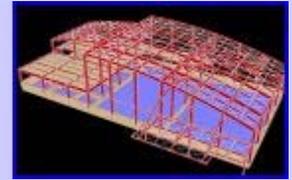




# VirtualWork

A newsletter for customers and friends



Volume 10.6, June 2004

## VisualDesign 5.1 Upgrade Sale

Here are the **top 5 reasons** to get rid of VisualDesign 4 in your office, *or* to supplement it with VisualDesign 5.1 in a side-by-side installation.

### 5. Support for New Specifications

Our latest offering supports the newest versions, updates, errata, and the like from AISC, ACI, NDS, and AISI. We are also supporting additional portions of these codes, such as **Mexican** and **Canadian** light-gauge codes, and providing enhancements to match IBC provisions. If you still use the older versions of ACI or similar, you may keep using your older VisualAnalysis installation side-by-side. You do not have to make the transition all at once.

### 4. Better Deflection Checking

Because service conditions often control the design, and because deflection checking is not as simple as  $L/360$ , we have extended our capabilities. For wood and steel design we now support the **IBC 2003 categories** of deflection checks based on the load types. We are also offering a column drift check for these modules.

|   |  |
|---|--|
| <input type="checkbox"/> <b>Beam Deflection</b>   |  |
| Strong Type                                       | Member Span Ratio <input type="button" value="v"/> |
| 'L only'  | 240  |
| 'S or W'  | 500  |
| 'D + L'   | 360  |
| Other   | 100  |
| Weak Beam   | None <input type="button" value="v"/>              |
| <input type="checkbox"/> <b>Column Deflection</b> |  |

### 3. More Flexibility

The new design software now enables a uniform and simple method for extending your designs to custom shapes in the Shape Database. You may also define default settings for many of the design parameters, switch among ASD/LRFD "on the fly", and control the design in new ways. The steel design is also up to **75% faster**, allowing you more time to explore options.

### 2. Much More Comprehensive

Version 5.1 now offers additional capabilities so you don't have to check as much by hand, or try to "fool" the

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## What's in a Name?

### Hidden Features in VisualAnalysis, Part 1

Oftentimes we hear suggestions about what VisualAnalysis should be able to do only to reply "*It already does!*". The software you use everyday contains features that you do not use because they are too difficult to figure out or you do not know they exist or because we have misnamed them. Here are a few that might help you with your next project. The following list provides **background** and **philosophy**, for details about how to **use** these features, please refer to the help file in VisualAnalysis.

### Model | Rename

This feature allows you to provide names for nodes and elements to help you stay organized. As you build projects VisualAnalysis will 'suggest' names for members, or generate them automatically. As your project evolves these names may be generic, unhelpful, and even misleading!

While you may manually change names as you create and edit your model, this becomes tedious.

The Rename command helps you stay organized by allowing you to automatically rename selected groups of items in a variety of ways. As you will see shortly, a

software. For example, concrete wall design now offers a single-layer of reinforcement, steel design will check St. Venant torsional shear stress, and you can create **multiple load combination 'sets'** to check each design group with a different set of load cases, if necessary. (This is most useful in mixed-material projects, steel uses one set of load combinations and concrete uses another.)

### 1. Get 10 Tools for 10 Bucks in our 10<sup>th</sup> year!

That's right, [upgrade](#) to [VisualDesign 5.1](#) in before July 31st and save a bundle. We are including the [VisualTools upgrade for just \\$10](#) with every VisualDesign 5.1 upgrade. Get the latest versions of these tools for just \$10:



**Member Load Generator**, for automatic application of tributary area loads on floors, roof systems, walls, etc. Apply stepped loads, projected loads and you may even superimpose loads on existing loads.



**Concrete Footing Design**, this tool now follows ACI 318-02 requirements.



**File Exchange Tool**, you can now import and export to the popular STAAD text-based format, also SDNF for interaction with XSteel or other products.



And more...

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## Ask Dr. Dan: Wood Design

### A Customer Asks:

*"Why can't I get unity checks for Wood Design?"*

**Caution: Theory Zone Ahead!**

### Dr. Dan Replies:

Almost always the answer to this question is that the shape type and material type have not been "coordinated". As you know there are major **shape categories** in the current NDS specification:



Dimension Lumber



Dimension Timbers



Glu-laminated



Round Timber Piles



Engineered Wood

The current IES database includes **shapes** in each of these categories that you may select from.

good naming system is critical to letting VisualAnalysis make your life easier.

