

TachyCAD 8 – What's new?

The new TachyCAD 8.0 contains numerous innovations and improvements. The most important of these are explained in the following pages.

Here is a brief overview on the important innovations:

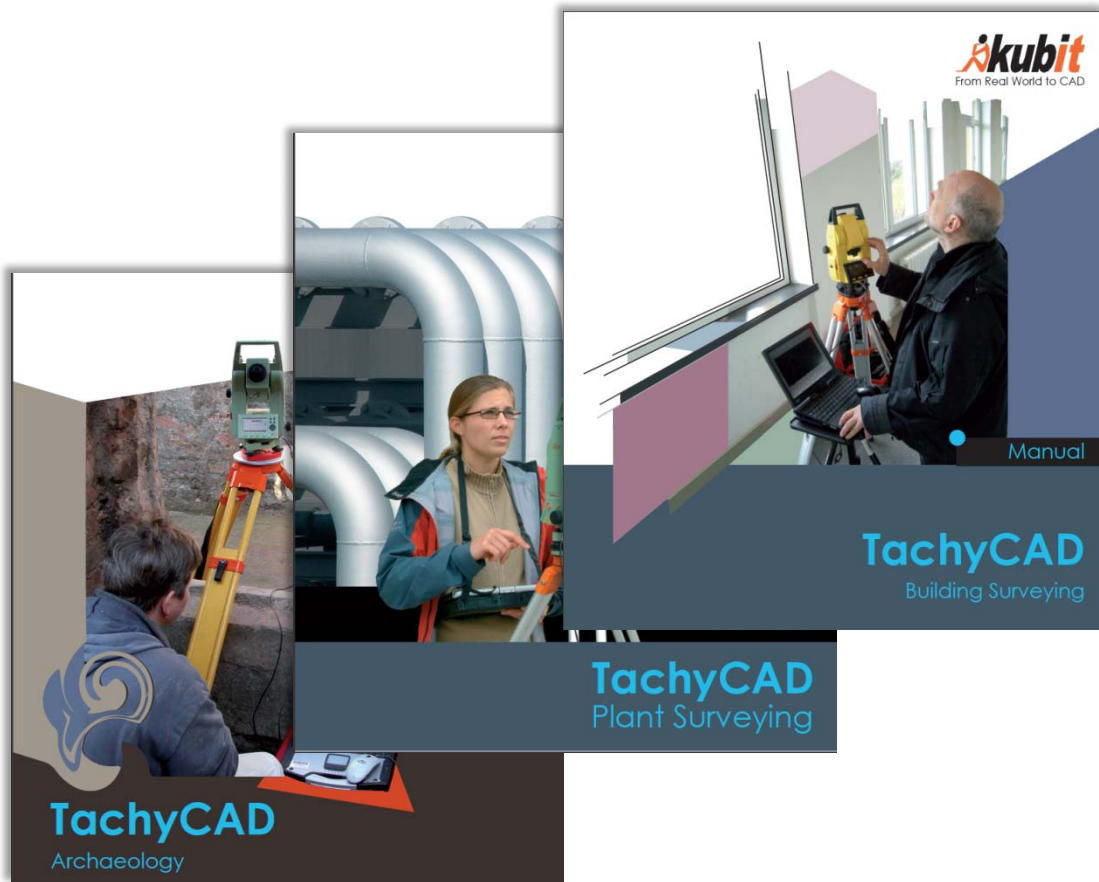
- Restructuring of the software: branch solutions instead of extension modules
- Compatibility to AutoCAD 2011 and AutoCAD LT 2011
- Coordinate frame tool for plot preparation
- The "Stakeout" command has been included into every branch version and is now, thanks to a new option, usable in many different ways
- Archaeology: feature management with more flexibility
- Building measurement: new measurement commands for staircases, niches, (ceiling) grid as well as highly extended functionality for the manual measurement.
- Plant survey: more options when measuring pipelines, compatibility with the laser scanner software PointCloud.
- GPS connection with more measurement options
- Many more detailed improvements

The new developments in detail

Restructuring of the software: The new branch solutions

Previous to version 8, TachyCAD has been a basic program which could be extended through branch specific settings, templates and functions. Since the branches have become more and more differentiated, kubit has decided to offer TachyCAD as independent branch solutions. The advantage is that we are able to match the concrete demands of the individual branches even better. You will notice this in the menu structure and the provided manual – every branch has its own manual.

