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Grid Presentation Manual

Grid Presentation

Provided your data set contains a grid (the **Grid(s)** button of the **Database** dialog is checked), you can view and adjust it using the **GridPresentation** tool. Click the button on the main toolbar to open the respective application:
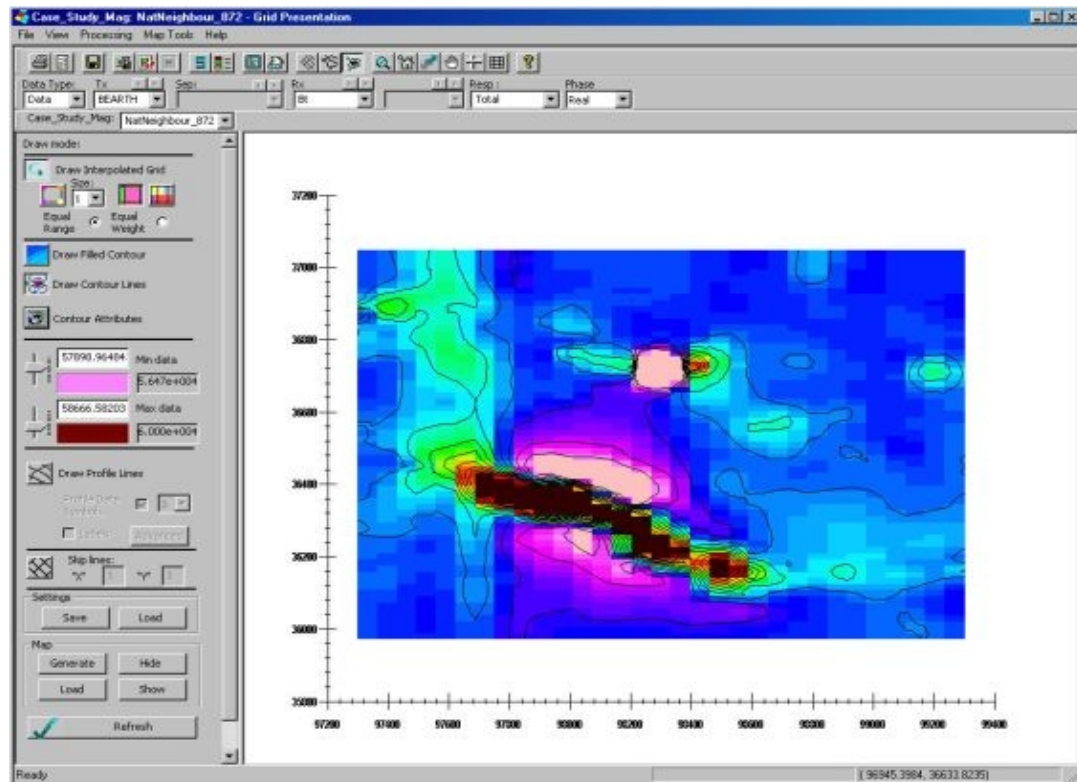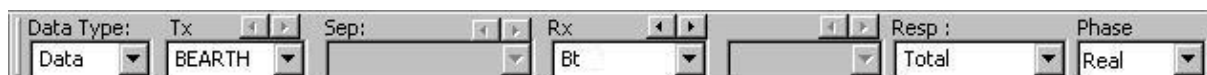

If your data set contains more than one grid, the grid to open will be the most recent one:

- To switch to another grid, select it from the dropdown list to the right of the name located on the bottom toolbar.
- An **Impedance** checkbox will be visible for the appropriate data to switch from grids with impedance data to grids without impedance data.
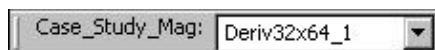
On the **Data Type** bar:

- If your data set contains different data types (data as is, recalculated data such as voltage, apparent resistivity, etc.), the **Data Type** dropdown list will contain the respective number of options, with **Data** selected by default. To switch to another option, select it from the list
- If there are several transmitters, receivers, separations or channels, select the required item from the respective dropdown list or use the arrow buttons above to switch between the items
- If both real and imaginary responses are available, turn one or the other button on to switch between the responses

