

# The Arch Way



## The Newsletter for Friends of Archway Systems

VOLUME 20, NUMBER 2.1

FEBRUARY 11

### Archway Systems, Inc.

Southern California:  
2134 Main St, Ste. 160  
Huntington Beach, CA 92648

Phone: 714-374-0440  
Fax: 714-374-0301  
tom@archwaysystems.com

Northern California:  
56 Nicholl Ave  
Point Richmond, CA 94801  
510-231-0502  
gmcmeans@egs-inc.com

WWW.ARCHWAYSYSTEMS.COM

WWW.VERSACAD.COM

WWW.POINTCLOUDTOOLS.COM

### Inside this issue:

Who's Who at Archway Systems	2
3D Printer Specials	2
Pointools	2
Special Report: Point Clouds and 3D Imaging	3

### Special Edition: Archway joins Pointools as a Sales Partner

#### Upcoming Events:

Mar 21-24 — SPAR 2011 Conference in Houston

### Archway Joins Pointools Sales Partner Program

Archway has just signed on as a sales partner for Pointools. Pointools makes software for processing "point clouds." Point clouds are created by 3D scanners that use lasers to bounce off an object, such as a building. They collect millions or billions of points from the surface of the object (i.e. building). Those points can be taken into CAD software such as MicroStation, where point cloud functionality is built-in, or AutoCAD, Rhino, and SketchUp via a plug-in.

In addition, there is a software called Pointools Edit which can be used to cleanup, join and divide point clouds as well as some point to geometry conversion. Archway is now authorized to sell and support the plug-ins and Pointools Edit.



3D Point cloud model of a Ford motor car plant in the USA. Point cloud is comprised of ~4.5 billion points and is visualized using Pointools Edit.

### Archway Joins Pointools in Houston at SPAR 2011

On March 21-24, Archway will join the Pointools booth in Houston at the SPAR 2011 Conference for 3D imaging and positioning markets. This conference will be a great opportunity for those interested in learning more about 3D imaging and point clouds.

The conference will include a great mix of exhibits and seminars. Don't miss the Keynote Speakers Brian Matthews of Autodesk and Robert Green of Vectors Inc. This will be a week full of

networking opportunities. Take advantage! Some of the seminars offered include: Mobile Surveying, Security Planning and Law Enforcement, Scan to BIM, Digital Preservation of Historic Assets, Geospatial: Augmented Reality, 3D as a Marketing and Recruitment Tool and much more.

You don't want to miss out on this fantastic opportunity. Click [here](#) to register now! Register before March 13 and save! And don't forget to come by **booth 68** to visit the Archway and Pointools Team. Can't wait to see you there!



3D Point cloud model in AutoCAD, displayed using Pointools Plug-in for AutoCAD



Find us on facebook

## Who's Who at Archway Systems

<b>Tom Lazear</b>	Administration, Sales & Training
<b>George McMeans</b>	Sales & Training in Nor. Cal.
<b>Mike Lazear</b>	Programming & Support
<b>Phill Frye</b>	Training & Consulting
<b>Greg Hamano</b>	Training & Support
<b>Sandy Lazear</b>	Accounting
<b>Linda Grubb</b>	Sales Manager
<b>Josh Lazear</b>	Webmaster , Z Support and Programming
<b>Daniel Lazear</b>	Programming
<b>Stephen Peters</b>	Building/Building Performance Sales
<b>Chris Grubb</b>	Civil and Water Sales
<b>Lauren Jansen</b>	Marketing & Sales
<b>Shannon Schoenberger</b>	Marketing & Public Relations

**PRODUCTS**

**ZPrinter® 450**  
World's Most Automated and Affordable Color 3D Printer



**\$18,000**

~~\$39,000\*~~

\* Manufacturer's Suggested U.S. List Price for Printer only. Options, shipping, local taxes and duties not included.