The following branch solutions are available:

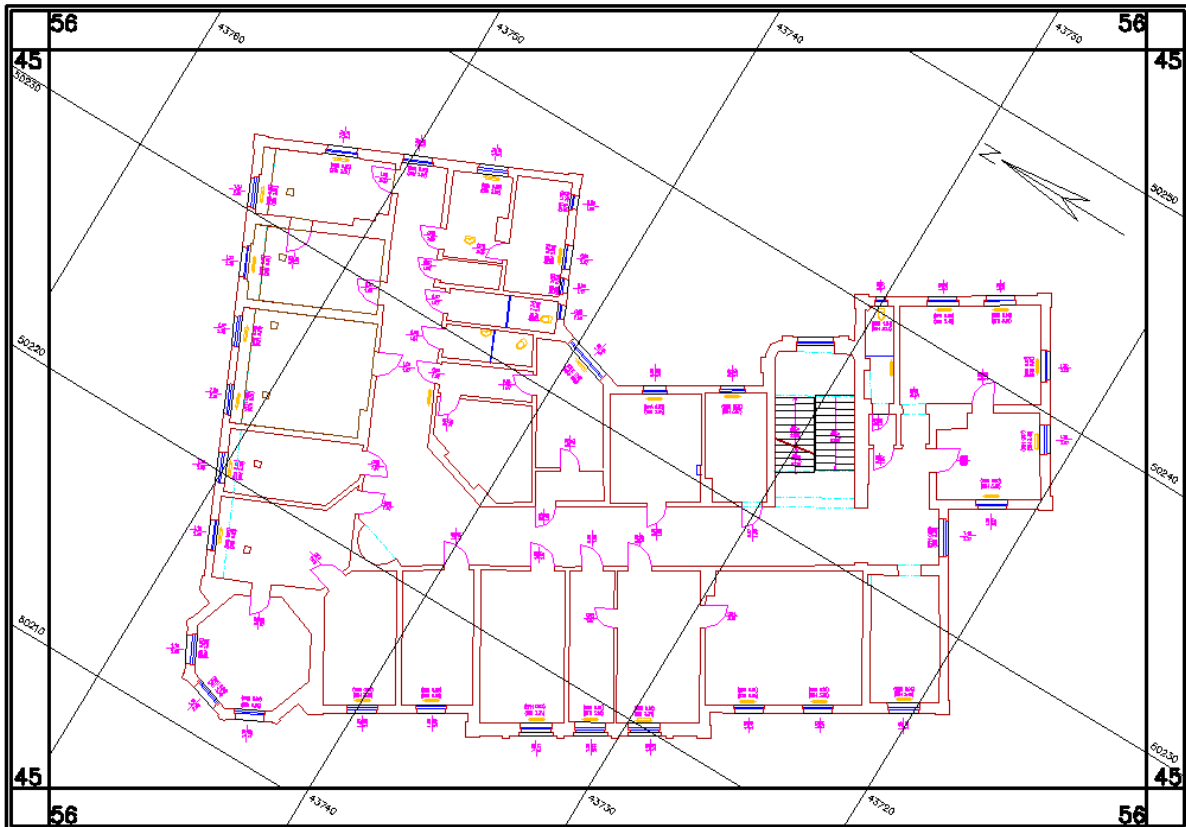


Compatibility to AutoCAD 2011 and AutoCAD LT 2011

The current version is compatible to all 32-bit and 64-bit variants of the Microsoft operating systems Windows 7, Vista and XP. TachyCAD is working with AutoCAD or AutoCAD LT and all AutoCAD based verticals such as AutoCAD Architecture or AutoCAD Civil 3D 2011. If TachyCAD is to be used with older versions of AutoCAD we will provide a former version of TachyCAD.

