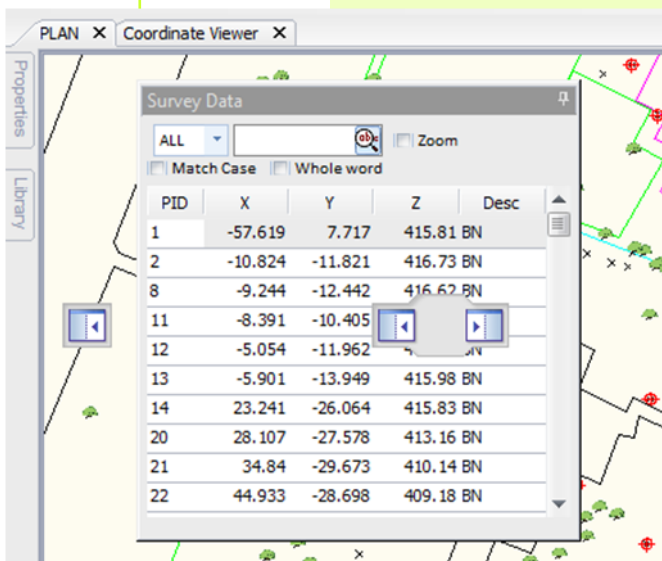


# What's New in AutoPlotter 8

## New User Interface

Experience a whole new look and feel with AutoPlotter 8. User interface of AutoPlotter has been changed completely to provide dock windows and floating windows which can be anchored at various locations on screen. Floating windows and dock window features an auto-hide option which is particularly useful to manage multiple screens together. Tab based interface for main screens make sure that you can

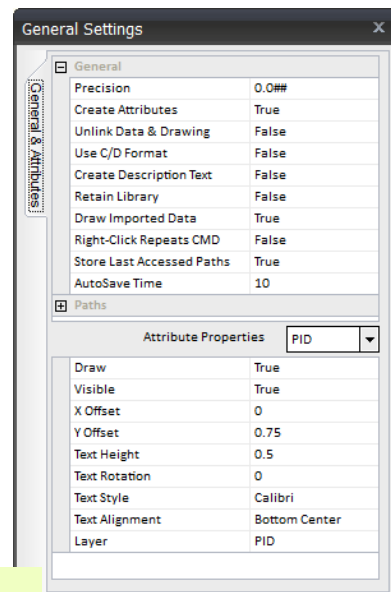
switch from one screen to next with a click. You can also drag a main screen and dock simultaneously. With this enhanced user interface, you have complete control on your workspace which helps in better judgment and quick results.



## Quick access settings modes

AutoPlotter 8 features tab based General settings with property bar which includes numerous options for quick and easy access to configurations settings of AutoPlotter. New option is added to quickly configure attributes display for nodes with the properties option. Attribute text style properties can also be selected from

the drawing giving to the flexibility. Path variables are now stored in settings for quick access during download, upload, save, open project and other import operations. Variable path definition is supported to refer from application path. With this, importing, retrieving, saving open



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## More data support

AutoPlotter 8 now supports various new raw formats such as GTS6 and GTS7 raw format from Topcon Instruments. AutoPlotter 8 also supports RAW format and PTS format from Horizon. Sokkia SDR 20, SDR33 are also fully supported. Raw Data can also be copied from other sources and pasted directly in AutoPlotter.

#	Ref. Code	Entity No	Point ID	X (Easting)	Y (Northing)	Z (Elevation)
1	BN	1	1	-57.619	7.717	415.81
32	DL	1	3	-12.183	119.505	410.22
33			4	57.449	92.829	411.36
34			15	122.879	67.764	412.62
35	GH	1	5	64.444	141.746	412.68
59	GL	1	9	-14.456	-4.415	410.32
60	GL	1	10	-6.362	15.848	411.46
61			30	-7.884	20.667	412.49
62			31	-16.984	30.071	413.03
63	GL	1	49	-14.87	35.099	413.27
64	GL	1	50	-18.778	43.065	413.54

### Survey data control

With AutoPlotter 8, viewing, examining and managing the survey data is now integrated and simplified.

In the coordinate viewer, survey data is now displayed as a tree view with several survey nodes grouped together based on survey feature type. Tree nodes can be expanded or collapsed. A toolbar is also provided to expand/collapse all the survey entity nodes together.

During edit operations of survey data, drawing is instantly updated as you edit the values in Coordinate viewer saving a lot of time as you do not have to re-process the data for the changes to take effect.

You can also specify whether a particular survey entity will be displayed on drawing screen using IN DWG toggle option. This helps in keeping your drawing tidy and small.

Sometimes during auto-creation of plan drawing, you would notice the shape for Polyline or polygon is not formed properly. Earlier Polyline entities could be re-

ordered using Polyline edit. Now you can **Re-order entity nodes** from Coordinate Viewer itself. The new shape is instantly displayed and updated.

Another interesting feature added Coordinate viewer is **Replace Code**. Sometimes the code used during survey may need to be replaced with some

other code, to have a proper representation of data, e.g. a point has been wrongly designated as Tree and actually it should be Electric Pole. With

'Replace Code' option you can quickly change the code and corresponding properties will be updated.

**“Instant drawing updates during edit operations saves you a lot of time and data processing is eliminated”**

### Quickly locate your data

Coordinate data viewer now features a Find option to quickly search based on PID, Northing, Easting, Elevation or Code. Search results are displayed instantly as you type.

Using Zoom option, current node is highlighted in Coordinate viewer and shown in Plan drawing as well. You can dock the coordinate data viewer screen to view the plan and coordinates simultaneously.

You can view and locate survey data instantly using **“Active Survey Data”** pane from the main screen as well. In the ‘Active Survey Data pane’ the data is displayed in the same order in which it is surveyed and imported. ‘Active Survey Data pane’ features find and zoom facilities similar to coordinate viewer.

