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***Tecplot***  
Enjoy the View™

**TECPLOT 360™**  
2008

## **Release Notes**

**Release 2**

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# Table of Contents

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Major Feature Additions .....	5
Bug Updates .....	9
Add-on Development Kit (ADK) Changes.....	10
Changes and Limitations.....	10
Platform-specific Issues .....	10
<i>Windows Users</i> .....	11
<i>Linux Users</i> .....	12
<i>UNIX Users</i> .....	14
<i>Macintosh Users</i> .....	14
Additional Resources .....	15





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# Welcome to Tecplot 360 2008 R2!

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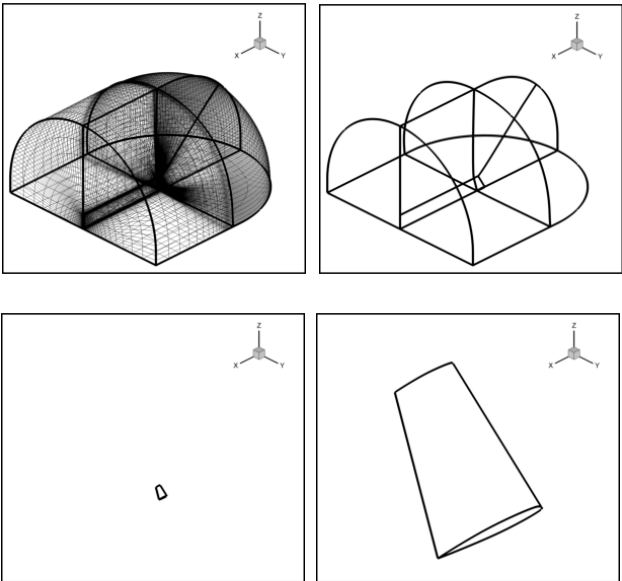
## Major Feature Additions

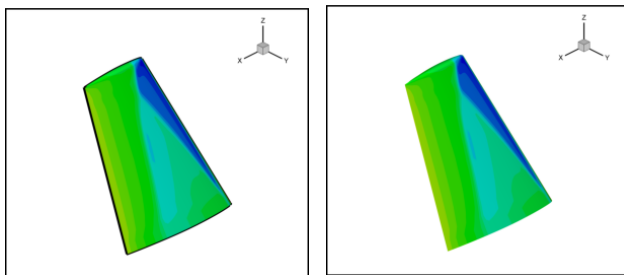
Tecplot 360 2008 Release 2 introduces several new and improved features:

- **Modernized 3D Style Defaults**

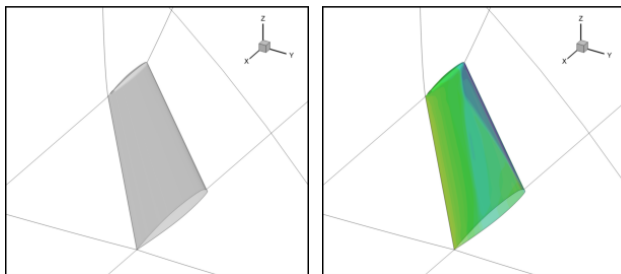
Modernized style defaults provide a substantial improvement of the first image you see when loading and viewing 3D data, so that you can enjoy the view sooner.

For example, a process that used to take five steps...





...can be accomplished now in only one step.



Tecplot 360 accomplishes these modernized styles and optimized processes with the following improvements:

- Surfaces fit to the screen by default. To fit the entire domain, we now include a **View>Fit Everything** menu option. The behavior of **View>Fit** (SHIFT-F) has been changed for this.
- If the data contains specified walls, those walls will display as shaded with translucency on.
- Only the edges of volume zones and non-wall surfaces will display. This allows you to view a contour on a surface in one click.
- Surfaces now have Gouraud shading and specular highlights.
- Meshes and edges now display by default as thin, black lines (.1%). This improves the initial plot view, avoiding color cycling and reducing the thickness of mesh and edge lines.

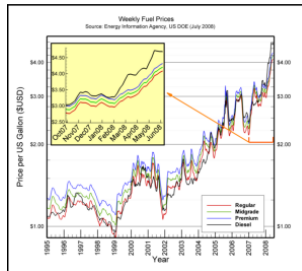
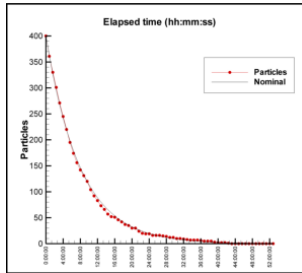


- Cut planes have a slight translucency to aid in placement.