Just like new Z 450! Now only \$18,000! Archway turns our demo machine at least once a year, and it is time for our demo 450 to go. If you purchase our printer and put it under warranty, it is just like a new printer. There is no difference. A used printer under warranty is the same to you as a new printer under warranty, only you save \$22,000. If you are looking for a printer, don't wait! First come, first served.

At Pointtools we enable multiple software products to reference and reuse the same Pointtools POD files, containing billions of measurement points all captured by the widest range of industry-leading 3D laser scanners.



We develop the Pointtools Vortex™ platform which is built into a number of industry-leading infrastructure software products such as MicroStation, Bentley MAP, GEOPAK, InRoads, OpenPlant, FME 2011, and many more.

We produce a portfolio of stand-alone apps + plug-ins to help users streamline scan-to-model workflows by enabling reuse of the same Pointtools POD files inside SketchUp, Rhino, & Autodesk applications.



Visit us at [www.pointtools.com](http://www.pointtools.com) and learn how you can eliminate time-consuming translations from your scan-to-model workflows by reusing the same Pointtools POD files across all of your software applications.

# Special Report

## Point Clouds and 3D Imaging

When initiating a new project, there is always a need to know the context within which the new project will sit. For architects and planners, that would be a case of seeing the adjacent buildings and infrastructure surrounding a new building. Civil and transportation engineers will want to see the existing terrain for their new road. Plant and process engineers will certainly want to see the location within a plant where a new machine will be installed or where a new part for an existing machine will reside. But it's not only about infrastructure; archaeologists may need to digitally model a historic dig site, forensic teams need to very quickly capture a crime scene for future analysis from every angle, and Hollywood frequently uses 3D models to provide context for building new stage sets.

In the past, these projects took months to measure manually and model digitally, or they were completed without capturing 100% of the information. Raising costs and reducing quality. In more recent times, however, a new technology has been taking hold — expanding its use in multiple markets due to the quality, speed, and cost advantages which users realize when they apply it for data capture and measurement of existing assets and features.

3D laser scanning — the high-speed process of measuring millions of points per second — and point clouds — the 3D models that are created by aggregating the billions of measurement points collected by 3D laser scanners — are now a practical reality on every construction site, in every process of manufacturing plant, at every significant archaeological dig, at every major crime scene, and on many film sets worldwide.

The models produced in this process are really just a collection of lots of points, and in terms of reuse, the models fall into two categories:

- Models that will be referenced to provide context
- Models that will be used to create new surface and solids geometry.

To add power to our users' desktop for all cases, Archway has signed up to resell the Pointools range of point cloud software apps and plug-ins which are designed to streamline the conversion, processing, and reuse of point cloud models, and eliminate the need for time-wasting translations while maintaining the visual quality and accuracy of the scan data.

Our MicroStation users will already be familiar with **The Pointools Vortex™**

**platform** which is built into MicroStation to reference and reuse the high-performance Pointools POD model file format and display the largest point cloud

models. Other products from Pointools include:

- Pointools POD Creator — to convert the broadest range of 3D laser scan formats
- Pointools Edit — for selecting, editing, segmenting, and animating the largest point cloud models
- Pointools Plug-ins for Rhino, Google SketchUp, and Autodesk applications including AutoCAD, Civil 3D, Architecture, Map 3D, and Land Desktop.

All Pointools software reuses the same Pointools POD model file format to eliminate the need for time-wasting translations (which otherwise take many hours due to the enormous files involved) when working across application environments to display the largest point cloud models on-screen while maintaining the highest levels of accuracy and visual quality.

The Pointools product comes in alongside Cloudworx which Archway already resells from Bentley. So which one product offerings should you choose?

Pointools is the proven market leader for point cloud visualization and animation because the software can responsively handle the largest possible point clouds, and because the Pointools POD model file format has become the world's most reusable point cloud format since the models can be read directly by all popular CAD products. On the other hand, Cloudworx remains a good solution for plant and process teams that want to convert point cloud models into geometry for redesign.

Look for the use of Point Cloud processing to continue to expand because of the efficiency compared to old methods.



Sports stadium in Abu Dhabi. Point cloud processed using Pointools Edit