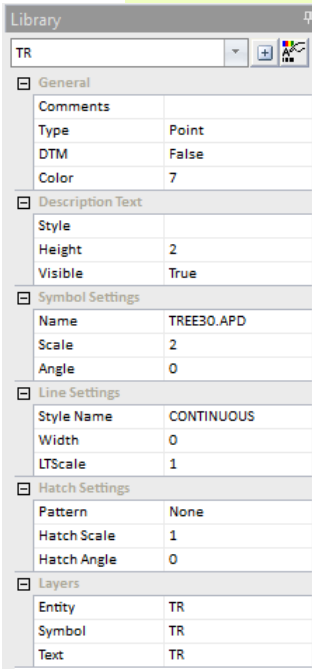
Active Survey data

The screenshot shows the 'Active Survey Data' pane with the following data:

PID	X	Y	Z	Desc
1	-57.619	7.717	415.81	BN
2	-10.824	-11.821	416.73	BN
8	-9.244	-12.442	416.62	BN
11	-8.391	-10.405	415.29	BN
18	-5.054	-11.962	417.05	BN
13	-5.901	-13.949	415.98	BN
14	23.241	-26.064	415.83	BN
20	28.107	-27.578	413.16	BN
21	34.84	-29.673	410.14	BN
22	44.933	-28.698	409.18	BN

The docked coordinate viewer shows the following data:

Ref. Code	Entity No	Point ID	X (Easting)	Y (Northing)	Z (Elevation)	Text
GL	4	94	26.35	13.318	410.61	
GL	4	95	30.954	15.249	411.41	
GL	4	96	38.54	31.154	412.99	
GL	4	97	34.904	32.783	413.36	
		98	14.75	143.365	413.37	Lawn Area
		99	40.35	115.654	413.85	Lawn Area
		100	50.373	135.365	414.1	Water Kundi



Active Library showing TR code configured for display of tree

### Active Survey Library

Autoplotter 8 introduces some unique panes which are always displayed on the main screen.

Active Survey Library pane is one such pane, which displays the current drawing library being used for automatic creation of plan drawing based on the description/Code provided for survey data.

Properties of Code Library can be changed and the effect takes place immediately. This real time update after library feature change is a real time saver and has various applications during final map creation.

Lets elaborate with a few 'example.

In the first case, during initial data processing, a survey

point of code BN was considered as Point, though actually it is a Closed line. With Active 'Library's Type feature, we can change the type to Closed and instantly all the BN points are re-processed together and closed boundary is created instantly.

In another scenario, during initial processing, the Tree symbol used for code TR was for Banyan tree, later it was found to be Coconut tree. Using Active library's Symbol option, once the symbol is changed, instantly all the banyan trees are converted to coconut trees.

Another application of instant update is during printing operation particularly for symbols and texts. Initially the plan was created with a scale

of 1:1000 in mind, but later for printing purpose, the scale to be used is 1:10000. In such case, using Active Library's scale feature, all attributes and symbols can be instantly changed.

New properties have been added to the Library such as Text Style, Line width and Linetype scale. With text style, description text can be now auto-created with various fonts. Line width is useful to create polylines/polygons with thickness. Linetype is useful during display and printing of lines/polylines/polygons which have different Linetype, since certain Linetype may not be properly

**“In Active Library, Real time update of plan drawing as you change library code properties such as Linetype, color or symbol, is a time saver and a great visualization tool while you create maps”**

### Active Properties

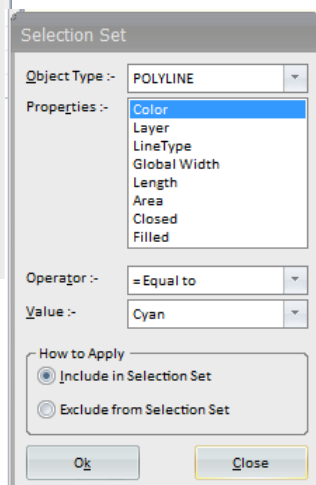
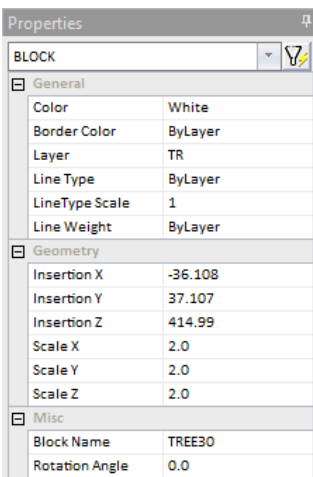
'Active Property' pane will display the properties of individual entity or a group of entities. Once you select an entity on screen properties for the same will be displayed in 'Active Properties' pane. New

fields have been added to display blocks with attribute, Polyline nodes with survey information, point nodes with survey information etc. Once the value in the field is changed, the entity property will immediately be updated. Some of the common properties are color, Layer, Linetype, line Weight etc,

Selection set option is available in 'Active Property' pane which is use useful to create new selection set from the existing selection by filtering out based on various common fields. A number of new property field has been added in section set so that entities can be grouped together easily.

Lets illustrate with example, the use of selection set. In a drawing, we have multiple

entities on a single layer, say 0. We want to segregate the entities of green color in Layer 'GR'. First we will create a new Layer 'GR'. To quickly select all the entities having green color, we will use Selection set and filter the property based on color. Now we can easily change the Layer Property to 'GR'.