Insert coordinate frame

With this command you may draw a perpendicular frame with coordinate dimensioning around any perpendicular drawing area. The appearance of the frame, as well as the display of the coordinates is flexible and can be adapted to your own needs. You may, for example, define the font and size, decimal places and coordinate intervals yourself. Optionally a coordinate grid or planes can be inserted within the framed area. You may generate the frame within the model or the layout area.



Always included and even more flexible – the Stakeout command

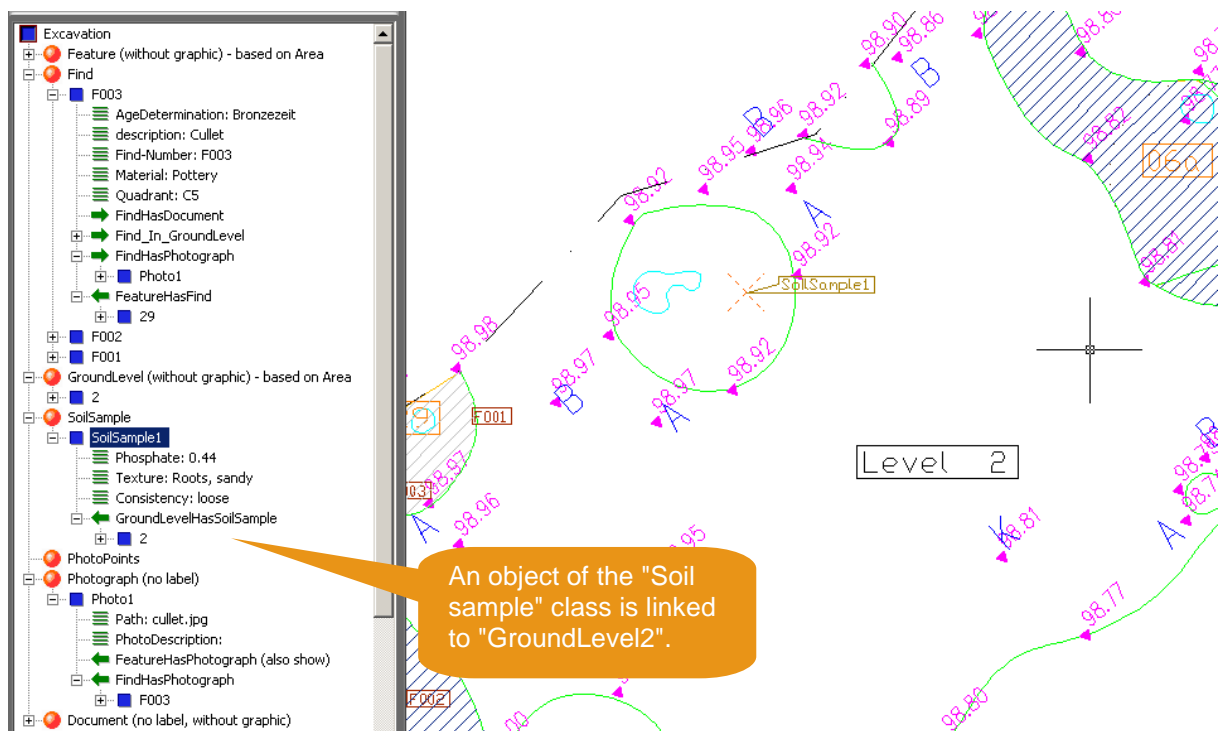
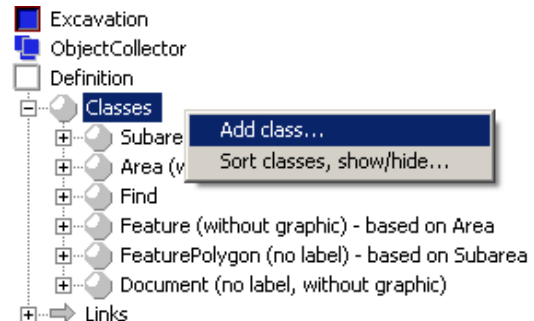
The "Stakeout" command is now included in every branch solution. With it you can transfer a point from the drawing to the site. Newly planned constructions from the CAD drawing can be brought "back to reality". The command has been changed, so that the point coordinates to be transferred can now be displayed within the UCS as well (not limited to WCS). This is important for staking out on façades or sloped planes.