- Check the **App Res** box to calculate apparent resistivity from data on the fly. Check **App Sigma** to switch to the respective grid. These boxes will only be visible when the data allows it.
- Click the ⬚ button to toggle the data parameters window:
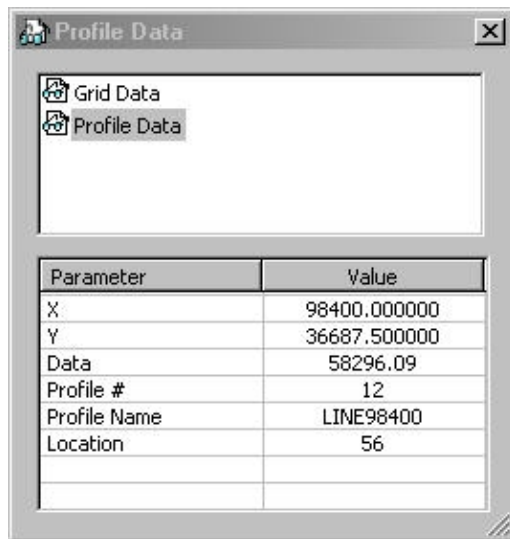
This window will provide information on any point that is clicked on the survey image. It is possible to choose between Grid Data, Profile Data and Solution Data depending on what is available. The Profile Data option will be enabled when the Profile Lines are toggled on. The Solution Data option will be enabled when an Euler solution is displayed(See Euler Overlays)

Related Topics:

Adjusting Grid Display

Creating Map Underlays

Saving Grids

Printing Grids

Analytic Signal (AS) and Horizontal AS

Decay Rate

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Adjusting the Grid Display

The left-hand panel of the **GridPresentation** dialog offers a number of tools to adjust your grid display.

Using this panel you can:

Change the Draw Mode of your Grid

Adjust the Range of Data to be Displayed

Adjust Contour Lines

Display Profiles

Change the draw mode of your grid

In the left-hand panel of the **GridPresentation** dialog:

- Click the **Draw Grid Symbols** button in the **Draw Mode** section to display each grid cell as a set of four data (vertices) and to assign a certain color to each data dependently of its value
- Click the **Draw Grid Cells** button to calculate the average of the data located in the vertices of a grid cell. The cell will be filled with a certain color assigned to the average value
- Click the **Draw Cells around Grid Vertices** button to display your grid as a set of cells drawn around each grid vertex and filled with a certain color assigned to the data value in the vertex
- Select **Equal Range** to assign different colors to equal ranges independently of the number of points in each range or **Equal Weight** to assign different colors to different ranges covering the same number of points

Note. To toggle your grid on and off, use the **Hide Grid Mesh** button .

Next

Adjust the range of data to be displayed

In the left-hand panel of the **GridPresentation** dialog:

- Insert the minimum and maximum values manually in the active **Min** and **Max** boxes or use the respective sliders on the left. The absolute minimum and maximum values are displayed in the disabled boxes on the right
- Click on the arrow button of the color palette to bring up the palette and change, if needs so, the colors assigned to your data. To view the newly assigned colors, click the **Refresh** button in the bottom of the **GridPresentation** dialog
- To switch to the full data range view, click the button on the **GridPresentation** toolbar

Previous/Next

Adjust contour lines

In the left-hand panel of the **GridPresentation** dialog:

- Click the **Draw Contour Lines** button to toggle the contours on and off (you can also do it from the **GridPresentation** toolbar). Click the **Draw Filled Contour** button to fill your contours with color. When engaged, either button enables the **Contour Attributes** button.