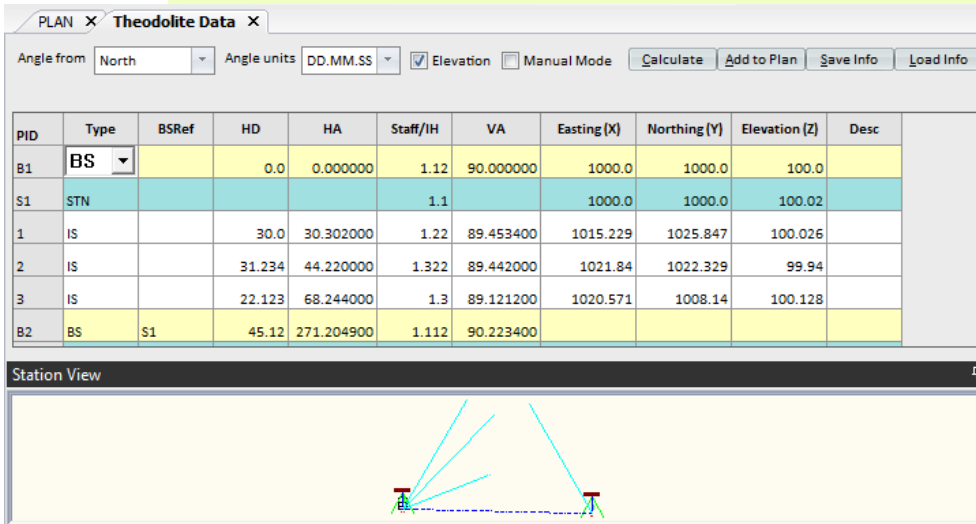
### Conventional data Import enhancements

Enjoy the new look and feel of 'Tachometer & Distomat. New the Import options for tools have been added for better 'conventional data from instruments like Theodolite, result and easy management of Data. You can now

dynamic view the plan as you enter data.

One of the notable enhancements in these screens, is a real time display of station information along with Foresights, Back sights, and Intermediate sights. With this feature, any problems arising due to wrong entry of data, or misinterpretation can be immediately rectified before final import to the project.

Another useful new addition is the saving and loading of data entered. Now you can save the



entered data and continue adding further details later by simply loading the saved data. There is also facility for direct printing of reports and transfer of report to XLS/XLST

That's not all, during data entry process, angle format is now supported for DDMMSS and Degrees and angle mode can be switched easily with a simple selection.

### Bearing Survey in multiple role

New User interface is now available to enter Data from Compass & Chain. The data can be entered in chainage as well as distance mode. Angles can also be entered in various formats like Degrees, DDMMSS and GONS.

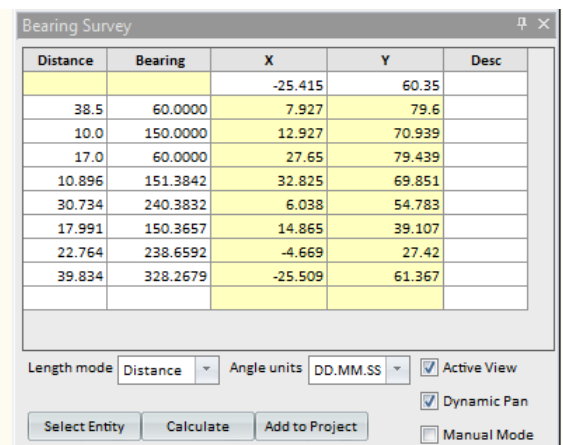
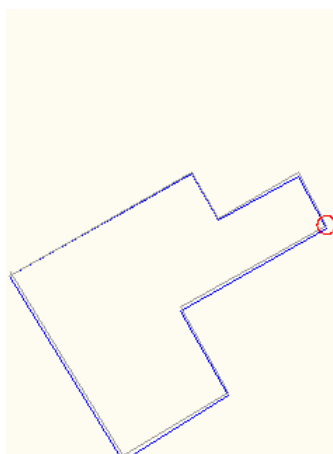
As you enter the Chainage/ Distance and Bearing, 'Autoplottter 8' calculates the coordinates immediately. To quickly visualize the data entered, use the 'Active View'

option. With 'Active View' the plan displays the data being entered instantly. If you use 'Dynamic pan' option, the current node is also highlighted and displayed.

In a different role, Bearing survey can be used to correct existing layouts with the facility to

'Select entity' from screen. Once you use the 'Select entity' option, you can select any line/polyline from screen and the Chainage, Bearing is displayed in bearing survey screen. Now, changes can be made, and 'Add to Project' option adds the corrected layout immediately.

**"In a different role, Bearing survey can be used to correct existing layouts with the facility to 'Select entity' from screen"**



### Enhancement in Level data import

Getting your level data became much more simpler and dynamic with the new features added in AutoPlotter 8

The Auto-Level/Dumpy Level data can be directly entered in Level sheet. Additional support for Digital Level is also available. As soon as you enter the data, readings are calculated and Dynamic Station View gets updated displaying the Level Station instantaneously.

That's not all. In case, you are entering data for route/corridor which has chainage & offset or X & Y coordinates, the current

cross section is instantaneously displayed. This feature helps in eliminating any scope for error due to negligence or manual entry mistakes and also gives you fair first hand idea on the terrain for which cross section information has been collected.

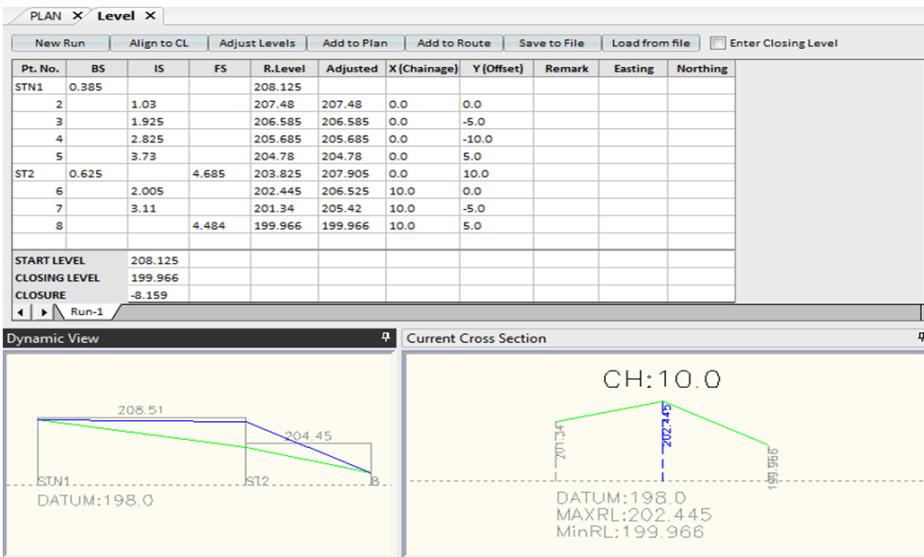
That's not all, AutoPlotter 8's Level import also features multiple level run entry. Unlimited number of runs can be created. You can correct individual level run using closed loops. In case of open loop, closing entry is possible before correction.

