

The Design Explorer

The Ashlar-Vellum User Newsletter

First Quarter, 2007

Ashlar-Vellum Users Win Good Design 2006 Awards

Two Ashlar-Vellum users have been recognized with Good Design 2006 awards from The Chicago Athenaeum.

Nelson Au won in the category of electronics for the Seagate Pocket Harddrive.



Cube Design's concept of the Espresso System for Breville.

The team at Cube Design won in the category of household products for the original concept of the Breville Espresso Machine.

The Chicago Athenaeum is an international museum of architecture and design dedicated to the disciplines of architecture, industrial design, product design, graphics and urban planning. Its mission is to educate the public about the value of good design and how it positively impacts the human environment.



Nelson Au's Pocket Harddrive for Seagate.

V7 Service Packs Released

All Cobalt, Xenon, Argon v7 users are entitled to a free update to Service Pack 2. Graphite v7 users have a free update available for Service Pack 3. If you have not downloaded your free update,



go to www.Ashlar.com.v7. If you have previously purchased a CD or have an ASAP maintenance plan, your CD should be arriving shortly if it hasn't already.

Graphite v8 in Beta



Graphite v8 is now in beta and a release about the end of March looks hopeful. Graphite's new features include:

- Mid-point Line Tool
- An Updated User Interface
- Resizable Dialog Boxes
- Tear-off Tool Palettes
- Dockable Tool Palettes
- Spacebar Pan
- Universal Binary Support for the Intel Mac (coming in SP1)
- Support for File Names Over 32 Characters Long
- AutoCAD 2007 DWG/DXF Support
- Direct, Multi-sheet PDF Creation with Optional Imbedded DXF Export
- New Installer
- Pen Style Palette
- Eyedropper Tool
- Offset Tool in Palette
- Further User Interface Enhancements (SP1):
 - Selection Mask Select All Operation
 - Circle and Arc Center-point Tool Operation
 - Linear and Polar Duplicate Tool in Palette

Universal Binary

To keep Graphite v8 on schedule Ashlar-Vellum has carefully considered the following factors:

- Universal Binary has no impact on our Windows user base.
- Running Graphite v8 on an Intel Mac under the built-in Rosetta emulator has little or no performance impact for 99% of our Mac users.
- The other features of Graphite v8 are of greater value to those awaiting this release than Universal Binary.

Therefore, because Universal Binary has minimal impact on the vast majority of our Graphite users, it has been decided that:

- Graphite v8 sp0 will be released without native support for Universal Binary.
- We will continue to work toward native support of Universal Binary as part of the free service pack 1 update of Graphite v8.

We take our customer needs very seriously and wish to support the greatest number

of users with the best possible software. We firmly believe that it is more important to make the productivity enhancing features of Graphite v8 available to users in a timely manner, than it is to make them wait for a technology function that will have little impact on their overall effectiveness as a designer. This decision does not apply to Ashlar-Vellum's 3D modeling products which are still slated to have Universal Binary support as part of the initial release of v8 sp0.

Cobalt, Xenon and Argon v8 in Beta



Cobalt, Xenon and Argon v8 will be released for the first round of beta testing about the first week of April. Some excellent new features are being added to the new version of each of these programs. Several of these are discussed below.

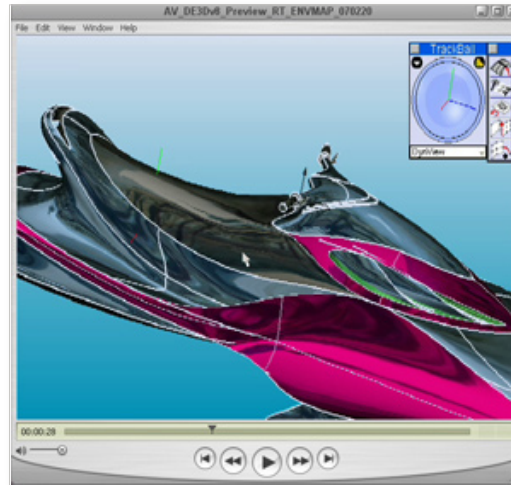
Area and Tube Lights

Cobalt, Xenon and Argon v8 will feature new photo-realistic light settings for both tube and area lighting with the proper geometric pattern and color temperatures.



