

VisualAnalysis 9.0 Tidbits

Little things add up to everyday fun

Home run features might make VisualAnalysis 9.0 a compelling upgrade, yet it is often the nice little "tidbit" features that make your chores a whole lot more fun. The following items may not make the marketing postcard or email, but are worthy additions that should not be missed:

Copying a Member Sets Default Properties

When creating new members it is nice to pre-define what shape, material, end-releases, etc. are used. You can setup preferences and use the Format Painter, but now you can also just **Copy** a member before drawing new ones.

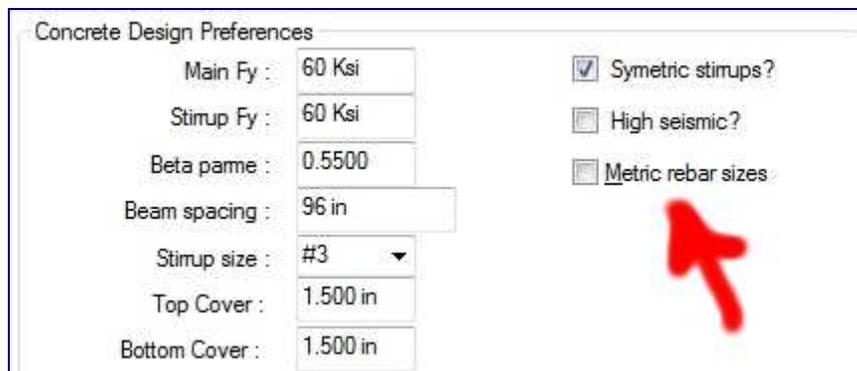
Toggle Object Toolbar Buttons



The toolbar buttons that show or hide nodes, members, and the like now display "state" information so you can see at-a-glance that you have suppressed items in the graphics.

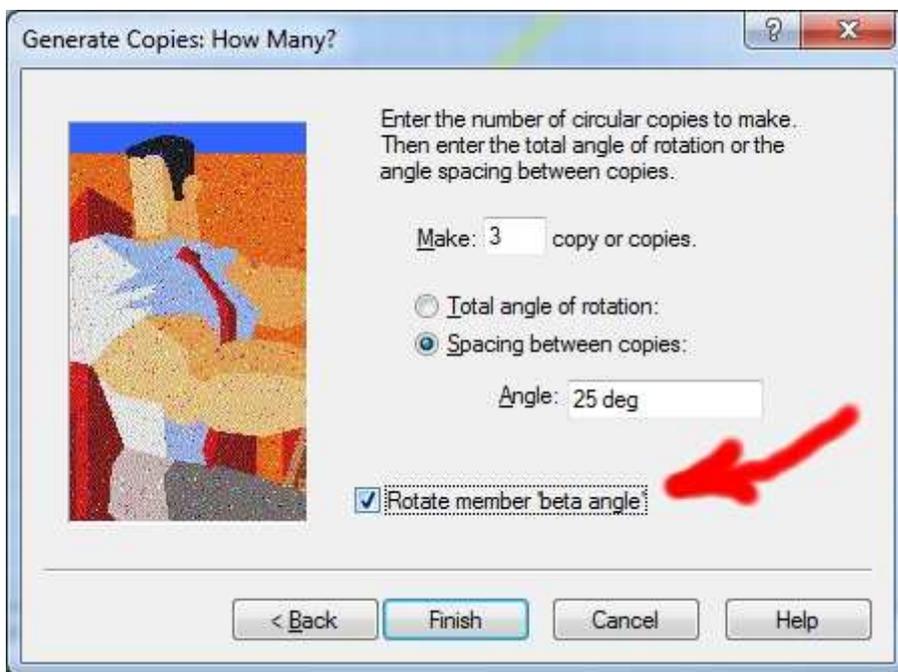
Metric Rebar Sizes

There are lots of settings and options when doing concrete design and to help we have added a number of them to the Preference settings including the option to use metric bar sizes instead of the 'normal' USA sizes.



Generate Circular Copies: Set Beta Angle

When generating copies of members in a polar fashion you may wish those members to align their local axes according to the center of rotation. This option has been added to intelligently rotate members as they are generated.



