

# The Design Explorer

## The Ashlar-Vellum User Newsletter

Third Quarter 2005

### Ashlar-Vellum Releases Cobalt, Xenon and Argon v7

Ashlar-Vellum is proud to have released version 7 for Cobalt, Xenon and Argon on August 25, 2005.

Says Robert Bou, president of Ashlar-Vellum, "Version 7 provides significant improvements over version 6 in both stability and speed. It just simply works better. We've also added a few interface enhancements that people will be delighted with. Customers upgrading to the new release will be pleased."

In addition to a seriously re-worked infrastructure, v7 also includes the updated ACIS 12 modeling kernel and Lightworks 7.4 rendering engine. Improved translators for IGES, STEP, CATIA and Rhino are incorporated, along with improvements to the Design Explorer Feature Tree. Support for 3dconnexion's motion controllers

has also been added for Windows users.

"We've listened to our customers who have told us over and over, 'Make it rock solid,'" stated Greg Morgan, product manager. "That's exactly what we've done."

On the following page is a chart showing the major feature enhancements of this version. There are also some boxes showing the feature enhancements added in versions 5 and 6. If you're still using an older version of our software take a look at what you're missing.

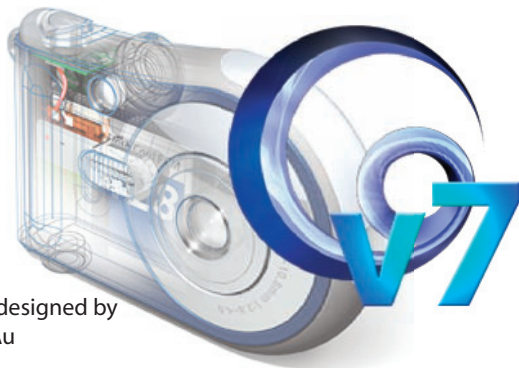
To upgrade to version 7, see your Value Added Reseller, contact Ashlar-Vellum directly at **1-800-877-2745** or see our web store at **www.ashlar-vellum.com**.

#### Initial feedback for Version 7 of Cobalt, Xenon and Argon:

"I really do like the selection thickening/transparency. You CAN do things in v7 that v6 didn't! The solid loft tools now work with guides."—Kevin Quigley, Quigley Design, United Kingdom.

"The Design Explorer is now well improved. It seems more reliable, the features are reordered and it carries the material description. Very good. Shelling and blends are way better than before, especially shelling: faster and more reliable. Great!"—Celso Santos, Rio 21 Design, Brazil.

"V7 seems to be well born, and I hope will be a great success. Everything is fast, and begins to work the way I think. Even the render library opens more quickly."—Alain Brux, Brux Concept, France.



Camera designed by  
Nelson Au

## Features and Benefits of Cobalt, Xenon and Argon v7

Below is a chart showing the major feature enhancements over the past several releases. Of course, if you're still using Vellum 98, 99 or 2000, your benefits will be even greater. If you haven't

ordered your upgrade, contact your Ashlar-Vellum Value Added Reseller today or call us directly at +1 800 887 2745.

Feature	Benefit
<b>Reworked Infrastructure</b>	<ul style="list-style-type: none"> <li>• Significantly improved stability.</li> </ul>
<b>Enhanced Undo Feature</b>	<ul style="list-style-type: none"> <li>• Improved reliability and speed, often instantaneous on complex parts.</li> </ul>
<b>Enhanced Visual Selection Tools</b>	<ul style="list-style-type: none"> <li>• Better visual selection and manipulation of objects with less confusion</li> </ul>
<b>Updated ACIS 12 Kernel</b>	<ul style="list-style-type: none"> <li>• Improved translations for STEP, IGES, CATIA v4 and InterOp.</li> <li>• Improved blending.</li> <li>• Improved shelling.</li> <li>• Faster modeling operations.</li> </ul>
<b>Enhanced Design Explorer Feature Tree</b>	<ul style="list-style-type: none"> <li>• Simplified to streamline model management and convey design intent to collaborators and clients (does not apply to Argon).</li> <li>• Shows material and decal names when accessories are installed.</li> </ul>
<b>Updated NURBS to v3.0</b>	<ul style="list-style-type: none"> <li>• Improved Rhino translations.</li> </ul>
<b>Support for 3D Connexion's SpaceMouse (Windows only v7 Mac coming in v8)</b>	<ul style="list-style-type: none"> <li>• Enhanced productivity and comfort for 3D modeling with this high performance motion controller.</li> </ul>
<b>Updated Lightworks to 7.4</b>	<ul style="list-style-type: none"> <li>• Implemented bug fixes.</li> </ul>
<b>Automatic Crash Catcher (Windows only v7 Mac coming in v8)</b>	<ul style="list-style-type: none"> <li>• Saves file and operating state before shutting down.</li> <li>• Allows user to send an automatic email to Ashlar-Vellum support department reporting the problem and last operating state for diagnosis and help from our support team.</li> </ul>
<b>Enhanced Drafting Assistant</b>	<ul style="list-style-type: none"> <li>• Eliminates annoying drop-outs.</li> </ul>
<b>Bug Fixes</b>	<ul style="list-style-type: none"> <li>• Over 100 aggravations exterminated.</li> </ul>

