VirtualWork
A newsletter for customers and friends of IES

VA: You Should Know!

Misconceptions can be costly or embarassing!

Wood Design

Wood design per **NDS 2012** is supported in VisualAnalysis 11.0. It will also check against NDS 2005, but **YOU SHOULD KNOW** that it uses the new NDS 2012 shape and material data for those checks. This may not be technically correct, but is more practical than trying to maintain or jugle multiple databases. (This is documented in the Help file.)

Strange Views and Behavior?

YOU SHOULD KNOW that we hear this all the time:

"After updating our video card driver the model works like a charm! No delay in changing view or selecting members. VisualAnalysis is much quicker and never crashes. I would have never thought of the video card as the root of the problem!"

Update your video card too!

Importing Custom Steel Shapes for Design

You can create custom shapes in ShapeBuilder and import them to VisualAnalysis for analysis for just about any shape or material. However **YOU SHOULD KNOW** that if you want design-checks from VisualAnalysis then you are limited to shape "profiles" that match AISC shapes: W, HSS, C, L, WT, etc. There is no support in VisualAnalysis for designing built-up steel shapes like a W+cover plate, or Crane-Girder (W+C).

Release 11.00.0008 was Published June 19th

The first few releases of VisualAnalysis 11.0 did not properly 'check for updates' so you may *think* you are up-to-date. **YOU SHOULD KNOW** that the **IES Updater** is not fooled. Run it to get the latest updates and also to find out why VisualAnalysis was updated!

Disabling Member Elements?

You cannot disable member elements in VisualAnalysis, there is no feature for this (like staged construction). **YOU SHOULD KNOW** that you could define a very "soft" custom material and call it "Dsiabled" and set a member to use this material. Soft might be defined as using a Modulus of Elasticity, E, that is 1/1000 of the E for your other members. As Dr. Galambos used to tell us "Stiffness draws Forces", so puting a noodle in your model will effectively disable it.

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ShapeBuilder News

**Discover The Power of ShapeBuilder!**

Print "Tall & Thin" Shapes

The ShapeBuilder report is not currently very customizable. We print the active view and all of the calculated properties. What you see in the graphics is controlled by the **Filter** tab in **Project Manager**, and there are some preference settings there for things like Fonts. The units and decimal places are controlled by the Unit Style settings.

But almost magically, there are actually two report **layouts** available, depending

subtly upon the aspect-ratio of the Sketch View you are reporting. If you have a very tall-thin shape you might want to "squeeze" the graphics by making the ShapeBuilder application window narrower (drag a corner). A picture explains it all:
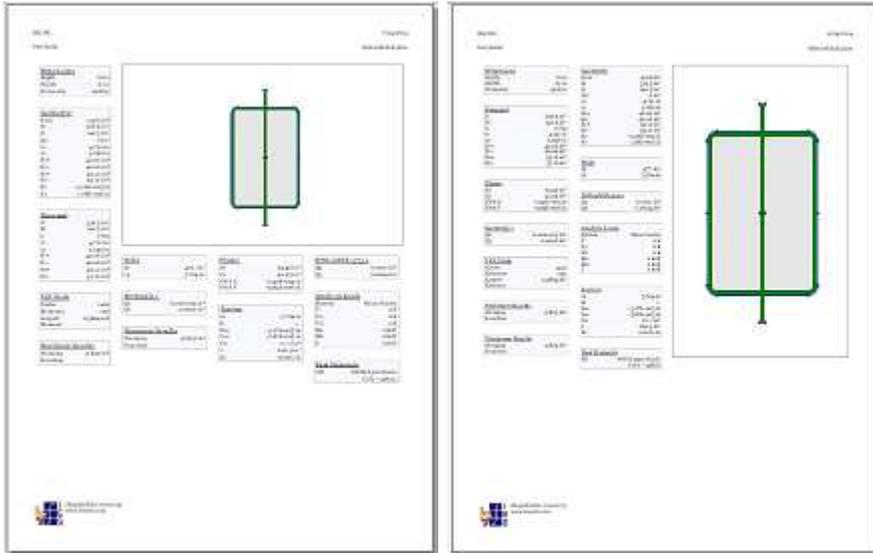
"F" is for Flattener

ShapeBuilder 7.0 tries to simplify your life by letting you creatively build up shapes out of editable parts that may be resized or relocated at any time. In addition, any part may be flagged as a hole (some parts also contain an implicit hole, like a Pipe or HSS). Finally you can change materials of parts to create 'composite' shapes.

In order to calculate properties, ShapeBuilder will "Flatten" your shape by merging overlapping parts of the same material, or creating a 'hole' in one material for an embedded part of a different material, or subtracting holes. Generally this works very well and you can see the results by **pressing the "F" key** in the Sketch View, or by switching to the Advanced Analysis tab.

