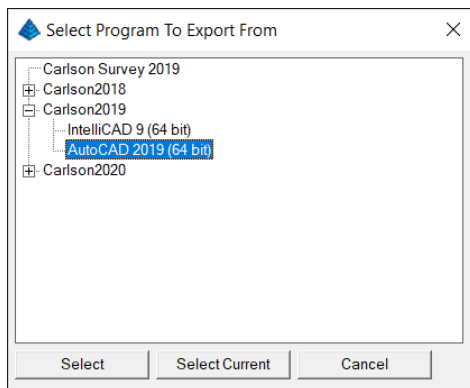


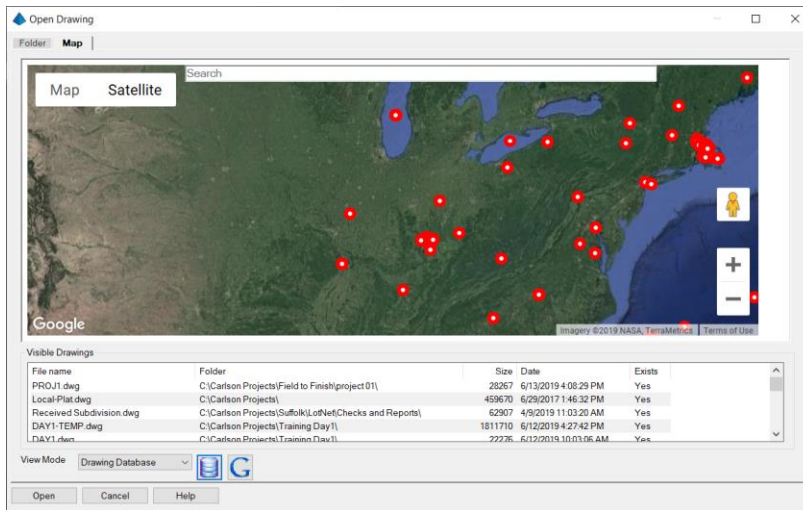
Carlson Survey and GIS 2020 offer User Interface Upgrades, Efficiency Tools and Education

MAYSVILLE, Kentucky, USA (September 2019)-- Carlson's latest release of Survey 2020 brings intuitive UI upgrades along with a host of new features and tools to improve day-to-day efficiency.

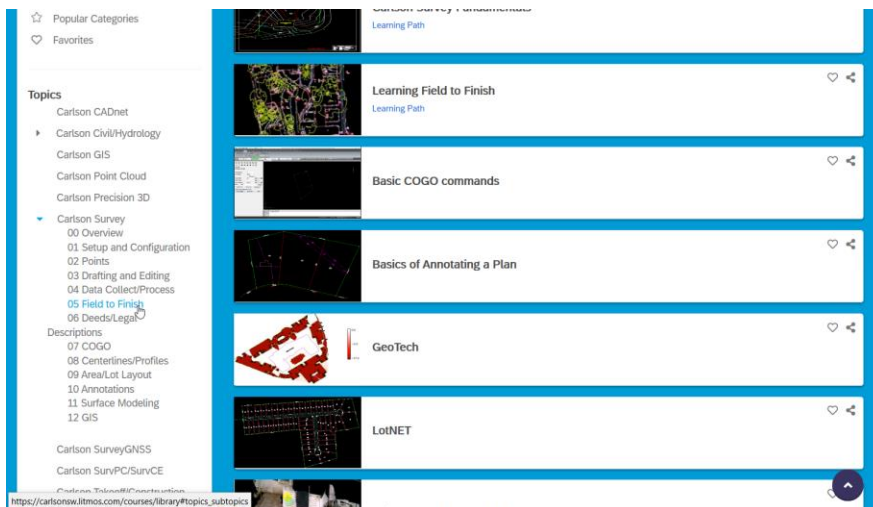
A long anticipated **Migration Wizard** for upgrading software as well as sharing settings and files across the office highlights this year's list of customer centric updates. This new migration tool allows users to install a new release and then just simply transfer all of their previous settings, custom symbols, linetypes, fonts, etc. to the newer version.



A new **Start Page** and **Open Drawing** dialog box with a georeferenced map can be used as a visual filing system, making locating drawings easier. Users will be able to find projects based solely on their street address or georeferenced location.



