

Archway Systems, Inc.
714 374-0440 phone
714 374-0301 fax
tom@archwaysystems.com

Central California:
PO Box 382
Prather CA 93651-0382

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

www.archwaysystems.com
www.versacad.com

To receive this email in PDF
electronically, send email to:
tom@archwaysystems.com

ARCHWAY

The Newsletter for Friends of Archway Systems

Volume 16

Jul/Aug 07

Number 3

Upcoming Events:

July 26-27	USC BIM Conference	USC
Aug 18	Civil Drafting Workshop	Corona
Sep 1-Dec 22	CAD Survey course	OCC

USC Mini BIM Conference

See leading vendors of BIM software present their software, especially as it relates to Sustainable Design. Professor Karen Kensek of the USC School of Architecture is hosting this all day event on July 27. Send an email to Kensek@usc.edu if you would like to attend. No charge and lunch served. Seating is limited.

Water Modeling News

www.watermodelingsoftware.com The latest website for information about modeling water, stormwater, or sewer systems. Signup for the blogs and newsletter.

MyCADvideos.com

Checkout the new video demos: PondPack and StormCAD plus Automated manufacture of steel studs, Automated Parking Structure Design and more. Also, the link to Bentley eSeminars and more. Mycadvideos.com

Implementing Civil Drafting

Bill Brown, President of California Drafting Teachers Consortium is hosting several teacher workshops this summer. Archway will be presenting a workshop on civil drafting all day August 18 at Santiago High School in Corona. Demand for civil drafters is high these days because of all the infrastructure work in California and elsewhere. Since MicroStation is the standard at Caltrans (and 46 other states), MicroStation will be the basis for the workshop which will also introduce civil terms and the new SkillsUSA category for civil. Unlimited free MicroStation PowerDraft available to attendees. Also free course material. Signup by emailing Bill Brown at bill0246@ca.rr.com. Cost is \$15. Free for CDTC members.

Archway Training Center

If you need training for any Bentley product or Rhino or Solid Edge or VersaCAD, Archway is the place. Cool off in Surf City USA while you sharpen your productivity. Archway is a certified training center and all instructors are certified for the products they teach. For example, Greg Hamano has been teaching MicroStation for 10 years.



Greg Hamano teaching MicroStation Essentials.

Rhino 4.0 Released

Rhino 4.0 is shipping with 200 new features including: improved mesh handling, better rendering, better everything. Updates are just \$395. Rhino classes are available at Archway.

HEED

If you do energy analysis for Title 24 or just for "green" building design, checkout this free software:

www.aud.ucla.edu/heed

It is like SketchUp for energy analysis.

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Who's who at Archway Systems

Arlene Black Admin and sales
Leah Spitler Civil engr software support
Tom Lazear Admin, sales and training
George McMeans Sales & training in Nor. Cal.
Mike Lazear Programming & support
Erik Wordal Training in Cal coastal
Rick Plummer Mftr consultant and sales

Josh Lazear Webmaster & programming
Greg Hamano Support & training
Sandy Lazear Accounting
Linda Grubb Support & admin
Dan Lazear Programming

REPORT

What ever happened to Automated Design?

Interestingly, initial uses of computers in engineering were to automate the design process. I recall my first project at Fluor as a programmer was to write software to design a foundation for vertical pressure vessels. The software took design loads and allowable soil pressure and material strengths and did in fact completely design, draft and detail the foundation. Later software projects were for design of other types of foundations as well as pressure vessels themselves. Then, somehow, the attention of the industry shifted to computer-aided-design, or computer-aided-design-and-drafting and the name CAD was born.

Recently there has been a resurgence of interest in software to take over the whole process. One example is VersaCAD/Parking Structure.

Here is how it works: A design firm gets a project to design a structure for a certain number of cars on a given size lot. The firm is asked to submit several different designs, for example with and without elevators, with different dressing on the outside of the structure, different number of parking stalls and the like.

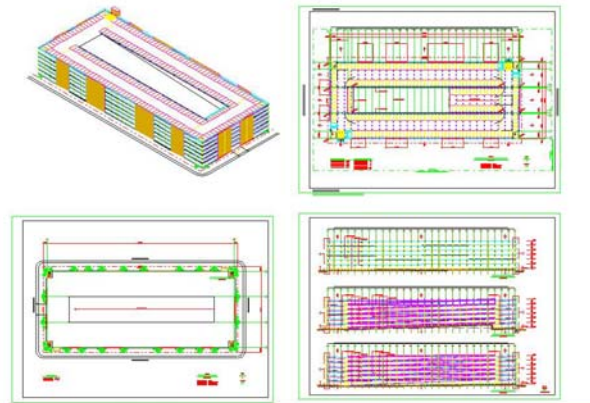
The design firm uses a standardized questionnaire form and asks pertinent questions, actually 112 in total.

