which is usually done using the OpenGL Utility Library. However, the rendering, both on-screen and in any DXF export, was sometimes corrupted. We believe that the problem was in the computer (perhaps an invalid DLL file) and not a bug in Potent. However, to provide a work-around if the problem should recur, an option has been introduced into the **Preferences** dialog box to allow an alternative tessellation method to be tried should the standard method fail.

## Bug fixes

### Problems with small hi-res displays

After the release of Potent v4.16.06 it became apparent that there are some problems when running the program on small hi-res displays. For example, a standard desktop 24" monitor has a display resolution of 1920 x 1200 pixels. By comparison the resolution of our Dell XPS13 Convertible with 13" touch-screen is 3200 x 1800 pixels, meaning that its pixels are much smaller. This discrepancy posed some programming issues that are addressed in release 4.16.07.

The following bugs were encountered when running Potent on small hi-res displays and have been fixed in this release.

#### *Dialog box elements mispositioned*

Some elements in dialog boxes were mispositioned, such as the coloured rectangles in the **Channels** tab of the **Options for reading observations** tabbed dialog box.

#### *World map too small in IGRF dialog box*

The world map in the **Model | Inducing field** dialog box did not fill the available space. Its small size made it difficult to use.

#### *Problems with PotentQ window sizing*

When PotentQ starts the various windows are automatically sized and positioned. However, the windows were too small to be useful and had to be repositioned manually; a time-consuming process.

### Field reversed when reading a model file

This problem occurred when a model containing polygonal prisms was saved using the **Model | Save (as)** command, and was subsequently read back in using **Model | Open**. If the model included a Background Density greater than  $1.0 \text{ t m}^{-3}$  then any polygonal bodies would have the order of their vertices reversed, resulting in the calculated field being reversed.

This bug potentially affects the Snapshot feature, which operates by saving the model to a file and restoring it when **Restore from snapshot** is invoked.

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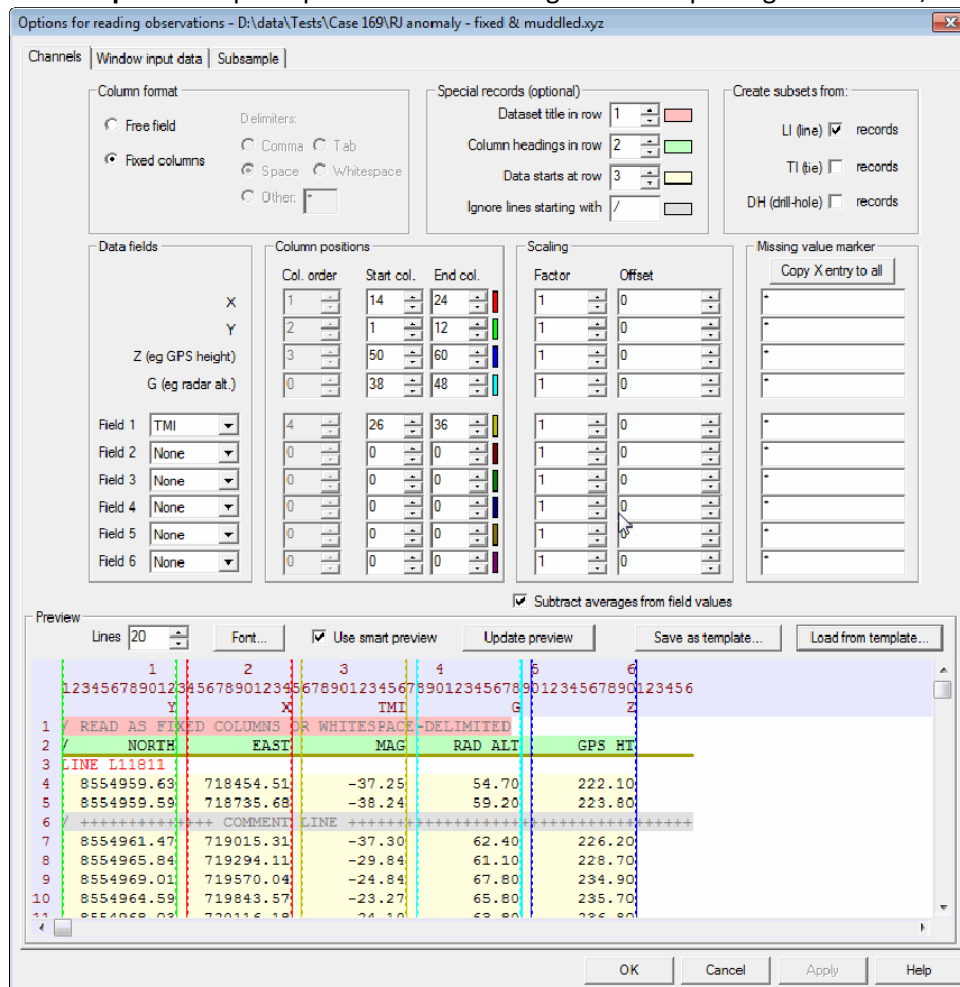
25 September 2017

## Features

### Smart preview when importing observations from text file

The **Observations | Import** command (**Channels** tab) has been improved:

- The **Preview** window is now incorporated into the dialog box and has vertical and horizontal scrolling)
- A **Smart preview** option provides interactive guidance in parsing the text file, as in this example.