In the **Contour Attributes** dialog to open:

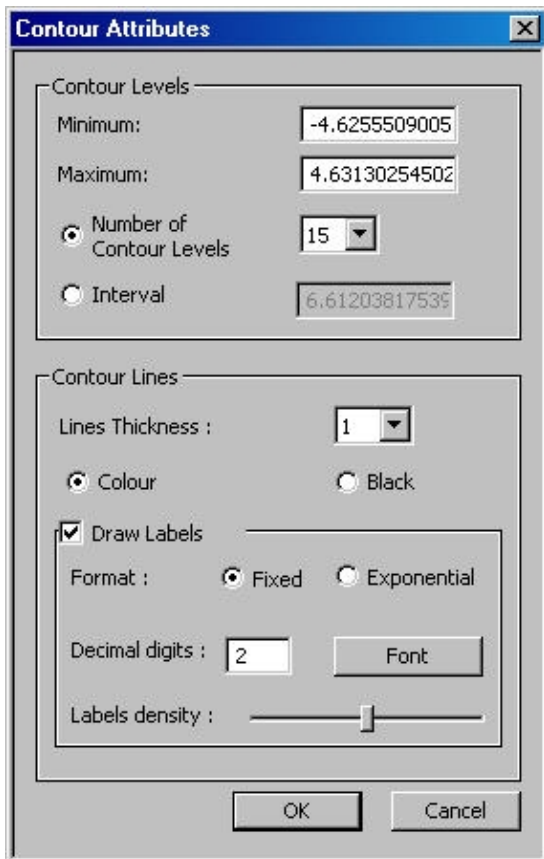- Specify the limits of the data values in the **Minimum** and **Maximum**
- Select the contour density from the **Number of Contour Lines** dropdown list
  OR
  Select the **Interval** between each contour line.
- Select the thickness of lines to be drawn from the respective dropdown list
- Select between the **Black** and **Color** options to draw your contours black or colored.
- Check the **Draw Labels** box to specify the format of the contour labels (fixed or exponential, number of decimal digits and font) and their density(number of labels to display).
- Click **OK**

Display profiles

In the left-hand panel of the **GridPresentation** dialog:

- Click the **Draw Profile Lines** button to toggle profiles on and off. You can also do it from the **GridPresentation** toolbar. When engaged, this button enables the respective section of the dialog

In the **Draw Profile Lines** section:

To specify the same style and color for all of the profiles:

- Click the **Advanced** button and select the line thickness and color in the **Profile Attributes** dialog to appear (see below)

To display your profiles stacked, with different colors assigned to each location dependently of the data value in it:

- Check the **Profile Data Symbols** box and select the size of symbols from the dropdown list to the right. To better view the profiles and data distribution, click the **Hide Grid Mesh** button in the **Draw Mode** section to switch your grid off and leave only profiles on the screen

To display profile labels:

- Check the **Labels** box. Click the **Advanced** button to specify the format, density and location of the labels in the **Profile Attributes** dialog to open:
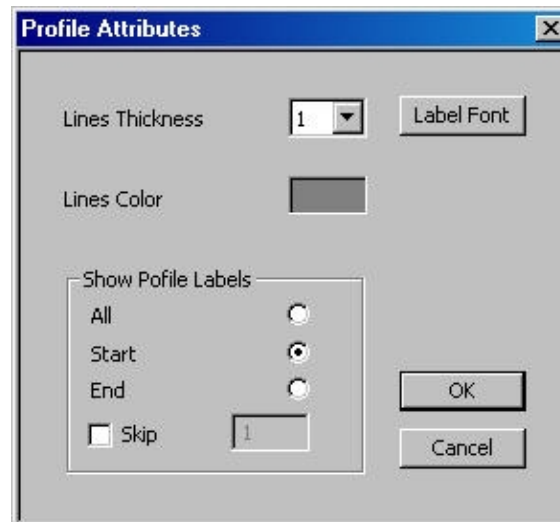
With the **Start** or the **End** option on, the profile labels will appear respectively at the beginning or the end of the profiles. The **All** option will show labels at both ends. The **Skip** option will skip the display of the number of labels specified.