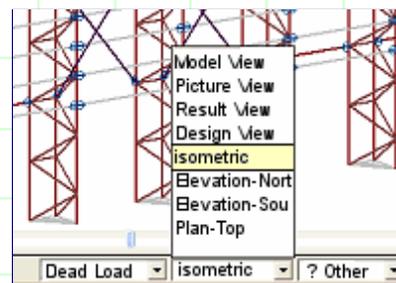
### Name Filters

Let's face it, sometimes those model views are so cluttered you cannot really see anything. Smart planes can help, if the items you wish to see all lie in a plane, but what if you just want to work with the wind bracing in a building and it is scattered all over?

This is where Name Filters come to the rescue. If you have given your wind braces a unique name prefix, such as "X", or "Br", then you can isolate them in either Graphics or Reports with Name Filters. Not only that, but you can use very powerful filter 'expressions' to show or hide various groups of elements. If you learn one new feature in VisualAnalysis this month, this should be it!

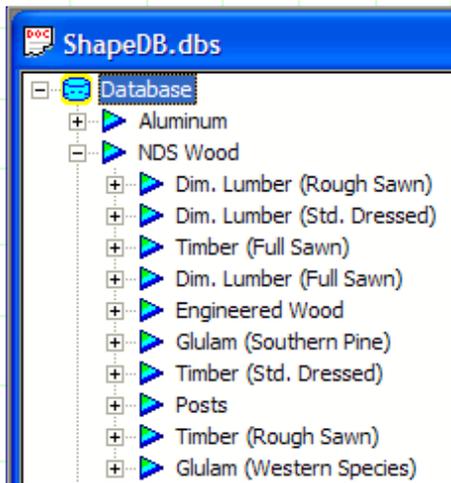
### Named Views

When working with a large complicated project you often spend a lot of time getting a view that shows the information you need and only that information. Wouldn't it be nice if you could get back to that view you had earlier in the day or week, with just a click of the mouse? You can!



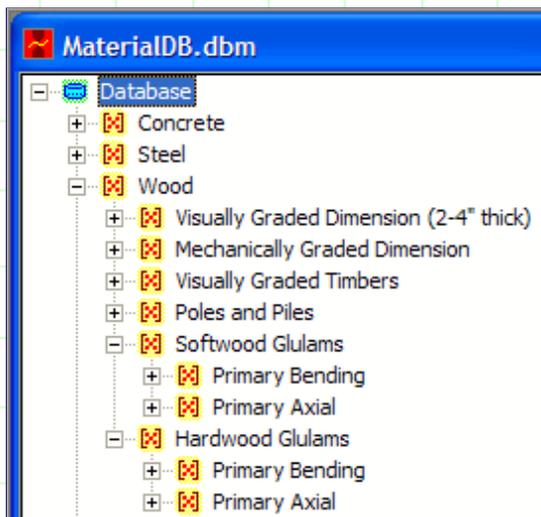
Whenever you have a view you like, just Save it, using the **View | Name Current View** command. You can save views for use in all your future projects, or for just the current project. You can create views for each floor plan, each braced frame, or the supporting nodes--whatever you like really!

Combine this feature with Smart Planes, Name Filters, and the 'regular' filter settings and you have an awesome organizational tool that will save you hours of "fiddling time"!



With the exception of Engineered Wood, the NDS supplement contains design information for each of the shape categories in separate tables. Each table has its own set of data that may not be consistent with other tables. In VisualDesign we handle this inconsistency by including different **material categories**, one for each of the NDS supplement tables:

-  Visually Graded Dimension Lumber
-  Mechanically Graded Dimension Lumber
-  Southern Pine Dimension Lumber
-  Visually Graded Dimension Timbers
-  Glu-laminated primarily in bending
-  Glu-laminated primarily in axial loading
-  Round Timber Piles (In NDS Spec. not Supplement)

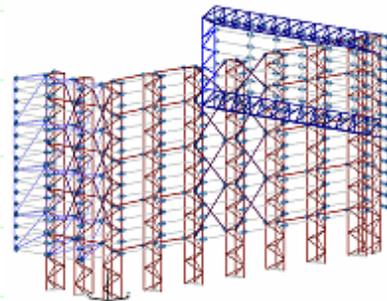


Obviously the material category and shape categories must be coordinated to get a meaningful design.

| IES Wood Coordination Key   |   |
|---|---|
| Materials   | Shapes  |
| Visually Graded Dimension (2-4" thick)<br>Mechanically Graded Dimension | Dim. Lumber (Rough Sawn) or (Std. Dressed) or (Full Sawn) |

### Object Name Colors

If you are still reading, it probably means you are already using the above features and are looking for more. Let us uncover a buried treasure for you: Name Colors. This feature allows you to escape the *"All the members are blue"* syndrome, which afflicts so many VisualAnalysis customers. In fact, it is one of the features that distinguishes an average *"user"* from a VisualAnalysis *"guru"*. You really have to be of the adventurous type to discover this command under **Tools | Customize Appearances**.



