

Point Cloud

Field Scan to Finished Plat

Bring Point Cloud data to the world of CAD

A modular program that provides the ability to go from field scan to finished plat, Carlson Point Cloud delivers powerful automation for large data sets. View and process up to 1 billion points all with Carlson ease-of-use.

Key features include:

- Register scans to local coordinates, filter or decimate the points, and overlay raster images in 3D
- Snap to edges and code descriptions for automated field-to-finish processing of linework and symbols
- Create contours, profiles, sections, and breaklines from within the point cloud

Lastly, all surface models, points, contours, breaklines, grid and profiles can be exported to CAD.

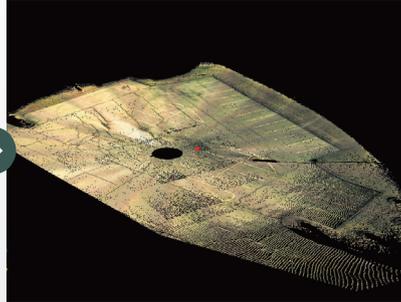


Top New Features

- **Extract Bare Earth:** Removes landscape, utilities and other non-surface features for a clean surface.
- **Draw Polyline:** New routines for high and low edge snaps for polylines and full curb polyline automation.
- **Larger Point Cloud Files:** An enhanced Point Cloud engine now allows up to one billion points per cloud.
- **Point Cloud Text:** Add annotation to your Point Cloud scenes to improve communication with co-workers, supervisors and clients.
- **Property Layer Manager:** Manage layers for points, polylines, and text from inside your Point Cloud scene.
- **Drape Images:** Select images from multiple formats to drape over meshes created from your Point Cloud.



Bare Earth Before



Bare Earth After



Data Extraction

- **3D extraction** of poles, trees, and hydrants
- **Extract data from clouds** or meshes — TINs, Contours, Profiles, Sections and Breaklines — and draw them in CAD design

Import / Export

- **Import/export** of grids
- **Import/export point clouds** containing up to 1 billion points
- **Import more cloud formats**, including LAS, Leica, Faro (requires installation of conversion software), E57, DEM, GeoTiff, and more
- **Export** to ASCII, LAS, or PDF (new in 2016)

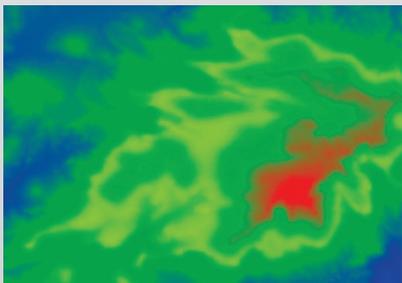
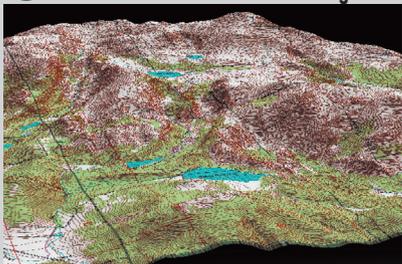


Image Before
Image After



Multiple Scan Consolidation

- **Register multiple scans** into one cloud
- **Merge clouds** (new in 2015)

Anomaly Reduction

- **Reduce anomalies with Clean Cloud** and reduce density with Resample Cloud

Data Improvement Tools

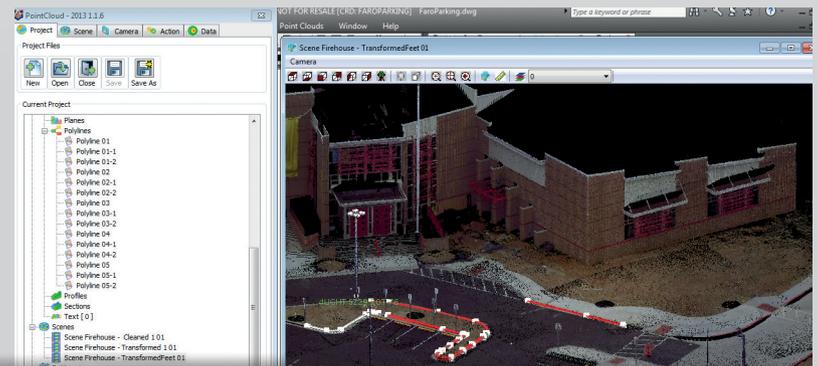
- **Continue data improvement** with Smooth Mesh and Simplify Mesh (this reduces the size of the model by removing least significant data points)

Field-to-Finish

- **Use the full power** of Carlson Field-to-Finish with Point Cloud data. You can use the same FLD files you use with GPS or conventional total stations with Symbols, Line Work and Labels all drawn in CAD

Viewing Cloud Data

- **Color Adjustment** (new in 2015)
- **View multiple clouds** at once



- **Color by Elevation** or Intensity
- **Adjust point size** and cloud detail
- **View as cross sections** (new in 2017)

Draw Linework

- **Multiple snap modes** to extract edges and slopes

Surface Data Commands

- **Load Surfaces** — Import scan data from various sources
- **View Surface** — 3D viewer for point cloud data

Scan Utilities

- **Resample and filter** scan data

Breaklines

- **Automatic 3D breakline creation** based on surface zones

Generate Profiles & Sections

- **Trace an alignment** across the site and generate profiles or sections