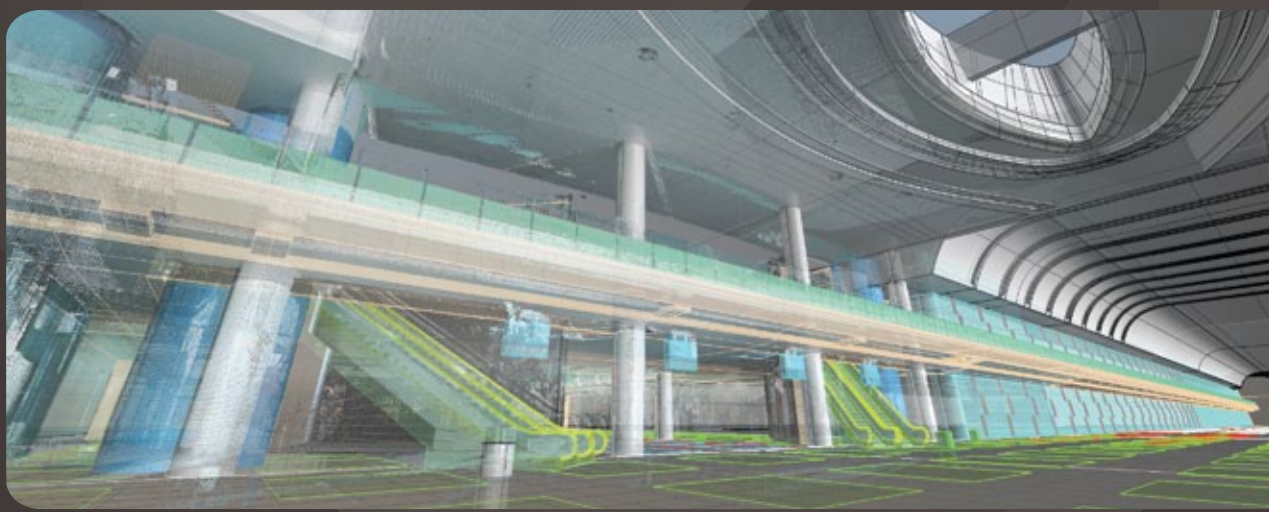
pointools™

plug-in for Rhino®



www.pointools.com

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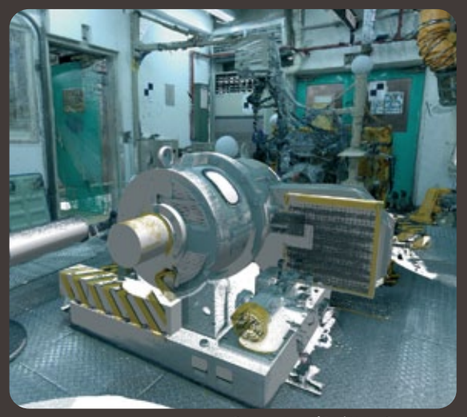
Product Overview

The Pointools Plug-in™ for Rhino® delivers the power and flexibility to reuse the largest point cloud models inside Rhinoceros modelling software.

