VirtualWork
A newsletter for customers and friends of IES

VA 17 Upgrade!

Chock full of Power

The Official Release

IES engineers have responded to all the beta testing feedback to create a fast, stable, friendly upgrade. We released the product officially on April 20, 2017. If you have an active license for VisualAnalysis 12.0, you may upgrade now. We are now making VA 17.0 the official release version for free-trials.

Top Customer Improvements

We asked nearly 100 beta testers which new features or improvements they appreciated most and this is what our customers told us:

- **Results**: Easier Report Setup and Operations
- **General**: 64-bit Architecture (solve larger projects)
- **General**: Faster (via multi-threading, optimizations)
- **General**: Better Graphic Views (via DirectX, WPF)
- **Design**: Concrete Design is Easier, Accurate, Flexible
- **Results**: Graphics in Reports
- **Engineering**: Pattern Loading for any Load Source
- **Modeling**: Better ShapeBuilder Integration
- **Engineering**: Smarter Plate Meshing
- **Modeling & Design**: SJI Virtual Joists & Joist-Girders
- **Design**: Better Custom & Parametric Shape Support
- **Results**: Plate Moment & Shear Diagrams
- **Engineering**: Automated, Smarter, FEA Model

Your Upgrade Plan

You may install VA 17 now, but you should finish any current projects in VA 12. Start new projects in VA 17 when you are comfortable with it. You may uninstall VA 12.0, unless you need to work on "legacy projects" without porting the data into the new system. Files and features have changed significantly, so this may make sense for a while!

Upgrade Guide in Help

There are some major changes in VA 17.0, so be sure to read the one page in the help that describes them! This will help you get up to speed more quickly and to avoid unnecessary surprises.

[back to top]

Buckling Analysis in VA?

Also called Push-Over Analysis

Advanced Usage

IES has always created practical tools, ones that did not overwhelm you with features that you rarely need, or may not understand. But we also have sophisticated customers who could leverage the capabilities within our product to squeeze out more value for their analysis-dollars. So while VisualAnalysis does not try to compete with the high-end tools like ANSYS, we do have some amazing capabilities.

Linear or Nonlinear?

VisualAnalysis 17.0 offers only linear-elastic material properties, and is based on small-displacement theory with no geometric nonlinearity except for the cable element. But we can now perform an **elastic-buckling solution** to help you better understand the behavior of your structural (model). You will need the advanced-level of VisualAnalysis to access this feature.

P-Delta + Unconverged Results

The approach to getting a buckling analysis is to perform a P-Delta analysis, and also enable the **Project Setting** to **Return Unconverged Results**. Finally, you may want to split column members into a few elements to incorporate the effects of little p-delta, which is not automatically included.

With those changes to your project, if your loads cause buckling, you will see multiple sets of result-cases available in the Result View, where there is a **Load Scale = XX%** indicator, where XX is some reduced load level, like 10% or 60%. The highest percentage returned can give you a hint about where some member is buckling.

See the White Paper

We have included with VisualAnalysis 17.0 an **example project** (actually 3 steps to Buckling Analysis) and an associated PDF outlining the procedure and discussing the caveats and limitations. You can open the projects using **File | Open Example**, and look in the examples folder. You may have to browse to this folder in Windows Explorer to find the PDF document.

[back to top]

House Cleaning

Time to Update Records

Check License Status!

Olivia is taking some vacation time in May, so we thought you might want to get your IES licenses all updated and in order now. That way you don't have to suffer through Terry's bumbling.

New Credit Card?

If you have automatic maintenance plans, please update the credit card data if it has changed. It is much easier to deal with this before your licenses expire. Edit the credit card in the Self Service Portal for any one payment plan.

Personnel Changes?

You can change your licensee names and email addresses, or change the contact-person for your company in the Self Service Portal.

Maintenance Invoice or PO?

If you have licenses expiring in the next 30-60 days, and wish to pay by check or over the phone, you may call our office and speak with Olivia about the best way to handle that task. She can be reached at 800.707.0816.

If you call in May, we will do our best to get you squared away, it just might take a minute or two longer.

[back to top]

Legacy Shapes in VA

Heads Up: Changes are Coming

ShapeBuilder

Since 2013, ShapeBuilder 7.0-9.0 have been creating new custom shapes in our latest database system. However, some customers used ShapeBuilder 6.0 and prior to import or or build shapes that they continue to use in VisualAnalysis 12.0.

Custom VA 12.0 Shapes

If you created custom shapes or materials in ShapeBuilder 6.0 or directly in VisualAnalysis 12.0 (and prior versions), **they are not accessible** in version 17.0. Those older products used a different database system. Unfortunately, the old system did not contain enough information about principal section-properties for us to automatically "upgrade" them into the new database.

Porting Old Shapes

You will need to manually recreate those custom databases in the new system. We would like to help you make the transition as smoothly as possible. We may be able to manually port your data or at least get you started on the conversion, it all depends on what kinds of shapes you have in your system. Some shapes could be converted in a semi-automatic fashion--for example I-beams with different dimensions than what are found in AISC. The ones that are tricky, are things with very complex or unusual geometry. If you have these kinds of shapes, your best bet might be to simply build a new database for VisualAnalysis 17.0.

We Can Help, Maybe

If you would like us to, we could look at your custom shapes and potentially help you get them converted to the new system. For assistance please send your custom .dbs files to IES Technical Support.

[back to top]