### Cobalt, Xenon and Argon v6, 2003

#### Features:

Support for native Mac OS X and Updated ACIS 8 Kernel.

#### Benefits:

- Improved speed, stability, user interface, and compatibility within the new OS.
- Improved blending.
- Improved shelling.
- Improved Booleans, especially coincident faces.
- Improved faceting.
- Improved translators for IGES, STEP & Catia.
- Bug fixes from customers.

### Cobalt, Xenon and Argon v5, 2002

#### Features:

- Dimensionally Constrained
- Parametrics
- Bill of Materials
- Improved Sweep and Loft
- Dynamic Pen Styles
- Multi-line Text Boxes
- Floating Layer Manager
- Transparent Objects while
- Faster Editing
- 100 other Changes

## A Hot Response

Shortly after releasing Cobalt, Xenon and Argon v7 last month, we were alerted to a problem with the software causing the registration code to expire almost immediately. Within 30 minutes

we had an email out to v7 customers alerting them to the problem and offering a temporary work-around. In less than 12 hours the problem was solved, a hot fix posted to the website and another

email sent to our users telling them how to download the fix. At Ashlar-Vellum we are committed to being immediately responsive to our customers' needs.

## Ashlar-Vellum Brings on New Head of Development

We're pleased to announce that we have a new Vice President of Software Development at Ashlar-Vellum. Christopher Griffin started Monday, May 23rd in our offices in Austin, Texas. Christopher will spearhead our development process, building and coordinating the work of our programmers both here and in the Ukraine. Christopher has previously worked with Ashlar-Vellum as a

contractor on a special project incorporating the haptic feedback device into Cobalt, so he is already familiar with our code and our team. Christopher brings not only exceptional programming experience, but also management experience coordinating teams and projects on a large scale.



Christopher Griffin, new VP of Software Development at Ashlar-Vellum.

## EDU & STU Combine to STU

Previously Ashlar-Vellum had two different pricing categories for Educational and Student users. Educational (EDU) was for instructors actively using Ashlar-Vellum products in the classroom or lab. Student (STU) was for students with current proof of enrolment. We've merged these two categories into one, calling it a

Student/Teacher Unit (STU). If you're an instructor at one of the many fine institutions of design using Ashlar-Vellum products and you notice that the prefix in your serial number changed with v7, don't be alarmed. You're still as important to us as you always were. Your STU version is correct.



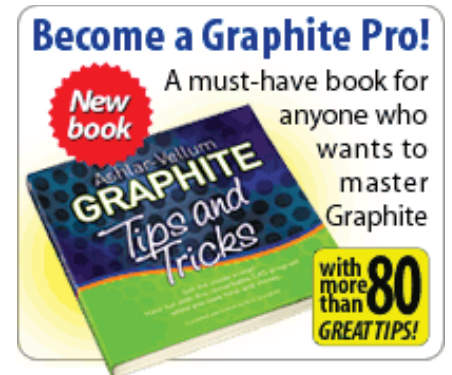
### The Language of Graphite

The Ashlar-Vellum development team has just finished translating Graphite into Japanese with the help of our Japanese reseller, Comnet. Graphite uses the ShiftJIS character set. This brings us to the grand total of nine languages supported within Graphite including German, Portuguese, Italian, Swedish, French, Spanish, and both British and American English. We'll soon make that an even 10 by adding Russian.

