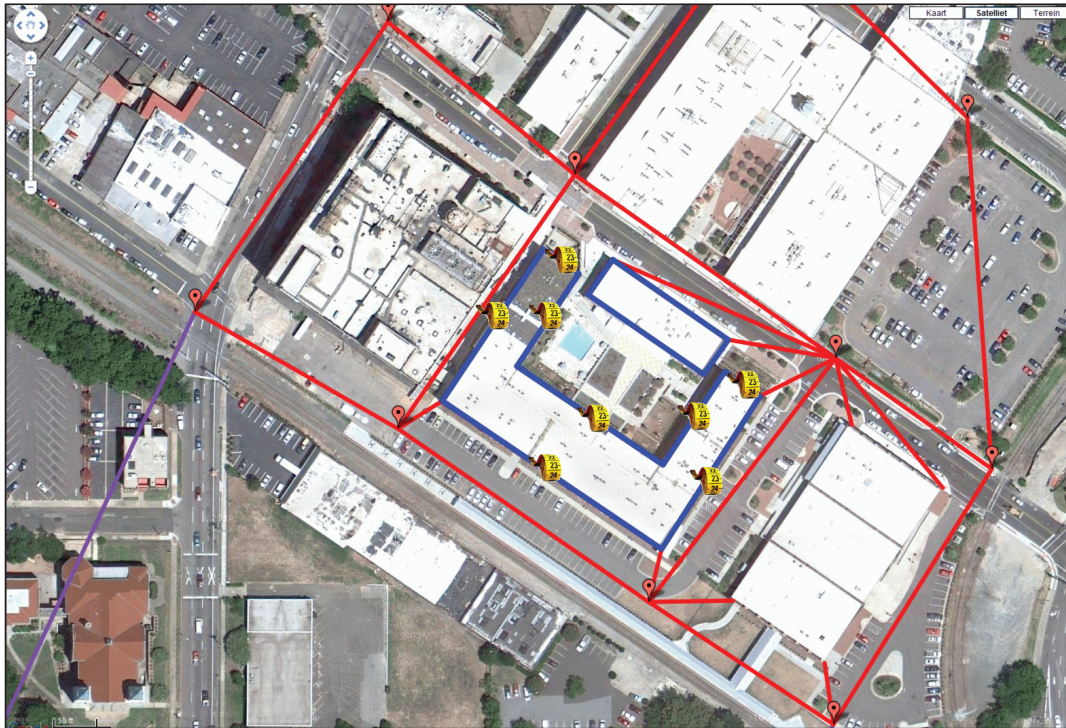


NewTechShowcase



The small yellow icons represent hand-taped measurements. By adding these values to total station measurements, MOVE3 uses the redundancy to tighten mapping accuracy.

MOVE3 Moves to the U.S. Survey Market

Given redundant and imperfect measurements, Network Least Squares finds the most probable position of points. It produces estimates of point accuracy in the form of “error ellipses” or confidence regions, typically at the 95% or 99% level. Network Least Squares is a tool that allows you to calculate, analyze and defend both the positions you publish and the measurements you made to determine them. It is now the standard, approved means of adjusting all types of field survey data for best results, such as angles, distances, height differences and GNSS baseline vectors.

MOVE3, developed by Grontmij of The Netherlands, is one of the most advanced products available today for using Network Least Squares. Designed for surveyors and civil engineers, its algorithms and particular methods are used by major survey equipment and software manufacturers as their “least squares engine.” It is taught at Purdue and other university survey programs. MOVE3 can

handle the smallest closed traverse to the largest network of field measurements, combining mixed data sources from total station to GPS to level loops and even including taped measurement.

Raw survey data includes Total Station Angles and Distances, GPS Vectors from Base to Rover, Level data, and Taped Measurements. Because 90-degree angles can be assumed, taped measurements around buildings (supplementing total station measurements to visible corners from a single setup) can be used effectively to map developed sites with multiple structures, saving time.

MOVE3 has a graphic engine in which individual observations, stations (points) and associated accuracies may be edited directly from the graphic environment or withheld for computation (a common debugging technique). It can project the points and associated vectors and measurements on top of Google Maps or Virtual Earth.

Computations are accomplished by one simple step. However, options include

Free Network (unconstrained), Pseudo Constrained, Weighted Constrained and Absolute Constrained which allows review or adjustment of the “weighting factors” assigned to measurements. Instead of guessing at weighting, you can see its impacts. Your 5-second total station may in fact deserve a 3-second angular weighting (or 10-second!).

MOVE3 imports standard Carlson RW5 files, Trimble JXL files and LandXML raw data files, in addition to TXT files in prescribed formats. Level data can be received from Leica, Topcon, Sokkia and Zeiss instruments. Point data is extremely flexible. The outputs from MOVE3 are also useful for site surveying that follows after initial control calculations. Outputs include precise site scale factors (ground to grid, grid to ground), azimuth offsets, refraction coefficients and baseline transformation parameters.

A dedicated team is at work, continually advancing MOVE3’s feature sets. In the U.S., contact Carlson Software for pricing and technical support. 