Archaeology: unlimited features for data management

The TachyCAD feature "data management" now has full flexibility for customizing a data structure. Previously the data classes were limited to "Find" and "Feature", while additional classes were not permitted. The data structure may now be adapted freely to the specific project.

You may, for example, create additional classes for ground levels, layers, soil samples, etc. and these may then be linked. You may also divide finds into different classes such as "wood find", "ceramic find", "bone finds"... The functional range of the Tachy-

CAD feature "data management" matches the kubit mapping software capabilities of MonuMap completely.

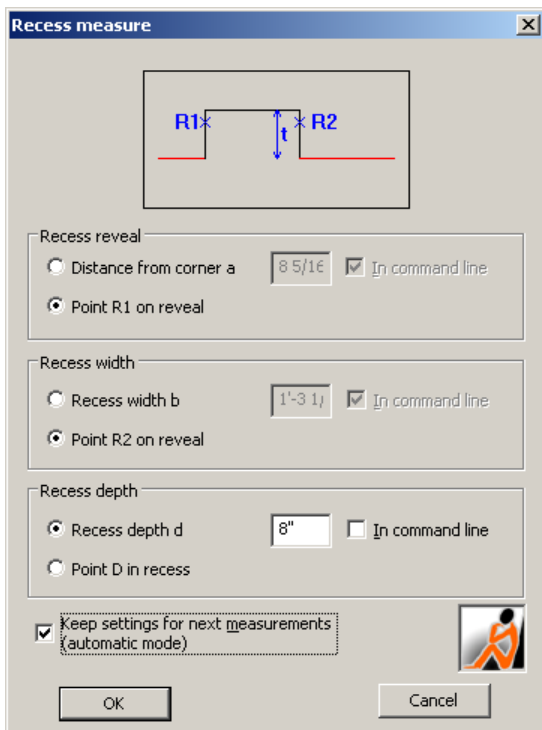
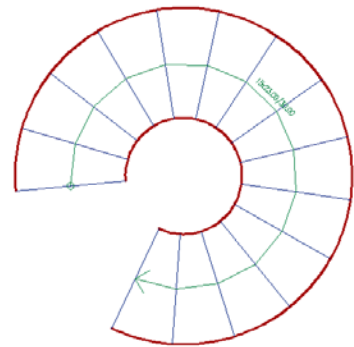
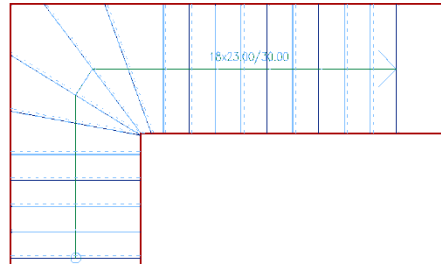


Building measurement: New measurement commands for tachymeter and laser distance meter

A long time customer request has now been realized: direct **measurement of staircase** ground plans. Different measurement methods are supported in order to enable the work with tachymeter and laser distance meter:

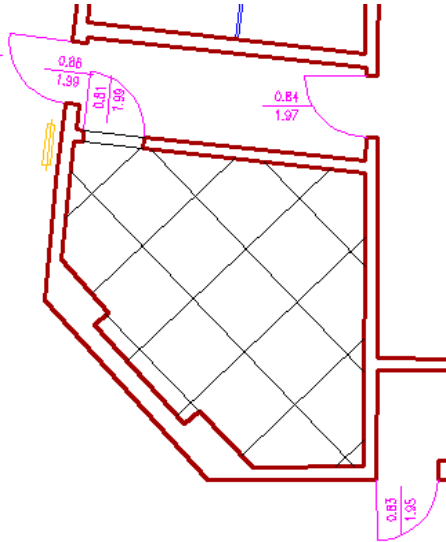
Tachymetric measurements of every single step, (tachymetric) measurements of the first and the last step with statement of the number of steps, measurement of the first step and statement of number etc..

TachyCAD calculates and draws the steps within stated boundary lines and optionally adds dimensioning. The geometry will automatically be generated on stated and configurable layers.



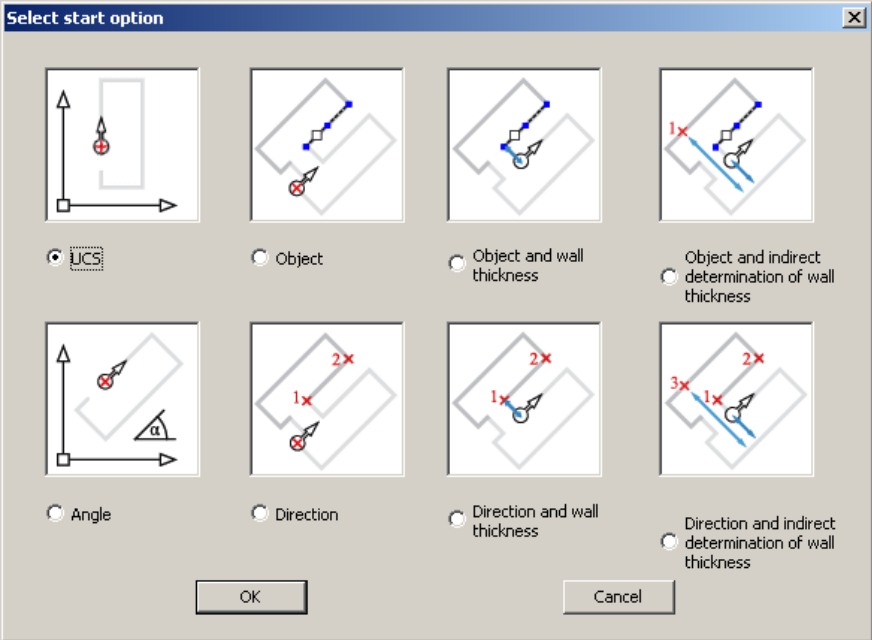
Another new command enables the fast **measurement of perpendicular niches** into an existing wall structure. Here you can also choose how to measure the niche: Either with three measurement points (tachymeter) or with three segments (laser distance meter or folding rule) or any combination of either measurement method. The automatic mode allows a fast measurement of several similar niches.

The command for **measuring a grid** or reflected ceiling plan is also new. TachyCAD draws a perpendicular grid with configurable grid widths within a closed outline. The direction and the starting point of the grid are defined via tachymeter or segment measurement.

