



Land Surveying Software Since 1987

Traverse PC

TPC Desktop 2011

When it comes to keeping track of grid distance vs. ground distance vs. geodetic (ellipsoid) distance or grid bearing vs. true bearing vs. magnetic bearing, the door is always open for *gotchas*. There's just so much to keep an eye on, like imported field data, coordinate reference systems, datums, projections, scale factors, project elevations and the list goes on. That's what we call the *scary of geodetics, grid and ground survey data*.

TPC Desktop 2011 tackles the *scary* head on with our new **Distance** and **Direction** types. Whether you're starting a new survey, entering traverse data, doing COGO or drawing a plat, TPC Desktop 2011 says, just pick the Distance and Direction types you want and we'll do the rest.

And since we're adding geodetics, why not add the tools for cadastral surveys on the PLSS (Public Land Survey System)? In TPC Desktop 2011 you'll find tools for Single and Double Proportions, Grant and Irregular Boundary Adjustments, Random Line Offsets and lots more.

Distance Types

Personal, Premium, Professional

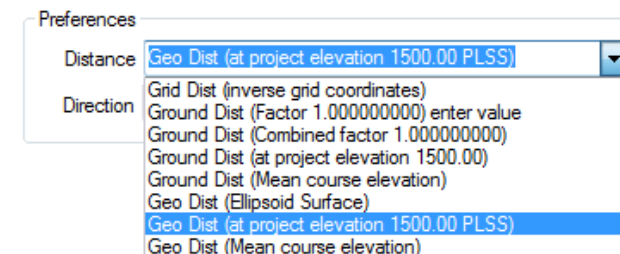
TPC can work with both Coordinate distances which are derived from Cartesian coordinates (Northings / Eastings) and Geodetic distances which are derived from geodetic positions (Latitude / Longitude).

When you are doing a typical boundary or topo survey, you are using coordinate distances. When you work with large tracks of land, you can switch to geodetic distances. Even the Personal edition of TPC Desktop 2011 now knows how to relate grid and ground distance. You can use a combined project factor, a project elevation or enter a distance factor that matches another survey you are working with. Regardless of which Distance Type you choose, TPC keeps track of which distance you are using in traverses, COGO and drawings. That's right. Switching between

ground and grid distance on a drawing is as simple as selecting the Distance Type. It's that easy, and after all, it should be.

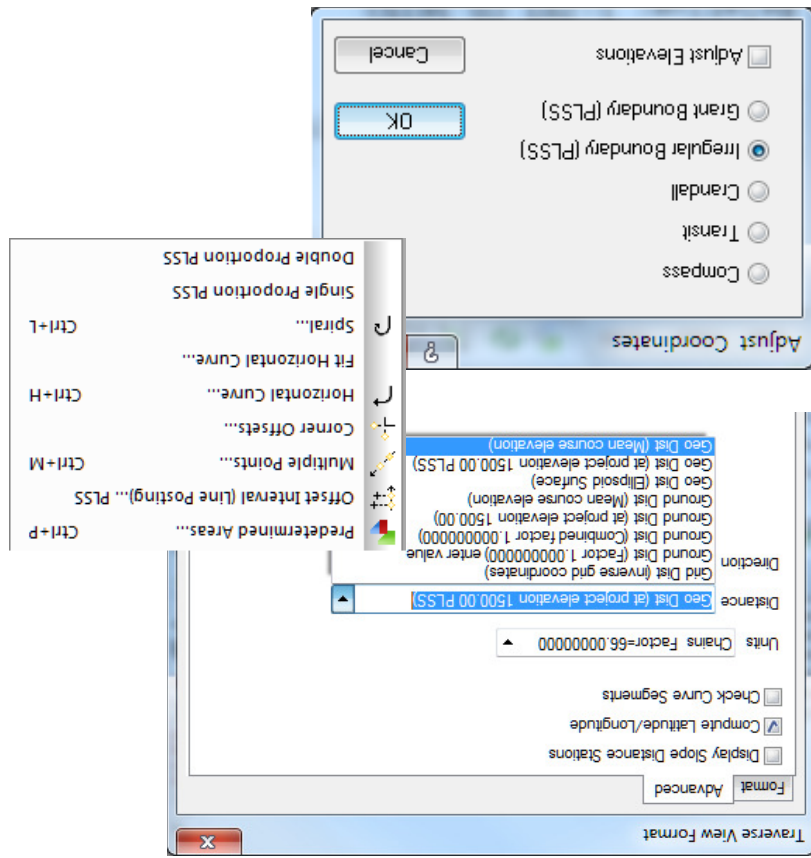
A survey can have one Coordinate Reference System (CRS) that relates its geodetic and rectangular coordinates. TPC computes coordinate distances by inverting between coordinates on the current CRS and applying the appropriate scale factor (conversion between the grid plane and ellipsoid surface) and elevation factor (conversion between the ellipsoid surface and the ground elevation). Since the CRS relates the coordinates of a point to its geodetic position, TPC can compute both a coordinate distance and a geodetic distance between any two points.

