

The Arch Way



The Newsletter for Friends of Archway Systems

VOLUME 19, NUMBER 8

AUGUST 10

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

Inside this issue:

Who's Who at Archway Systems	2
Report: Solid Edge Used in Prominent Designs	2
Different Levels of Solid Edge	3
3D Printer Specials	3
MyCADvideos.com	3

MyCADvideos.com

There are Solid Edge videos available on MyCADvideos.com to help with your learning and design process.

Some of the topics discussed in these videos include creating and editing sheet metal parts, creating 3D parts from 2D drawings in Solid Edge ST, and making parameterized edits without model regeneration.

If there are any other videos you would like to see, or questions you have about Solid Edge you want answered, let us know! We are always looking for new ways to better help you.

Z Printed 3D Models

Archway has a Z Printer which prints 3D Models. We offer service to make Z Printed 3D physical models that are useful for prototypes.

If you are interested in this service, email your 3D model and we will send you a no-obligation quote. If you say go, we will print and ship the model to you.

Synchronous Technology 3

In Siemens latest release of Solid Edge Synchronous Technology (ST3), this third edition will now be even better than before by accelerating model creation, speeding ECO's and improving reuse with imported data.

Also it will include a wider range of simulations which further reduces the need for physical prototypes. It will build on Insight and Teamcenter Express' integrated data management solutions which will allow collaboration between a wider range of CAD and non-CAD users.

Solid Edge ST3 will be the most important release thus far as it will build customer confidence and accelerate adoptions.

If you have used Synchronous Technology before, you know that it is a great addition to the Solid Edge product. This new release will just make it even better by making the design process faster and more efficient because of it's streamlined workflows.

Please contact Archway for more information.

Tip of the Month: YouTube Videos

Have questions about Solid Edge? Want to learn some tricks to making your design process faster? Not sure how to use that tool?

Check out YouTube for your quick answers. That's right, Solid Edge is on YouTube! If you go to YouTube.com and search for "Solid Edge Tips & Tricks", you will find a multitude of videos to help you with many of your design needs.

These videos include help on figuring out how to use shortcuts, setting up custom view styles, tricks for quickly building assemblies, and so much more. There are also tutorials for Solid Edge Synchronous Technology available if you need a little more step by step process to get through your design.

Whether you are new to Solid Edge or have been using it for years, these tips and tricks are sure to help make your design process faster and more efficient.

NX Sheet Metal Design

NX Sheet Metal Design from Siemens is clearly the best sheet metal package on the market. This product has so many beneficial features for companies.

It allows companies to apply default settings to the values used in the creation of sheet metal parts, based on both industry and company best practices. It also has an intuitive user interface which allows designers to work with the model on the screen more directly instead of so much work with dialog boxes. This saves design time.

There is also a focused workflow tailored specifically for the designing of sheet metal parts, so that the software automatically accommodates sheet metal production methods. IT includes a complete set of bending features, allowing for the creation of flanges, bends and jogs that can all be unbent and rebent as required.

This product is great for sheet metal designers as the intuitive interface and the pertinent tools available allow for the greatest amount of production at the smallest cost of time and money.

For more information check out Siemens website [here](#).

Who's Who at Archway Systems

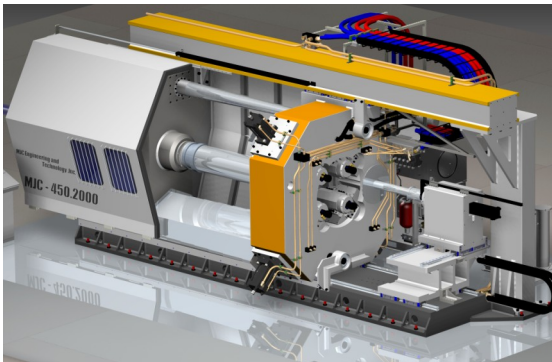
Tom Lazear	Administration, Sales & Training	Josh Lazear	Webmaster , Z Support and Programming
George McMeans	Sales & Training in Nor. Cal.	Daniel Lazear	Programming
Mike Lazear	Programming & Support	Stephen Peters	Application Engineer
Phill Frye	Training & Consulting	Chris Grubb	Civil Engineering Software
Greg Hamano	Training & Support	Lauren Jansen	Marketing & Sales
Sandy Lazear	Accounting	Shannon Lazear	Marketing
Linda Grubb	Support and administration		

REPORT

Solid Edge Used in Prominent Designs

MJC Engineering & Technology used Solid Edge to design the first Flowforming machine for manufacturing large CNG tanks.

The F450.2000-4, recently completed for a customer in China, is the first 4 roller Flow Former to be designed and manufactured in the U.S. The machine fits in an envelope of 20' x 40' x 12' tall and includes four large modules: The flow former, 550 gallon lubricant tank, 300 gallon hydraulic tank, and the electrical cabinet. The total weight of the machine is over 160,000 pounds.