Display grid lines

In the right-hand panel of the **GridPresentation** dialog:

- Click the **Show or Hide the Grid** button to toggle the grid lines on and off. You can also do it from the **GridPresentation** toolbar.
- If the grid is too dense, specify the number of grid lines to be skipped in the X and Y boxes to the right

Adjust axes

In the image field of the **GridPresentation** dialog:

- Double-click in the region of the X axis to bring up the **X-Axis** dialog or in the region of the Y axis to display the similar **Y-Axis** dialog:

- Toggle the display of an axis on either side of the display using, in the case of the X-Axis, the **Bottom** and **Top** checkboxes.
- Edit the step between major ticks in the respective box.
- Check the **Major Tick** box and the **Minor Tick** box in the **Show Mesh Lines** section to display the coordinate grid.
- Edit the **Axis Min** and **Axis Max** values as desired in the **Axis Limits** section.
- Specify the format and color of the tick labels in the respective section.
- Type in the title of your X or Y axis in the respective field; use the **Font** button to specify the format of the title.
- Click **Apply**.

Note. To provide the proportional scaling of the axes, use the **Show Proportionally** button .

Toggle the coordinate grid on and off

- Use the **Show Coordinate Grid** button on the **GridPresentation** toolbar.

Display the legend

- To display the legend, use the **Show Legend** button on the **GridPresentation** toolbar. The legend can be moved to a new location by dragging it with the mouse.
- Click once on the legend and a resizing box will appear to allow the legend to be resized.
- Double click on the legend and the **Legend Data** dialog will appear:
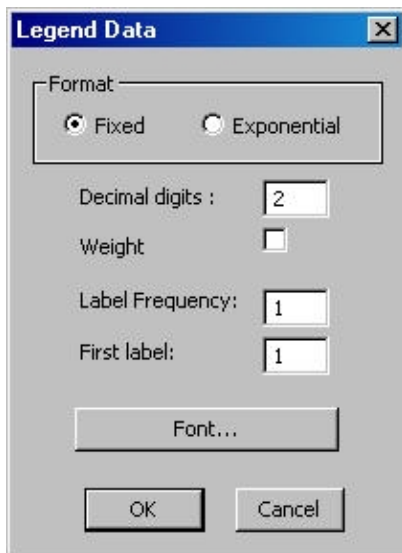
- The format of the legend data values can be set here.
- Check **Weight** to display how many data values fall into a certain interval
- Control the amount of intervals with **Label Frequency**.
- Leave a number of intervals without a label using the **First label** value.

Switch to the full-screen view of your grid

Click the **Full Screen View** button 🖳 on the toolbar. You can also do it from the **View/Full Screen** menu

Toggle off bars and panels

- De-select the respective item (**Toolbar**, **Data**, **Info** bars, **Left Pane**) from the **View** menu. To bring it back, select it again

Zoom in on a grid fragment

· Engage the **Zoom In** button 🔍 on the **GridPresentation** toolbar

· Click in the grid and without releasing the mouse select the required fragment

· To return to the initial view, use the **Home** button 🏠 on the toolbar.

Creating Map Underlays

GridPresentation allows you to load an already available map or generate a map to be used as an underlay. Calibrated files must have a *.map extension.

See

To toggle the map underlay on and off, use the **Show** and **Hide** buttons in the **Map** section of the **GridPresentation** dialog or the ![button] button on the toolbar.

Save to an Image File

To save the image displayed to a file, click the ![button] button on the toolbar. The **Generate** button in the **Map** section can also be used if you wish to automatically go to PEGeoMap to make a customized map file. The **Select Raster Type** window appears :

- **Raster with Georeferenced File** will create both an image and a map file. The available map file formats are for Emigma/QCTool, ArcView and MapInfo. If you do not desire a map file select **Raster Only**.