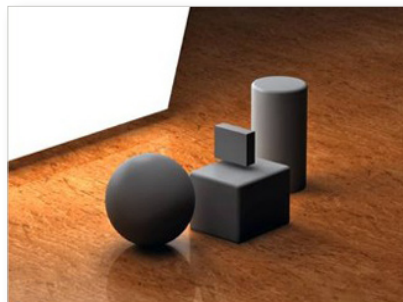
Tube lighting.

Use tube lights for fluorescent and neon lighting effects. Create a start and end point for a fluorescent tube. Use a spline to designate a curved neon light.



Environment Mapping

Cobalt and Xenon v8 both feature real-time environment mapping in the edit window. Environment maps provide interactive feedback on surface aesthetics. They are used to interactively evaluate curved surfaces in real-time rather than waiting for the scan-line rendering used in v7.



Area lighting.

Area lights create a lovely diffused light. Simply create a surface and have it glow as a light source.

Use these lights in stills and animations for improved realism for photo-realistic renderings.

Universal Binary

Cobalt, Xenon and Argon v8 are expected to have Universal binary support as part of the initial release.

To view a Quicktime movie of real-time environment mapping in action, go to http://ftp.ashlar.com/Movies/AV_DE3Dv8_Preview_RT_ENVMAP_070220.mov. This movie file is 13 MB and usually loads in less than a minute. Depending on web traffic it can take up to 10 minutes to load, even with a high-speed connection.

When using real-time environment mapping with complex modeling files, we recommend installing a medium- to high-performance workstation-class graphics subsystem.

Please note, that the movie was made using alpha v8 software and does not yet show the updated interface with the new icons that are coming in v8.

Tips from our Knowledge Experts

Measuring Distances in Cobalt, Xenon and Argon

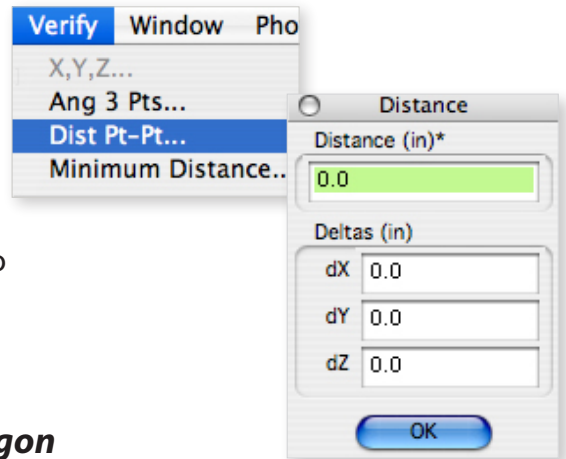
Q One of the tools I frequently use in Graphite is the ruler tool to perform point-to-point measurements on drawings. When will you implement this tool into Cobalt?

A Actually, there is an enhanced version of this tool already in

Cobalt, Xenon and Argon.

- Go to **Verify>Dist Pt-Pt** to open the dialog box.

This tool not only allows you to check a distance between two points, it also gives the delta values for X, Y & Z.

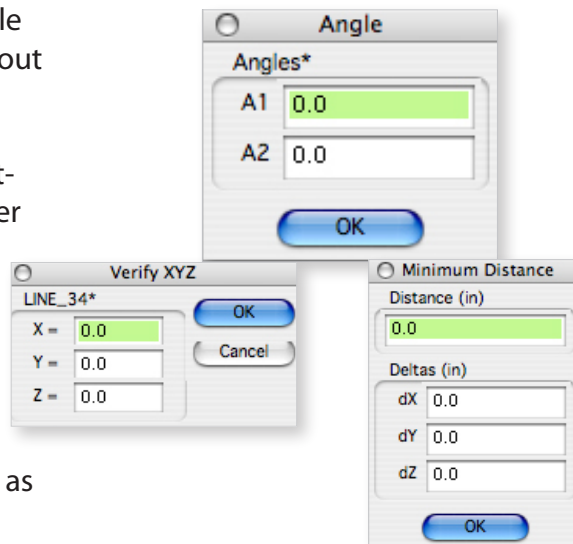


Checking Object Information in Cobalt, Xenon and Argon

Q What other tools are available for checking information about specific objects?

A In addition to Distance Point-to-Point, there are three other additional tools under the **Verify** menu. These include:

- **X,Y,Z:** This displays the model coordinate of a selected point. Edit the selected point values as desired.