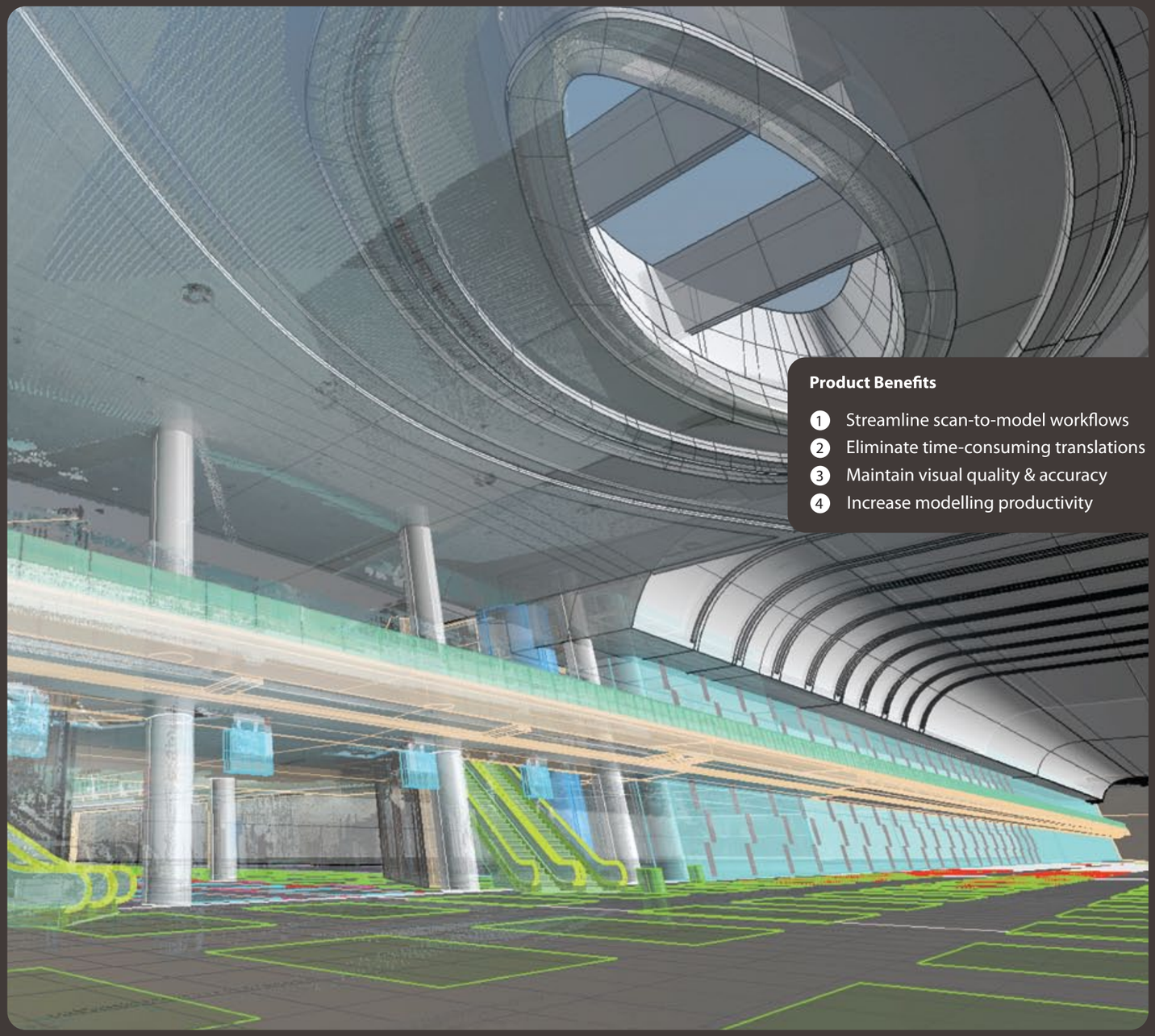
Streamline scan-to-model workflows & import all major scan data formats. Eliminate time-wasting translation by reusing the Pointools POD model format. Maintain visual quality and model accuracy & display billions of points on screen without extreme decimation. Increase model productivity by creating 2D/3D geometry from a selection of points.

Data courtesy of Teccon bvba

FARO · TOPCON · Leica Geosystems · Optech · RIEGL · Trimble · ZF Zoller+Fröhlich



Data courtesy of Ford Motor Company



Product Benefits

1. Streamline scan-to-model workflows
2. Eliminate time-consuming translations
3. Maintain visual quality & accuracy
4. Increase modelling productivity

Product Comparison	Rhino	With Plug-in		Rhino	With Plug-in		Rhino	With Plug-in
3D Model Aggregation	○	●	Application Interoperability	○	●	Productivity Settings	●	●
Large Point Cloud Support	○	●	View Configuration		●	Geometry Creation	○	●
High Performance Graphics		●	Model Shaders	○	●	Point Cloud Processing		○[2]
Data Interoperability	○	●[1]	Georeference Support	○	●			

1 = Requires Pointools POD Creator 2 = Requires Pointools Edit

Product Specification

3D Model Aggregation
- View point clouds, 3D models, & 2D drawings together

Large Point Cloud Support
- Handles large datasets with billions of points
- Manage scene parameters interactively
- Load and unload POD models fast

High Performance Graphics
- Multi-threaded for high-performance display
- Uses high-density, low decimation Vortex display engine
- Stream point cloud model display in real time
- Control point cloud density with interactive slider