Click **OK** and enter a name for the image file and select the file type before clicking **Save**. Available output file types are jpeg, bmp, gif, png, tiff, tga, pcx, wmf and emf. For jpeg and tiff formats, you will be asked for some compression settings. The default values work very well. The **Bitmap Export** window then appears:
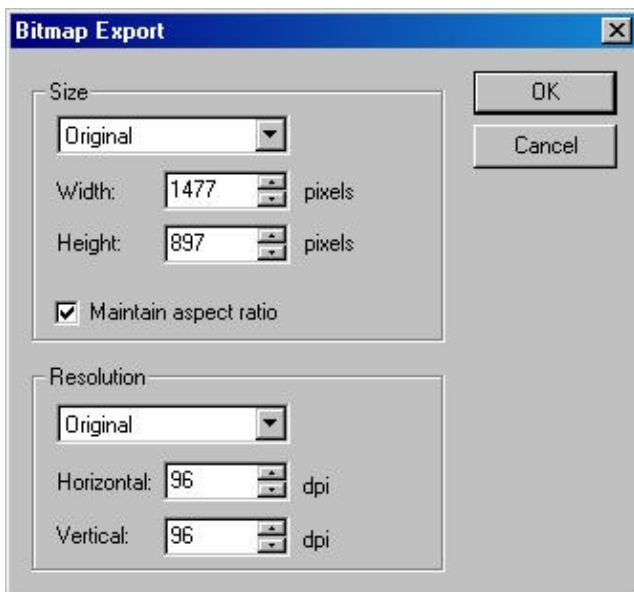
To modify the resolution:

- Enter new values into the **Width** or **Height** boxes to modify the size of the image. Check the respective box to maintain aspect ratio.
- Enter new values into the **Horizontal** and **Vertical** boxes to modify the resolution. One value will be updated to be the same as the other if **Maintain aspect ratio** is selected.
- Select **Original** from the drop down box if it is displaying **Custom** to return to the original values.
- Click **OK**

If you had chosen to create map files, the **Select GeoMap Format** window will appear:
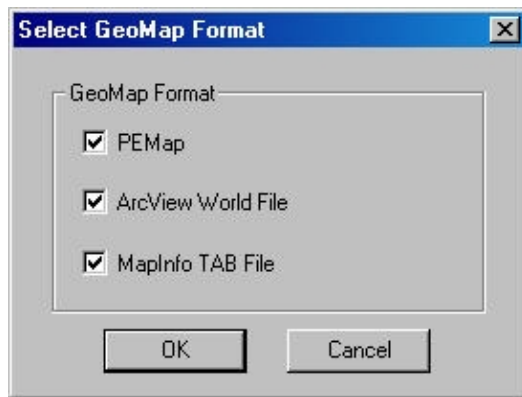
One or all of the options can be chosen. Select **PEMap** for use in Emigma and QCTool. Select **ArcView World File** for use in ArcView. Select **MapInfo TAB file** for use in MapInfo. Click **OK** and a window will appear with information on the saved files.

Load an Existing Map

- Click the **Load** button in the **Map** section of the **GridPresentation** dialog or click the [image] button on the toolbar. Browse for the required *.map file in the Windows-style Open dialog to appear.

  Also see:

  Saving To An Image File

Save your grid settings

- Click **Save** in the **Settings** section of the **GridPresentation** dialog
- In the **Save Settings** dialog to appear, type in the name for your grid to be saved with or select the existing file from the list and click **Save**. In the latter case, the existing grid will be overwritten with the new one.

Save your grid in a different format

You can save your grid as a *.bmp, *.jpg, *.wmf, *.emf, etc., file

- Click anywhere in the grid area to activate the view window
- Select **File/Save As** and choose a desired format from the **Save as Type** dropdown list in the standard **Save As** dialog to appear

Load previously saved grid settings

- Click the **Load** button in the **Settings** section of the **GridPresentation** dialog
- In the **Load Settings** dialog to appear, select the file to open and click **Load**

Measuring Distance on Grid

To measure the distance between two points on the grid:

- Click the [image] button on the toolbar.
- Click on the point on grid where you want to measure from. Don't release the mouse button and drag to the point where you want to measure to. A line is drawn between the two points on the grid display and the distance appears next to the coordinates on the status bar

`Dist:851.909`   `( 98222.8203, 36148.1081)`

Print your grid as is

·   Select **File/Print** or click the **Print** button on the GridPresentation toolbar to bring up the standard **Print** dialog and specify print setup