If you have feedback on our modernized style settings, we would love to hear from you. Contact us at [www.tecplottalk.com](http://www.tecplottalk.com), or email at [j.carson@tecplot.com](mailto:j.carson@tecplot.com).

- **Load and Display Time/Date Data on Axis**

You can now load and display time and date data on your plot axes. You can use our Excel add-in<sup>1</sup> to read data with times or dates from Microsoft® Excel® into Tecplot 360. These graphs illustrate Tecplot 360's new ability to display dates or times on an axis:



- **Zone and Map Limits Increased to Approximately 1 Billion**

Zone, map, and number of variables limits are effectively removed. Machine memory usually dictates limit constraints now.

1. util\excel\RunTecplot5.xla



- **Improved Multithreading**

Tecplot 360 now supports up to 64 cores/processors.

- **Improved AVI Export**

AVI export in Tecplot 360 now supports a lossless uncompressed format, resulting in true color animations. This format runs in Microsoft PowerPoint without the use of a third-party plug-in.<sup>2</sup>

- **StarCCM+ Data Loader Improvements**

The StarCCM data loader now handles parts.

- **Added Ports**

Sun Solaris 9 replaces 7/8. We have also added Linux Itanium (replacing older version) and HP/UX Itanium (new).

- **Preplot Conversion**

Preplot now converts point format to binary block, the most efficient format for Tecplot 360 to interact with data. This enables faster data loading after the Preplot conversion.

- **FLEXnet Licensing**

All platforms now use FLEXnet for network and site licenses management.

Tecplot 360 2008 Release 1 (December 2007) included the following major features:

- **Native Polyhedral Support**

Loaders supporting polyhedral data include Tecplot, Fluent, and StarCCM+. We offer a library that you may (freely) use to output Tecplot data from your solver or application. For more information, visit [www.tecplot.com/tecio](http://www.tecplot.com/tecio).

- **Python Scripting Support**

Technical Support has posted several examples at [www.tecplottalk.com/python](http://www.tecplottalk.com/python), including key frame animation and integration under a slice. Tecplot 360 uses Python 2.5.1, which installs automatically with Tecplot 360.

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2. Flash<sup>®</sup> is usually the best compromise between AVI size and quality, for those users with access to Flash.





- **FLOW-3D® Data Loader**
- **Export Open-standard X3D™ Output**
- **Increased Features**

Increased number of color map, contour, iso-surface and slice groups to eight.
- **New Add-ons**
  - The time-series plot add-on extracts a single point over time and plots the result as an XY Line Plot.
  - The extract over time add-on extracts iso-surfaces, slices, streamtraces and geometries over time.
  - The link time add-on synchronizes frames while animating transient data.
  - The strand editor add-on edits the solution time and strand IDs of zone(s).
- **FLEXnet™ Licensing**

FLEXnet licensing added, with pack-and-go support.
- **Memory Management**

Memory management has improved for transient data cases.
- **Platform Support**

Support added for 64-bit Windows platforms, as well as for the latest 32-bit and 64-bit Linux platforms.
- **ABAQUS Loader**

An Updated ABAQUS loader supports ABAQUS version 6.7 data files.
- **StarCCM+ Data Loader (Beta)**

## Bug Updates

For a list of bugs fixed in the Tecplot 360 2008 Release 2, visit:

[http://download.tecplot.com/360/bugs\\_fixed.html](http://download.tecplot.com/360/bugs_fixed.html)

For a list of current bugs flagged in Tecplot 360 2008 Release 2, visit:

<http://download.tecplot.com/360/bugs.html>



## Add-on Development Kit (ADK) Changes

- If you use add-ons created with previous versions of Tecplot 360 or Tecplot Focus, and you wish to use these add-ons with Tecplot 360 2008 R2 or Tecplot Focus 2008 R2, these add-ons must be recompiled, in order to accommodate the transition of EntIndex\_t 32-bit integers. If your add-on is not recompiled, it may crash when you run it. Visit the [Tecplot Talk](#) forum for more information.
- Refer to [ADK User's Manual](#) for a list of **TecUtil** functions that have been deprecated, as well as a few other ADK-specific issues.

## Changes and Limitations

- **TecIO** does not allow point format input. You can download our current **TecIO** libraries at <http://www.tecplot.com/support/tecio.aspx>.

