



NEWSLETTER

September 2007

NRG Survey System for Windows Version 11.0

V 11.0 Available 12th September 2007

Summary of new features

DTM / Map

- **New DXF import**
- **Support for CAD lines and blocks**

- **Text culling**
- **Text overwrite removal**

- **Volume reporter**
- **Benching measure option**
- **Annotate volumes and centroids**

- **Import Trimble GPS data**

- **Line widths for parallel lines**
- **'Break' lines**

News

We receive constant feedback from users and we welcome it very much. Our wish list is currently on item 2543, and we have probably dealt with 2300. It's been running for 15 years, but I'm sure you'll think of more.

What you may not know is that we record who makes the suggestions, and this year to show our appreciation we will be giving awards to those contributors. Leica and Topcon have kindly supplied goody bags for the winners and we'll also be presenting trophies which you can take home and show your mum.

User Forum

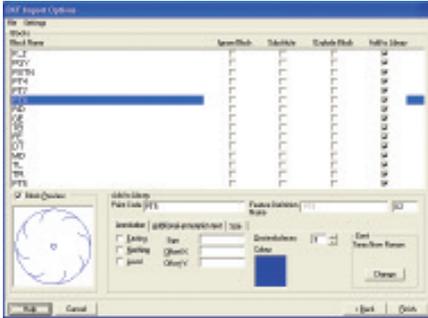
We are pleased a few of you have made use of the new forum this year, there's at least one user making regular posts, but it's not actually turned out to be the lively discussion page we'd hoped for, with everyone sharing ideas and suggestions.

Do you feel that this could be developed further, or altered in any way? Any feedback would be greatly appreciated.

User Group

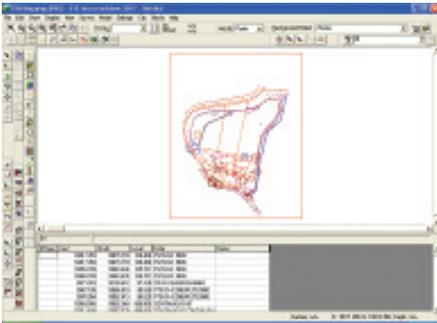
There's just about time to book your place for this year's user group – 12th 13th September.

If you haven't had an invitation then call us now.



You can always use the new line and point styles manager to edit individual lines and points, or delete them if necessary.

Finally, you'll have a drawing in DTM Map which matches the Autocad drawing.



A tip by the way, if you only have a few points with levels in your drawing, you can model these separately and 'shift' points onto that model to interpolate between them.

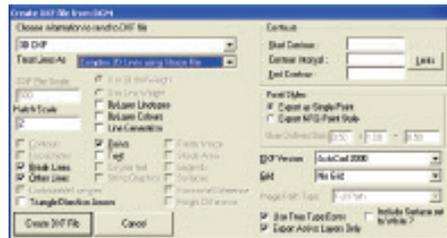
Line Styles

We have introduced the concept that there are 3 classes of lines available, these are:

Windows CAD Complex

The reason is entirely because Autocad cannot deal with 3D complex line styles. The solution to this is to either export your complex line styles as a block overlay or as a shape file. The disadvantage of shape files is that they then have to be compiled into the drawing using CAD, although that can give a preferable solution to using blocks, since these can be difficult to edit in CAD.

Another option is not to use complex line styles and only use the ones supported by CAD, we've made clear which these are now with the separate classes.

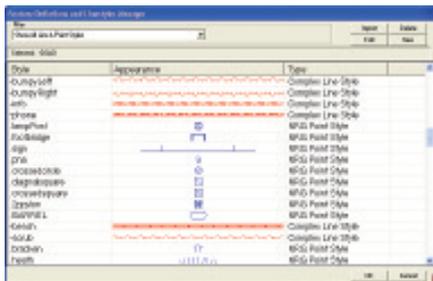


Support of 2D Shape files for line styles has been re-introduced.

Point and Line Style libraries

Our line and point styles have always been made using complex shapes, why AutoCAD with its huge resources find this so difficult I am at a loss to know. Anyway in order that the user can manage the line and point styles we've created a line and point styles manager.

This will let you load libraries from CAD, edit and delete them etc. You can also see clearly from the manager which lines are inherently supported by CAD (windows and CAD ones) and those which they can only understand in 2D (Complex)



Access the line and point styles manager from the Display menu or from the features manager menu.

