The Design Explorer
The Ashlar-Vellum User Newsletter

Fourth Quarter, 2008

Cobalt™, Xenon™ & Argon™ SP1 Released

Just released!
Improved DWG/DXF import and export
Enhanced PDF smart-data export
Intel Mac optimization

Service Pack 1 for Cobalt, Xenon and Argon v8 was released this month. This new service pack includes:

• Mac Intel optimizations
• Lightworks support for multicore now on Mac
• SpaceMouse support now on Mac
• Materials and colors per face
• Document thumbnails for Finder
• Hundreds of user requested enhancements and bug fixes

Graphite™ SP1 Hot Patch 3 Released

Hot Patch 3 for Graphite v8 SP1 will be released later this month. This hot patch includes:

• Preview pane in the File>Open dialog box
• Document thumbnails for Finder
• A dozen user requested enhancements and fixes
• JPG and PNG import/export

Holiday Hours

Ashlar-Vellum's headquarters in the U.S. will be closed December 22nd through January 2nd. During this time, orders placed through our website will be processed by our European office and registration codes sent to you via email. Shipping of physical materials will resume on January 5th.

Requests for demo codes will also be monitored and fulfilled. Technical support will be handled as usual through our website. We wish you a blessed holiday season.

May Joy, Peace and Prosperity Fill Your Hearts This Christmas and Throughout the New Year

Click here for holiday hours.

Don't Forget Share

Share allows those without Ashlar-Vellum software to open, view, print and export our files from their Windows or Mac desktop.

Share is free for the download. Just look for the Share logo on our home page at

www.ashlar.com

New Cobalt & Xenon Pricing

With the world in economic crisis Ashlar-Vellum is doing their part to stimulate the economy by lowering prices on new commerical permanent licenses of Cobalt and Xenon. Graphite e-only goes down slightly and Argon stays the same.

The prices for new units of Ashlar-Vellum software will be:

	e-only	full materials
Cobalt	$2995	$3095
Xenon	$2495	$2595
Graphite	$1395	$1495
Argon	$1195	$1295

Vellum Acquires Ashlar's Products

Vellum Investment Partners LLC has assumed selected assets and selected liabilities of Ashlar Incorporated. This process started in 2005 and has taken longer than anyone here imagined.

Ashlar-Vellum will become a DBA (doing business as) of Vellum Investment Partners rather than Ashlar Incorporated. The only significant change that you will probably see is that the copyright notices will change over time.
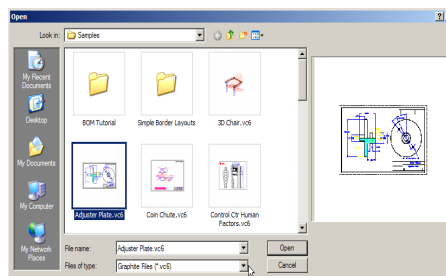
Vellum Investment Partners is a limited liability company owned by Robert and Julie Bou. Robert, currently Ashlar-Vellum's president, has been with the company for over 10 years. His wife and partner, Julie Bou, is Vice President and coordinates all communications for the company.

Preview Pane Now in Graphite™ Open Dialog Box

A preview pane has been added to Graphite's Open dialog box in build 844 or higher. A thumbnail is now generated as part of the save process, therefore old files will have to be opened and

saved again before they will appear in the preview window. Similar technology will be added to Cobalt, Xenon and Argon in a future version.

Graphite Named Staff Pick by Apple

Graphite v8 SP1 was named as a *Staff Pick* by Apple Computer on the OS X Software website. For over two weeks, Graphite made the charts for Top Downloads in both the *All Downloads* and *Imaging & 3D* categories on Apple's site. Demo downloads went from about 10 per day to almost 300.

While things have tapered off now, we're trusting some of these will turn into sales as the year ends.
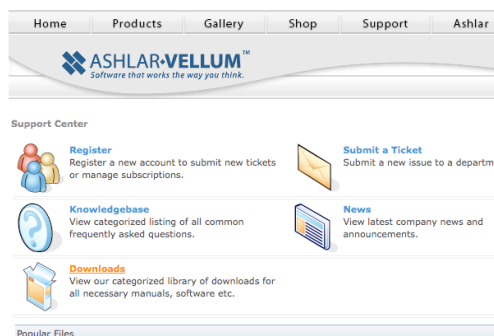
Eliminating the "Wrong Entity on Sheet" Error

Sometimes when exporting a file from Graphite v8 SP1 to DXF/DWG you'll get one or more error messages, "Wrong Entity on Sheet," requiring you to click OK, sometimes multiple times. This is caused by zero length arcs or infinite radius arcs, which both generate one message per entity.