Data Interoperability
- Store points in POD models for broad reuse
- Efficient accuracy based compressed file format
- Create POD models from large range of scanners incl: Faro, TopCon, Leica, Optech, Riegl, Trimble, Z+F
- Supported scan data formats include: Ascii XYZ/TXT, FLS/FWS, LAS, PTX/PTS/PTZ/PTG, IXF, 3DD/RSP/RXP/RDP, CL3, Terrascan BIN, Kubit PTC

Application Interoperability
- Integration with 2007 - 2011 Autodesk apps incl: AutoCAD, Civil 3D, Architecture, Map 3D, Land Desktop
- Integration with broad portfolio of Bentley apps incl: MicroStation, OpenPlant, InRoads, RailTrack, GEOPAK, Bentley Map, Navigator
- Integration with Google SketchUp

View Configuration
- Create multiple sections through point cloud models
- Edit section cut plane and depth dynamically
- Align drawing plane with section cut plane
- Move section cut plane along a curve
- Filter point cloud model view by region

Model Shaders
- Shade points by intensity and RGB colour
- Shade points by defining distances from a plane
- Configure shading settings for each viewport
- Blend all shading settings for maximum impact

Georeference Support
- Works across all Pointools enabled applications

Productivity Settings
- Snap to points for draw and model workflows
- Configure point snap setting to streamline use
- Enable or disable point snapping
- Measurements via point to point or single point

Geometry Creation
- Extract 2D lines, circles, and arcs by drawing on a plane
- Fit a cylinder to selected points for pipe modelling
- Fit a 3D plane to selected points

Point Cloud Processing ** requires Pointools Edit*
- Interactively recolour points
- Change colour by hue/saturation or brightness/contrast
- Fast point cloud selection tools including 3D brush
- Select and hide points by regions or colour
- Layer + grid segmentation + density control
- Export layers or point selection to create new POD model

About Pointools

The Pointools suite of software leverages the high-performance Pointools POD format for working with the largest point cloud models inside the broadest range of applications. Used by architects, engineers, contractors, and surveyors to work with 3D laser scan data, Pointools software supports multiple workflows including Art & Entertainment, Forensics, GIS & Mapping, Infrastructure, Manufacturing, and Security & Defence. Pointools offerings include stand-alone applications, CAD software plug-ins, and a third-party development platform for point cloud processing and visualisation; uniquely enabling point cloud model reuse across Bentley, Autodesk, Rhino, and SketchUp applications without time-consuming translation.

Product Portfolio	Pointools Apps			Pointools Plug-ins							Pointools Platform						
Capabilities	Pointools Edit™	Pointools View Pro™	POD Creator™	Rhino®	AutoCAD®	Civil 3D®	Architecture®	Map 3D®	Land Desktop®	SketchUp®	MicroStation®	OpenPlant®	InRoads®	Bentley RailTrack®	GEOPAK®	Bentley Map®	Navigator®
3D Model Aggregation	●	●	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●
Large Point Cloud Support	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●
High Performance Graphics	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Data Interoperability	●	●	○	○[1]	○[1]	○[1]	○[1]	○[1]	○[1]	○[1]	●	●	●	●	●	●	●
Application Interoperability	○[2]	○[2]		○	○	○	○	○	○	○	○	○	○	○	○	○	○
View Configuration	●	●		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Model Shaders	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Georeference Support	●	○		○	○	●	○	●	○	○	●	●	●	●	●	●	●
Productivity Settings	●	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Review Tools	●	●		○	○	○	○	○	○	○	○	○	○	○	○	○	●
Image Generator	●	●									●	●	●	●	●	●	●
Animation Producer	●	●		○[3]	○[3]	○[3]	○[3]	○[3]	○[3]	○[3]	○[3]	○[3]	○[3]	○[3]	○[3]	○[3]	○[3]
Geometry Creation				●	●	●	●	●	●	●							
Point Editing	●																
Point Painting	●																
Point Segmentation	●																
Batch Import			●								●	●	●	●	●	●	●

Pointools reserve the right to change this specification without notice

1= Requires Pointools POD Creator 2= Interoperates with same Pointools POD model 3= Leverages host application rendering and animation capabilities

pointools™

Autodesk® Authorised Developer

Bentley

Rhinoceros® NURBS modeling for Windows

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