Multiple Level run supports spill over of cross section information and dynamic views are updated even during spillover.

Level data can be aligned to center line on plan to generate XY coordinates and can be directly added to project. Data can also be treated as route data and added directly to routes.

All these traditional instrument import now supports save and load option for convenience.

Saving option is also available to XLS format directly



“Level screen offers unique visualization by displaying of Station View along with cross section View for multiple level runs”

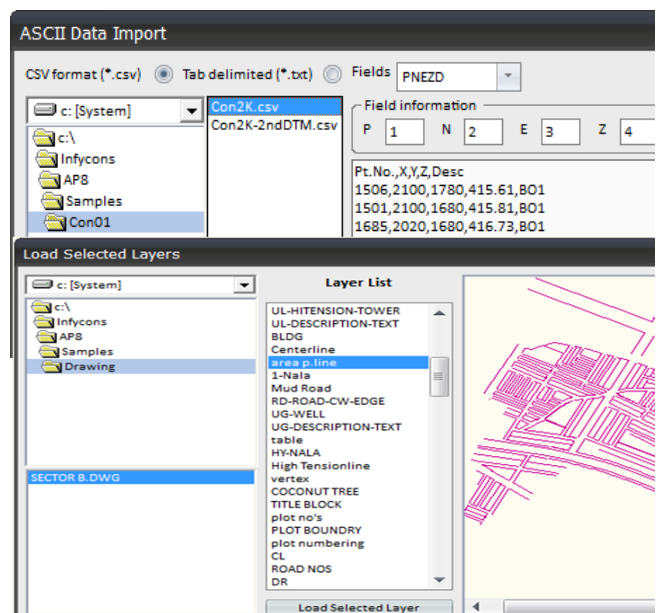
### Further enhancements in data Import

ASCII Import is now improved to have preview option before import along with pre-configured & user defined fields.

New feature has been added to extract individual layer from a drawing (APD,DWG,DXF) instead of loading the complete drawing. This feature is particularly useful, if we want to segregate data and import only the drawing information required for AutoPlotter project, e.g. we have a drawing with contours, spot levels and other details.

We can use 'Load selected Layer' and now import spot level layer in project. With this, unnecessary layers are eliminated and the important ones are loaded and used.

Another new enhancement is done for shape file (SHP) import with option for previewing the shape file before importing. Preview shows the extent of shape file and the file can be preloaded to particular feature code



### Layer enhancement

AutoPlotter 8 now has an integrated layer screen for quicker and easier management of

current drawing's information. Changes in Layer properties take place instantly. Layer property also features the auto-hide button to save your drawing workspace. Some new tools are added for quick layer management. 'Make entity layer current' can be used to change the current layer by selecting an entity on screen.

lected entities based on referred entity. 'Change to current Layer' sets the current layer based on entity selection. 'Layer Off' lets you switch off layer based on entity selection. 'Turn all layers on' sets everything on. 'Layer Lock' lets you lock layer based on entity selection. 'Layer Unlock' sets everything unlocked. 'Layer merge' combines two layers based on source entity 's layer and target entity's layer.

Status	Name	On	Lock	Color	LineType	Lineweight	Print	Entity
✓	0	☹	🔒	□ 7	Continuous	Default	🖨	495
☹	Defpoints	☹	🔒	□ 7	Continuous	Default	🖨	0
☹	C-ANNO-TABL	☹	🔒	■ 1	Continuous	Default	🖨	0
☹	C-ANNO-TABL-PATT	☹	🔒	□ 7	Continuous	Default	🖨	0
☹	C-ANNO-TABL-TEXT	☹	🔒	■ 150	Continuous	Default	🖨	0
☹	C-ANNO-TABL-TITL	☹	🔒	■ 150	Continuous	Default	🖨	0
☹	C-ANNO-TABL-TTBL	☹	🔒	■ 5	Continuous	Default	🖨	0
☹	C-PROP-BRNG	☹	🔒	■ 92	Continuous	Default	🖨	0
☹	C-PROP-TEXT	☹	🔒	■ 92	Continuous	Default	🖨	0
☹	C-PROP-LINE	☹	🔒	■ 230	Continuous	Default	🖨	0

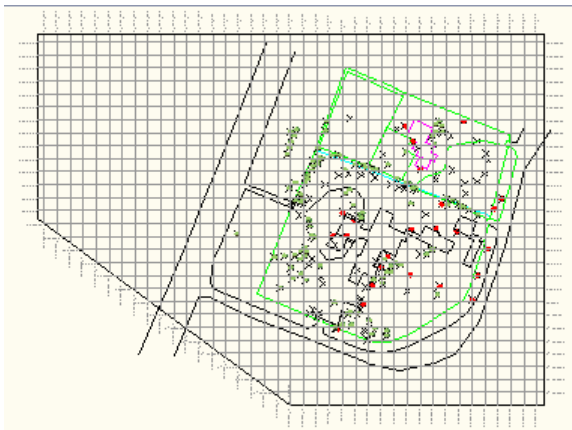
drawing. Layer screen is updated at real time to display

'Layer Match' quickly sets same layer properties for se-

### Grid creation

Grid creation for display is now enhanced to support grid crea-

tion based on closed boundary selection as well as by specify-



ing corners. Grid can be aligned. Option is available to mark X & Y automatically for the grid along any axis. Grid automatically trims at boundary edges. X & Y marker can be displayed along with prefix when grid is aligned horizontally.

**“Grid automatically trims at boundary edges. X & Y marker can be displayed along with prefix”**

### New Edit options

In AutoPlotter 8, based on earlier requests, some edit options have been added and some have been enhanced.

'Edit Polyline' now has insert above and insert below option to insert an additional node. Z can be locked during drag operation to avoid modification. Auto-pan of current vertex has been enhanced to consider current view.

'Extended trim' has been

added to quickly trim multiple entities based on cutting edge and side selection.

