

PointwisePointer

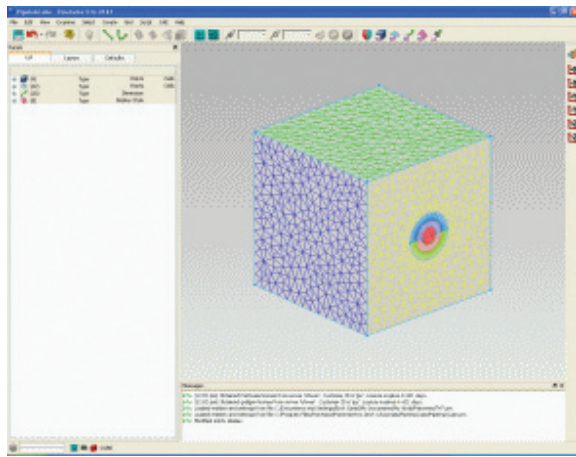
A User Tip from the
Pointwise Support Desk

Winter 2008

Welcome to Pointwise V16

Interface Overview

Pointwise is a new name for a new program built on the trusted meshing tools you have come to depend on in Gridgen. It sports a standard and flat interface allowing you to generate your meshes with many fewer clicks and much less time. We will now take a tour around the new interface.



At the top left of the Pointwise interface, is a standard command menu layout starting with **File** commands on the left through **Help** commands on the right. Tools related to modifying or changing entities are grouped under the **Edit** menu, along with full **Undo/Redo** capability and standard **Cut**, **Copy** and **Paste** commands. Grid specific operations, such as **Dimension** and **Distribute**, are found in the **Grid** menu. Analysis software related commands, such as selecting a **CAE** solver or setting BC's, are found in the **CAE** menu. These are just a few of the commands and menus found in the new layout.



Below the menu, you will find frequently used commands readily available on Pointwise's customizable toolbars. These toolbars can be repositioned at any edge of the interface, and

the commands shown can be tailored as you see fit using the **View, Toolbars, Customize** command. You can also turn off individual toolbars altogether if desired using the **View, Toolbars** command.

On the left side of the Pointwise interface, is an area set aside for the Panels. There are three tabbed panels, **List**, **Layers**, and **Defaults**, that remain present at all times for quick easy access to these functions. **List** provides selection of all entity types in individual collapsible sets, **Layers** provides layer management tools for database entities, and **Defaults** provides access to all default settings. Any new command panel you invoke is added here as a new tab. You can tear off **Panels** into a separate window or dock them to the right side of Pointwise if you prefer.

The majority of the Pointwise interface on the right side is taken up by the **Display** window. This is where you view your project work at all times, perform entity selection, and place points visually.

Directly below the **Display** window is the **Messages** window. Pointwise displays various message types here to keep you informed of the results of the commands you invoke. Most messages are "Info" messages with command results. You can customize the message types displayed using the **Edit, Preferences** command. You can also tear off the **Messages** into a separate floating window or dock the **Messages** to another edge of the interface.



Finally, at the bottom of the Pointwise interface, is the **Status** bar. At the far left of the **Status** bar is a two level progress bar shown above. The upper level shows the stage progress of command processes, while the lower level shows the progress of each stage. Many commands are only a single stage. Whenever the progress bar is active, a **Stop** sign icon becomes available which can be clicked on to halt any active process.

Also displayed in the **Status** bar are the state icons showing your choices of grid type, grid dimension, view type and CAE

solver. On the right end of the Status bar, Pointwise will display coordinate values when commands involve coordinate selection. Depending on the type of entity under the cursor at the time, you may see Cartesian, IJK, UV coordinates, or a combination.

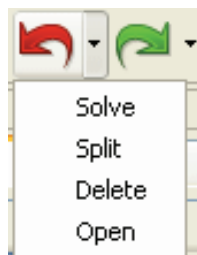
The relative layout of the individual components of the Pointwise interface can be adjusted to your liking. All layout and toolbar customization is remembered automatically by Pointwise to be restored on your next session.



View Manipulations

In order to support standard mouse button use, for instance right-click menus, view orientation manipulations are updated in Pointwise. Zooming is performed by scrolling the middle mouse scroll wheel or by clicking and holding the middle mouse and moving the mouse toward or away from you. To perform a pan of the model, sliding it up, down or sideways on the screen, you use **Shift**+right mouse. Rotating the model is performed using **Ctrl**+right mouse. The respective mouse cursors seen while performing these manipulations are shown above.

More precise rotations can be performed using the number pad keys. **Num Lock**, **/** and ***** provide body X, Y, and Z rotations (**Clear**, **=** and **/** on the Mac). **7**, **8**, and **9** on the number pad provide screen X, Y, and Z rotations. Zooming can also be performed using a zoom box. Use **Shift**+middle mouse with the initial mouse click in the center of the area you wish to zoom on; hold the middle mouse to size the zoom box.



New Capabilities

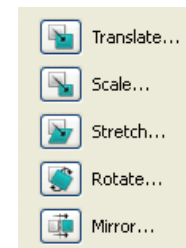
In developing a new interface for Pointwise, it was inevitable that useful capabilities would immediately find their way into the software. Fortunately, the most requested feature is now available, multiple-level **Undo** and **Redo**. You can adjust the number of undo levels stored using **Edit, Preferences**. The toolbar implementation, show above, also includes a pull down list of the saved levels to pick from.

Pointwise uses a single native file with .pw file extension. This project file contains both database and grid data from your meshing sessions. No longer do you have to worry about finding and using the correct database file for maintaining grid associativity.

For those large meshing projects, Pointwise is available in a native 64-bit build. This opens the door to available RAM beyond the 2 GB limit imposed by 32-bit architecture. See our web site at www.pointwise.com/pw/port.shtml for more platform support information.



The **Create, Assemble** command will take a collection of connectors and domains and automatically assemble them into domains and blocks. This is available for creating structured and unstructured topology. Now there is no longer a need to manually select and assemble connectors into domains or domains into block faces. However, for some complex topologies, Pointwise still provides an **Assemble Special** command for manual assembly.



CAE boundary conditions in Pointwise are assigned directly to domains and remain assigned regardless of use in blocks and changes to the selected CAE solver. An all new CGNS filter has been implemented for Pointwise CAE export and CGNS import is also included.

Another longtime frequent feature request is the ability to simultaneously transform, for instance Scale, database and grid entities while maintaining database associativity. This can be done in Pointwise for any of the standard transforms: **Translate, Scale, Stretch, Rotate** and **Mirror**.

Pointwise is available for download now at www.pointwise.com/support/dload_pw.shtml. All customers with current maintenance or annual Gridgen license can request and receive a license file to run Pointwise for no additional fee. So why not try it out now?