

The Arch Way



The Newsletter for Friends of Archway Systems

VOLUME 19, NUMBER 3

MARCH 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: Finite Element Modeling and Analysis	2
Different Levels of Solid Edge	3
3D Printer Specials	3
MyCADvideos.com	3

Upcoming Events:

Mar 27 — Siemens Solid Edge and FEMAP
Hands on Workshop @ USC

Upcoming Hands On Workshop at USC

On March 27th, 2010, Archway will be hosting a full day of free hands on training with Solid Edge and FEMAP! This is a great opportunity that you do not want to miss!

From 8AM to 4PM, we will have two workshops available. Each of these classes are three hour sessions. One of each in both the morning and the afternoon. In between, lunch will be served, for free!

The first class offered, once in the morning and once in the afternoon, will cover Solid Edge and its Synchronous Technology. This is a wonderful technology provided by Siemens Velocity Series which is perfect for all your 3D design and modeling needs. Check out the other articles in this newsletter for more information on the great Solid Edge product series.

The second class offered, also once in the morning and once in the afternoon, will cover FEMAP and Nastran for Analysis from NEI Software. This is a great Finite Element Modeling and Analysis software. Check out the report on page 2 for more information.

Also, while you enjoy a free lunch, listen to Bob Hadley, product development manager for Razor USA, as he gives a talk about Solid Edge during the lunch hour.

Join us to update your skills, network with colleagues and enjoy lunch on us! All of this is offered to you for FREE! What better way to learn more about these products than free training sessions to put you ahead in the workforce.

Space is limited so contact Lauren (lauren@archwaysystems.com) at Archway in order to receive registration details or additional information.

Remember, the date is Saturday, March 27th, 2010 at University of Southern California from 8AM to 4PM.

Bob Hadley — Keynote Speaker at Workshop at USC

Bob Hadley is the Product Development Manager of Razor USA LLC. In the beginning, Razor was using 2D AutoCAD to design their products, but have since moved to using 3D Solid Edge. This has increased their upfront development speed a lot. Hadley says, "By allowing us to do upfront development about 50 percent faster compared to 2D, Solid Edge got us to where we could make faster decisions about which concepts to bring to market. With Solid Edge, we were able to introduce at least two or three times as many new products each year as we could previously."

Bob Hadley will be the keynote speaker at the upcoming Siemens Solid Edge and FEMAP Hands on Workshop at USC on March 27th, 2010. For more information on the success of 3D Solid Edge for Razor USA LLC and Bob Hadley's experience, check out the article on Siemens website at www.plm.automation.siemens.com

Solid Edge Simulation

Solid Edge Simulation is a new, built-in finite element analysis tool specifically designed for designers and engineers to be used for structural analysis of parts and assemblies. It is based off of Femap modeling and NX Nastran solver technology.

Solid Edge Simulation lowers costs by reducing the need for physical prototypes. Instead it allows you to run analysis for structures and parts automatically. Then you can make the adjustments right there without having to spend extra time and money on testing and physical prototypes.

Solid Edge Simulation provides the boundary condition definitions which you'll need to model realistic operating environments for analysis. With this product you can figure out static analyses, determine natural frequencies of structures, and more. If what you want to do goes above and beyond Solid Edge Simulation, you can easily transfer designs and data to the more advanced Femap FE. Contact Archway with any questions.

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

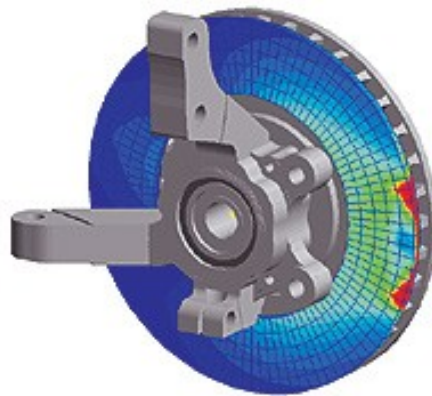
Finite Element Modeling and Analysis

In case you are not familiar with these products or finite element modeling and analysis, here is a bit of interesting tidbits and history.

Finite element modeling (FEM) is the process of taking a part or assembly and breaking it into little tiny pieces. Finite element analysis (FEA) is taking those little tiny pieces, spreading the loads down to them and analyzing how each little tiny piece will respond to the loads. Usually, FEW software is very numbers/engineering oriented and not for the faint at heart. FEM on the other hand is usually very user friendly and can prepare the model for FEA. Then it can also take the results and present them in a way that is conducive to understanding, like graphs and pictures. One of the most popular FEM software is FEMAP published by Siemens. And one the most popular FEA software is NASTRAN, of which there are several versions.

NASTRAN was originally developed many years ago at NASA. It was a project originally done by an engineer named McNeil. The software was so popular that Mr. McNeil decided to start a business,

but since the software was developed at NASA, the source code was public property. So Mr. McNeil became the first licensee of the NASA software which was named NASTRAN. Soon after, another engineer by the name of Mr. Schwendler joined and the company became McNeil Schwendler, now renamed MSC.

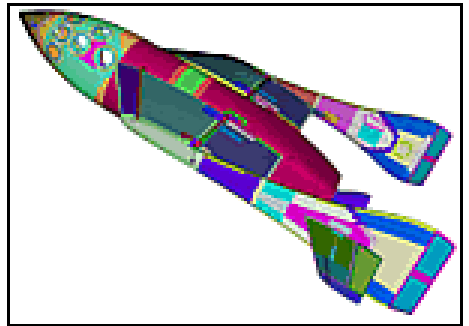


Designed with NX Nastran from Siemens.

Later other entrepreneurs, who figured they could do a better job, also licensed the source code and took it in a different direction. One of those companies was started by David Weinberg, and is the company now called NEI. NEI sells their versions of NASTRAN called NEI NASTRAN. In addition, Siemens

has a version called NX NASTRAN. So there are at least three flavors of NASTRAN. All are good. One is better for certain applications and another better for others. NEI is considered the easiest to use.

FEMAP was originally developed by a small company in Pennsylvania called ESP. They sold to Unigraphics which itself was sold to Siemens. So today Siemens publishes FEMAP. FEMAP prepares models for a variety of different FEA, including NEI and the other NASTRANS. You can check out demos of the FEMAP software [here](#).



Designed with FEMAP software by Siemens.

Archway works closely with both Siemens and NEI. See us all at the upcoming event at USC on March 27.

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

New 3D printing products from Z Corp are transforming how schools, architects, designers and engineers are creating their 3D models. Offering full HD color and pure white models that only need water to cure, Z Corp is turning the 3D printing world upside down. There has never been a better time to purchase a new Z Corp Printer. If you need information, would like us to create a 3D model for you, or would like to purchase a new Z Corp Printer, please give us a call.

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.