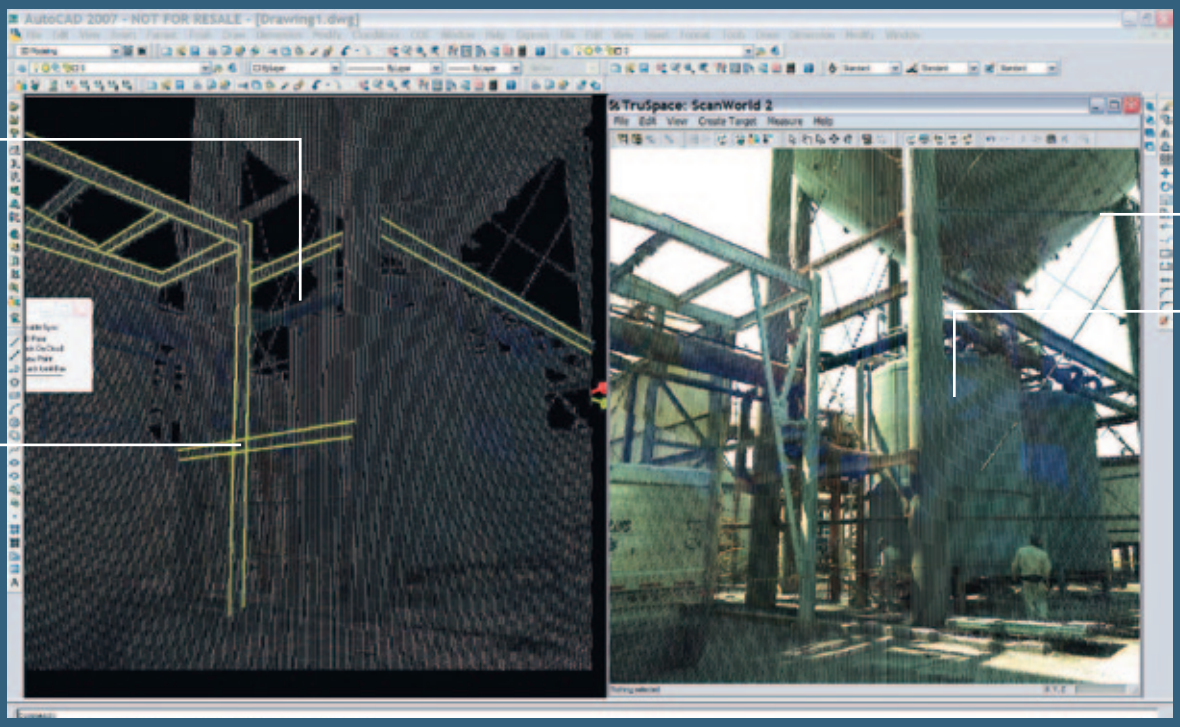
Leica CloudWorx 4.2 for AutoCAD

Point Cloud Plug-in Software



The CAD window can synch and follow the TruSpace viewer for easier navigation.

Points picked in the TruSpace viewer can drive CAD commands to draw lines, etc.

The TruSpace viewer includes background images for better visualization.

The TruSpace viewer provides a clearer image of scanned data.

Efficient management, viewing and processing of as-built laser scan data for architectural, plant, civil and other 2D & 3D projects

Leica CloudWorx 4.2 for AutoCAD is the most efficient and popular plug-in software for using as-built point cloud data – captured by laser scanners – directly within AutoCAD.

Users take advantage of the familiar AutoCAD interface and tools to shorten the learning curve for working with laser scan data. Leica CloudWorx and the powerful Leica Cyclone point cloud engine let users efficiently visualize and process large point cloud data sets. Users can create accurate 2D and 3D as-builts, check proposed designs against existing conditions, perform critical construction & fabrication QA, and more... all directly within AutoCAD.

In the past, users often struggled with point cloud manipulation when using AutoCAD point cloud plug-ins. CloudWorx 4.2 overcomes this with its powerful TruSpace viewing window. This intuitive, panoramic viewing window lets users "see" better what the point cloud represents, and acts like a super-control to drive point clouds visualization in AutoCAD with unprecedented speed.