Mouse/Keyboard Tips in Context Menu

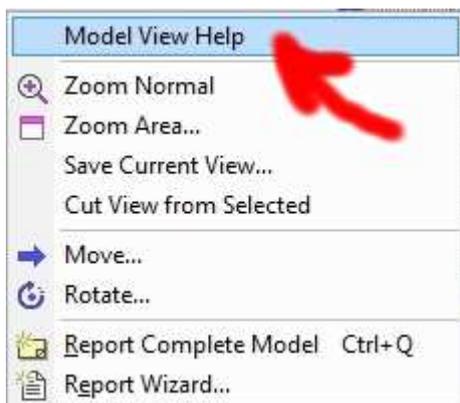
VisualAnalysis provides lots of power through mouse and keyboard commands, like the Shift+Ctrl+Click or the Middle-Wheel-Button-Drag. Sometimes you can't how to draw members that don't split where they cross. **Right-click** in the Model View to get an easy to read help screen.

Scale Spring Support Stiffnesses

After generating many soil-support springs you might need to adjust the soil-stiffness. In the past you had to delete all the springs and start over, but now you can just select them and scale the stiffnesses by some factor.

Clipboard Exchange Button on Toolbar

This utility offers easy ways to generate or modify models through a spreadsheet table working in your favorite program (like Excel). We have made some improvements and extensions to its capabilities and given it a button on the toolbar for easier access.



Editing Area Pressure Loads

Editing small area loads was problematic due to unit conversions and editor limitations. Numbers like "4 psf" are really small values when using kips and inches. We've made improvements so that these values display properly (not 0 ksi) in edit boxes.

Spreadsheet Report Formatting

In prior versions switching to the Spreadsheet report format could be frustrating as text was truncated or columns were mis-aligned. These issues have been resolved to provide a smooth transition between the two report formats.

Result Validation Checks

INFORMATION:

Analysis results could be inaccurate. This report might assist your validation efforts. The following are heuristic and may or may not indicate problems. Please check your results carefully.

WARNING:

The total applied moment about origin Z axis for 'D' is -132.6 K-ft.
The total reaction moment about this axis for this result case is 109.2 K-ft.
The relative moment error exceeds 5 %.

Analysis Error Report

When models do not analyze properly it can be difficult to track down the reasons. We have simplified the error report messages and also include more detailed statics-check tables to help you unravel the mysteries more efficiently. We have also worked hard to prevent the "false-positive" type messages where you get warnings that are really meaningless.

Conclusions

VisualAnalysis 9.0 offers major and compelling upgrade benefits that are described in many places, but you may find that just one of these tidbits is enough to save you hours on your next project.

[\[back to top\]](#)

Validation Efforts

Automation Yields Accuracy for VisualAnalysis!

Automated Testing

Validation testing is something we have always done prior to releasing major new product upgrades, but the process was haphazard or manually tedious. During the development of VisualAnalysis 9.0 we automated our validation testing so that the product can be automatically re-validated anytime we like. Running thousands of analysis and design checks in minutes rather than days or weeks. This effort will help IES ensure the quality of **every single release** of VisualAnalysis from this point forward. Our goal is to eliminate strange "side effects" of code changes that impact far-flung areas of the software in ways that nobody anticipates.

Issues Found in Development

In addition to improving future quality, this effort has also uncovered dozens of major and minor defects in our systems as we were able to be much more thorough in our validation testing, by building variations into the system.

This means that VisualAnalysis 9.0 is far more accurate than previous versions. **We can no longer recommend** using VA 5.5, 6.0, 7.0 or 8.0 as a result of what we have uncovered and corrected! There are "hidden" or unreported bugs lurking inside older products: just waiting to bite you.

Fixes we incorporated into VisualAnalysis 9.0 included a wide ranging array of features:

- Cable Elements
- Semi-Rigid Ends
- Steel Design: WT and Rectangular Bars
- Wood Design
- Round-off Errors in Static Analysis
- Statics-Check Improvements

Benefits for Many IES Tools

Because the VisualAnalysis "engine" is used as a component for many of our products, these corrections will also affect the next releases of these products as well. We will continue to move forward, extending our automated validation efforts to help insure the highest possible quality and reliability.