- **Angle 3 Pts:** This calculates the angle formed by three user-chosen points.

- **Minimum Distance:** This calculates the smallest distance between two selected objects including any combination of curves, surfaces or solids. It is useful for checking if two objects will interfere with each other.

Small Geometry with Zoom All

Q When I do a zoom all my geometry becomes very small on the screen in Cobalt, Xenon, or Argon.

A One possible cause is that there is extraneous geometry in the file that is included when Zoom All is chosen.

1. Select the geometry that you want to keep by drawing a fence around it.
2. Use the Show/Hide palette to Hide the selected items.
3. Double click on the Selection tool icon to select all.
4. Don't worry that nothing

appears to be selected on the screen, it is in the Design Explorer.

5. Press the Delete key or use **Edit>Cut** to delete the unwanted items.
6. Use the Show/Hide palette to Show All.
7. Zoom All

Note: If a message appears warning that the items you are deleting are linked, contact support@ashlar.com.

Changing Objects between Layers

Q How do I get an object(s) from one layer and transfer the object to another layer?

A 1. Select the object(s) to transfer to the other layer.
2. For Graphite:
Select **Edit>Edit Objects**.
For the Cobalt, Xenon and Argon:
Select **Window>Edit Objects**.

3. The layers status box shows what layer the selected objects are on. If the layer field is blank, that simply means there are selected objects on multiple layers. Scroll within the layer box and select the destination layer.
4. Press the Apply button. Your objects are now on the new layer.

An alternate method for Cobalt, Xenon and Argon users is to:

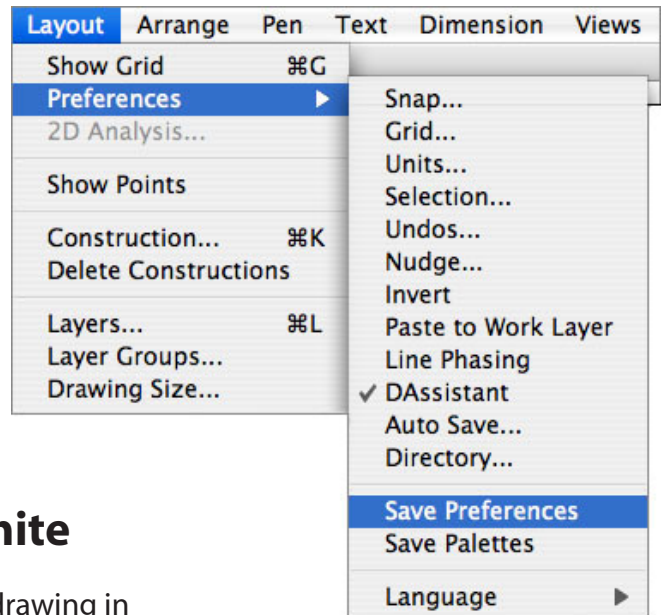
1. Highlight the object and use **Edit>Change Layer**.
2. A dialog box opens for selecting of the new layer. New layers can be created there if needed.

Saving Preferences as Defaults in Graphite

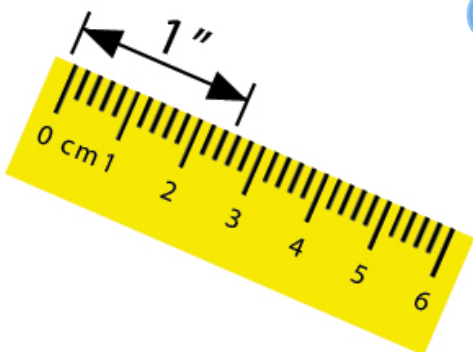
Q How do I save my Preferences as Defaults in Graphite?

A 1. Simply open up a new sheet with no geometry on it, make the changes to the variables desired.
2. Go to **Layouts>Preferences>Save Preferences** and the new preferences are saved.

NOTE: Be sure that there is no geometry on the screen (even geometry that is on a hidden layer is not acceptable) before Preferences are saved. This can cause the Preference file to become corrupt and/or slow performance.



Metric to Inches Conversion in Graphite



Q I accidentally did my drawing in millimeters and want it in inches. I've already set predetermined lengths.

A Use the standard conversion factor for millimeters to inches of 25.4.

