




tecplot[®].rs 2010

Release Notes

Release 2

Tecplot, Inc.
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Additional Resources



In addition to these Release Notes, Tecplot RS includes the following manuals and HTML Help Library to help you explore all of Tecplot RS's features. Your installation includes these manuals in the *doc* folder within your installation folder.

- [Installation Guide](#) This guide gives detailed instructions on how to install Tecplot RS on your machine.
- [User's Manual](#) This manual provides a complete description of working with Tecplot RS features.
- [Integrated Help Library](#) You can access indexed, searchable Tecplot RS information by choosing "Tecplot RS Help" from the **Help** menu.
- For additional resources or help using Tecplot RS, visit our Web site at <http://www.tecplot.com>.

Welcome to Tecplot RS 2010 R2!

New Features in Tecplot RS 2010 R2

Welcome to Tecplot RS 2010 R2! This second release of Tecplot RS 2010 includes the following new features.

- A new **Measure Distance tool** shows you the straight-line distance between any two points on a grid. 
- The new **Quick Probe tool** shows you the coordinates and contour variable value at any point on a grid, using the status line rather than the Probe dialog. 
- A **multi-well mode in History Match** lets you see how well your simulation matches your actual data for selected wells at a given time step, in addition to the existing feature of comparing history data for a single well over time. An optional weighting factor allows the most important wells to be determined by a variable such as total production.
- **Selection sets can now be exported** to an XML file format for easy reuse and editing. They are still saved in projects and can still be loaded from there as well.
- Now you can **drag multiple folders** into the Tecplot RS workspace to load the data files they contain.
- A **new HIST file data format** being used by Chevron is now supported.
- **REGION entities in CHEARS CSV files** are now supported.
- The **sidebar is less cluttered**. Previously, many functions were available as buttons both in the toolbar and in the sidebar. These functions are now available only in the toolbar, giving you more room to work in the sidebar.

New Features in Tecplot RS 2010

If you are upgrading from Tecplot RS 2009 or earlier, you will also enjoy features added in the first Tecplot RS 2010 release. There are so many, we've separated them into groups.

New User Interface and Architecture

- **Modern Graphical User Interface** looks and functions the same on Windows and Linux platforms.
- New, **custom-designed icons** for toolbar and other buttons make features easier to find and identify, and follow the MS Vista style standard.
- New **dockable, moveable toolbar** with buttons corresponding to major workflow steps provides **quick access to more features with fewer clicks**. With the new toolbar, you can:

Load Data

Manage the data in your plot with fewer clicks using the New, Open, and Save Project buttons, and the Load XY Data, Load Grid Data, and Manage Data buttons.



Adjust View

Change the view on your plot easily with buttons to zoom, move, rotate, change light source, redraw and reset the view of your plot.



Edit Plot

Make simple plot edits easily with the Selector tool, the Adjuster tool, and the Add Text, Change Plot Options, Manage Multiple Frames and Update Paper Layout buttons.



Investigate Plot



You can investigate your plot easily with the final grouping of toolbar buttons: probe for variable values, add streamtraces, blank cells, add a histogram or cross plot, integrate, and calculate new variables. The robot button lets you quickly play a macro.

- The **sidebar is dockable**, too, letting you move it to a convenient location, including out of the Tecplot RS window to maximize plot view in the workspace.
- **Additional filtering choices** facilitate easier searching of long lists.
- Automatic “**smart**” **alpha-numeric sorting** of variable lists simplifies variable selection.
- **Re-organized, updated menus** follow the typical reservoir engineer workflow more closely. For example:
 - **File** menu renamed **Project** menu to reflect content (Alt-F still opens the menu).
 - Recent projects now appear in **Project** menu (up to ten projects).
 - Macro operations moved to **Macro** menu.
 - Extract Cell Data and Sim Input controls moved to the **Data** menu.
 - The **View** menu now includes only the view choices useful for Tecplot RS users.
 - You can now turn the toolbar and/or sidebar on and off in the **View** menu.
 - We removed the **3D** menu and moved the View Presets options to the **View** menu.
 - The Write Data as Formatted Text add-on is now an integrated part of Tecplot RS and is included in the **Data** menu.