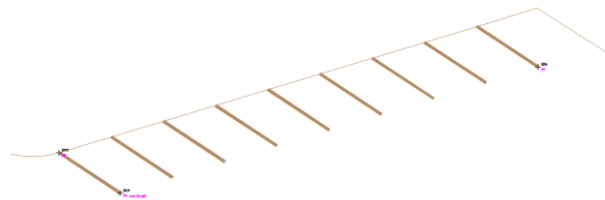
Carlson Academy is an on-line interactive learning system that contains training material for learning Carlson programs.



It contains videos and written materials that are targeted for both new and existing users to learn from scratch or enhance their existing knowledge. This

learning system is accessible through the Carlson portal (account.carlsonsw.com) and only requires a valid email address and an up to date version of Carlson Software. This new learning system should be very helpful for all Carlson users.

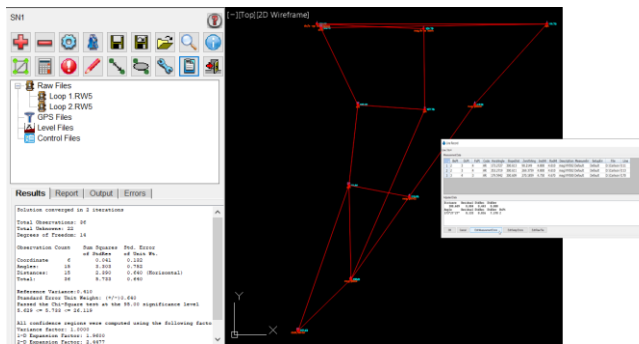
For surveyors, there is a new **Vertical Datum Utility** that aids in converting datum and **Field to Finish** and boasts more new features to make data collection and drafting even more efficient. Things like a new **Parking** special code that allows users to take just a few shots and automatically draw parking stalls is a time saver that any surveyor will appreciate.



A new special code for defining **Templates** on the fly in the field is another example of a great time saver. Surveyors can take any number of shots to define curb lines, retaining walls, or other typical features and apply that template to subsequent locations and now multiple horizontal and vertical offsets are possible.

An especially useful new feature is the **Crandall Polyline Adjustment**. This is a perfect way to distribute rounding errors on perimeters without altering the record dimensions, and **Process Deed** File now allows for a user-defined **Point of Beginning**.

SurvNET offers the most expansive UI update. The new interface now has interactive graphics that allow users to review data and edit control and measurement standard errors by simply “double-clicking” on any graphic entity.



It also has an updated **Report** format that quickly shows critical information about a network that helps take the mystery out of Least Squares adjustments.

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Solution converged in 2 iterations

Total Observations: 36
Total Unknowns: 22
Degrees of Freedom: 14

Observation Count    Sum Squares    Std. Error
                    of StdRes      of Unit Wt.
Coordinate           6             0.041      0.132
Angles:             15             3.303      0.752
Distances:          15             2.390      0.640 (Horizontal)
Total:              36             5.733      0.640

Reference Variance: 0.410
Standard Error Unit Weight: (+/-)0.640
Passed the Chi-Square test at the 95.00 significance level
5.629 <= 5.733 <= 26.119

All confidence regions were computed using the following factors:
Variance factor: 1.0000
1-D Expansion Factor: 1.9600
2-D Expansion Factor: 2.4477
Expansion factors for 95.00 confidence regions taken from normal distribution table

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The **GIS** module contains a host of added support for World Image Files, Google Earth, and Esri. It also supports the Sqlite/Spatial Lite data base, GML files and has more services in the Web Feature Services.

Along with Carlson Survey and Carlson GIS for 2020, Carlson Software is also releasing the 2020 versions of Carlson Point Cloud, Carlson Civil, Carlson Hydrology, Carlson GeoTech, Carlson CADnet, Carlson Trench, Carlson Construction, Carlson Mining, and Carlson Natural Regrade, all featuring their own industry-specific improvements. Bundle these modules together and save through the Carlson Civil Suite (carlsonsw.com/civilsuite), Carlson Takeoff Suite (carlsonsw.com/takeoff), or customizable Select Suite (carlsonsw.com/specials).

Outperform the competition with Carlson 2020, now available for upgrade or new purchase. For more information about other enhancements in this new release, visit the Carlson 2020 webpage, www.carlsonsw.com/2020.



Founded in 1983, Carlson Software Inc. specializes in CAD design software, field data collection, laser measurement and machine control products for the civil engineering, surveying, GIS, construction, and mining industries worldwide, providing one-source technology solutions for the entire project cycle. Carlson Software is headquartered in Maysville, Ky., U.S.A., with branch offices in Boston, Mass.; Almere, The Netherlands; Brisbane, Australia; Ottawa, Canada; and York, England.