Specify grid surroundings

- Click the **Print Settings** button 🖳 on the **GridPresentation** toolbar. The **Print layout** dialog will open with options listed to the left and a diagram of the page layout to the right:
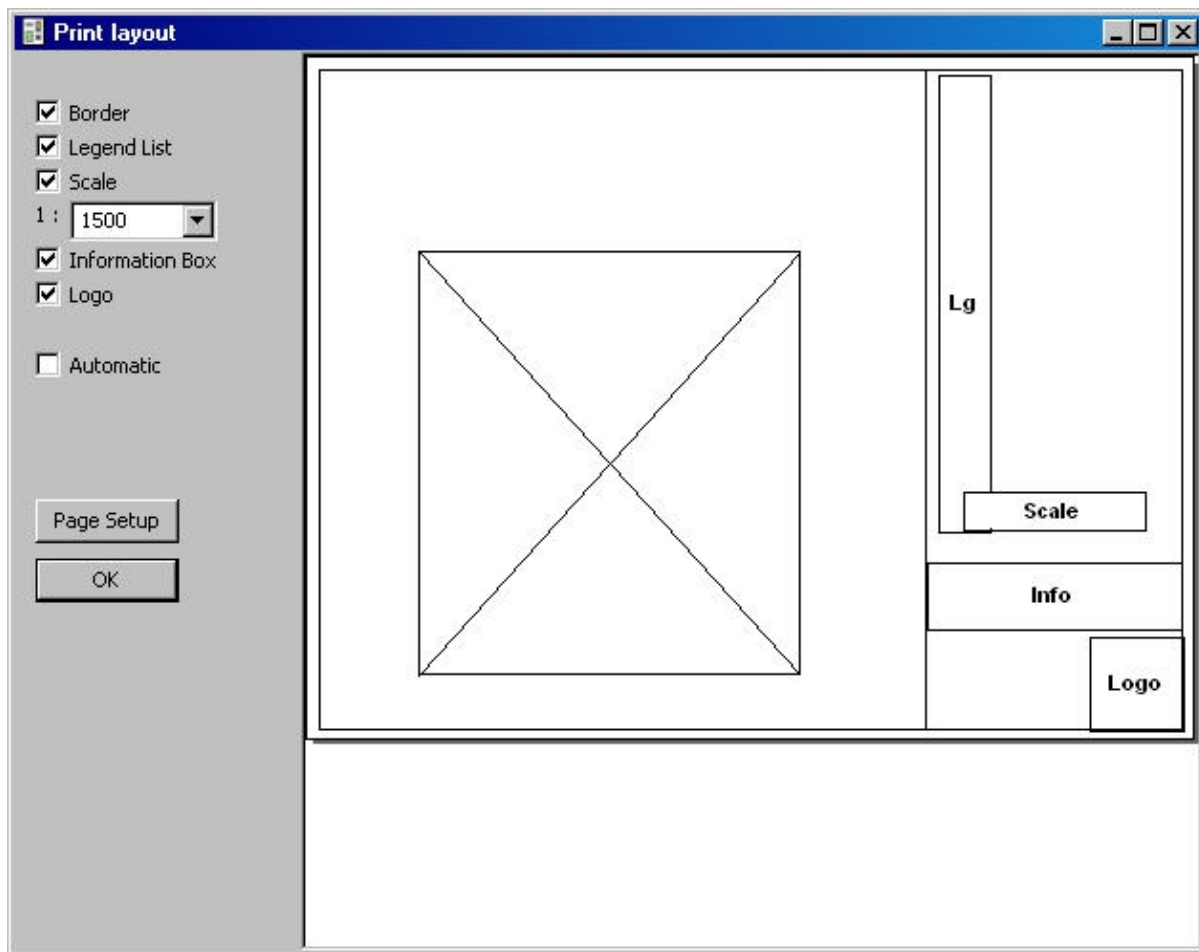
To print a grid without any surrounding:

- Leave the **Automatic** option checked (it will contain a flag by default)

To print the legend list, scale bar, information box and logo alongside your grid:

- De-select the **Automatic** box.
- Check the **Border** box to draw a border around your grid. The width of the border can be resized with the mouse.
- Check the **Legend List** to have the legend printed to the right of the grid. Double-click on the **Lg** component on the layout diagram to bring up a settings dialog.
- Check the **Scale** box and select a required scale from the dropdown list below. If the scale you want is not listed, type it in manually.

