Potent v4.11.04 release notes

April 2010

Enhancements

Import stratigraphic interfaces

A new command, **Import as interfaces**, in the **Model** menu displays an interactive dialog box that can greatly simplify building a layered model from a file containing digitised stratigraphic data.

Optional clip in DXF export

A new **Clip** checkbox in the **DXF export options** dialog box allows you to specify whether or not the exported model should be clipped to the axes. Previously the model was always clipped but there was a bug in the clipping function. (The bug has been fixed as part of this enhancement.)

If a 3D DXF file is being created then at least one profile window must be open as well as the plan window. The Z axis of the profile window is used to clip the exported model in the vertical direction.

Specify "drawn length" for 2D bodies.

A "2D" body has infinite strike length ("B axis", in Potent terminology). Therefore, when it is drawn a decision must be made as to just how much of the strike length is to be represented. When drawing on-screen this is not an issue; Potent simply assumes a very long strike length (1,000,000m) and relies on the clipping that is automatically applied at the window boundaries by the various Windows drawing functions.

The problem arises when exporting to DXF and polygon files. Potent has no way of knowing the spatial extent of, for example, a destination map, and hence of what is an appropriate strike length to draw. Hitherto a suitable strike length has been assigned on the basis of the spatial size of Potent's main Plan window, but this could be inappropriate in practice.

A new command in the **Model** menu, **Set 2D drawn length**, displays a dialog box that allows you either to enter explicitly the length that is to be drawn or to specify that automatic length assignment should be used. Automatic length assignment works as before, but with some improvement in the algorithm that derives a suitable length.

Allow vectors to be drawn with the Z field component reversed

The direction of Z is a matter of convention, and sometimes vectors drawn using one direction are more indicative of the location of the source body than those drawn using the other.

A new checkbox, **Reverse Z**, in the **Vectors** page of the **Profile scales** dialog box allows the Z field component used for drawing vectors to be reversed.

Display subset name on status bar

The end of a subset may be marked on a plan window with a small button. Right-clicking on this button displays information about the subset, including its name. However, when there are many subsets (as in an airborne survey, in which each flight line might be a subset) the requirement for an explicit mouse click made it time consuming to locate a particular subset.

This release introduces a feature whereby the name of the subset is prepended to the hint text on the status bar when the mouse pointer hovers over the subset marker button.

Update to IGRF11
Update the calculation of the IGRF to the latest "IGRF11" model from the IAGA. This allows calculation of the IGRF for any year from 1900 to 2015.

Use separate process to update licence
A new "Potent licensing" command in the **GSS** group of the Windows **Start** menu is now used to update or transfer the licence without needing to run Potent itself. This command runs in "elevated adminsistrator" mode by using the User Account Control (UAC) feature of Windows 7 and Vista. With earlier versions of Windows it ensures that the command is being run using an administrator account.

This enhancement should provide more reliable control of your Potent licence.

Bug fixes

Broken Help links in dialog boxes
When you clicked the **Help** button in the **Preferences** dialog box (**File** menu) an error message was displayed. This button is now connected to the correct page.

The **Help** button in the **Set inversion limits** dialog box was not connected to a Help page. It now displays its appropriate help page.

Snapshot file names confused
When running multiple instances of Potent, each instance used the same file name root for the snapshot files. Snapshot files are deleted when you exit Potent. However, when one instance finished it deleted all snapshots, including those belonging to other instances.

Fixed. Each instance now identifies its own snapshot files by a three digit ID at the end of the file name root.

Corrupted snapshot files
Sometimes garbage was written to the snapshot file with the result that Potent was not able to restore the model from the snapshot.

Fixed

Potent crashes when trying to save a DXF file
A crash occasionally would occur if you tried to save a DXF file (**Model | Export as DXF file**) when a Plan window was not selected.

Fixed. The command now is not available unless a Plan window is selected.

Problem with scaling of vectors on down-hole sections
The vectors drawn on down-hole sections with **Auto** scaling enabled were generally too long.

Fixed.

Scrolling of cross-section not working properly
The vertical scroll bar in cross-section panes of profile and down-hole windows were not working effectively.

Fixed. The scroll bar sensitivities have been altered to improve scrolling.

Axis/font colours confused

When font colour was changed in the Profile window settings (Axes tab), the colour was assigned to the axes rather than the font.

Also, the font/axis colour was not implemented in down-hole windows.

Fixed. Colours and other attributes now function as expected. (Note that this functionality is not currently implemented for Plan windows.)

Edges not properly erased when dragging polygon vertex

When dragging a polygon vertex the adjoining edges of the polygon were not always erased before redrawing in their new position. This caused a visually disturbing “multiple line” effect that disappeared when the dragging operation was completed.

Fixed. (If the vertex belongs to multiple bodies then only one body is redrawn while dragging. This provides an adequate visual cue during dragging. All bodies are redrawn when the dragging operation completes.)

"Scales" dialog box not working correctly for down-hole windows

The "Apply to all profile windows" check-box was not working for down-hole windows.

Fixed.

Inversion not working for very small scale surveys

This issue arose in the context of UXO surveys, which covered a rectangular area of only a few metres per side. It is anticipated that the same problem could arise for detailed archaeological work.

Fixed.

Windows appear black

With some graphics systems the plan and cross-section windows had a black background, making text and axes invisible.

This was due to failure to initialise all required OpenGL buffers when rendering 3D bodies, and could be worked around by choosing the **Always draw model as wireframe** option from the **Model** menu.

Fixed.

Calculated field not drawn properly when "Real-time" is on

Calculated field not drawn properly when "Real-time calculate" is on in Edit Body dialog boxes.

Fixed. Also take the opportunity to cause full redraw of windows when left button is released after using spinners in the Edit Body dialog boxes.

Potent crashes when trying to create a 2D DXF file

Fixed

Spurious lines drawn when using "Make subset - polygon" tool

If the **Make subset – polygon** tool was used after the **Make subset – box** tool then spurious lines were drawn on the plan window.

Fixed.