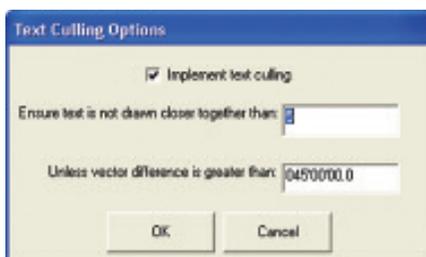
Right click on a style to edit, or use the edit button.

Text Culling

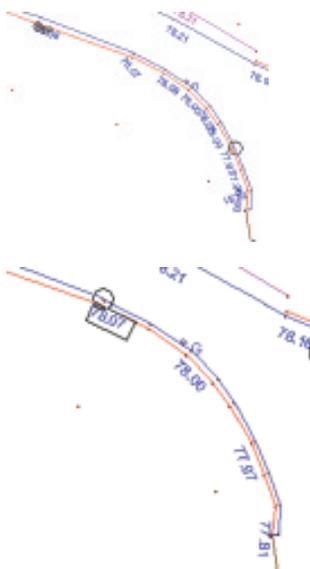
In the display menu there is now a Text Cull option, with 4 sub options

- Restrict Line feature text**
- Remove text overwrite**
- Replace culled text**
- Text Cull settings**

Restrict Line feature text



This enables the user to set a minimum distance between text on lines in an attempt to prevent text overwrite.

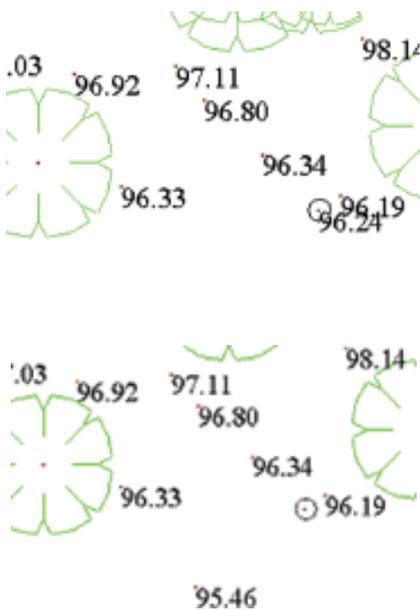


Text Culling Cont'd...

This option will examine all the free text and dynamic text and check where they overwrite, then depending on the priorities set, it will add a /TC command indicating the text is to be culled.

Remove culled text by using the remove option and it will show all the feature codes that have culling associated which you can then turn off if desired, this will remove the /TC commands.

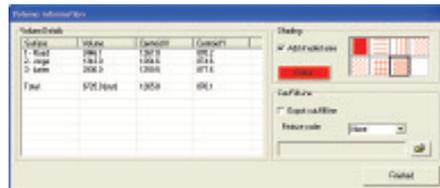
Change **Text Cull settings** using this option, where you can prioritise Free text and dynamic text and sort the feature codes into a priority list.



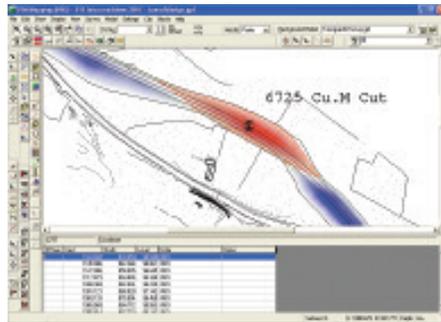
Volume Centroid

 After a volume has been run, use this button to highlight a cut or fill. The software tracks around the perimeter of that cut or fill.

Then it shows the volumes for that area and the centroid position. You can attach shading to the area using the dialogue.



Use this tool to annotate separate cuts and fills on a project.



Use the centroids to calculate Mass haul

Volume Compiler

Now that we've optimised the process of calculating volumes so much we found that the most time consuming task was to abstract all the information into a schedule.

Earthworks schedules made simple!

The screenshot shows the 'Volume Compiler' application window. It has a menu bar (File, Edit) and a toolbar. Below is a 'Source File' table with columns: Primary Cat., Secondary Cat., Tertiary Cat., Dip, Cut of, Fill of, Cut plan Area of, Fill plan Area of, Cut surface Area of, and Fill surface Area of. The data includes categories like '1: Area Cut', '1: Main D/Veig', '1: Existing Carriageway', '2: Hard verge', '3: Yedge', '4: Buffer', 'B: Central Reserve', and '2: Side Road'. Below the source file table is an 'Output' table with columns: Cat, Area, Flow, Mass, etc. The output table contains numerical data for various categories.