The options available depend on which edition you choose.



- ◆ Choose Coordinate or Geodetic Distances
- ◆ Choose Coordinate or Geodetic Directions
- ◆ Choose Distances and Directions for Drafting
- ◆ Choose Distances and Directions for COGO
- ◆ Geodetic Learning Guide and Videos
- ◆ Cadastral—PLSS Learning Guide and Videos
- ◆ Set Multiple Object Properties
- ◆ Expanded Point Table
- ◆ Lot Tables
- ◆ Alta/ACSM 2011 Standard
- ◆ Latest AutoCAD and MicroStation Drivers
- ◆ Improved Least Squares Network Adjustments
- ◆ Minimized COGO Dialogs
- ◆ Automatic Rotation, Translation and Scaling of Some Data Collector Imports
- ◆ More...

Features Vary by Edition
See Inside for Details



Traverse PC Desktop 2011 Makes Geodetic and Cadastral Surveys Easy!



P.O. Box 105
Florence, OR 97439
(800) 460-3002 Ext. 251
www.traverse-pc.com

TPC Desktop 2011 with Geodetics is Here!!!



(800) 460-3002 x251 sales@traverse-pc.com www.traverse-pc.com

- New in TPC 2011:**
- Latest AutoCAD & MicroStation Drivers
 - Geodetics
 - Public Land Survey System (PLSS)
 - Alta/ACSM 2011
 - Lot Tables
 - Distance Types
 - Direction Types
 - Set Object Properties
 - Minimized COGO Dialogs
 - Expanded Point Table
 - Plot Grid, Ground or Geodetic
 - Least Squares Network enhancements
 - More...

- Surveys:**
- Boundary
 - Mortgage
 - ALTA
 - Site
 - Topographic
 - Construction
 - Cadastral
 - Geodetic
 - Control
 - Subdivision
 - Metes And Bounds

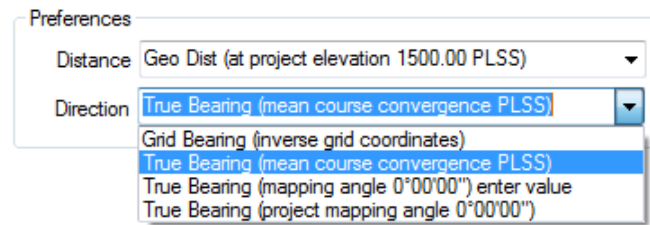
- Requirements:**
- Windows 7, Vista, XP
 - CD-ROM
 - 60 MB hard disk space w/Samples
 - 1 GB Ram

- Output Devices:**
- Any printer or plotter with a Windows driver

Direction Types

Personal, Premium, Professional

Even if you continue to work only in grid direction (vs. geodetic), TPC Desktop 2011 will make your life much easier with its new Coordinate Direction Types. TPC gives you 4 ways to equate grid direction to ground direction and keeps track of it all the way from data collection to final drafting. The options available depend on which edition you choose.



Mean Course Convergence

We're excited to offer True Bearings based on Mean Course Convergence. Whether you are doing a Direct or Inverse computation, TPC takes into account the direction at both ends of a course and means them for the computations. That means you can work seamlessly with the requirements of the PLSS or rest assured that you are extending an East-West line appropriately along a latitudinal arc. It's the rigorous solution you expect when you need true geodetic positions.