Chamfer and Fillet has been added which can be applied to different entities or a single Polyline entity.

Convert Line to Polyline converts line entity to polyline entity.

Divide PL divides a line or a polyline into multiple segments which can be stored as

new polyline or points. If DTM information is available, then Z is automatically calculated for the new vertices.

Edit Attribute values displays all block insertion attribute for selected block which can be easily modified or copied. Auto pan option displays the current insertion as you browse through the table.

	X	Y	Z
1	-28.756	74.199	407.02
2	-66.725	89.18	405.73
3	-88.023	39.207	405.2
4	-90.61	35.074	404.78
5	-93.391	16.397	415.26
6	-89.208	11.3	415.28
7	-59.583	-1.528	415.35
8	-17.301	-18.259	415.41
9	-13.041	-16.097	415.46
10	-8.391	-10.405	415.23
11	4.855	-16.133	415.23
12	10.448	1.816	415.42
13	21.557	-2.194	415.41

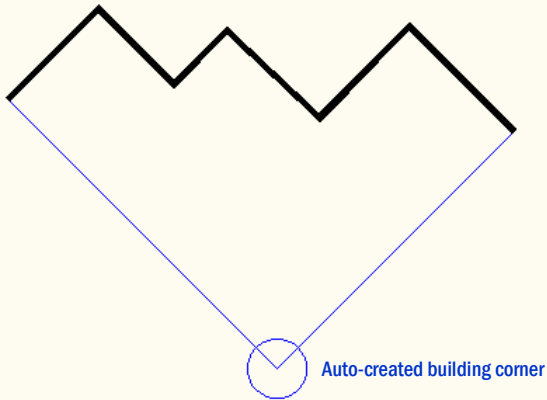
### Auto create-dimension & Building corner

You can now automatically dimension your entire drawing having lines, polylines and poly-

gons with a single click option of Auto-Dimension. Auto-dimension has option to specify whether you want to dimension all entities or only lines/polylines or polygons.

Another great feature is automatic creation of building corner. It is a common practice among surveyors involved in detail topographical or layout survey to observe only the major nodes for building of regular shape, e.g. If a rectangular building is being surveyed, only 3 points will be observed. Now, to create the final shape, the

fourth corner will be added manually during drafting process. With AutoPlotter 8's Automatic Building corner creation feature, the manual task is eliminated, as AutoPlotter can now create the 4th point automatically and close the rectangle to create the building. This functionality is not limited to a rectangular building, but also applied to n number of nodes in the building.



### Drawing to data conversion options

Specific enhancement was carried out in conversion or a drawing to extract survey data information. Now there are three options available to extract survey information from existing drawing.

'Convert Drawing to Data' option converts the entire drawing based on the entities and automatically creates Point Code for Lines/Polylines, Poly-

gons and Points. This option is great when you have the data in these entities. Attributed blocks also get converted to survey points with this option.

■ 'Convert spot Levels to data' is useful when your spot levels (Z) has been written as a text. XYZ information is extracted from text and 3D point is added. This option also works with attributed block with nu-

meric spot level attribute. This option also supports text having space delimited attribute.

■ 'Drawing entity to survey data' lets you select individual entity and then converts it to survey data. This option is more useful during on-going drafting & conversion.

**"Drawing to data conversion option helps to quickly extract archive data and use the same for reference, set outs or analysis"**

### ■ Import & Export grid data to XLS

AutoPlotter 8 communicates directly with Excel sheet to create report style data output for grid data. This option is quite useful for when data is maintained in grid (e.g. stock piles) Once, you export your grid data, the row and column layout in Excel sheet follows coordinate structure giving you plan type view of your data. The report is also formatted to highlight existing locations where

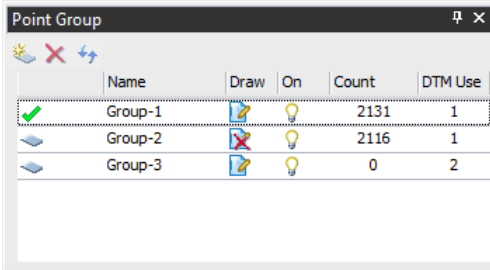
data is present. A read option is also available to read this kind of data back to AutoPlotter 8. This is usually required to update the information in AutoPlotter 8 after modification in Excel sheet.

**Point Groups**

AutoPlotter 8 now comes with a point group feature. With this you can easily manage your various data sets. There are various scenarios where separate point group is useful. E.g. if a site uses multiple instruments, data acquired from individual instrument can be maintained and processed separately helping for quick identification and output creation.

survey data is collected at various stages of land/site development during different time, separate point groups can be used. E.g. a survey is carried for a open cast mine before cutting, and then subsequently after 1st bench cutting and so on, separate point groups can be used. Hide/show option available in point group can be used as a toggle to display or hide the drawing entities for specific point group. This is useful for visualization when various point groups are available.

when we are using large volume of data as reference for some output such as DTM/contour or volume calculation. In such scenario, individual point creation and display is not necessary and will be burden to processing engine. So the point group can be set with *No Draw* option. Special tools are available for point groups to identify duplicate points and merge them. Existing point groups can also be merged, and new point group can be created by extracting points from existing group.