The screenshot shows the 'Add Item' dialog box in the Volume Compiler software. It has a table with columns: Primary Cat., Secondary Cat., Tertiary Cat., Dip of, Cut of, Fill of, Cut plan Area of, and Fill plan Area of. Below the table are buttons: 'OK', 'Cancel', 'New Template', 'Flat Template', 'Imported from', and 'Import'.

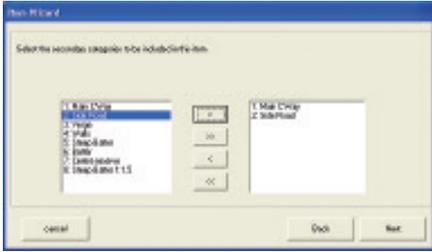
To access the volume compiler after running a volume press the 'volume compiler' button this will load the results into a schedule. Alternatively to load a previously saved volume select volume compiler from the Volumes Menu.

Once you have a set of results loaded you can use one of our default templates or create your own. To start a new template – File, New Template. Then add items in using the add item option

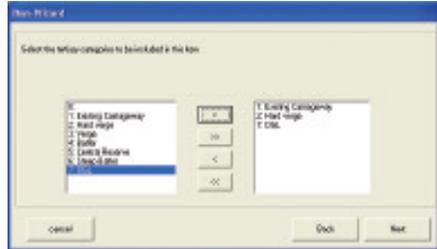
The screenshot shows the 'New Template' wizard dialog box. It contains a text field with the label 'Enter name for the new item:' and the value 'Flat Single Lane (Information)'. Below the text field are 'Cancel', 'Back', and 'Next' buttons.

The wizard will guide you through adding an item

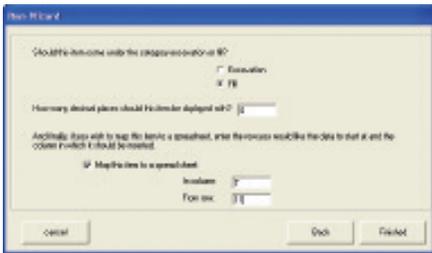
The primary category that you have set in the measure will always be used to determine the measure zones.



Add the secondary categories to be included in the item. Then the third, fourth and fifth depending on the categorisation you have set during the volume run.



Next tell it which element is to be used



Finally specify whether it is to be included as a cut or fill, set the number of decimal places to use and map it to a spreadsheet if you wish. Default Excel spreadsheets have been included in your set up

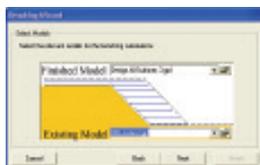
Earthworks schedules have never been this easy!

Once you have your items defined simply call them up in excel, save the summary as a CSV file or print them from the File menu.

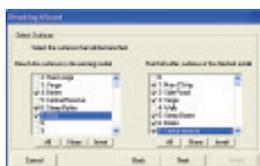
Benching Wizard



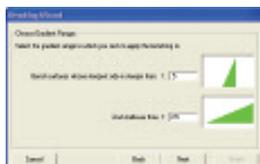
Specify the model to bench



Specify the models to use for benching



Specify the surfaces



Specify the gradients



Specify the rise or going



Break up the measure using a locations model

Station	Profile	Height	Grade
10+00	100.00	1.00	0.00%
10+05	100.00	1.00	0.00%
10+10	100.00	1.00	0.00%
10+15	100.00	1.00	0.00%
10+20	100.00	1.00	0.00%
10+25	100.00	1.00	0.00%
10+30	100.00	1.00	0.00%
10+35	100.00	1.00	0.00%
10+40	100.00	1.00	0.00%
10+45	100.00	1.00	0.00%
10+50	100.00	1.00	0.00%
10+55	100.00	1.00	0.00%
10+60	100.00	1.00	0.00%
10+65	100.00	1.00	0.00%
10+70	100.00	1.00	0.00%
10+75	100.00	1.00	0.00%
10+80	100.00	1.00	0.00%
10+85	100.00	1.00	0.00%
10+90	100.00	1.00	0.00%
10+95	100.00	1.00	0.00%
11+00	100.00	1.00	0.00%

Display results

Line widths / parallel Lines

Windows and CAD line styles now recognise the /W command as a parallel line.



Trimble Link

Trimble have been kind enough to give us direct access to their link engine which means we can import virtually any type of Trimble survey data direct from their devices.

'Break' Lines

To get rid of long lines we've added this simple tool which allows you to add /ST's by dragging a line across the screen, it will break any lines that it crosses.



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