1. Using the Resize tool (also known as the Scale tool), click a fixed point in the drawing.
2. Type 25.4 into the factor field on the status line and press Enter.

Student v7 Codes Renewed

In order to qualify for Ashlar-Vellum's Student/Teacher Units special-use licensing, students and design instructors must be currently participating in related design courses and not using the software to

produce commercial work of any kind. Each subsequent year, STU license holders will be required to reaffirm their status in order to receive new registration codes for another year. If you did not receive an email and need to reaffirm

your status, fill out and return the STU pre-ship agreement found at <http://www.ashlar.com/sections/shop/special-use-licensing/special-use-licensing.html>.

Training Becker & Mayer!



This month Ashlar-Vellum product manager, Greg Morgan and president

Robert Bou trained eight new Xenon users at Becker & Mayer! in the Seattle area.

Becker & Mayer! is one of the largest book producers of non-fiction books for adults and children in the United States. Their full line of book-and-toy juvenile products incorporate plastics, electronics and other materials. Becker & Mayer! is particularly proud of their SmartLab series of fun science books for children ages 8 to 10.



Robert Bou, far left, and Greg Morgan, second from right, with the razor sharp design team using Xenon at Becker & Mayer!

Accessory Feature

Graphite Share™, Cobalt Share™, Vellum Share™

Are you sharing drawings or models with clients, collaborators or production people who aren't using Ashlar-Vellum software? You could spend a lifetime sending different file formats back and forth, trying to find the best solution by trial and error. A better way is to use one of Ashlar-Vellum's free Share utility programs.

Share allows others to open, view, print, and export Ashlar-Vellum files on their

own Windows or Mac desktop. Share displays exactly what you intended, not some translation that may be different. Share is especially helpful when working with others who are using:

- AutoCAD
- SolidWorks
- Solid Edge
- Pro/E
- CATIA



Share comes in three versions:

- Cobalt Share v7, which also

views Xenon, Argon and old Vellum Solids files.

- Graphite Share v7, which also views old Vellum 2D/3D files.
- Vellum Share 99, which opens old .vlm files.

These powerful tools are free for the download at: <http://www.ashlar.com/sections/products/share/share.html>.

CD's with all three programs are also available through our sales department for US\$25.00 plus shipping. Order online or call +1 800 877 2745.



Watching Conceptual Design Take Form

Luc Heiligenstein of Tres Design Group has built a clientele designing peripheral products for sports equipment manufacturers. One of his recent successes is a computer heart monitor for a cycling company. Luc uses a number of drawing and modelling packages, among them, both Ashlar-Vellum Graphite™ and Cobalt™:

“When we discovered Ashlar-Vellum software in the late ‘80’s we knew then that it was the software that industrial designers would understand. It had an intuitive way for visual people to create something without going through a ton of calculations to achieve a tangible result.”

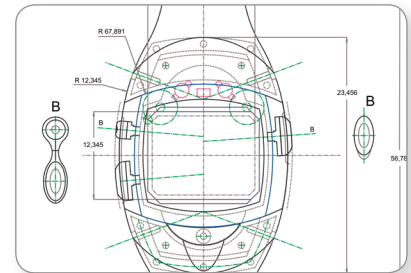
When Luc designs sports products like this heart monitor, he starts with the integrated electronics from his client, including the printed circuit board and LCD display. Then, using Graphite, Luc lays out the components getting the chips, receivers, contact keys and buttons into the best place. “Graphite is a better 2D solution because it is easy to move parts around. You don’t have to be an engineer to run it,” commented Luc.

With the layout done in 2D, Luc uses Cobalt to extrude parts for the PCB and LCD in several layers. “With Cobalt you can just extrude in any direction to get a product shape very quickly. It’s as flexible as modelling clay. Unlike other design software, you don’t have to calculate everything using parametrics, create a detailed assembly and add all the dimensions just to get something to show the client for interim approval.” Luc quickly lights and renders these extrusions and sends them off to the client for concept review.

Luc uses both Graphite and Cobalt back and forth, just as he does Adobe Photoshop and Illustrator. “One doesn’t go without the other,” he says. “It’s hard to check a minimum wall thickness in 3D but it’s easy in 2D. I can quickly check the viability of an idea with the manufacturer using Graphite because manufacturing people are used to 2D. For upper management, however, 3D photo-realistic models of the product are like 3D illustrations. They have more influence to sell product ideas.”