## Platform-specific Issues

The following table outlines the support for various platform-specific features new to Tecplot 360 2008.

	Linux			Mac	Windows		UNIX
	x86	x86_64	ia64		32-bit	64-bit	
FlexNet Licensing	Y	Y	Y	Y	Y	Y	Y <sup>a</sup>
FLOW3D loader	Y	Y	N	N	Y	Y	N
ABAQUS loader	N	N	N	N	Y	Y	N
Python	Y	Y	Y	Y	Y	Y	N
SciPy/NumPy <sup>b</sup>	Y	Y	Y	Y	Y	N	N/A
Link Time Add-on	Y	Y	Y	Y	Y	Y	Y <sup>c</sup>

a.New!

b.Scientific libraries used for advanced mathematical functions such as FFTs.

c.Not available on the IBM platform.

Refer to the remainder of this section for issues specific to your operating system.



## Windows Users

- **All Windows Platforms**

- **Remote Display Issues**

- You can run a network license of Tecplot 360 on one Windows computer and display it on a second computer. However, if the network connection between the two computers has any latency, the dynamic text and geometries may become unusably slow.

- If you use Cygwin/X11 on a network, the server must run Tecplot 360 with the `-mesa` option to communicate with this client.

- If you post-process large, transient datasets, you may run into an OS limit on the number of temporary files allowed in a directory. To fix this, exit Tecplot 360 and restart the program. Tecplot purges the directory of temporary files upon exiting.

- **Windows Vista™ Users**

- If you are running Windows Vista, you must have administrator rights on your computer to install Tecplot 360.

- Windows Vista users have reported video driver issues. If you experience strange video behavior (for example: phantom glyphs, screens that don't refresh), we recommend you follow these steps:

- Disable the “Windows Aero” display mode. To do this, right-click on the desktop and go to **Personalize>Window Color and Appearance**. Choose “Open classic appearance properties”, and change the Color Scheme to either “Windows Vista Basic” or “Windows Standard”. Select [Apply] and [OK] to finish.

- Check with your video card vendor to see if they have an update for Windows Vista. Update your video driver.

- If these steps have still not solved the issues, you may want to disable hardware acceleration. To do this, open your `tecplot.cfg` file and uncomment this line (by removing the “#”):

```
# $!INTERFACE OPENGLCONFIG {
    ALLOWHWACCELERATION = NO }
```

- If you are running a machine with Vista and up-to-date Symantec® antivirus, you must temporarily disable virus checking before installing Tecplot 360. Virus checking can be re-enabled after the Tecplot 360 installation is



complete. If virus checking is not disabled before installing Tecplot 360, the installer will exit after installing Python and will not fully complete the installation.

- **Windows 32-bit users**

The memory address space is 2 Gb, limiting the size of solutions you can visualize.

- **Windows 64-bit users**

- The Tecplot 360 installation for Windows 64-bit platforms does not include SciPy and NumPy Python modules.

- The 64-bit version of Tecplot 360 requires the 64-bit version of Python. If you have the 32-bit version of Python installed, you will receive an error message in your Tecplot 360 installation. Uninstall the 32-bit version of Python, and run the Tecplot 360 installation to install the 64-bit version of Python.

## Linux Users

- **Temporary Directory**

Tecplot 360 relies on being able to create temporary files. On Linux, this defaults to `/usr/tmp` or `/var/tmp`. If this directory is unwritable, you can override the default by setting the `TMPDIR` environment variable in your profile.

- **Menu Shortcuts**

Menu shortcut keys will not work if the NUM LOCK is on. You can set the NUM LOCK to turn off automatically in the machine's BIOS.

- **SELinux**

SELinux (as installed on Fedora™ 7+, SUSE® 10.2+) adds an extra layer of security. If you see this error message:

```
./bin/tecplot.shared: error while loading shared
libraries: ./lib/libtec.so: cannot restore
segment prot after reloc: Permission Denied
```

Enter this (as root):

```
chcon -c -v -R -u system_u -r object_r -t lib_t
$TEC_360_2008/lib/
chcon -t texrel_shlib_t $TEC_360_2008/lib/*
```

You can run Tecplot 360 without disabling SELinux.

- **Ubuntu®**



Tecplot 360 does not support Ubuntu 7.04 or 7.10. (Ubuntu 7.04 had an unstable X server. Ubuntu 7.10 included a beta package, compiz, whose defaults interfered with Tecplot menus.) Please use version 6.06LTS or 6.10. Preliminary tests of Ubuntu 8.04 suggest this version may work as well.