- Some features with marginal use have been removed, including the **Quick Edit** dialog, the **Iso-Surface Details** dialog, the ability to create zones from the **Data** menu, and the **Advanced Quick Edit** dialog.

Faster Data Loading: More capabilities with fewer clicks

- Large grid files **load up to 40% faster**.
- **New toolbar icons** open XY and grid loading dialogs directly. Click the Load XY Data button to load XY data, and the Load Grid Data button to load grid data.
- **More file associations** enable loading of multiple data files with fewer clicks.
- **Load by dragging and dropping project files** onto the Tecplot RS icon or onto the workspace to load all project content simply.
- **Load XY data files by dragging and dropping** a folder onto the Tecplot RS icon or onto the workspace; Tecplot RS loads all XY data files that it recognizes in the folder.
- **New toolbar button** launches the **Manage Data** dialog for quick access to manage loaded data sets.

Enhanced Comparison Capabilities: Comparison of data from multiple sources

- **Comparison data sets** included in Quick XY plots enable interaction with well production data while viewing grid solution plots.
- You can now **extract and create an internal history data set** from Eclipse history match runs so that you can compare simulation and history data for multiple runs without having to select unique variable names for history data. Sidebar option provides quick access to calculate the difference between simulation and history data.

- **Sum and Average** controls in XY Entities plot type now **apply to all comparison data sets**, so that you can select a particular set of wells to compare across multiple data sets, then compare the properties as an instantaneous “group” by choosing to sum or average the data.
- You can now **create user groups for all data sets** rather than just one. Tecplot RS stores the new groups in the project and recreates them when you reload the project.
- Spreadsheet tool in **Data** menu lets you highlight and **copy plot data to the clipboard** so that you can paste it directly into a spreadsheet program (such as Microsoft Excel) for additional post-processing.

Data Interrogation: Improved tools for grid solutions

- Updated **Probe** dialog provides **faster display of solution data**.
- Addition of **light source and translucency controls** for iso-surfaces and slices enhances visualization of 3D objects.
- **New streamtrace tool** lets you interactively seed streamtraces in the reservoir flow. Inserting multiple streamtraces helps reveal the sweep area of an injector or determine the source of fluids moving toward a producer.
- New **interactive 3D light source tool** enhances visual perspective of reservoir. You can turn the light effect on and off in the Plot Controls sidebar.
- One-button sidebar control enables **synchronization of Local Grid Refinements (LGRs) with their parent grids**, so you can step through both grids concurrently while using step controls for just the LGRs.
- New bubble plot control provides the choice to **scale grid plot bubbles** by diameter or area proportional to the assigned variable values.

- Grid orientation, translation, rotation, and z-axis inflation now reside in the **Grid Options** dialog instead of in the grid loading process, enabling **quick access to these features** without reloading data.

Well Pattern Analysis: Strategic new tools

- You can now **load well allocation factors** generated by several streamline simulators.
- You can also load both constant and time-dependent **well allocation factors from a user-created file**.
- You can now **define well patterns by interactively selecting** the wells that participate in the pattern.
- With Tecplot RS 2010, you can **calculate production data** for well patterns and create a plot of the results to help determine effectiveness of particular injectors.

Supported Platforms

Tecplot, Inc. supports Tecplot RS on the following operating systems. The software may also run on operating system distributions similar to the ones listed here, but we cannot provide support for users running Tecplot RS on other systems.

Microsoft Windows Platforms

<i>32-bit</i>	<i>64-bit</i>
XP (Service Pack 3)	XP (Service Pack 2)
Vista (Service Pack 2)*	Vista (Service Pack 2)*
Windows 7	Windows 7

*. Vista and Windows 7 require that the installation be run as an administrator.

