TerraSurvey

for MicroStation Se/ J / V8 ®
Microsoft Windows 98/NT/2000/XP ®

– All you need to create 3D-survey drawings

TerraSurvey is the Bridge between Field Survey and Design

TerraSurvey is a survey drawing application built on top of MicroStation SE, J and V8. TerraSurvey reads-in survey data as text file and creates a survey drawing as 3D design file. It recognizes automatically a number of survey data formats. By defining your own file format you can read in practically any files, which are based on coordinate or angle fields.

Terrasurvey suits well for processing data from totalstations. It is also very useful, if you control the quality of TIN of ground laser points and the location of images captured during airborne laser mapping project. TerraSurvey let you give a feature code to objects like power lines, which you have detected by TerraScan.

Full benefits from surveying data for mapping and modelling

Each survey point is assigned a feature code, which defines the surveyed object like a tree, a road center line, an elevation point or a manhole cover. The graphical display of each code is defined by one or several drawing rules.

When TerraSurvey is processing survey data it tries to find a matching feature code to each survey point. If a match is found, the TerraSurvey goes through all drawing rules assigned to that feature. The surveý map displays the XYZ location and topology of each survey point after valid drawing rules.

TerraSurvey forms a nice combination to TerraModeler for creating TINs automatic from surevey elements. Therefore each feature code may have also sub-code. For example a road line may have a number as a sub-codes and 'breakline'. When TerraModeler scans the mapping elements coded by TerraSurvey, it recognizes automatic the modelling information and decides whether to use the point for TIN as random point, soft or breakline or abandon the point completely as a modelling point. The number defines the type of the model, like ground, bedrock or any sub-soil layer.

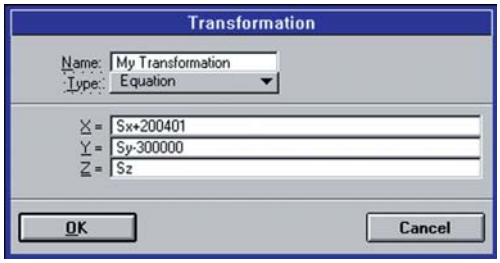
Terrasolid Oy

Email: info@terrasolid.fi www.terrasolid.com

Use built-in formats or make your own

TerraSurvey is able to read in survey data from various sources. Supported coordinate or angle based file formats include Geodimeter, Wild, Sokkisha, SDRmap, Moss genio and MTM.

The ability to create user defined file formats lets you read in practically any text files containing point or observation data organized into column fields. When reading in a file, the application recognizes the data format automatically so there is no need for conversions between file formats.



TerraSurvey transforms survey data from WGS84 directly to several local co-ordinate system. You can define your own planar transformations too.

TerraSurvey reads in also angle based survey files and computes adjusted Xyz coordinates for stations and surveyed points. You can control which reference observations to known points or to other stations will be used in the calculation. TerraSurvey solves automatically the station location if a sufficient number of reference observations are available.

Versatile tools for helping your working

Draw Point Table tool draws a tabular listing of survey points in the design file. It extracts survey point information from the survey elements and creates a table of points with selected feature codes.

List Survey tool creates a text file listing from the survey drawing. The output file format can be any of the built-in or the user-defined survey file formats. You can choose to output all the survey points or filter the points by the feature code.

List Elements tool creates the listing from the vertices of graphical elements filtered by level and element type.

View Data Sources tool allows viewing of survey elements by the data sources from which they have originated from. A survey drawing is often a combination of data from various sources which may differ by their accuracy, reliability or creation date. For example, you could see where an older survey data overlaps the more recent and reliable surveys.

Show Survey Info tool lets you view survey information of an element.

Set Scale tool sets a plotting scale and rescales a drawing. Plotting scale affects all survey text elements and those cells for which the size has been defined as fixed millimeter height on paper.

Hide Overlapping Texts tool finds overlapping text elements and hides the extra elements by moving them to a specified level.

Soften Element tool softens elements by adding new vertices around sharp corners. The survey elements appears smoother and more natural when creating visualization images.

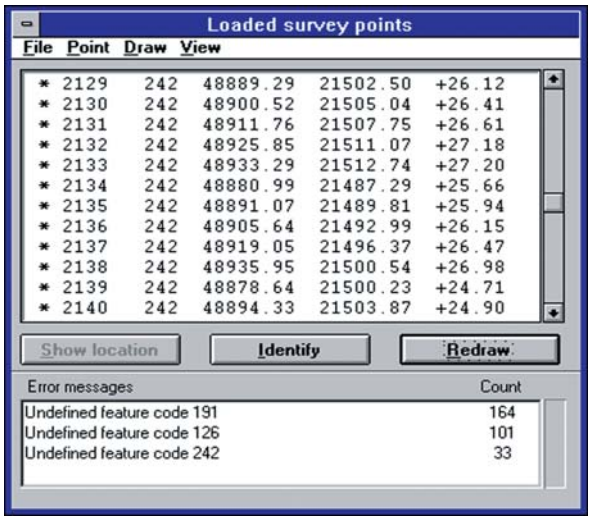
Fix errors and modify maps interactively

Whenever a survey file is loaded, the loaded points are first displayed in the *Loaded survey points* window. While this window is open, the survey drawing is visible as temporary elements. You can redraw them whenever you have modified the survey data.

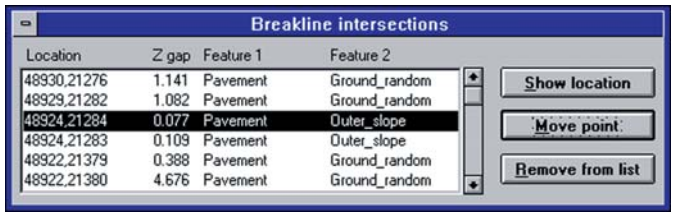
There are several methods for validating and fixing survey data before generating a final survey drawing. Problems can be fixed by doing any of the following:

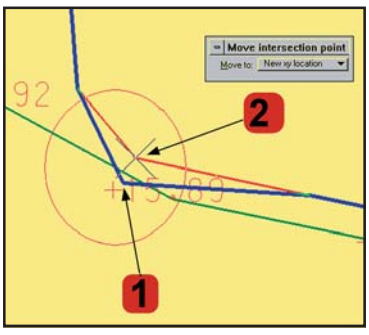
- Fill in missing information. For example, you can assign feature codes to uncoded survey points.
- Delete erroneous points.
- Modify survey point information such as coordinate values or dimension parameters.
- Create a new feature in the active feature list if you encounter a new feature code.
- Change the graphical presentation of a feature by modifying the drawing rules in the feature list.
- Attach another cell library if correct cells are not found.
- Find and fix intersecting breaklines.

When closing the windowthe applications asks you whether or not you will save the survey drawing permanently as a design file.



The upper list box displays all the survey points extracted from a survey data file. The lower list box shows all the encountered errors when reading in the survey points.





Find Intersecting Breaklines tool allows viewing of the locations where survey drawing elements would cause intersecting breaklines in a surface model (1). There are four methods to fix the errors by moving a survey point into a new location (2).