- Check **Information Box** to have it added to your printed grid. Double-click the box labelled **Info** on the layout diagram to customize the information box.
- Check **Logo** to have a logo on your printout. Double-click the box labelled **Logo** on the display to specify an image file as well as its size.
- Reposition any of the items on the layout diagram by dragging it with the mouse. The grid cannot be repositioned.
- Use the **Page Setup** button to specify page layout and printer settings. Click **OK** to close the dialog and select **File/Print Preview**.

Analytic Signal (AS) and Horizontal AS

Provided the derivatives have been calculated in your magnetic or gravity survey, you can display the results of processing by the Analytic Signal and Horizontal Analytic Signal techniques

- Select **Processing/Analytic Signal (AS)** or **Horizontal AS** to launch the respective processing and view its results

Decay Rate

For time-domain systems, the decay rate calculation is provided

- Select **Processing/Decay Rate**. The following dialog will open:
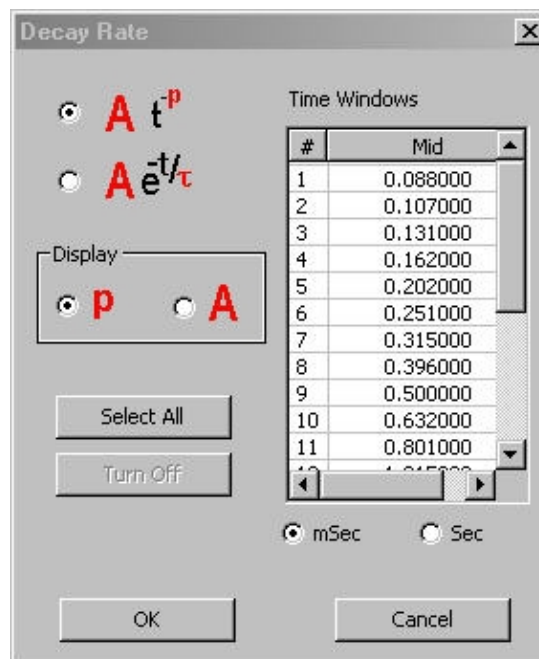
- Select the range of decay windows in the respective list on the right to be used in the decay rate calculation

Note. *Only multiple selections are applicable*

- To select all windows, click the **Select All** button
- To cancel selections and return to initial data, click **Turn Off**
- Select between the two algorithms on the left, then select between the two display options.
- Click **OK** to close the dialog and view the results.

Euler Overlays

Provided your data set contains Euler solutions:

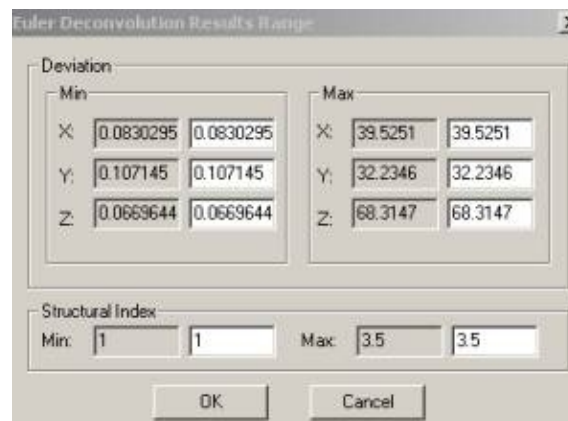> • Select **Processing/3D Euler**. The Euler solutions will appear over your grid