Point Group showing 3 point groups and properties

In another scenario, when the

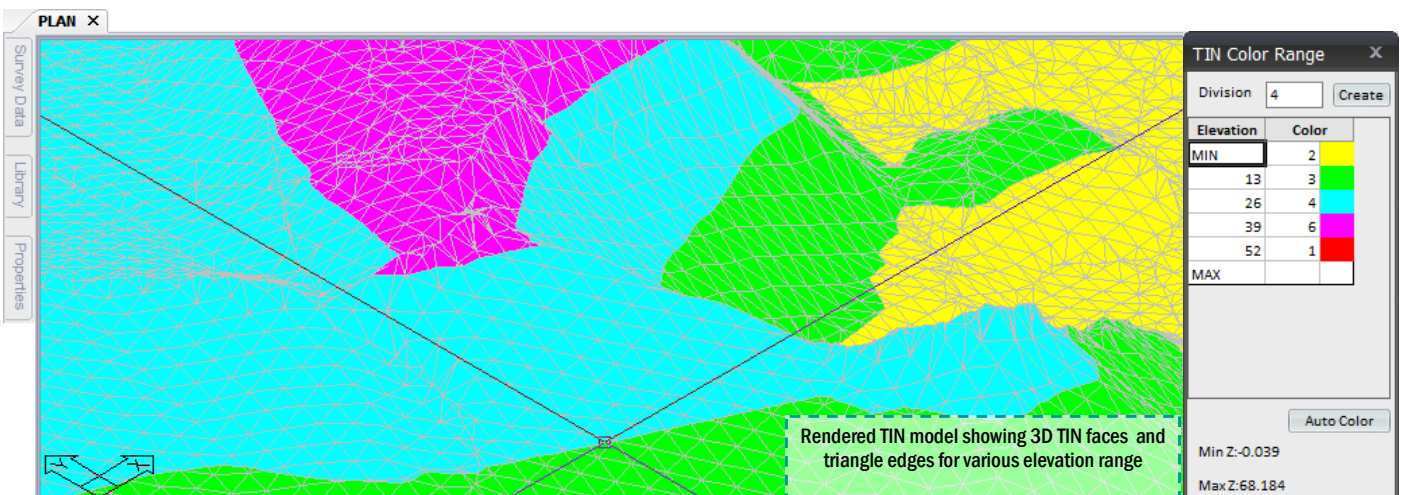
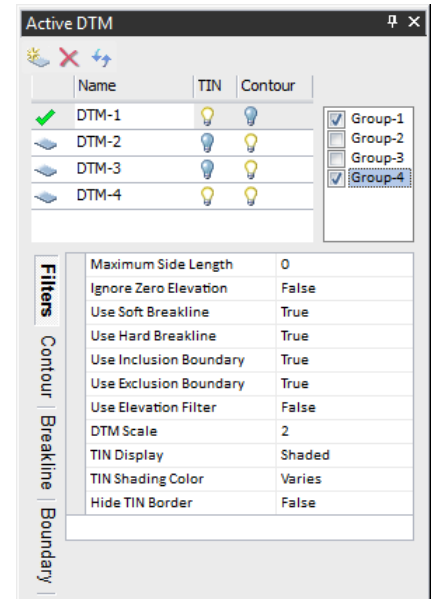
Draw/No Draw option is useful

**Enhanced DTM**

**“In the new DTM engine, updates to TIN model is instantaneous, so the changes you make in DTM is instantly reflected on 3D surface and contours”**

Autoplotter 8 features a fast and integrated DTM engine for instant creation of DTM TIN model and analyze for contours, volumes, sections etc. Updates to TIN model is instantaneous and DTMs are saved and loaded from memory enhancing speed of operation. The new DTM engine supports application of inclusion and exclusion boundaries, hard and soft break lines and various filters to create TIN model. DTM screen has been simplified to manage all your DTM based needs from a single

screen. DTM screen features a tab based interface with functional properties of DTM grouped together in individual tabs. Unlimited number of DTMs can be created based on various scenarios. DTM definition can be applied to multiple point groups. **Filters** tab has focus on various DTM properties such as usage of boundaries & break lines, display setting of TIN model, display scale of DTM etc. to control the TIN model generation.



Rendered TIN model showing 3D TIN faces and triangle edges for various elevation range

**Single click TIN model & Contour**

Autoplotter 8 focuses on simplifying the tedious operations and providing an easy user interface. Keeping this in mind, Autoplotter 8 now features a single click option for toggle of TIN and contour display. Contours intervals can be specified based on major & minor contour groups, or based on elevation range and even individually. New option for 'Minimum contour length' can be used to control display of spot contours. Contour smoothing and annotation display can also be controlled from **Contour** tab easily. In case, the DTM model changes, refreshing the DTM

model will automatically update the contour display saving considerable amount of operation and time. **Depth contours display** is added to show Cut & fill zones for contour. Depth contours can be generated based on reference DTM or datum level.

**Cut/Fill Contours**

**Cut/Fill Criteria**

From DTM	DTM-1
To DTM	Datum
Datum Level	44
Boundary	

**Contour Properties**

Contour Interval	1
Cut Contour Color	Green
Fill Contour Color	Red
Zero Contour Color	White
Layer Prefix	CON
Curve Type	Line

**Annotation Properties**

Annotate	Along Path
Annotation Txt Height	2
Distance Along Path	100

**Active DTM**

Name	TIN	Contour
DTM-1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DTM-2	<input type="checkbox"/>	<input type="checkbox"/>

**Filters**

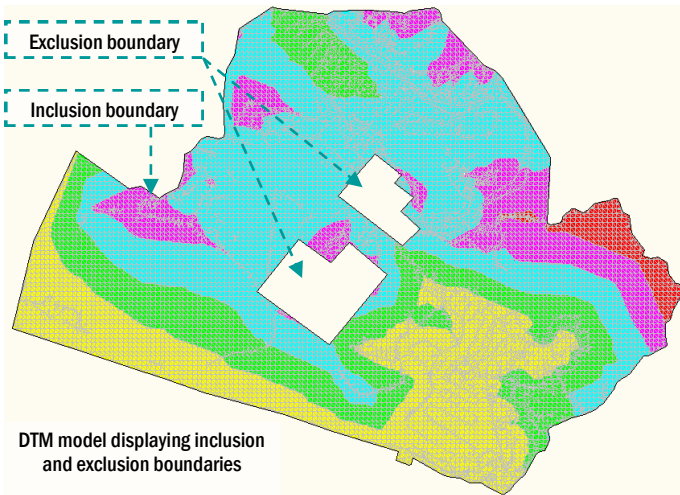
- Group-1
- Group-2
- Group-3

**Contour Properties**

Layer Type	In Single Layer
Layer Prefix	CON
Curve Type	Cubic B Spline
Erase Layer	True
Annotation Txt Height	2
Distance Along Path	0
Minimum Contour Length	0

Buttons: Define Contour Group, Define Contour Range, Define Individual Contour, Refresh Contour Display

**Annotations:** Cut & Fill contour for Depth Contour display, Active DTM showing contour tab and plan drawing with contours



**Boundaries & Break lines**

AutoPlotter 8 fully supports hard and soft break lines which helps in accurate creation of DTM model surface. Soft break line is useful to define existing features such as existing river edge, existing road CL & edge, etc. Hard break line is useful for proposed feature definition such as proposed River bank, proposed road CL & edges, Building ramp border

etc. Inclusion and exclusion boundary is also supported to demarcate the area for which DTM model will be created. For boundaries & break lines, some quick selection tools are available to speed up the process.