Features and Benefits

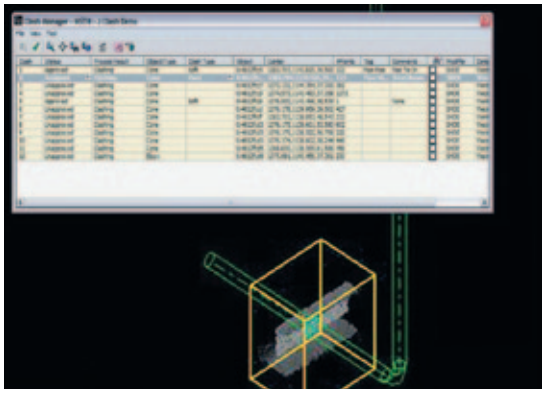
- Fast manipulation of scans in AutoCAD
- Slices – quickly trace or auto-fit 2D lines, polylines, arcs
- Auto pipe fit – intelligent, as-builts in AutoPLANT, CADWorx, more
- Accurate tie-ins & clash checks
- Fully-featured for 3D or 2D deliverables
- English, German and Japanese versions

- when it has to be **right**

Leica Geosystems

Leica CloudWorx 4.2 for AutoCAD

One common usage of point cloud data in CloudWorx is to trace over the point clouds to create dimensionally correct 2D or 3D wire frames for building elevations, model extrusions, etc. Several CloudWorx commands make this easy.



Clash Manager creates a database for managing, tracking, assigning and classifying clashes. A powerful navigation feature lets users easily pull up isolated views of any clash. Here we see a pipe clashing with scanned point cloud data of a beam.

Point Cloud Display Control
To focus on particular areas of interest, easy-to-use tools define specific areas of 3D point clouds to display. For improved visualization, segments of point clouds can be selectively hidden using fences and user-defined cutplanes, slices or 3D limit boxes.

Accurate Building Documentation
Slices through point cloud data facilitate the creation of planimetric and elevation drawings. 2D lines, polylines, and arcs can be best-fit to provide accurate results. Cross sections of point clouds can also be plotted directly, introducing an entirely new, accurate deliverable and reducing project cycle time.

As-built Piping Models
Pipe fitting tools enable users to quickly create accurate, intelligent as-built piping models, best-fit to the point clouds, in conjunction with tools in Bentley AutoPLANT, COADE CADWorx, etc.

Detailed Information for Retrofit Projects
Engineers can use CloudWorx in retrofit design projects to check for potential interferences with point clouds that represent actual as-built or as-is conditions. The unparalleled detail provided by point clouds allows engineers to create 2D or 3D designs based on accurate, comprehensive information, providing time- and cost-savings throughout a project's various construction phases.

Civil Engineering Applications
Leica CloudWorx integrates with applications like Autodesk Land Desktop and Civil 3D to deliver solutions for civil engineering projects – such as transportation infrastructure, land development, bridge models and more. Users can extract 3D coordinates to represent site features that are easily identifiable in detailed point clouds. Original ground points can be extracted for topographic modeling.

Available in Multiple Versions and Languages
Leica CloudWorx for AutoCAD is available in Basic and Pro versions in English, German and Japanese. See the Leica CloudWorx 4.2 Technical Specifications document for a complete listing of product specifications.

Leica CloudWorx 4.2 for AutoCAD Specifications*	
Large point cloud mgt	3D limit boxes, slices, interactive visualization of massive data sets Cyclone Object Database Technology: fast efficient point cloud mgt.
Rendering	Level of Detail (LOD) graphics, "Single pick" point cloud density control
Visualization	Intensity mapping, true color TruSpace panoramic viewer - Select view point from key plan - Drive CAD viewpoint from TruSpace - Quick limit box in CAD from single pick in TruSpace - Send point picks from TruSpace to CAD commands - Include background image Limit boxes, slices, cut planes
Measurement	3D point coordinate, point-to-point, point-to-design entity
Modeling	Pipe Modeling Least-squares fitting, Fit points inside fence, Grow from pick, Grow a piping run from picks, Connection of piping run Planar surface (patch) modeling; Best-fit 2D lines, polylines, arcs, Flange Tie-Point Location tool
Interference checking	Check designs for potential interferences with point clouds, Advanced clash management database system

Hardware and System Requirements

Processor: 2 GHz Pentium® 4 or higher
RAM: 1 GB (2 GB for Vista and Windows 7)
Hard Disk: 2 GB
Network card: Ethernet (required for licensing)
Display: SVGA or OpenGL accelerated graphics card (with latest drivers)
Operating system: Microsoft Vista**(32 or 64), Microsoft Windows XP (sp3 for 32), (sp2 for 64), or Windows 7 (with up to date patches)
File System: NTFS

Compatibility: Leica CloudWorx 4.2 for AutoCAD is compatible with the AutoCAD 2007-2013 families of AutoCAD based products (including all available 32 and 64 bit versions within that range).

* Reference the Leica Cyclone 7.0 Technical Specifications document for a complete listing of product specifications
** Some systems may not support Windows Vista's Desktop Windows Manager (DWM) with Leica Cyclone and must be operated in Windows Classic Look

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