## Steering the Vehicular Design Add-on Specification

Ashlar-Vellum is in the beginning stages of developing a specification for a new Vehicular Design add-on for the aerospace, marine, automotive and related industries. If you would like to be part of this team (as much as we like puns, we

hesitate to call it a “steering committee”) and have your input included with others like Jim Tighe, *Design News Magazine’s* Engineer of the Year, please contact Robert Bou at robert.bou@ashlar.com.



## Meet our Staff



Jimmy Mills has recently rejoined Ashlar-Vellum and we’re pleased to have

him back. Jimmy is a wizard at our marketing database and will be working as our new Channel Partner facilitator. Jimmy is also a full-time student studying business.



Ross Brown is part of our tech support team. Previously a 3D animator, Ross

is an artist and has a passion for vintage Stingray bicycles with banana seats and sissy bars. He’s also the most camera-shy member of our staff, so don’t expect to see another picture of him anytime soon.

guages and spends her free time painting or enjoying music.



Vladimir Karpenko is the managing director of our office in Kiev, where

we have software development, quality assurance and web development support. Russian by birth, Vladimir finished graduate school in the US and has most recently worked for HP in Houston, Texas before joining us. In July he became a US citizen and married a lovely Ukrainian girl.



Pam Whaley works part time as our book-keeper. She’s a 5th generation

native Texan—a very rare breed. As a country girl she loves antiques, horses, and says her two granddaughters are her life.



Victoria Roik is our newest graphic and web designer in our Kiev, Ukraine office. She’s tackling a new project now to get all

of our graphical assets cataloged in a database. She speaks four lan-

## Architosh Represents Ashlar-Vellum

Ashlar-Vellum is proud to be represented by Architosh, the Macintosh-based website dedicated

to architects and CAD/3D professionals worldwide. Ashlar-Vellum products will be listed as an Archi-

tosh Store with this growing retail establishment, featuring Graphite, Cobalt, Xenon and Argon.



## Accessory Feature Vellum:tracks



## Vellum:tracks

<http://www.ashlar.com/sections/products/vellum-tracks/images/Track-01.mp3>

Click on the link above and listen. Do you hear that? That's a sample of "E Song," one of 13 royalty-free instrumentals on the Vellum:tracks CD. These great cuts are designed specifically to give 3D modeling movies a higher level of polish and professionalism—without having to steal music from those who work as hard as you do to create fine intellectual property.

Vellum:tracks include a variety of styles and sounds. Edit them to any length using standard music editing software. Segue from one song to another to match the mood and flow of any presentation.

Developed by Devolver Music, a

soundtrack production company and band here in Austin, Texas, Vellum:tracks includes cuts specially designed to be both listenable as an album and workable as support for CAD movies. Says John Schussler of Bose, "The music is cutting edge with an edge, well suited to complimenting modern 3D CAD designs. I appreciate having such royalty-free tracks on hand to augment CAD presentations."

To listen to a sample of all 13 tracks visit the Ashlar-Vellum website at:  
<http://www.ashlar-vellum.com/sections/products/vellum-tracks/vellum-tracks.html>.



- Vellum:tracks CD US \$100.00.
- Vellum:tracks e-only download US \$92.81.
- Vellum:tracks site license CD US\$200.00
- Vellum:tracks site license e-only download US\$192.81.

CAD movies have never looked so good.



Free viewer for your clients and collaborators.

### Share

#### Ashlar-Vellum Files

Do you need to share Ashlar-Vellum files with clients and collaborators who don't own Ashlar-Vellum software? Try one of our free Share utility products.

Share is a set of utilities that allow others to open, view, print and export Ashlar-Vellum files from their own Windows or Mac desktop. Share displays exactly what you intended, not some translation that might be just a little different. It's especially helpful for interacting with clients or production people using:

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

Share comes in three versions for Mac or Windows:

- Graphite Share, which also views old Vellum 2D/3D file.
- Cobalt Share, which also views Xenon, Argon and old Vellum Solids files.
- Vellum Share 99, which opens old VLM files.