In the 3D Euler dialog to open:
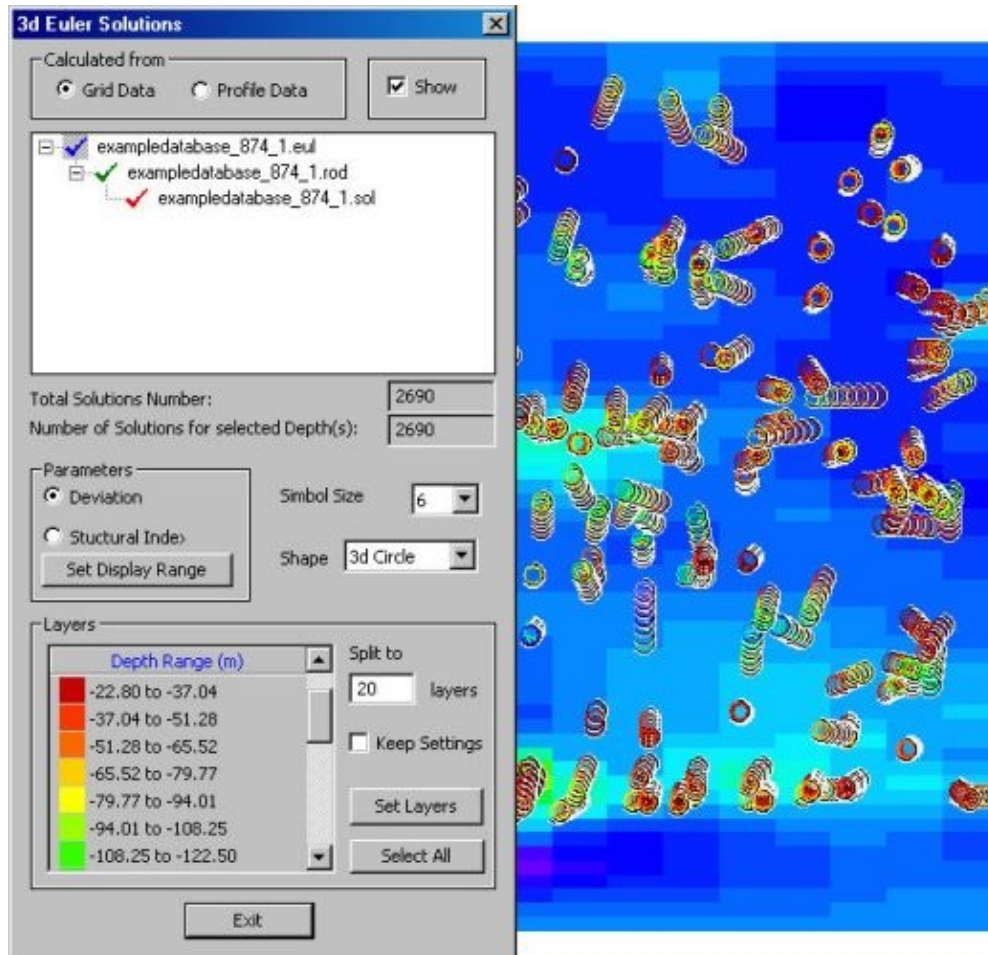
> • Leave the **Show** box checked. De-selecting it will switch the Euler overlay off
> • In case your data set contains more than one Euler overlay, select the one to view from the list in the upper part of the dialog. The box below displays information on the total number of solutions.
> • Any Rodin and Final solutions available are indicated a plus sign beside the Euler solution file. Click the plus sign to access the post-processed solutions.
> • Select **Profile Data** to display a list of Weiner solutions.
>
> • Edit the number of available depths with the box labelled **Split to __ layers**. Edit depth settings in more detail by clicking **Set Layers**.
> • Select a particular depth to see its Euler solution or click **Select All** to display all Euler solutions

The **Number of Solutions for Selected Depth** will change accordingly with your choice of depths

> • Select between the **Deviation** and **Structural Index** options in the **Parameters** section and click the **Set Display Range** button to specify the range of deviation or the range of structural indices to be taken into account:

The gray fields to the left will show you the initial deviation and structural index minimums and maximums. Adjust the minimums and maximums in the active boxes as needed and click **OK** to close the dialog

To customize the appearance of your Euler overlay:

> • Make selections in the **Symbol Size** and **Shape** sections.