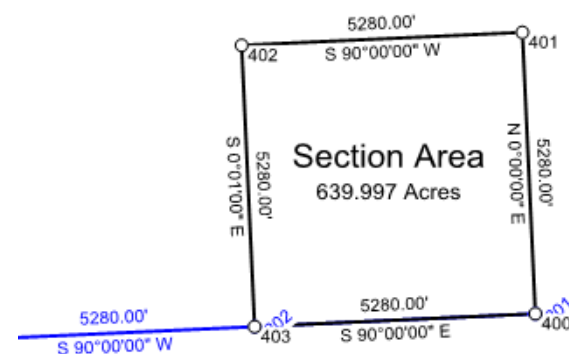
Distance / Direction Drafting

Personal, Premium, Professional

There are ways to force Cartesian coordinate based software like CAD to draw geodetic lines (they actually appear as arcs on a large scale drawing) but none of them are simple to use or understand. That all changes with TPC Desktop 2011 in the No CAD Zone.

TPC Desktop 2011 makes drawing geodetic lines as simple as selecting a Distance and Direction Type. You can use these same selections to enter your data, compute your COGO and to create your map. Just tell TPC what you want to draw and it does the rest.

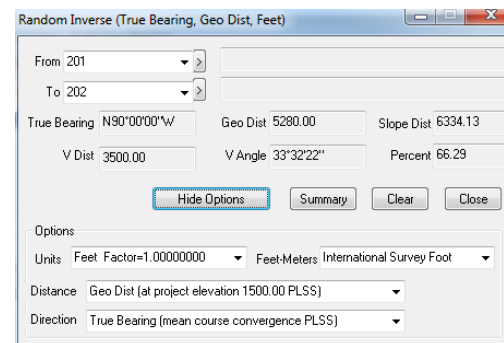
We've even included drawing variables you can put into your drawing that show the Distance and Direction Types being labeled.



Distance / Direction COGO

Personal, Premium, Professional

The COGO routines in TPC are completely aware of grid coordinates and geodetic positions. They know that the length of a geodesic is not the same as the length of a straight grid line or the ground distance between the same two points and that a latitudinal arc between them may have a different distance yet. All the COGO routines know the difference between a grid, ground and geodetic distance. The same holds true for grid and true bearings.



The Random Inverse dialog shown above displays the Distance and Direction Types in the title bar. You can also expand options to select a different Distance and/or Direction Type.

Geodetics

Premium, Professional

Geodetics are now as much a part of TPC as X,Y coordinates. TPC is as comfortable computing a 'geodesic' as it is computing a straight line on a coordinate grid. Best of all, TPC makes it obvious when you are doing one and not the other.

But the real beauty of using TPC Desktop 2011 for geodetic computations comes in how easy it is. Choose a Distance and Direction Type anywhere in the program and TPC takes care of it. Enter geodetic bearings and ground distance, compute a geodetic inverse with COGO and plot geodetic lines labeled with geodetic distance and direction. We're making it sound pretty simple and it is.

Easy to Learn

Geodetic Learning Guide

We've put together a Geodetic Learning Guide to walk you through some of the most common tasks involving geodetics.

Cadastral Learning Guide

We've put many of the common Cadastral—PLSS tasks into a separate Cadastral Learning Guide. We'll walk you step-by-step through Single and Double Proportions, Grant Boundary Adjustments and more.

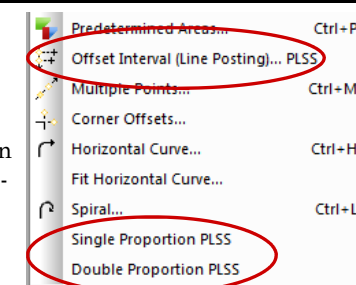
Geodetic and Cadastral Videos

Check out the new Geodetic and Cadastral videos on our website.

Cadastral—PLSS

Professional

The PLSS (Public Land Survey System) is unique in many aspects including its use of cardinal direction and ground distance. Computations in the PLSS are done per the 'Manual of Surveying Instructions'. The 2009 manual just came out and TPC Desktop 2011 follows it to the letter (including the corrections made after its release). As a result, you'll find new tools for Single Proportions, Double Proportions, Grant Boundaries, Irregular Boundaries, Areas and more.