### • Display Issues

On some platforms, drawing lines in OpenGL<sup>®</sup> may use an optimization technique that avoids drawing the last pixel. This occurs most noticeably for text drawn in the work area, as some characters will appear to be missing the final stroke of the pen. To resolve this problem, add the following to your configuration file (*tecplot.cfg*):

```
$!Interface openglconfig {screenrendering
{DoExtraDrawForLastPixel = TRUE}}
{imagerendering {DoExtraDrawForLastPixel = TRUE}}
```

### • Mesa Versions

Mesa, an OpenGL-equivalent graphics library, performs 3D rendering in software. It is typically used when hardware acceleration is unavailable.

The Mesa version of Tecplot 360 functions slower, especially for 3D plotting. If you must run the Mesa version and display remotely, you can speed up the rendering for XY Line and 2D plots by setting the environment variable below. (On some machines, this may improve the speed of 3D plotting.)

```
export MESA_BACK_BUFFER=Pixmap
```

### • Remote Display Issues

If you have a network or site license, you can run Tecplot 360 on one computer and display it on a second computer (via an X server). However, if you are running the OpenGL version of Tecplot 360, the X server must have the GLX extensions.

- If you are working with a large grid file remotely, try using the **-mesa** option to minimize the number of OpenGL commands sent across the network.



- When displayed remotely, Tecplot 360 may exhibit substantially lower drawing speeds than when it is displayed locally, especially for text and geometries.

## UNIX Users

- **UNIX (IBM AIX<sup>®</sup>, Sun Solaris, HP/UX)**

Because these platforms are fairly old, some new features are unavailable. Please see the chart in [“Platform-specific Issues”](#) on page 10.

- **Browser Configuration**

The online help for Tecplot 360 uses CSS2. If your browser does not support this, the page layout and some fonts may render inaccurately.

- **AIX**

Please ensure you have installed the OpenGL package.

## Macintosh Users

- **Intel Support**

Ensure that you have the correct (Intel) architecture. (If your Mac is less than 3 years old, you probably have an Intel processor.)

- **Mac OSX 10.5 Leopard**

We have not yet tested Tecplot 360 on Mac OSX 10.5 (“Leopard”).

- **Off-Screen Rendering**

Due to a problem with the Macintosh XServer, off-screen rendering is not available for Macintosh machines using OpenGL. Image exporting and copying to the clipboard are performed using on-screen rendering instead. Off-screen rendering is available for Macintosh machines using Mesa.

<http://lists.apple.com/archives/mac-opengl/2003/Mar/msg00086.html>



On Mac OSX 10.3 (and earlier), off-screen rendering produced a black image. However, in Mac OSX 10.4, the problem manifests itself by crashing the Mac X server. For this reason, we have disabled off-screen rendering as the default. Should you want to enable it (for example, for anti-aliasing and variable resolution image buffering), please add the following line to your *tecplot.cfg* file:

```
$!INTERFACE USEOFFSCREENBITMAP = YES
```

Alternatively, you can use the "-mesa" option when launching Tecplot 360. However, you will lose the benefits of hardware acceleration if you choose to use Mesa.

## Additional Resources

In addition to these Release Notes, Tecplot 360 includes the following eight manuals and one online forum.

- [Getting Started Manual](#) - New Tecplot 360 users are encouraged to work through the tutorials provided in the Getting Started Manual. These tutorials highlight how to work with key features in Tecplot 360.
- [User's Manual](#) - This manual provides a complete description of working with Tecplot 360 features.
- [Scripting Guide](#) - This guide provides Macro and Python command syntax and information on working with Macro and Python files and commands.
- [Quick Reference Guide](#) - This guide provides syntax for zone header files, macro variables, keyboard shortcuts, and more.
- [Data Format Guide](#) - This guide provides information on outputting simulator data to Tecplot 360 file format.
- [Add-on Developer's Kit - User's Manual](#) - This manual provides instructions and examples for creating add-ons for Tecplot 360.
- [Add-on Developer's Kit - Reference Manual](#) - This manual provides the syntax for the functions included in the add-on kit.
- [Installation Instructions](#) - These instructions give a detailed description of how to install Tecplot 360 on your machine.



- [Tecplot Talk](#) - A user-supported forum discussing Tecplot 360, Tecplot Focus, Python scripting, Add-on development, TecIO and more. Visit [www.tecplottalk.com](http://www.tecplottalk.com) for details.