The designer then goes to the computer and types in the answers, given that most questions will already be answered with default values, for example the width and length of the stalls for both standard and compact cars. VersaCAD/Parking Structure then goes through calculations, completes the design and outputs: 14 detailed, dimensioned drawings done to user-specified scale including: transverse and longitudinal sections, ground floor plan, typical floor plan, roof plan and site plan. A list of material is also prepared broken down by floor including yards of concrete, number of girders and beams, number of parking stalls and more. Finally, an isometric drawing of the designed parking structure is prepared as well.

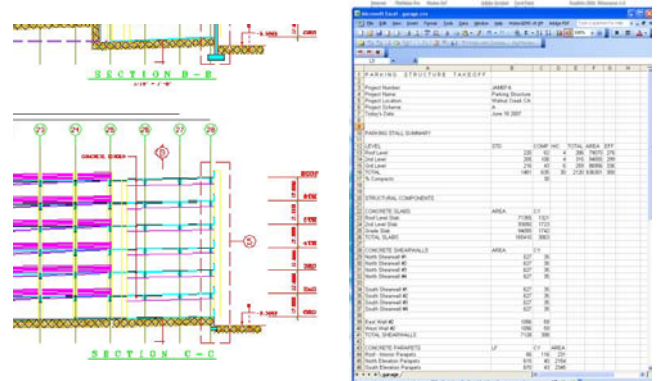
After the data is collected, it only takes about 15 minutes to enter it into the computer and the software takes another minute and the job is done.

Hard to say how much time and cost are saved but it is very significant. Here are some very small scale images, just to get an idea of what it looks like.

See a demonstration at: www.mycadvideos.com



Several design firms have acquired this software, even though they are not users of VersaCAD. Of course, that is no problem, VersaCAD was just a convenient vehicle to develop the application. The resultant design is easily moved to any other CAD software such as MicroStation or AutoCAD with no loss whatsoever. The user doesn't even have to learn VersaCAD. The material list produced is opened in Excel or any other spreadsheet. So, the learning curve is very short.



Trends are for other software to move toward automated design, which itself is just an extreme form of parametric design. For example, Bentley's RAM software automates much of building component design such as foundations and even structural members after the first rough cut by the designer. And STAAD.Pro can automate and even optimize structural member design for very large structures.

It looks like automated design may be making a resurgence.

Training Class Schedule

Archway offers a variety of training classes using the latest of each software. Classes are 1 to 4 days in duration and cover subjects in depth using certified materials. All classes are 8:30 am to 5 pm. Locations: Huntington Beach training center (**HB**) and S.F. Bay area (**BA**). Classes can be delivered on-site and online. For latest Bentley courses, see also: <http://www.bentley.com/en-us/training/>

Upcoming open enrollment classes:

MicroStation V8 XM Edition User Update – 2 day covers latest new features from V8 thru XM. Course includes a book and instruction. Cost is \$800. HB: TBA

MicroStation V8 XM Edition Admin Update - 2day class covers V8 XM install, configure, customize etc. \$800 includes workbook and instruction HB: TBA.

InRoads 101- This is a Bentley certified, 3-day class using Bentley's InRoads 8.8 training manual. Cost is \$1350 including course book and instruction. HB: Jul 25-27

Everything 3D Learn how to design in 3D using MicroStation's surface and solid modeling capability. \$1350 HB. Aug 7-9

Moving to MicroStation- Covers the basics of MicroStation 2D for persons who know another CAD. This is a good first class in Bentley's certified course series. Cost is \$1050 HB: Aug 28-30;

MicroStation Essentials XM. Even deeper than Moving to MicroStation, this four day class is basic for new users. Cost is \$1400 HB: Jul 17-20; Jul 31-Aug 3 (pre XM); Aug 14-17.

Water Modeling. Five day complete at \$2995 or two day starter at \$1995. HB: Aug 20-24.

Rendering and Animation with MicroStation Learn how render and animate your 3D MicroStation models. \$2500 HB. Sep 24-28

Rhino Level I Learn to make 3D NURBs models. \$695 HB. August 7-9

ProjectWise StartPoint Quickstart. A 2 day course in how to install, configure and use StartPoint in combination with Microsoft SharePoint. HB: \$1000. TBA

Sanitary Sewer Design With SewerCAD Learn how to design sewer systems and analyze. Two-day class, \$1495 HB. Oct 22-23

Sanitary Sewer Design With SewerGEMS Learn how to design sewer systems and analyze.. Two-day class, \$1995 HB. Oct 24-26

Solid Edge Basics - The goal of this 4 day course making the student ready for productive work with an introduction to Part, Assembly, Draft and Sheet Metal modules of Solid Edge. At \$1200 this is a very cost-effective and quick way to get started in Solid Edge. HB: TBA

VersaCAD 2006 Windows update- Covers all the changes in VersaCAD 2003 thru 2006. One-day class includes workbook, lunch and computer to use. HB: Cost is \$245. Classes available on demand.