Because Luc’s client is standardized on SolidWorks, he delivers his finished designs in a standard file format that the manufacturing department easily handles from there. Any revisions are sent back into Cobalt without difficulty.

Luc concludes, “Ashlar-Vellum products bridge the gap between the artistic aspect and the engineering requirements with everything needed in between.”



Graphite is used to determine the best layout for the watch components and communicate with manufacturing in 2D drawings.



Photo-realistic 3D models have more power to sell design to upper management decision makers.

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Xenon Changes Designer's Point of View

For over 24 years John Bicht continued to use paper and pencil every time he wanted to design a new product. Then he found Graphite™ and was amazed at the fluidity with which he could communicate his ideas. But while he was quite adept at visualizing the final product in 2D wireframe drawings, his customers were not. So for marketing purposes he rather reluctantly moved to Xenon™, one of Ashlar-Vellum's 3D solid and surface modeling programs. Now he'll never go back.

Bicht admits that he struggled a bit to learn 3D modelling. "There were so many tools to use: surfacing, solids, rendering qualities, and so forth." But he successfully completed a redesign of a part for Versalab's original espresso machine while he was learning Xenon. Some months later he needed to redesign another of their espresso makers. This time he really didn't need Xenon's rendering capabilities, however. As Bicht put it:

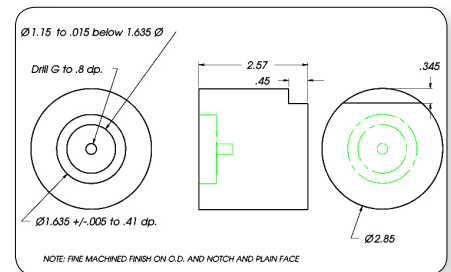
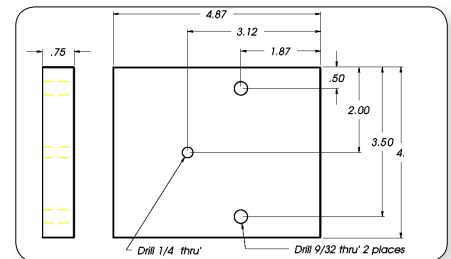
"The thing that was odd to me was the realization that only wanted to do the redesign in Xenon. While initially harder to learn than Graphite, Xenon's rich 3D capabilities, once learned, provided several huge advantages over simply working in 2D wireframe."

The first advantage was speed. Bicht found he could create a block in one step rather than moving from side view to front view, creating multiple rectangles. The block would appear in any view of a manufacturing drawing without copying and pasting. He could modify parts just as a machine tool would, removing material from a solid, cutting shapes or blending edges. He could view the result from any angle of the 3D model and instantly see it in his manufacturing drawing.

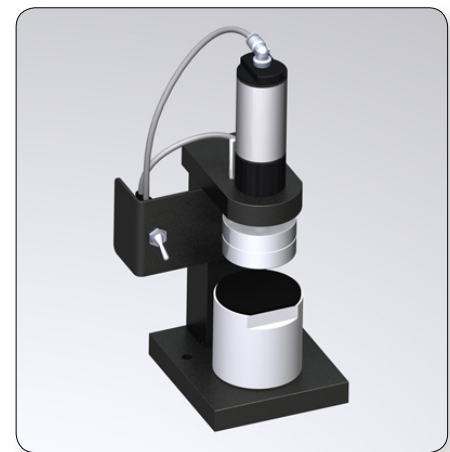
The second advantage was accuracy. The complexity of Bicht's designs demanded more than the usual number of views. Using Xenon, Bicht only needed to change the 3D model once and all of the views were automatically updated using Xenon's associativity. No longer does he waste time and money manufacturing parts that don't fit correctly because they were generated from a view that was not updated.

Finally, Bicht likes Xenon's rendering tools. "The ability to see the product rendered in 3D is very helpful in explaining things to others. I also get a better view myself."

Read more about John's success using Graphite in the Ashlar-Vellum proven success story "Not Your Daily Grind."



Bicht used Xenon for the speed and accuracy of its 3D modelling, plus Xenon's excellent photo-realistic rendering tools to redesign parts for the Propack Espresso system.



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