Linux Platforms

32-bit	64-bit
Red Hat Enterprise Linux (RHEL) 4, 5	Red Hat Enterprise Linux (RHEL) 4, 5
SUSE 10, 11	SUSE 9 (SP 4), 10, 11
Ubuntu 6.06 LTS, 8.04 LTS*	Ubuntu 6.06 LTS, 8.04 LTS*

*. Ubuntu must be a Long Term Support (LTS) release.

Windows Configuration

Tecplot RS uses OpenGL 3D graphics, and will utilize high-end 3D graphics cards. For best results, use a graphics card and operating system that supports OpenGL (almost all newer graphics cards do).

With certain system configurations, it is not uncommon to experience problems due to insufficient memory or poorly-programmed graphics drivers. If problems arise on your system, please attempt the following:

1. Temporarily set the Hardware Acceleration option to None. To do this, add the following line to your *tecplot.cfg* file:

```
$!InterfaceOpenGLConfig{AllowHWAcceleration=No}
```

If this fixes the problem, it is very likely your OpenGL driver was causing it. We recommend you install the latest driver for your graphics card from the manufacturer's Web site. Setting Hardware Acceleration to None may substantially reduce drawing speed, so use this as the final solution only if nothing else works.

2. Try changing the Color Palette to 16-, 24-, or 32-bit color.
3. If operating on large data sets, you still may run into memory issues. If this is the case, try one of the

alternative Graphics Cache settings: Cache Only Lightweight Graphics Objects, or Do Not Cache Graphics. Choose “Performance Options” from the **Options** menu. On the Rendering page of the **Performance** dialog, choose the desired Graphics Cache setting and click OK. You can also make these your default settings by editing your *tecplot.cfg* file with a combination of commands. For Cache Only Lightweight Graphics, use:

```

$!Interface
UseDisplayLists = Yes
CacheLightWeightDisplayListOnly = Yes

```

For Do Not Cache Graphics, use:

```

$!Interface UseDisplayLists = No

```

Linux Configuration

- **Qt Display Customization**

The default display settings for Qt software on Linux platforms may cause Tecplot RS to display graphics at less than optimal speeds. You can customize your Qt display settings by using the *qtconfig* utility included in the standard Tecplot RS installation (in the *bin* folder). To learn more, see the [Installation Guide](#).

- **Remote Display Issues**

If you have a **Network** or **Site** license, you can run Tecplot RS on one computer and display it on a second computer (via an X server). However, if you are running the OpenGL version of Tecplot RS, 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 RS may exhibit substantially lower drawing speeds than when it is displayed locally, especially for text and geometries.

- **Mesa Versions**

Mesa, an OpenGL-equivalent graphics library, performs 3D rendering in software. It is typically used when hardware acceleration is unavailable or when working with remote display of large data.

The Mesa version of Tecplot RS functions more slowly, 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
```

Platform-Independent Issues

- **Graphics drivers**

For best results, please make sure you are using the latest graphics drivers compatible with your hardware and operating system. You can obtain these from your graphics adapter vendor's Web site. Old versions may have issues with Tecplot products (especially with larger data sets).

NVIDIA: <http://www.nvidia.com/Download/index.aspx>

ATI: <http://support.amd.com/us/gpudownload/Pages/index.aspx>

Intel: <http://downloadcenter.intel.com/Default.aspx>

Download the latest available driver for your system and adapter.

- **Toolbar and sidebar docking**

If you have trouble re-docking the new toolbar or dockable sidebar, you can run the RSReset utility (in the *bin* folder of your Tecplot RS installation). This will reset the window configuration(s) back to the default settings.

Or you can follow these steps:

1. Exit Tecplot RS.
2. Open *regedit.exe* (on Windows platforms, you can usually find this in *C:\Windows*).
3. Navigate to HKEY_CURRENT_USER/Software/Tecplot/TecplotRS and expand the entry.
4. Delete the entry “mainwindow”.
5. Restart Tecplot RS.

Bug Updates

For a list of bugs fixed in Tecplot RS 2010 R2, visit:

http://download.tecplot.com/RS/bugs_fixed.html

For a list of known bugs in Tecplot RS 2010 R2, visit:

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