



Release Notes

3DFXGL DRIVER - ALPHA RELEASE 2

Version 0.2

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Important Information

The Nature of This Alpha Release

3Dfxgl is a 3-D graphics library with an API which is very similar to that of OpenGL®¹. It was developed entirely by 3Dfx Interactive based on freely available information about the OpenGL state machine and interfaces. This release is intended to give developers an early opportunity to gain experience with this API on 3Dfx Interactive hardware. It is important to keep in mind that this is an **ALPHA** release. Not all features are supported; features supported may not offer complete functionality. No attempt has been made to run any conformance tests. Furthermore, please note that performance optimizations are incomplete; no inferences should be drawn about the fundamental capability of 3Dfx Interactive hardware based on the behavior of applications executed with this library.

Unsupported Features

- **Polygon/Line Stipple:** enabling **GL_LINE_STIPPLE** or **GL_POLYGON_STIPPLE** will be treated as a no-op.
- **Texture Coordinate Generation:** **glTexGen*()** functions are stubbed out. Applications depending on this functionality will most likely fail.
- **Texture Subimage Functions:** **glTexSubImage*()**, **glCopyTexImage*()**, and **glCopyTexSubimage()** functions are stubbed out. Applications depending on this functionality will most likely fail.
- **Evaluators:** **glEvalCoord*()** functions are stubbed out. Applications depending on this functionality will most likely fail.
- **Stencil Buffer:** enabling **GL_STENCIL_TEST** will be treated as a no-op.
- **Pixel Transfer Functions:** **glReadPixels()** and **glDrawPixels()** are not implemented. The behavior of applications depending on these functions is unpredictable.

Known Problems & Restrictions

- Under Windows 95, the sample applications may fail to set the pass through mode correctly. In general, any console application (i.e. not utilizing a Windows event loop) is susceptible to this problem. The workaround is to manually toggle the pass through mode via CTRL-F9.
- Textures in some of the demo programs (e.g. *steam*) are rendered incorrectly.

¹ OpenGL is a registered trademark of Silicon Graphics, Inc.



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- Resizing a window so that the client area becomes zero or iconifying the window causes a DirectDraw error.
- A banner appears in the lower right hand corner of the screen when a 3Dfxgl application is running to signify that this is an Alpha release. This banner may not be suppressed.

Bugs Fixed in this release

- Texture caching does not fragment memory
- Texture names > 512 work correctly
- `wglGetPixelFormatDescription()` now returns correct data
- Line and polygon stipple implemented
- Flashing line at the top of screen during quake fixed

- **System Requirements**

- Pentium Class PC or higher
- Windows 95 or Windows NT 4.0 Operating System
- 3Dfx Interactive Voodoo Graphics-based 3D Accelerator (second monitor **required**) –or–
- 3Dfx Interactive Voodoo Rush based 2D/3D Accelerator
- 3Dfx Interactive Glide Version 2.3 or later
- Microsoft OpenGL must be installed to supply needed library files. This is the default on Windows NT, but only on some Windows 95 systems. To verify that OpenGL is installed on a Windows 95 system, check for the existence of the file named `\WINDOWS\SYSTEM\GLU32.DLL`. OpenGL for Windows 95 can be downloaded from the Microsoft web site from <ftp://ftp.microsoft.com/softlib/mslfiles/oglfix.exe>. For further information read the Knowledge Base article Q124556.

Using the Driver

The name of the 3Dfxgl alpha driver is `OpenGL32.DLL`. **IMPORTANT:** this driver should **only** be copied to a user directory containing an executable to be evaluated. Under no



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circumstances should this driver be copied to any system directory, including `\WINDOWS\SYSTEM` under Windows 95 or `\WINNT\SYSTEM32` under Windows NT. Similarly, do not put any directory containing `OpenGL32.DLL` into your path.

To use this driver, copy it into the same directory as the application executable (.EXE). For example:

```
C:\> COPY \3dfx\3Dfxgl\opengl32.dll \games\glquake\
```

Creating a 3Dfxgl Application with MSVC 4.x

Here is a quick, easy, step-by-step example of how to build and run a sample 3Dfxgl application with Microsoft® Visual C++ Version 4.

Create a new project in Microsoft® Developer Studio

1. select **File | New...** from the main menu
2. select **Project Workspace** from the **New** dialog
3. select **Application** in **New Project Workspace** dialog and complete the **Name** and **Location** edit controls
4. click on the **Create** button

Add the file `square.c` to the project. This file is included with the alpha distribution.

5. copy `square.c` from your 3Dfxgl installation directory into the project directory
6. select **Insert | Files into Project...**
7. select `square.c` from the file list

Add the file `opengl32.lib` to the list of included library modules.

8. select **Build | Settings**
9. select the **Link** tab in the tabbed dialog box
10. add `opengl32.lib` to the list of files in the edit control labeled **Object/library modules**:

Build the program.



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11. select **Build | Rebuild All**

Copy over the 3Dfx driver.

12. e.g. C:>COPY \install\fxogl\opengl32.dll \projects\square\debug

Run the program.

13. select **Build | Debug | Go**

Demos

The following demo applications are included in this release:

- **Atlantis.exe**: swimming textured fish
- **Fractals.exe**: fractal tree
- **Glumech.exe**: walking automaton, many options
- **Mjkwarp.exe**: texture-mapping demo
- **Scene.exe**: a few simple polyhedra
- **Steam.exe**: animated piston, many options

Discussion Group

3Dfx encourages developers to express their opinions, wish lists, and comments. Please join in an open discussion of our 3Dfxgl driver at:

<news://news.3dfx.com/3dfx.opengl>

For more information on OpenGL, please visit the OpenGL WWW Center at:

<http://www.sgi.com/Technology/OpenGL/opengl.html>



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Bugs

Please send bug reports to:

opengl-bugs@3dfx.com