These powerful tools are free from Ashlar-Vellum for the download at:

<http://www.ashlar-vellum.com/sections/products/accessories/accessories.html>.

## Accessory Feature Vellum:environments

Have you taken a look at our newest addition to the Vellum accessories, Vellum:environments? Graeme MacDonald and Nick Slaughter teamed up to create this great new product that works as an easy starting point to speed renderings in Cobalt, Xenon or Argon.

Vellum:environments contains 15 virtual photography studios with large, smooth surfaces that are pre-lit for easy modification. There are five sizes each of the Universal Studio, Chrome Studio and Infinite Studio.

Just follow the step-by-step instructions for the best results, including:

- Preparing a model for rendering.
- Applying and modifying materials and decals.
- Applying a wrapped image.
- Mixing custom materials.
- Placing and manipulating lights.
- Working with shadows.
- Analyzing material settings in an example rendering.

Also included are:

- Illustrated explanations of the five shader classes.
- Illustrated explanations of the main reflectivity controls.
- Trouble-shooting guide.
- Thumbnail guide to built-in materials.

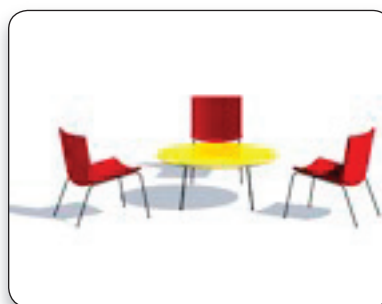
Pricing: US\$100.00 for CD & Book, US\$38.54 e-only, US\$60.00 Book only. Site licenses available.



The Universal studios can be colored and changed to accommodate many styles, with backdrops facilitating wide viewing angles.

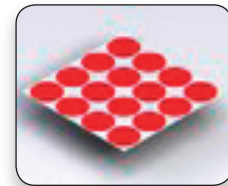


The Chrome studios provide reflective backdrops that mimic the real world, and are great for polished metal objects.

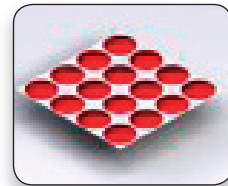


The Infinite studios allow models to cast a ground shadow within an infinite backdrop.

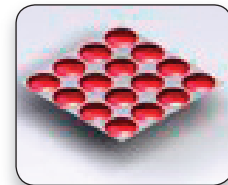
One example of the valuable tools included in the Vellum:environments book is the illustrated examples of the shader classes seen below.



Color: plane, pattern or image, including wood and tile.



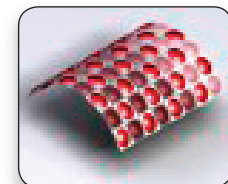
Displacement: 3d surface texture, regular, organic or image-based.



Reflectance: how light is reflected including matte, mirror, glass and even chrome.



Transparency: applied evenly or as a pattern, including transmission of light through a part.



Texture Space: maps a texture onto a part, wrapping and scaling as desired.

## File Translation Tutorial for 3D Modeling

The importing and exporting of 3D modeling files is a challenging issue across the entire industry. Ashlar-Vellum is committed to providing the greatest compatibility, allowing you to collaborate with other designers, engineers, clients and manufacturers. It is important to remember, however,

that a file translation is just that—a translation—and just as in translating between foreign languages, slight subtleties may be lost in the process if you are not careful.

We'd like to take this opportunity to discuss some of the issues that

commonly occur when translating files into and out of Cobalt, Xenon or Argon to help you get the best possible result for the greatest collaborative effect. In the upcoming December issue of The Design Explorer we will discuss issues relating to Graphite translations.

### Before You Begin

Before beginning, it is important to establish a clear purpose for any particular translation. Are you showing a client a new design idea? Are you sending a file to a collaborating engineer for FEA analysis? Are you sending the files out for rapid prototyping? If you're trying to accomplish more than one goal, consider two or more translations.