**Evaluate DTM**

You can evaluate and get the summary for the DTM definition using the **Inspect DTM** option. This is quite useful to know various properties related to the DTM. General informa-

tion pertaining to DTM properties such as, total number of triangles used, number of points used, number of break lines & boundaries used & number of contours are shown.

Other derived and calculated information are shown such as 2-D and 3-D area and minimum and maximum elevation.

**Inspect DTM**

DTM Name	TIN Count	Point Count	2D Area	Surface Area	Min Z	Max Z	Break lines		Boundary		Contour
							Soft	Hard	Include	Exclude	
DTM-1	31	246	144.6726937	156.5176421	83.175	108.656	1	1	1	1	127
DTM-2	482	246	3993.674421	4564.322462	82.9	108.381	0	0	0	0	257

**“DTM Inspection provides a quick tool to find out the Surface area and plan area along with other DTM related properties”**

**DTM based volume**

AutoPlotter 8 features DTM based volume calculation with a ready to print report. Calculation is based on the TIN model and volume can be calculated

the entire DTM surface or for an enclosed boundary. The report is generated instantly. Featured option is display of Cut & Fill zone. Once this op-

tion is enabled, the cut and fill zone is marked on plan. This option is extremely useful for land development activities.

DTM based Volume

DTM From DTM-1 To Datum 26.5

**VOLUME BY DTM**

DTM From: DTM-1  
Datum: 26.5  
Total Triangles: 27630  
Boundary specified: NO  
Total Cut Volume: 1140176.952  
Total Fill Volume: 1212968.741  
Total Area under Cut: 116596.809  
Total Area under Fill: 95395.809  
Total Inclusion Area: 211992.618

Average Cut Depth: 9.779  
Average Fill Depth: 12.715  
Cut to Fill Ratio: 94.0%  
Import Volume: 72791.789  
Elevation change to reach balance: 0.343  
Volume change for 0.1 Unit: 21199.262

Volume report by DTM showing various details



**Section based volume**

Section based volume calculation is now enhanced to provide a summary report for volume calculation.

New AutoPlotter 8 interface can show all the views simultaneously helping in easy analysis. Cross section view displays

the area report & cross section together. Similarly, Profile viewer displays the profile and volume report together.

All the reports can be saved to XLS. Also, all cross section & profile drawing can be saved to other drawing formats.

PLAN X

Section based DTM Volume

DTM From DTM-1 To Datum 26 Section Interval 10

Extra Chainage

**VOLUME BY DTM SECTIONS**

DTM From: DTM-1  
Datum: 26.0  
Total Sections: 222  
Boundary Nodes: 156  
Total Cut Volume: 1401053.215  
Total Fill Volume: 1167796.378  
Cut to Fill Ratio: 119.97%  
Export Volume: 233256.837  
Volume change for 0.1 Unit: 22489.158

Summary report for volume based on section method

Cross Section Viewer

Chainage 50.0 Y-Scale 1 Datum 26.0 THt 1 Y-Interval .5

Cross Section

Section CH.50.0

Cross section for CH: 50

Area Report

CH	50							
Offset	FINAL	Datum	DIST	DIFF	AVG.DIFF	CUT	FILL	
52.148	16.815	26.0	0.0	-9.185				
53.695	17.196	26.0	1.547	-8.804	-8.994		13.915	
53.909	17.238	26.0	0.214	-8.762				
55.408	17.615	26.0	1.498	-8.385				
57.309	18.095	26.0	1.901	-7.905	-8.145		15.486	

Area report for CH: 50

Center Line

Boundary

Profile Viewer

Offset 0.0 Y-Scale 10 Datum 26.0 THt 1.5 Y-Interval 2

Profile Data Profile

Section FINAL

From Line To Line

CH	RL
35.739	11.023
40.0	12.754
44.923	14.753
50.0	16.815
60.0	19.86
70.0	26.778
71.135	25.355
80.0	30.819
90.0	32.78
100.0	37.045
44.923	4.923
50.0	5.077
60.0	10.0
70.0	10.0
71.135	1.135
80.0	8.865

Profile Display

Volume Report

Chainage	Distance	Cut Area	Fill Area	Cut Volume	Fill Volume
35.739	0.0	0.0	0.0		
40.0	4.261	0.0	742.691	0.0	1582.27
44.923	4.923	0.0	1610.941	0.0	5793.00
50.0	5.077	0.0	1666.953	0.0	8321.58
60.0	10.0	0.0	1880.025	0.0	17734.88
70.0	10.0	113.37	2335.907	517.851	21079.66
71.135	1.135				2695.51
80.0	8.865	443.281	2246.223	2657.52	20652.30