We thought long and hard about how to make PLSS computations available to everyone who uses TPC Desktop. The method we settled on was to add a 'PLSS' notation to commands that use the PLSS methods. When you need to restore one or more lost corners with the Grant Boundary

Adjustment, go to the Closure View and Adjust Coordinates like you always do, but choose the 'Grant Boundary (PLSS)' option. You'll catch on right away.

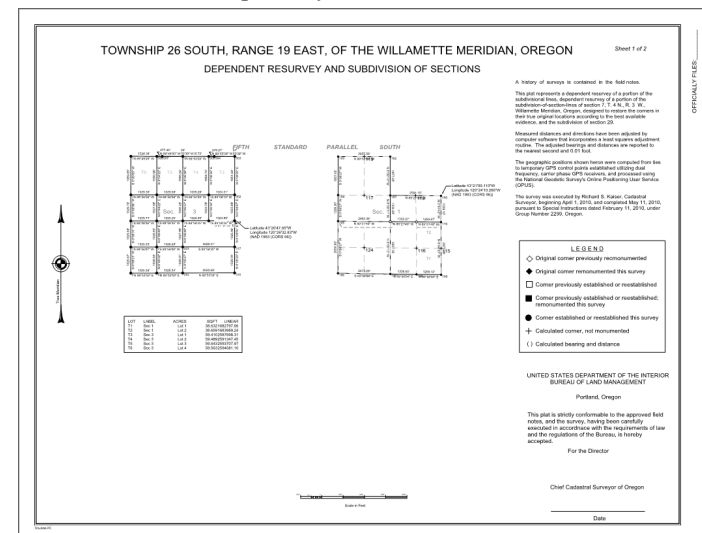
We've also shown typical PLSS routines in a set of videos on our website that will help you understand how to make the change from

Cartesian coordinates to the PLSS.

PLSS Drafting

When it comes to drafting a PLSS survey, TPC makes it simple with the Distance and Direction Types.

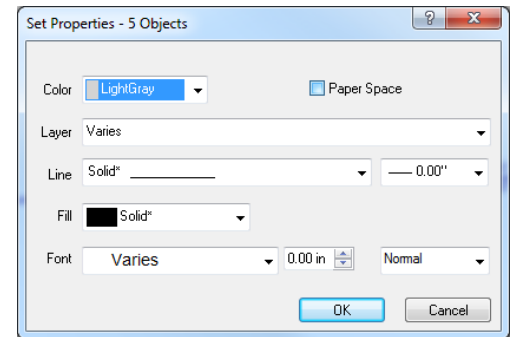
Just select the options you want and TPC does the rest.



Set Object Properties

Personal, Premium, Professional

Have you ever wished you could select a bunch of objects in a drawing and change their color, line type or font all at once?



Well now you can with the new Set Properties command. Change the properties you want to apply to the selected objects and TPC sets just those properties. Talk about a real time saver.

Alta/ACSM 2011 Standard

Premium, Professional

TPC Desktop 2011 sports a new report layout designed to meet the new 2011 standards for reporting Relative Positional Accuracy.

Expanded Point Table

Personal, Premium, Professional

Now you can include geodetic information like latitude, longitude, convergence and scale factor in the Point Table.

Lot Tables

Personal, Premium, Professional

The new Lot Table lets you put lot label data like area into a table. You can also add information not otherwise available like length, linear error and relative error.

Any lot label in a drawing can be placed in a Lot Table where each row represents a labeled lot in the drawing. Each drawing can contain only one lot table.

In this example, we've requested an automatic lot reference.

LOT	LABEL	ACRES	SQFT	LINEAR
T1	Lot 2	1.010	44014.39	0.010

ence, T1. We could just as easily used the lot name 'Lot 2' to reference the lot.

Lot table areas use the same Distance and Direction Types you are using in the drawing. Choose from any of the grid, ground or geodetic options.

Adding Lot Tables to our already extensive array of Smart Drawing Objects is just one more way that TPC Desktop 2011 makes your job easier and quicker!

More...

TPC Desktop 2011 also adds minimized COGO dialogs, support for the latest AutoCAD and MicroStation, Least Squares Network enhancements, automatic rotation, translation and scaling of some data collector imports and more...