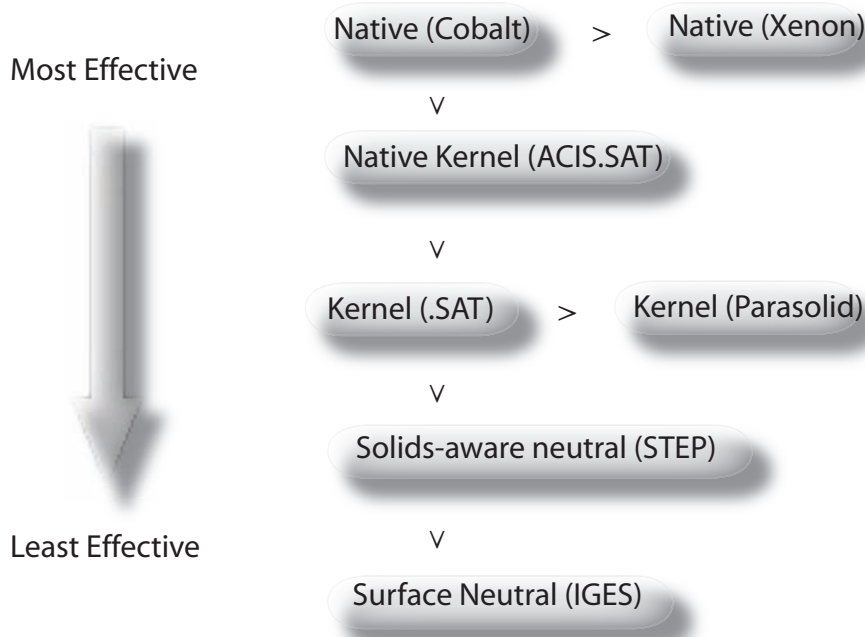
For 3D modeling files it is best to avoid generic options such as DXF or IGES whenever possible. Always consider all of the options available from the import and export lists within Ashlar-Vellum products and those of the target application. Often a better choice is available. We'll discuss how to determine the best choice as we continue.

Consider first if the translated data must be edited or just viewed and/or printed. If it is just viewed or printed, use one of the free Ashlar-Vellum Share utilities talked about on page 5.

If it is 3D solid and surface modeling data and it must be manipulated and saved, what is the target application and is that target application based on a kernel technology? By far and away, the most important advice we can give is to *always stay within the native kernel* whenever possible. For Cobalt, Xenon and Argon, this means the ACIS kernel, which has been used by a number of other industry leaders. Many other products which are not ACIS kernel-based, such as PTC's Pro/E and Dassault's SolidWorks provide an SAT translator module for good results.

cont. on pg 8

### 3DSolid & Surface Translation Effectiveness



## Before You Begin cont. from Pg. 7

If you can't stay within the same kernel, then it's best to go kernel-to-kernel with the Parasolid .X\_T or .X\_B. This provides the exact solid and surface modeling data embedded in the file for reliable results.

Further down the ladder of choices would be a solids-aware neutral file format such as STEP. While it's more reliable than using IGES, it's less so than any kernel-based translator.

Finally, the last choice to use is a surface-aware neutral file format

like IGES. IGES has a whole set of idiosyncrasies and is best left alone as much as possible.

Before exporting, make sure that the target application can handle multiple bodies in one file. If not, use the "Selected Only" option to export an isolated part in a file.

Before importing or exporting 3D modeling data, use the "Check Object" function in Ashlar-Vellum software to verify sound geometry. This prevents a good deal of trouble down the line.

It is a general fallacy that re-importing a file successfully proves translation accuracy. Re-importing is not a guarantee of success nor is it an indication of failure.

Use Zip or Stuff-it to compress files before emailing. Using an email program's built-in compression has unreliable results on graphics, often converting them to text files.

## Shop Our Web Store



Buy a boxed copy or get your software now, with a fast e-only, downloadable version.

## Specific Translation Advice for Cobalt, Xenon & Argon

Below are some specific points regarding individual file formats with which you might be trying to communicate your 3D solid and surface modeling data. Following this is some advise regarding specific products to which you might be importing and exporting.

### File Format Information

#### ACIS SAT

Cobalt, Xenon and Argon are based on the ACIS kernel from Spatial. If the target application is also ACIS-based or has a historical tie to ACIS, such as Autodesk Inventor, use the .SAT file format for the very best possible result. SolidWorks also has a built-in .SAT

translator. This is the BEST way of translating files to and from Cobalt, Xenon or Argon.