While it is possible to hunt down and eliminate these arcs in your Graphite file, a much easier way is to download an FE script from our Support Center and run it to quickly eliminate all zero length arcs and infinite radius arcs before exporting. To do this:
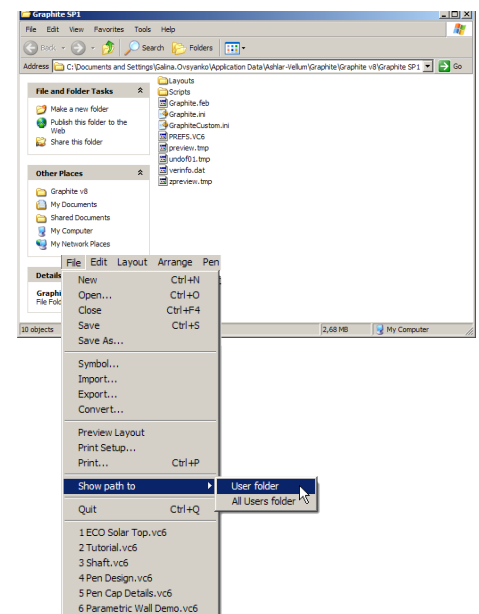
1. Go to http://support.ashlar.com.
2. Click on Downloads.
3. Under Graphite v8 SP1 Utility

Scripts click on **Clear Illegal Arcs**.

4. On the next screen, click the Download button.
5. Move the downloaded file to the appropriate Scripts folder for the Graphite installation on your particular operating system. To easily find this folder, in Graphite go to **File>Show Paths to>User Folder**.

6. Close and relaunch Graphite.
7. Go to **Utilities>Clear Illegal Arcs** to run the script on your Graphite file prior to exporting it to DXF/DWG.
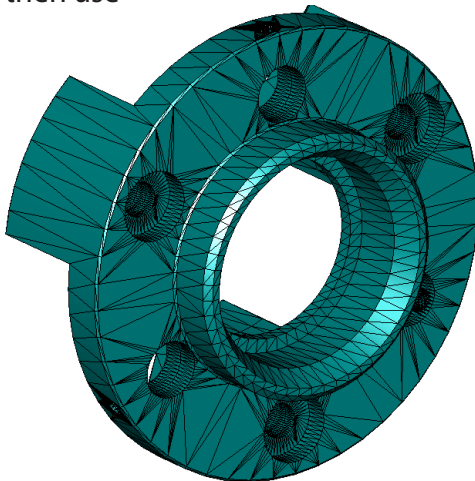
Welcome Alyona

Ashlar-Vellum is pleased to welcome Alyona Vysotskaya to our graphics and web development team. She is completing a degree in hospitality management and has previous experience as a web master. She is a highly creative person that enjoys interesting people. We're glad she's joined us.

What Do I Need to Know about 3D Printing?

Cobalt, Xenon and Argon all support 3D printers such as Z Corp, through the export of STL, DXF and WRL files. These printers are driven by a 3D tessellated mesh which is a collection of 3D triangles representing a closed volume.

Data is tessellated to a specific precision and accuracy within Cobalt, Xenon or Argon. To create meshes use **Edit>Change Object Type**. From the Change Type box choose *Mesh*. Be sure not to delete the original objects. Then, set the parameters including selecting the STL Facets option. Select the mesh using the Selection Mask, then use
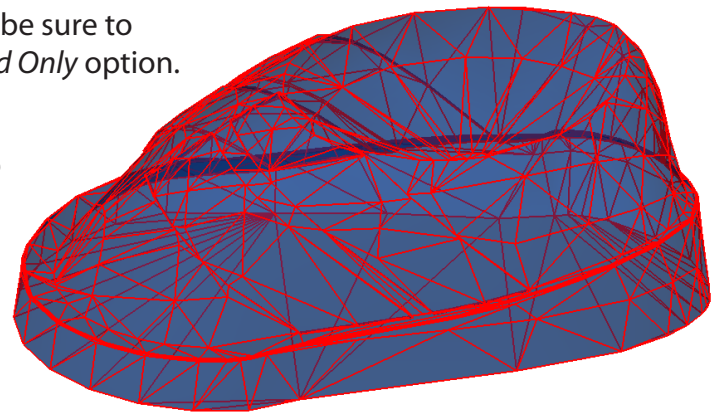
File>Export and be sure to check the *Selected Only* option.

STL

Traditional stereo lithography, or STL, files support only one volume or part per file. Ashlar-Vellum's STL file format, however, allows multiple parts in one STL file. Therefore, if the target software for the 3D printer does not also allow multiple parts, be sure to check the *MultiFile* option in the Export box when exporting to an STL file. Be aware that STL does not support color. To 3D print in color, use either DXF or WRL.

DXF

Many 3D printers also support DXF for color printing. You'll need to export the part created in Cobalt, Xenon or Argon as a DXF file. The difficulty is that a DXF file can contain all kinds of extra data that is inappropriate to a 3D printer. It is important to export only the data necessary for the 3D printer to avoid problems.

To do this, create a copy of one or more solids as a mesh. It's usually most convenient to put the meshes on a separate layer. Select the meshed objects, use **File>Export**, select DXF and check the *Selected Only* box. If you also select *MultiFile*, each meshed object will export into a different file. This may or may not be handy, depending on your target software.