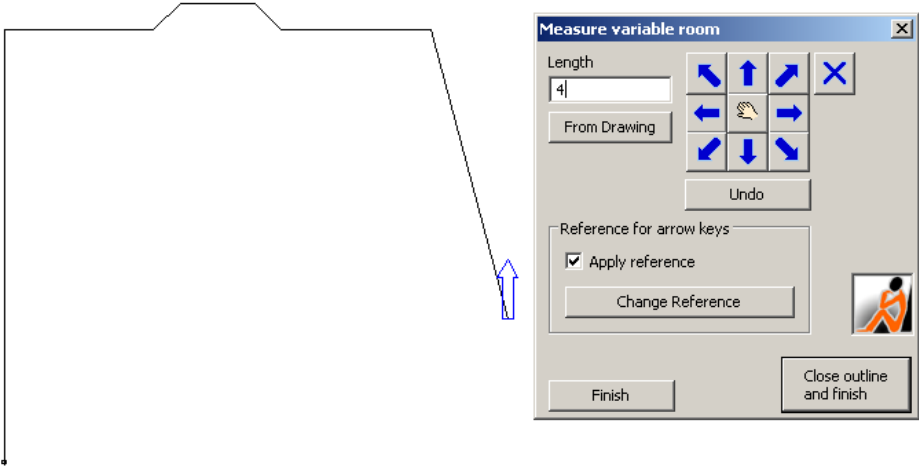


Building measurement: measuring rooms with a laser distance meter

The command for measuring perpendicular rooms with (Bluetooth) laser distance meter has been revised and extended with new options for the alignment of the room to existing geometry. This way it is possible to not only align the room to be measured at existing walls and wall thickness but also indirectly by difference segment measurement. This is an important option in case the wall thickness cannot be measured or can only be measured inaccurately.



A new command for **measuring rooms of any shape** by laser distance meter completes the command lineup. Here you will also use the arrow keys of the Leica Disto distance meter in order to determine the direction of the wall. If a wall does not fit the 45°/90° scheme it will be aligned via the measurement of an additional body diagonal. This entire tool has been designed ergonomically, so there are only a few entries at the computer necessary between the Disto measurements.

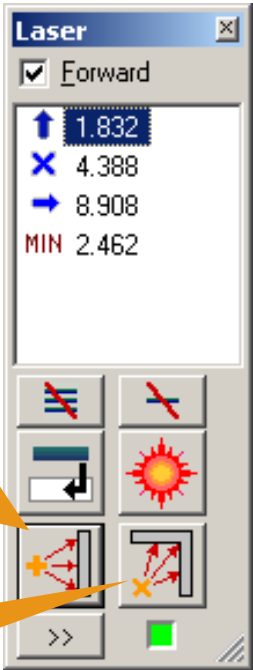


Extended measurement options for the laser distance meter interface

To start a minimum or maximum measurement directly from the computer is now possible. This is an essential function for customers who mount the laser distance meter on a connection rod for ceiling measurements. The minimum function is useful if, for example, a segment is to be measured vertically onto a wall. The maximum function helps with the measurement of body diagonals and solves the problem of having to aim exactly into a corner of the room.

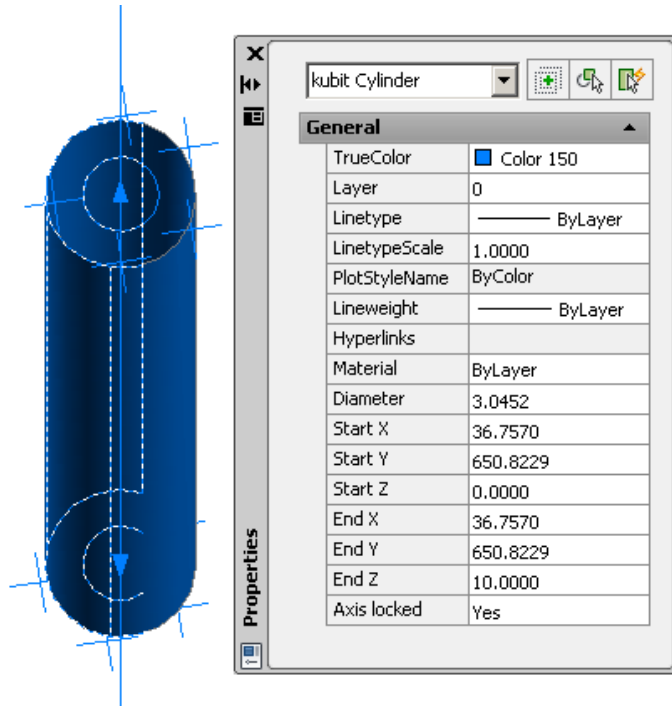
Start and stop of the Disto measurement and determination of the minimal distance...