The Chinese customer will use the machine to manufacture 1 CNG tank every 3 minutes. The tanks are used in city buses and other vehicles to convert them from gasoline to natural gas for a much more environmentally friendly engine. China has recently surpassed the U.S. as the world's largest producer of pollutants, and their program to convert city buses is an important step for the world's ecology.

The process to use the flow former to

produce the CNG tanks is as follows: First, take a tube of aluminum about 16" in diameter and 3' long with 3/8" wall thickness. Then bring that into the flow former and, using a force of 100,000 pounds, press it along a mandrel to stretch it out to 5' long, reducing the wall thickness to 3/16", strengthening it along the way.

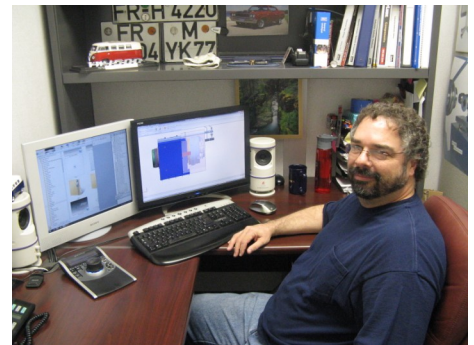
The aluminum tank is then spun and finished, after which it is cross wrapped with carbon fiber to give it strength. Aluminum tanks are about a third of the weight of steel tanks made for the same purpose. Weight is an important characteristic for tanks that are to be installed in city buses (which take four or five of them), cars, and trucks.

MJC will deliver and install the machine in China. However, all engineering and final assembly was done in MJC's Huntington Beach, CA shop. Parts are manufactured all over the U.S., primarily in Illinois, Wisconsin, Missouri and then delivered to MJC for final assembly and painting. Part suppliers include: Timken, for bearings; Parker, for controls; IKO International, for rails and more. The major supplier, though, is Siemens, including the 250 HP electric motor, the electrical cabinet (which is like a small substation), and the instruments in the control panel.

Per Carlson, VP and GM of MJC, is the principal designer of the machine,



pictured above, at his CAD station. He is assisted by Bill Barry shown here.



Per said, "There are over 1000 files on my Solid Edge CAD station for the design of the 6000 parts, assembly and drawings. I have been using Solid Edge for 10 years including the modules for parts, assembly, drafting, sheet metal, frame and all the renderings. Draft is used not only for the parts, but also is used by our electrical engineer for all the electrical schematics."

MJC is a company founded to service custom-built CNC metal spinning equipment and specialty machinery needs in North America. They are the best choice for your new equipment needs.

Different Levels of Solid Edge

There are four different levels of Solid Edge available. Here we want to explain to you the differences so that you can best decide what works for you. If you would like any more information on any of these four levels, don't hesitate to contact Archway.

- **Solid Edge Design and Drafting**
This is the base package which includes Synchronous Technology, a unique method of providing history-free feature based design, parametric, feature-based solid modeling of holes, cutouts, and assembly tools that make it practical to work with large assemblies.
- **Solid Edge Foundation**
This package includes all of the features of the base package

as well as Rapid Blue, a series of unique capabilities for robust complex shape creation. It also includes process specific workflows and more.

- **Solid Edge Classic**
This package includes all of the features of the Foundation package as well as Femap Express, fully integrated design management with Insight, embedded assembly and BOM management, and much more.
- **Solid Edge Simulation**
This package has a finite element analysis functionality and is designed for structural analysis of parts and assemblies. Check out the article on page 1 for more information.

Archway's Product Line

Archway is a full service provider of technical software serving the Academic, Architectural, Civil and Mechanical Engineering markets.

DESIGN & ENGINEERING SOFTWARE:

- MicroStation, ProjectWise and applications
- VersaCAD Win & Mac
- Bentley Architecture & Generative Components
- InRoads, PowerCivil & Geopak Civil Software
- Haestad Hydraulic Analysis Software
- Hevacomp & Tas Software
- Solid Edge and applications
- Promis*e

3D GRAPHICS & ANIMATION SOFTWARE:

- Rhino 3D, Flamingo, Penguin & Bongo
- Bentley ProjectWise Navigator
- ArchVision libraries

COMPUTER PERIPHERALS:

- Z Corp 3D Printers

SERVICES:

- Training
- Phone support
- On-site support
- 3D Printing
- Customizing
- Consulting
- Contract software development
- CAD file translation

MyCADvideos.com

Checkout this site for free introductory videos and one hour webinars on the latest in CAD, FEM, and more.

ZPrinters

Just like new Z 450 at half the price! 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 \$20,000. Two parties have already expressed interest. If you are looking for a printer, don't wait! First come, first served.

PRODUCTS

ZPrinter[®] 450

World's Most Automated and Affordable Color 3D Printer



\$39,900*

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