WRL

WRL is the file extension for the VRML, or Virtual Reality Markup Language, standard. WRL supports color and textures in 3D meshes, though Ashlar-Vellum does not currently export any texture information to this format.

Catching a Dream in Midair

Rainbows shimmer and interleave in Dream Weaver, *the recently completed work of art by sculptor Robert Perless for the Howell Cheney Technical High School in Manchester, Connecticut. Established in 1912 by the Cheney family, the school was founded to educate the workers in their silk ribbon mills.*

What started as a vision of ribbons floating in the air developed into a holographic representation of the unseen dimensions of string theory. At over 150 feet long and thirty feet wide, *Dream Weaver* visually pierces the front wall of the building, leading the eye inward in its celebration of light and movement.

Comments Perless, "I view *Dream Weaver* as a teaching tool for these students and teachers who are learning about engineering, physics, welding and philosophy, getting them to have this work of art in their own environment as part of their daily life, so that art is no longer a rarefied and remote experience."
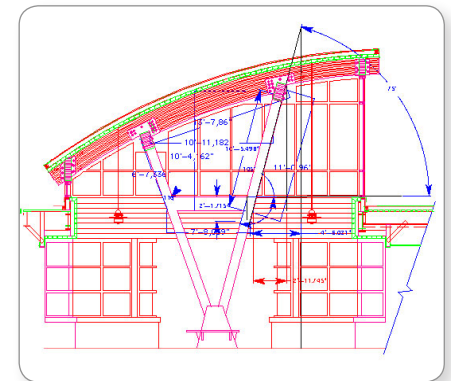
Perless used Graphite™ to conceptualize, develop, produce and install *Dream Weaver*, just as he has many of his other sculptures around the country. He says about Graphite:

> ***"It gives me the control to produce an explicit, precise drawing when I have to, and when I don't, it gives me the ability to be creative and lateral, and just dream about where I'm going with the particular concept."***

He particularly likes Graphite's accuracy and ease of use. "I didn't have to struggle with how I was going to have the die made. Ashlar-Vellum Graphite gave me all the tools. It was accurate right down to 1/1000th of an inch. When they built the final part it was absolutely correct and that means a lot."

Dream Weaver sculpture by Robert Perless installed at Howell Cheney Technical High School.

Truss detail drawing done in Graphite for *Dream Weaver* sculpture.

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The Wizard of Whiz

Canadian designer Jean-Françios Jacques of Météore Design has a passion for making users come together as one with their products. From among Jacques' many innovative designs he recently won Grand Prize from the Palm enRoute Awards in Mobility Design for the On-Track airport electric scooter. The Palm enRoute awards honor ingenious ideas designed to take flight.
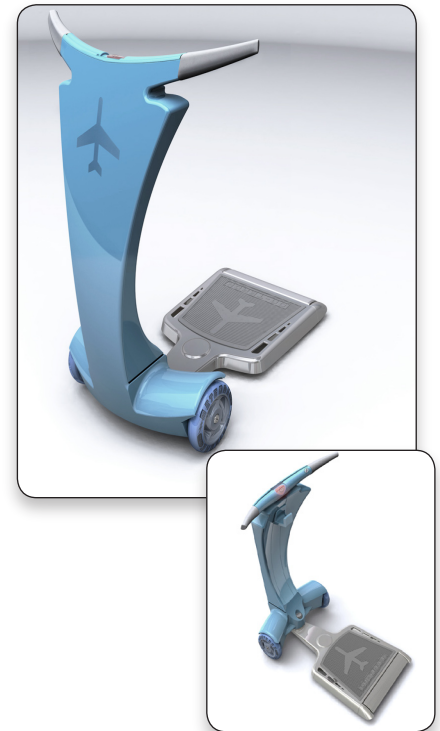
The On-Track scooter whisks passengers through international airports at a brisk 6.2 miles/10 kilometres per hour (about jogging speed). The sleek vehicle features an electric motor that is easily recharged at convenient docking stations and includes a GPS system for easy navigation between tight connections.

Jacques used Cobalt's™ Organic Workflow™ design process to develop almost everything on the On-Track. As he tells it:

> **"One of the most important things in the design process is the freedom to explore many paths. Cobalt's tools are perfect for this. It's so easy to create concepts, then rapidly explore them in 3D. It's easy to put parts in place for evaluation without some cumbersome assembly module. If I'm not satisfied, the on-demand history tree and parametric constraints make it easy to go back and modify my ideas."**

Like many Ashlar-Vellum designers, Jacques uses any number of design software tools as the job demands, but he prefers Cobalt. "We've tried other CAD and 3D modelling tools but the problem was the learning curve. With Cobalt it's possible to be operational in one day."

He continues, "With Cobalt's comprehensive tools, we can create any shape, but it's real strengths are the 3D Drafting Assistant, the user interface, the intuitive approach and the pleasure it is to use. These things are the core, the real spirit of the software. With these firmly in place, the tools and the user come together naturally."

The On-Track electric airport scooter.

Jean-François Jacques holds an STL prototype.

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