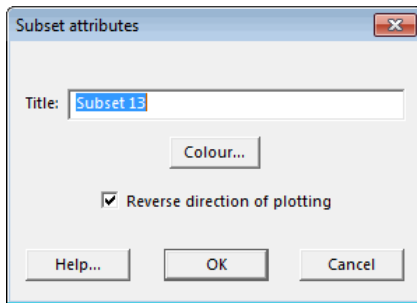
Some example text files are located in the `examples\text_data_examples` subfolder in the Potent installation folder.

### Allow direction of profile to be reversed

By default Potent will configure a subset so that when it is viewed in section form (i.e. using a Profile window) the viewer's eye is at a distant point normal to the profile and in the SE or SW semi-plane. This corresponds to profiles with bearings ranging from  $-45^\circ$ , through  $45^\circ$ , to  $135^\circ$ . Therefore a profile will have West or South on the left.

Usually this provides an intuitive viewpoint. However, consider a number of profiles that have bearings close to NW ( $-45^\circ$ ), such as those from an airborne survey that has been flown with SE-NW lines. Profiles with bearings slightly North of NW ( $-44.9^\circ$ , say) will be drawn with SE to the left. However, profiles with bearings of slightly South of NW ( $-45.1^\circ$ , say, which is interpreted as  $+134.9^\circ$ ) will be drawn with NW to the left.

When modelling a number of adjacent sub-parallel lines this can result in confusing changes in direction when drawing the profiles. To avoid this the **Subset attributes** dialog box now has a **Reverse direction of plotting** check-box. This is intended to handle the situation just described; if this box is checked then any profiles created from the subset will be drawn in the opposite direction to the usual one.

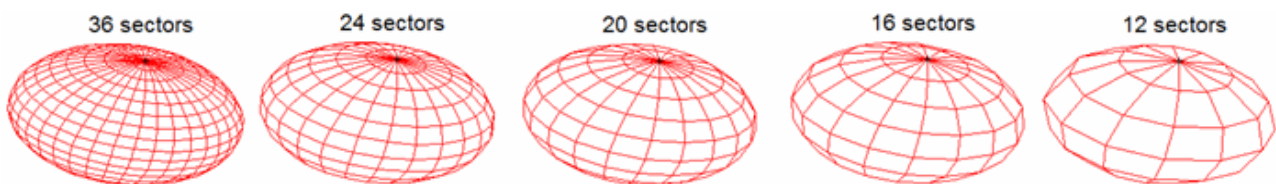


(The **Subset attributes** dialog box can be displayed either by right-clicking a subset button on a Plan window, or by using the **Subset management** command in the **observations** menu.)

### Specify mesh density of ellipsoid wireframe drawing

Previously the number of sectors that were used to draw the wireframe representation of spheres and ellipsoids was fixed at 36. This resulted in “latitude”/“longitude” lines drawn 10 degrees apart. This produced a smooth representation of the body, but often the high line density obscured other features in the window.

A feature has been added to the **File | Preferences** dialog box that allows you to specify the number of sectors used for the wireframe, as shown in this image:



The value you choose will become the default value that is used when *Potent* is run on this computer.

The new default value is 20.

(This feature will be of particular interest to PotentQ users, as the chosen mesh density will be used when exporting ellipsoidal bodies to Oasis montaj as Geosoft polygon files.)

### Improvement to “Import as interfaces” feature

When building a model using the **Model | Import as interfaces** command the density of vertices from the digitiser might be far greater than needed for modelling purposes. A new **Thin vertices** button allows you to enter a factor by which to thin out the vertices.

## Bug fixes

### Problem when cloning a sphere

When cloning a sphere the body properties and position were not copied to the new body.

Fixed.

### Can't change contour interval or colour stretch for residual image

In the **Image properties** dialog box for an image of the residual field the controls in the **Colour stretch** and **Contours** groups were mostly disabled (greyed).

Fixed.

### Sphere not drawn correctly from Composite Edit dialog box

In some situations when **Update** was clicked in the Composite Edit Body dialog box while a sphere was being edited the drawing of the sphere was corrupted.

Fixed.