VersaCAD 2006 for Mac OSX Update Covers all changes since VersaCAD 2001 plus review of some features. One-day class includes workbook, lunch and use of computer. HB: Cost is \$245. Classes available on demand.

CAD Survey Course

I sit on a number of CAD and engineering advisory boards. As a part of that responsibility, I have been complaining to a number of schools that they are in a rut, and have become training centers for one particular brand of software rather than educating our future engineers and designers on the fundamentals and on the variety of software and tools that are available. Well, I was finally told to "put up or shut up". So, this fall, I will be teaching a Saturday class for 16 weeks on a survey of CAD. The course is Drafting 165 at Orange Coast College in Costa Mesa. Actually, I am looking forward to it. The plan is to introduce the subject of computer aided design, to discuss the disciplines that use CAD, and then for the students to learn the basics of three or four different, popular CAD software. I'll report later how it went.

Steel Stud-Wall Detailing Application

Archway's stud-wall detailing software is now shipping in beta for MicroStation or MicroStation PowerDraft. Starting from a 3D model or 2D elevation of a wall, draw the outline of a wall and with one click, see all the properly placed vertical studs. Insert an opening and see horizontal members automatically created. Indicate where holes are to be cut and the rest is automatic. The software assigns mark numbers to the pieces, draws the detailed wall and outputs numerical control instructions to a new machine by New Tech Framing of Lincoln City OR. The machine actually takes flat steel coil, bends to a C section, cuts pieces to length, punches holes and notches and marks each piece. The field personnel then only have to erect the wall like an erector set. See a demonstration of the software at www.mycadvideos.com

Having Trouble Finding Employees?

A very common problem these days is finding an adequate supply of technical employees. If your company uses any product that Archway offers and you need employees, send us the job description and we will forward to the instructor at the closest school that teaches that subject. Often find very good entry level employees that recently completed a course or you might want to try an intern. Interns have worked well for us.

BentleyLEARN

BentleyLEARN is a tremendous value for a professional user of Bentley software or an educator. For the pro, the cost is just 20% of your annual SELECT bill. For the educator, BentleyLEARN is included with your BECareers Subscription, so no extra charge. There are 600 online, prerecorded training classes on the BentleyLEARN website. Send an email to tom@archwaysystems.com if you would like to receive a pamphlet describing how to use BentleyLEARN. The pamphlet includes the steps to get to the course you need as well as suggested course outlines for teaching or learning: MicroStation, InRoads, Bentley Architecture or PowerCivil. Let us know if you would like to tryout BentleyLEARN for 30 days at no charge. If you try it, you will like it.

ARCHWAY'S PRODUCT LINE

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

DESIGN & ENGR SOFTWARE:

- MicroStation and applications
- VersaCAD Win & Mac
- InRoads & Geopak Civil Software
- Haestad Hydraulic Analysis Software
- Solid Edge and applications
- Plassotech finite element modeling
- TransMagic-translation software
- Magics X STL editing software

3D GRAPHICS & ANIMATION SOFTWARE:

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

COMPUTER PERIPHERALS

- Z Corp 3D Printers

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.



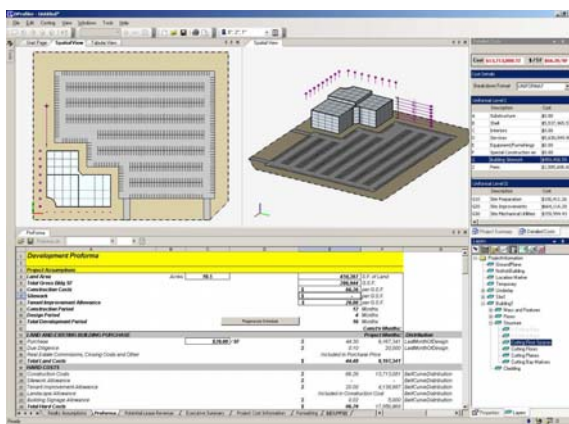
Tom Lazear
Archway Systems, Inc.
2134 Main Street #160
Huntington Beach CA 92648

SERVICES

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

Beck Software for Building Cost

We found some great software for building designers, contractors, developers and architects. Product name is DProfiler, from Beck Technologies, part of Beck Group. DProfiler is like a SketchUp with attached RSMeans Cost database. Sketch your building in context of its location and you get a constructed price within a few percentage points. Save the file and import into MicroStation and Bentley Architecture. Here is a real small screen shot:



Call us for an online demonstration.

Z 450 3D Printer

The Z450 has made 3D printing practical for any design office. It boasts full color, good resolution, and includes all the necessary components in one enclosed unit. Excess powder is automatically vacuumed off the finished part and recycled so there is no waste and no dust in the room. Accepts any STL or VRML 3D model file and creates the physical model faster and at less cost than any of the competition. Note the samples shown in the photo at left. Rick@archwaysystems.com for appointment to see it.

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