Sometimes you will be surprised at the result! Generally this happens when there are "tolerance" issues, shapes either do not touch or overlap in a weird way. Editing coordinates of Top, Left, Right, or Bottom may help.

Part-in-Hole

The most common surprise in ShapeBuilder 7.0 is the way holes are handled, in that they are subtraced "last" during the flattening process. If you try to place a part inside of a hole it will simply vanish, unless it is fully contained AND shares a common border with the hole AND is of the same material as the containing part. (We have recently improved this behavior from the original release.)

For circular parts or very complex situations, you may need to be a bit more creative with your parts-inside-holes situations. We have created a video that demonstrates the technique for making a "Net Hole" after sutracting out the area of parts that might be inside of it.

Custom Shapes for VisualAnalysis?

You can export non-composite shapes to VisualAnalysis for analysis. Some shapes (like steel or wood or aluminum) may also be used for design-checks. At present, if a ShapeBuilder shape has two different steels (different Fy values) it will not export, as it is composite! For analysis in VisualAnalysis all we need are A, I, S, and J, but for design there are lots more requirements and more properties are needed. Read about it in the Help file.

Import Cold-Formed Steel Shapes?

Because of the way VisualAnalysis performs cold-formed design you cannot simply create a built-up shape in ShapeBuilder and export it to the database to get checks from VisualAnalysis.

ShapeBuilder provides the path for importing cold-formed or light-gauge steel shape libraries in order to get design checks in VisualAnalysis. These import "through" ShapeBuilder, but not "into" it! You must create these shapes in the non-IES product (**CFS** from www.rsgsoftware.com).

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Install Issues?

Things Will Go Wrong

Terminology

We hear from about 1% of our customers that they have difficulties with IES product installations. This is just a fact of life in the world of Windows PCs (See Keep a Clean PC). In order to provide the best support we need to understand each other, so here is some terminology:

Download: copying a "setup" file from our web server to your machine

Install: running "setup" to get our product onto your machine, adding a desktop or Start menu item.

Licensing: Identifying you with a purchase you have made.

Activation: Keeping track of how many times your license is used. Deactivation frees up your license for another machine.

Won't Install (Setup Fails)

This can happen for a number of reasons:

- Insufficient Privileges
- Failed previous installation
- Corrupt download (setup.exe)
- Previous install is corrupted

Solutions are usually to run with 'admin' privileges, reboot the computer, remove any previous install of the same product (perhaps through Clean Uninstall instructions in our FAQ Answer).

Won't Run (Product won't launch)

If you try to run an IES product and you get 'nothing' or a cryptic error message on launch, it is often a result of:

- Third-party software conflicts
- Regional (non-USA) settings
- Out-Of-Date video card driver
- TEMP folder is full

Solutions are to search the FAQ with key words from the error message. Update your video card driver (instructions in FAQ). Or use a tool like MSConfig or CCleaner to do some housecleaning or investigation (See Keep a Clean PC). You might need to run a utility like Process Monitor to send a log-file to IES for inspection, using instructions in the FAQ!

Licensing Fails

- Using Customer ID instead of License ID
- Wrong Password
- Wrong Product License ID
- No Internet or Firewall Block
- Expired License
- Wrong Product Version

Solutions are to verify your licenses and License ID's at the IES Self Service Portal, log-in with your email address. The system can email your password if you have forgotton. Find quick licensing instructions in PDF or video format at the above link. Make sure you are using the version of the product you have purchased! For licensing help, please email sales@iesweb.com, rather than support@iesweb.com, which is for engineering/technical issues.

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Keep a Clean PC!

Prevent Problems in Your Windows PC

Open Architecture

The Windows operating system has a somewhat crazy architecture in that just about anybody and everybody can create software that hooks deep into the bowels of the system to provide "services". While this may be useful and helpful, it can also leave your system vulnerable to a variety of questionable utilities or even viruses and trojan-type attacks. At IES Technical Support we have seen these items prevent products from starting, cause performance issues, or make 'normal' operations like a mouse-click or a print command crash.

Easy Defense: Offense!

The easiest way to defend against a slow machine with strange problems is to be somewhat proactive:

- Do not install questionable tools
- Be "ruthless" with start-up programs.
- Uninstall products you do not use

Most of the software that wants to run at start-up on your machine does not NEED to run there and simply slows down the boot up process (at best) and interferes with normal Windows operations (at worst).

Manage Start-up Items

You can use **MSConfig** (ships with Windows) or a free utility like CCleaner to monitor and manage start-up items. We like CCleaner for its ability to clean-out registry garbage left over from uninstalled programs, easily disable or delete start-up programs, and monitor what add-ins your web browser (Chrome, Internet Explorer, or Firefox) is using. It will also clean out TEMP files and folders and other items that can slow-down or congest your system. In fact, after 10 years of this tool "saving my bacon", I have purchased a Professional License of it today...and no, I have no stake in this product or the Piriform company.

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