#### Parasolid (Windows Only)

This is another popular kernel for such applications as Solid Edge. Cobalt, Xenon and Argon will translate to Parasolid versions 7-12 in both .X\_T and .X\_B file formats. Be sure to determine the correct version and format before translating.

#### Pro/E

The Pro/E format was removed from Cobalt, Xenon and Argon v7 because Pro/E contains support for .SAT files, the preferred method of translating files between Pro/E and Ashlar-Vellum 3D Modeling

files. If you previously relied on the Granite translator in v5 or v6, you can continue to use these versions with your old serial number.

#### CATIA

Ashlar-Vellum 3D modeling programs have a built-in CATIA v4 import and export option that's been enhanced in v7.

#### IGES

This is a very old standard that is best described as a can of worms. Ashlar-Vellum tech support recommends using it only as a last resort. If you're having trouble with IGES files, it is best to find another format, preferably at the kernel-level.

cont. pg 9



## Specific Translation Advice for Cobalt, Xenon & Argon cont. from pg 8

### STEP

This is the ISO standard acronym for **ST**andard for the **E**xchange of **P**roduct Data. It was designed to replace the IGES format and carry more data. Again, we would advise using a kernel-level translator if it is available before trying STEP.

### STL

You will need to make a mesh prior to exporting to STL for stereo lithography. Check the STL facets to eliminate any rectangular facets which are not supported by some rapid prototyping machines.

### QuickTime Movies

These have good rendering quality and support walk-throughs and fly-bys of object and panoramic Virtual Realities created in Cobalt, Xenon and Argon.

### Adobe Illustrator

The built-in translator within Cobalt, Xenon or Argon works well. Remember that the Adobe Illustrator exports at the current zoom level, so be sure to set it to 1 for a 1:1 scaled export.

### Rhino 3DM

Version 7 of Cobalt, Xenon and Argon now imports 3DM 2.0 and 3.0 files. To export to Rhino 3.0, use .SAT for best results. While IGES will work to export to Rhino 2.0, it is best to use Rhino 3.0 to revert to Rhino 2.0.

### PDF

While support for PDF is not built into Ashlar-Vellum software, it is readily available. Use Adobe Acrobat or Distiller for the best quality PDFs. PDF files made through the operating system are often less accurate.

### DXF/DWG

Please remember that DXF and DWG are NOT published "standards." They are file formats invented and encoded by Autodesk.

There are several challenges inherent with DXF/DWG files. First, they contain no units. Be sure to identify metric or English units upon import. Second, because individual users customize their systems, there is often difficulty in translating fonts, line weights and patterns, dimensioning styles, hatch patterns and custom symbols. The resulting visual fidelity of these is moderate in Cobalt, Xenon and Argon.

When importing and exporting 3D solids and surfaces it is usually much more effective to use something other than DWF/DWG. We recommend using ACIS .SAT whenever possible. Another option is to use Parasolid .X\_T. These are both kernel-level translators and provide the best possible results. Before going to DXF/DWG for 3D models we would recommend trying STEP, or as a last

resort, IGES.

On the other hand, for 2D data, DXF or DWG work very well. All Ashlar-Vellum programs import and export exact 2D/3D wireframe geometry using the DXF or DWG file translators. Also be aware that DXF and DWG are different and may provide very different results. We often recommend trying them both to see which provides the best result for your file.

If the goal is to import or export archive drawings and it's important to preserve text and dimensions, we would recommend using a free copy of Ashlar-Vellum Share or buying Adobe Acrobat.

Ashlar-Vellum has been asked about support for the DXF 2005/2006 standard. While the encryption on this system has been broken, it requires changes to our file structure and will not be incorporated until version 8. If you need to convert to this newest format, we recommend purchasing Any DWG DXF Converter 2005 for about \$75 from AnyDWG Software, Inc.  
cont. pg 10



## Upgrade Your Graphite

Upgrade to the latest version, or upgrade to another product from Graphite.

## Tips for Getting to and from Specific Products

### Adobe Illustrator

Illustrator is a 2D program, so any 3D information will be flattened to the view used during export. Remember to use the built-in Adobe Illustrator import/export function within Cobalt, Xenon and Argon. This translator was built for Illustrator 8. When saving for Illustrator 10 or CS, use the export option and choose Illustrator Legacy as the format. In the next window, choose Illustrator 8 as the version. This disables all options.