Customer Validation

IES does not publish internal validation tests or results. We do encourage YOU to validate your projects with similar tools, hand calculations and your own judgment and experience--software is known to have defects! For more information, see the IES FAQ Answers.

[\[back to top\]](#)

Thanks Again!

End-of-Year is Time for Reflection

We are constantly amazed at the way IES customers use our tools. While some days it seems like nothing works and we are always making fixes. Other days bring customer comments like these:

"Thanks again for the great work IES does."

"You guys are awesome!"

"IES has the best sales and technical support of any company I have dealt with!"

"From sales to service IES is absolutely outstanding!"

What can we say? **But Thanks Folks**--we do what we do because we understand structural engineering, we like programming (most days), and because we really love to make tools that customers can actually use!

Thanks to all IES customers, we raise our glasses to you and to your success!



(The IES guys are almost this attractive.)

[\[back to top\]](#)

Cloud Design?

Up Up and Away

Chances are you are running lots of cloud applications these days. Most common are online banking applications, social networks and web-based email programs. Perhaps you are also using things like Google Docs or Shutterfly or Dropbox. These services are transforming the way we live and work.

IES Cloud Design Survey

Structural Engineering in the Cloud

Are you ready for structural analysis and design in the cloud? We want to know what you think about this issue. When we asked you eight years ago the answer was a resounding "no way!", but we suspect your answer might be different today.

IES Cloud Design Survey

VisualAnchorBolt

IES has been experimenting with a free "Cloud" application for anchor-bolt design that has been available since late 2009. VisualAnchor allows you to check anchor bolts in shear and tension, without having to download or install any software.

This page now ranks in the top 20 pages at iesweb.com.

Cloud Benefits & Risks

Think about never having to install any software. Think about always having the latest update. Think about never worrying about backup files. Think about accessing your work from home just as easily as the office. Think about freedom from Windows (e.g a Mac or smart-phone could work). There are major benefits to cloud-based software. But there are also concerns such as lack of Internet or privacy.

Take the [IES Cloud Design Survey](#) now and tell us how to do cloud computing properly, if at all...

[\[back to top\]](#)

Crashing Softly

Battlefield reports show patterns

You hate software crashes. We hate software crashes too! Now that we are on the same page, we can work together to solve crashing problems.

What IES Is Doing Now

In our ongoing efforts to rid the IES world of crashing, we have instrumented our products to provide automated crash reporting directly to the development team. This serves two purposes:

- It keeps us humble.
- It provides diagnostic details

We are using these reports to understand where the software is vulnerable and to eliminate the possibility of crashing, if possible. These reports are far from perfect, though...

What You Can Do Tomorrow

You can help us! If you experience frequent or repeatable crashing, please tell us. Tell us what you were trying to do, send us your project file and the steps you took that led up to the crash. Armed with this knowledge, the automated crash-reports we get become much more valuable. We know this takes time, but your reward will be better productivity in the long-run.

What We've Learned So Far

First, about 80% of the crashes in VisualAnalysis 9.0 are happening on Windows XP or Vista. That means you can **prevent crashes by upgrading your machine** to Windows 7. If you are crashing, you have a good reason.

Second, about 10% of crashes are related to video card driver issues. Using a **high-quality video card** with an updated driver will help.

Third, **use our latest updates**. We had a crash-rate of about 1 per 10 hours of use with VA 9.00.0007 (first 'official' release), which has dropped below 1 per 80 hours for build 12.

Steps to Prevent Crashes

You can do things to prevent crashes or to reduce their frequency--regardless of which software programs you use:

- Upgrade old computers
- Use the latest Operating System (Windows 7)
- Minimize Running "Crapware"
(Try CCleaner: disable startup items)
- Restart programs between projects
- Reboot the machine regularly
- Don't run 20 programs simultaneously
- Get IES Updates regularly
- Tell IES about crashes!

[\[back to top\]](#)