Volume report for entire stretch

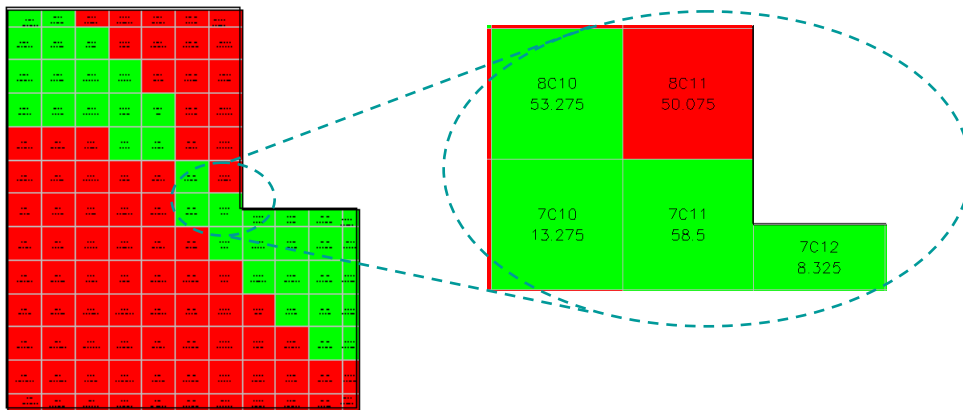
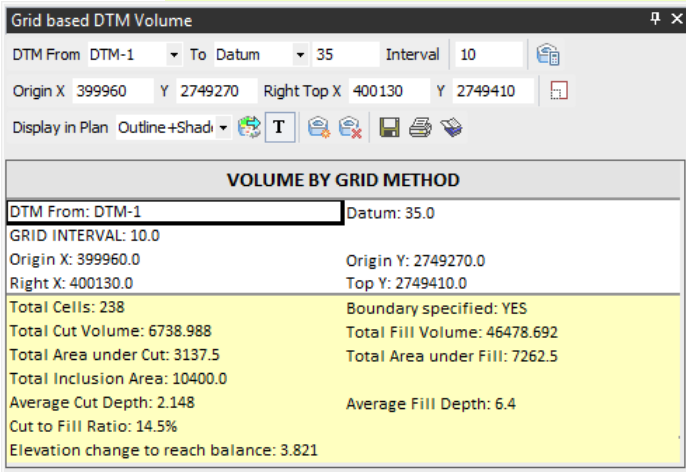
**Grid based volume**

Grid based volume calculation is particularly useful for stock taking purpose. AutoPlotter 8 extends the features of grid

based volume calculation by providing support for enclosed boundary. With this feature, volume can be generated using grid method between two DTMs or between a DTM and datum, even for an irregular shaped boundary. Grid cells automatically trims at boundaries to resultant cell volume is calculated. You can also use grid based volume in the traditional approach without specifying boundary, where the cells are based on the rectangular bounds provided.

Grid based volume provides visualization option for cut fill zone similar to DTM based volume. Individual cells can be marked with border or shade and the cell volume can be displayed on plan which is particularly useful for site drawing reference.

A detailed report can be generated with a single click detailing the calculation for individual cells with height differences and area marked. This report can be saved for reference.



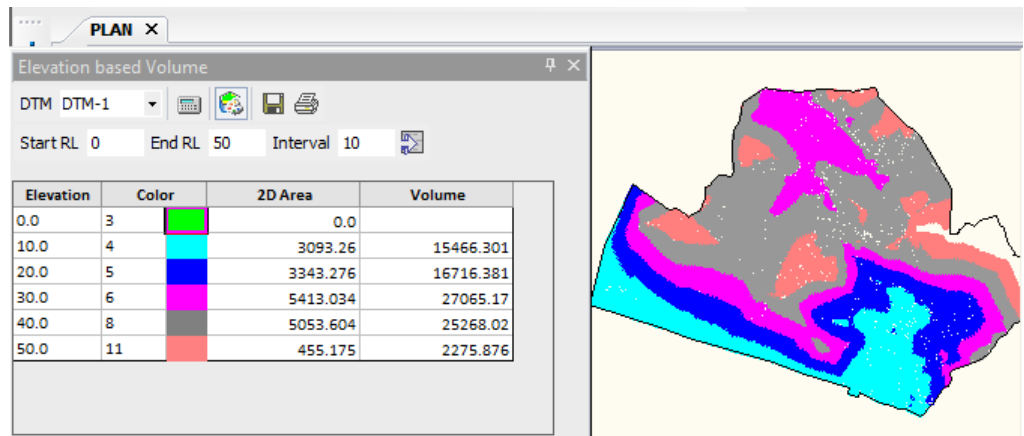
**“Grid based volume now takes boundary into account and the cells are automatically trimmed at boundaries to provide individual volume”**

**Elevation based volume**

Elevation range based volume calculation is a new feature of AutoPlotter 8. Elevation based volume is particularly useful to find volume based on contour levels and used for dam/bank contour volume calculation, catchment volume calculation, reservoir volume calculation and so on.

AutoPlotter 8 provides a quick option of specifying elevation range and different range can be shaded differently for visualization. Report is generated

instantly with area and volume statement for individual elevation range. Shaded model can be displayed for the range.



## Infycons

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## Infycons

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Infycons is a dedicated group of engineers and software professionals. We develop and market quality software products for the engineering field and provide state of the art solutions in the field of GIS, engineering and graphical applications. Our software is used not only for conventional tasks, but also in highly specialized fields. Regardless of the scale of work, we have consistently set the standard for integrating reliability and ease of use. Behind this reputation lies a comprehensive approach to product design, development and implementation. The culture at Infycons' is research oriented and driven by industry needs.

### Infycons story

Infycons was established in 1997 in Surat, Gujarat, India by two entrepreneurs on a shoe string budget. From the very beginning, the direction at Infycons was focused on providing easy to use and affordable solution to civil engineering industry. This approach was highly appreciated by the industry and the company have since then expanded to other parts of the country having head office at Bangalore, India. To provide quick access to support and solutions, company has established associate network all over

India, SAARC countries and Middle-East Asia. All the products from Infycons are directly supported with a dedicated support team. Infycons now provided turnkey solutions to major survey instrument manufacturer 'Topcon Sokkia' to enhance their solution capabilities and some of the custom products are marketed by 'Topcon Sokkia' in the entire Asia-Oceania region. Infycons is also involved in providing consulting services for major highway projects, and irrigation projects.

The company's growth has been remarkable, with an annual growth rate of over 60% for the last 5 years. The company's flagship product AutoPlotter is a huge success in the infrastructure industry and has more than 5000 installations in India. Other products and modules such as Road Estimator, CanSE, Mine, LIS etc. have added vertical functionality to specific industries and are accepted widely by the industry.