Many graphics created in Illustrator, including logos, may look correct but are mathematically too complex or are under-defined to translate well for 3D work. Use Logo Spruce or another AI plug-in to clean them up prior to importing in Cobalt, Xenon or Argon. Otherwise, be prepared to spend hours cleaning them up by hand. Using small 2D chamfers on all adjacent spline connections significantly improves the use of Draft and other complex operations.

When exporting to Illustrator, always set the zoom level to 1 for a 1:1 export scale before exporting. To do this, select the Zoom tool, type 1 in the Scale field and press enter, then continue with your export.

### AutoCAD

For best results use ACIS .SAT for 3D data. Use DXF 2000 for 2D data.

See the section on DXF/DWG above.

### Pro/E

For best results use ACIS .SAT for 3D data. Use DXF 2000 for 2D data. See the section on DXF/DWG above.

### SolidWorks

Use the ACIS .SAT translator built into SolidWorks for the best results with 3D shapes to and from Solidworks 2004/5/6. Use the Parasolid translator for Solidworks 2003 and earlier. Do not use IGES to communicate 3D shapes between Ashlar-Vellum 3D modeling programs and SolidWorks.

For 2D drawings, use PDF or eDrawings for printing, viewing and visual collaboration. To use the 2D drawing as the basis for a 3D model or further 2D work, use the DXF 2000 export.

### Rhino

There are several issues to be aware of when translating Rhino data to Argon, Xenon or Cobalt. First, many Rhino files have "extra" surfaces that cause the Stitch command to fail. Carefully select all surfaces desired for a specific stitch operation. Also, many surfaces created in Rhino are unbounded and will be difficult to re-trim automatically to correct the water-tightness during the stitch operation.

Next, many times a "solid" or collection of surfaces defined as a solid within Rhino is not as water tight as necessary for Cobalt or other true 3D modeling programs.

Finally, many adjacent surfaces created by Rhino users are not truly adjacent, causing problems in stitching and double lines in the model-to-sheet function.

### The End Result

We hope that you'll find this specific translation advice helpful as you collaborate with others across the industries. Ashlar-Vellum is committed to empowering you with the tools, techniques and knowledge to change your world in a significant way. Few people can do that alone. For most of us it is a team effort. The translation of data to facilitate collaboration is one of the many ways we are enabling designers to work together to this end.





# Ice Cream Dream Machine

*Nick Dearden of Deardens Limited in the United Kingdom was contracted to handle the product design, manufacturing, documentation, assembly line planning and all logistics for the initial production of 5,000 soft-serve ice cream dispensers to be delivered in five months. Working with a virtual team spread throughout the United Kingdom, Dearden used Cobalt<sup>TM</sup>, virtual prototyping and the internet to coordinate his network of experts and get the job done in an extremely efficient manner.*

Dearden relied on Cobalt's hybrid 3D solid and surface modeling and 2D wireframe capabilities to help him think through his design ideas. Built-in rendering produced realistic visualization for both client and collaborators. Finally, Cobalt's extensive import/export capabilities supported the virtual prototyping and final manufacturing process. Says Dearden,

***"Cobalt is the heart of our virtual prototyping design and development process, supplying all our solid modeling, 2D drawing and image rendering needs in the one package."***

After approval of the dispenser's exterior design in Cobalt, the team developed progressively more detailed models for a virtual prototype. Cobalt supplied the data to drive the downstream 3D information for mechanical studies, engineering analysis, tool making and manufacturing.

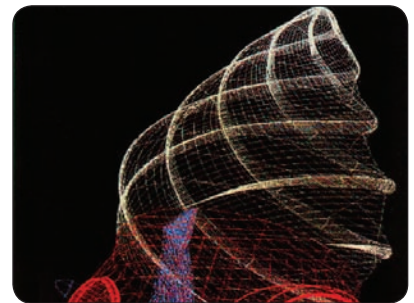
No less than 100 design reviews were required, so the ability to email rendered 3D images and engineering drawings was crucial. Dearden knew that the dispenser's swirl would produce a good deal of debate, especially since it required expensive mold tooling. Cobalt's extensive surface modeling capabilities paid off here, enabling him to create six different swirl designs, prototyped via stereolithography for evaluation.