This feature, like others in this column, is most useful if you use the Rename command to organize your model. Once that is accomplished, browse to this customization setting and enter those prefix values, change the colors and voila! Columns can be **brown**, bracing **green**, and girders **purple**.

You may even use this feature in a Picture View, rather than the default material coloring, by toggling the "Show Object Colors" filter item.

Turn on that color printer!

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### Update Issues

As everybody is painfully aware: software is imperfect. At IES we address our imperfections quickly and responsibly, and we offer periodic updates that are free and easy to obtain. We are also publishing a [change log](#) for each product so that you can see what has been fixed, before you decide whether to update or not.

Here are some *"rules of thumb"* to help you manage updates.

|                         |  |
|-------------------------|--|
| Visually Graded Timbers | Timber (Std. Dressed) or (Rough Sawn) or (Full Sawn) |
| Poles and Piles         | Posts  |
| Softwood Glulams        | Glulam (Southern Pine) or (Western Species)          |
| Hardwood Glulams        |  |

If the material and shape coordination is not done, you will not get unity check values in VisualDesign. If you see the solid line member in your Design View that indicates "Not Checked" you can double click on the member and get a design report. At the bottom of the design report you will see a message like the following:

\*\*\*Note: A dimension wood shape does not have dimension wood material properties

When you go to the design inspector and set the Design As categories for both Shape and Material to be coordinated as the table above indicates and then select "Design Selected Group" you will get proper unity check values. In the case of obtaining unity check values only, you must see that the shape and material type are coordinates in your Model View as well.

As a final comment on this topic, consider the case where you want to add your own special wood shapes to be designed. Remember that the coordination above must exist for the added shape you plan on using. To do this use, first use the Shape Database Editor supplied in the IES program group. Once you've entered the basic geometric properties you must "Add Support for Property Set" by selecting the added shape and using the Right-Mouse click. You can look at the current shapes to see which property sets need to be selected. For example, for a "new" dimension lumber shape you'll need to add support for both "Rectangle" and "Dimension Sawn Wood".

Once you've got the shape database updated with the new shape, you'll need to run the Material Database Editor supplied if you have special design values to use. Once you've entered a new material, you must "Add Support for Material Set". Again look at other materials already in the database to see which sets to enter data for. Once both shape and materials are set, VisualDesign should handle your new wood member.

In summary, designing or getting unity checks for wood members can appear to be complicated on the surface. If you remember that the shape and materials need to be coordinated, the design will go along smoothly with no surprises.

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## Subscription Service Clarified

The [IES Subscription Service](#) is a tool you can use to:

1. Save Money
2. Organize Your Budget

## 1. Updates *may* cause weird problems?

We have seen rare instances where installing an update will really "mess up" the software installation. If you start seeing **really bizarre problems** immediately after updating, then the solution might be to uninstall and then re-install. If you are not sure, please ask IES support before you waste a lot of time!

## 2. Don't update under a *deadline*!

In light of #1, and also because updates will change the software, sometimes in ways that have not been predicted, it is wise to update your software during a "quiet time" in your business! None of us need the extra stress involved in facing deadlines AND suffering through update woes. 99.9% of IES updates go smoothly. But like everything else in life:

*"The worse you want it, the worse you're going to get it!"*

## 3. If it *ain't* broke don't fix it?

Some of our updates fix minor, or obscure problems reported by one or two customers. If you check the [change logs](#) you may find that you can "skip" an update or two, without suffering any errors or problems. Our normal update schedule is to release updates once a month. Updates will come "immediately" if a serious problem is discovered.

Our newer products will automatically notify you of any updates once every two weeks, but you can check for updates at any time using the **Start | Programs | IES | Support** menu.

In general, we recommend that you stay within two or three "builds" of the current build for the fastest updates. If you wait longer than that, you will end up downloading the entire installation for your update rather than just the changes.

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3. Stay Current

4. Support IES

### **Save Money**

By purchasing the upgrade plan you lock in today's prices and also get a discount of up to 25%.

### **Organize Your Budget**

With known annual payments for 3 to 5 years, you can take the guesswork out of upgrading IES software.

### **Stay Current**

Don't miss our next big innovation! Work efficiently with new features as soon as they become available.

### **Support IES**

By purchasing your subscription, you help us smooth out the boom-bust software cycles and lower our costs for upgrade mailings. All of this will help us deliver higher quality software in a timely fashion at the lowest possible prices.

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