Leica CloudWorx-VR

Point Cloud Plug-in Software for 3ds Max and Maya

Users can create models from the point cloud.

Import scan data to use as background and scene information or as a basis for modeling.

Create stunning photo-realistic images and animations derived from point clouds.

Convenient plug-in for efficiently creating models, renderings, animations and photo-realistic 3D content based on rich point cloud data directly – within 3ds Max or Maya.

Leica CloudWorx-VR is available for Autodesk® 3ds Max, 3ds Max® Design and Maya®. It seamlessly extends these applications to directly support the use of large point cloud data sets – captured by laser scanners – with all standard visual effects tools.

Now, you can easily use point cloud data in your native modeling environment to create compelling fly-through movies; serve as a template for modeling 3D geometry or lighting effects; and serve as a 3D background for visual effects processes.

The versatility of Leica CloudWorx-VR serves the needs of surveyors, architects, engineers, forensic investigators, game makers, movie effects artists and visualization specialists across a wide variety of applications.

Features and Benefits

- Import from a wide range of point cloud data sources: Leica Geosystems PTG, PTS and PTX, Optech-IXF, LAS, Faro-FLS, Riegl-3DD, ASCII
- Limit Boxes for convenient point cloud segmentation
- Point Snapping
- Navigation and camera controls
- Advanced Rendering
- Point Cloud Coloring control

- when it has to be **right**

Leica Geosystems

Leica CloudWorx-VR

This photorealistic image was created by first modeling the boat from a point cloud as shown.*

A 3D wire-frame is developed by tracing over the point cloud.

*Image provided courtesy of Dr. Hesse und Partner Ingenieure of Hamburg, Germany.

Works Efficiently with any Point Cloud Data
Leica CloudWorx-VR utilizes point cloud data from all Leica Geosystems 3D laser scanners, and other sources such as Faro, Riegl and LAS format. The built-in ability to work efficiently with billions of points ensures a productive environment for creating highly accurate virtual worlds.

Intuitive, High-Fidelity Movie-Making
The built-in animation tools of Autodesk® 3ds Max, 3ds Max® Design and Maya® are ideal for movie making. Users can now create professional grade movies with point clouds. Users can light the point clouds and cast shadows from modeled geometry.

Modern Viewing Toolset
The "Limit Box" tool, common to high-end point cloud applications, lets users contain the cloud display to a defined cube. Users can apply standard top or side view tools and control background coloring as a gradient or image.

Cloud Coloring and Rendering
Users can switch color schemes on the fly. They have options for grayscale, intensity mapped rainbow colors from scanner, and elevation mapping. Dynamic point size control is another helpful visual management tool.

Lighting
User can improve depth perception with lighting. All standard lighting effects of the underlying systems (Max and Maya) are available for use on point clouds including ambient, shadows, spots, and other effects. Point clouds can also be included in stereo rendered output for 3D movies.

Output
Rich, accurate point clouds are fully available as 3D content for any static or dynamic output (images or movies) totally integrated with all standard content such as 3D models, texture maps, background images, lighting effects, animated 3D content and photo-realistic images.

Leica CloudWorx-VR	
Large point cloud mgt	Interactive visualization of massive, multi-billion point data sets.
Rendering	Cloud color rendering methods include Intensity mapped grayscale, intensity mapped rainbow, elevation map or colors from scanner.
Viewing and Navigation	Standard 3D zoom\pan Orthographic\perspective camera Walk-through mode Limit boxes, clip boxes Standard views: Top, left, bottom, etc. Navigate via scanner position
Data formats	Binary: REP, PTG, IXF, LAS, FLS, 3DD; ASCII: PTS, PTX, TXT
Drawing and Modeling	Create construction plane Draw spline, particle or vertex Modeling helpers
Tools	Units management, Individual cloud toggling, Dockable menus Performance settings
Output	Point cloud data can be included in any native static or dynamic output of images or movies.

Hardware and System Requirements
Must utilize system requirements of underlying host system (3ds Max, 3ds Max Design or Maya) plus one additional GB disk space to accommodate CloudWorx-VR install and minimum point cloud data set.
Minimum
Windows XP / Vista / Windows 7 2 GHz 32-bit (x86) processor, 1024 MB of system memory, 100 Megabytes hard drive space Support for DirectX 9 graphics and 256 MB of graphics memory (Shader model 3.0)
Recommended
Windows 7 64-bit 2 GHz dual or quad core processor, 4 gigabyte of system memory, 100 Megabytes hard drive space Support for DirectX 10 graphics and 512 MB of graphics memory (Shader model 4.0)

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