Over 15 subcontractors across the U.K. were involved in the manufacturing process, each using 3D geometry files exported from Cobalt, including laser cutting and fabrication, FEA, STL modeling, metal part production and stainless steel casting. After mechanical testing, the go-ahead was given for production. This included injection molding, vacuum forming, and tooling, all done in a Delcam CAM system that directly imported Cobalt files. Finally, a field manual was quickly produced using Cobalt drawings.

In only five months the ice cream dispenser went on sale in April and by July had exceeded sales forecasts. Ashlar-Vellum is proud that Cobalt allowed so many different people to contribute to the design's success.



In only five months from concepts through distribution, Deardens brought this ice cream dispenser to shops throughout the U.K.



Cobalt's surface modeling (middle) enabled six swirl designs to be prototyped using STL (above) for evaluation.

#### **Background/Contact:**

For more details on this project contact:

Deardens.Ltd

Studio 14044-46 Morningside Road,  
Edinburgh, EH104BF, United Kingdom

[www.nickdearden.com](http://www.nickdearden.com)





## Taking the Devil out of the Details with Cobalt<sup>TM</sup>

*Martin Brunt of Seattle Spiral builds 3D signs and environmental graphics that cost millions of dollars. Cobalt is a success for Brunt, giving him the edge to become the industry pace setter.*

Brunt started using Ashlar-Vellum<sup>TM</sup> software in 1993 when it was known as Vellum 3D. Through the years he's upgraded into Cobalt, citing it as a turning point in his business. Getting started in a three-day workshop, he then put the software to work in his design and fabrication business.

Cobalt gave Brunt the competitive edge from the start, designing 3-dimensional signs and environmental graphics with complex geometry, that required structural engineering and design interface for city permit approval. As a master craftsman, Brunt understood how to build things. He knew what the production shop required and what the engineers needed. He found Ashlar-Vellum software ideal for quickly creating complex geometry.

"After one year I was able to compete with the big companies and their CAD operators that used AutoCAD," says Brunt. "When I started doing site surveys and permit drawings on-site using Cobalt on my laptop, my business started to build really quickly." After spending a couple of hours of design time with the client sitting in their lunchroom, Brunt had the design and approval process completed.

***"Cobalt's precision detail and export features made production two to three times faster. In short, the project was ready for production before the big companies ever sent out the surveyor."***

The clients love it. As a small company, Brunt says he completes 10 to 20 times the work volume through innovations provided using Cobalt.

Cobalt helped Seattle Spiral move in a new company direction, completing international projects, including fabrication of metal atrium trees for Hong Kong's elegant Langham Place. Brunt says, "Cobalt's solid modeling was the reason for our success in Asia. Once the production model was un-folded and flattened, it became a production language that over 50 non-English speaking craftsmen in mainland China could understand."

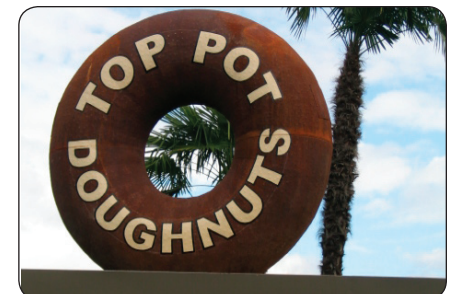
Brunt's parting words of advise, "Detail it with Cobalt, pass it to production and have fun! Cobalt takes the devil out of the details."



Brunt designed and fabricated 11 of these Chinese dragons using Cobalt for Seattle's International District.



These metal atrium trees were designed in Cobalt and fabricated in mainland China, using Cobalt as a "production language" easily understood by non-English craftsmen.



Three-dimensional signs, like this one for Top Pot Doughnuts, are just some of the interesting things Brunt designs in Cobalt.

### **Background/Contact:**

For more details on this project contact:

**Seattle Spiral**  
4885 Lakehurst Ln. SE  
Bellevue WA 98006

**Phone:** (425) 943-0042

**Website:** www.SeattleSpiral.com