... or the maximum distance.

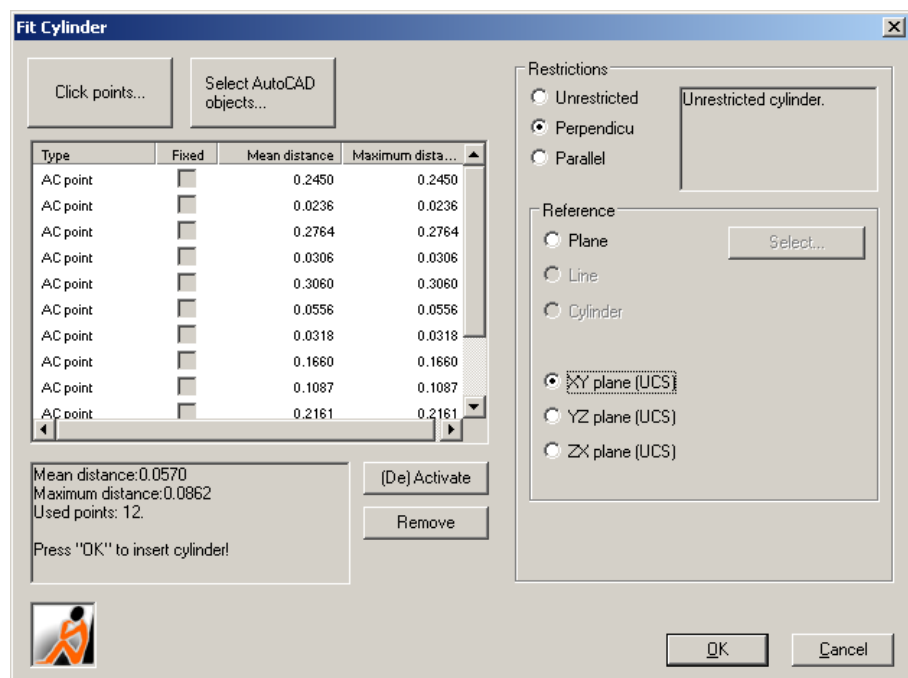


Plant survey: pipes are now called cylinders

The TachyCAD pipe objects have been changed fundamentally. They are now called "**kubit Cylinder**" and are more flexible than the old pipes. You may query and change the diameter, start and end point via the AutoCAD characteristics window. With the "Axis locked" property you are able to lock an axis so its position can not be changed afterward. The kubit cylinders of TachyCAD are compatible to those of the point cloud evaluation software PointCloud, therefore both products may be combined.



A new command "**Fit Cylinder**" enables you, to generate a cylinder automatically with the help of any number of points or with other AutoCAD graphics. Additionally you may state conditions such as "perpendicular to a UCS axis" or "perpendicular to a kubit plane".



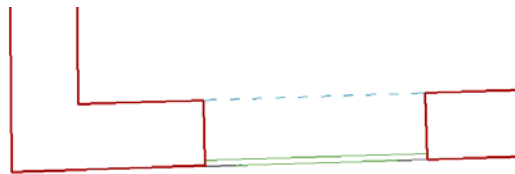
TachyCAD GPS-connection

Since version 7 TachyCAD supports the direct transfer of coordinates which were measured with Realtime-kinematic GPS.

The current version now offers even more options regarding the transfer of the measurement values. You may, for example, take the mean of the measurement values for a certain time or you may start a measurement automatically with the help of certain criteria.

Detail improvements

- **Measuring windows:** The window frame may now be flush with the wall. Previously, in such a case TachyCAD sent an error message.



- Now the **observation point block** can be configured: You may state an individual block within the TachyCAD setting dialog under "Blocks – BlocknameObservationPoint". Previously the block name was preset for the user.

The tachymeter series **Nikon Nivo M**, **Spectra Precision Focus 6** and **Topcon IS** have successfully been tested with TachyCAD. The necessary settings for these devices are explained within the user manual.

