Fastgraph® for Windows®

Version 6.01 Release Notes

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Introduction

The Fastgraph 6.01 for Windows (FGW) maintenance update includes 28 new functions, most of which extend the capabilities of Fastgraph's 3D geometry system. The update also adds DirectX version control and corrects all problems reported since the release of FGW 6.00. One new example program is provided, along with updated versions of the example programs that have changed in this release.

New versions of the *Fastgraph 6.0 User's Guide*, the *Fastgraph 6.0 Reference Manual*, and the Fastgraph 6.0 help file are not included here, but are available from http://www.fastgraph.com/help.html.

This distribution contains patch files, not full libraries or units. After you apply the patches, your FGW 6.00 libraries will be converted to version 6.01. Complete instructions for applying the update patches are provided later in this document.

The FGW 6.01 update will work only if you have installed FGW from the version 6.00 CD.

In addition, the update will work properly only with the original libraries or unit files. If you have modified these files in *any way*, you must re-install the original libraries, update the original libraries, and then make your own modifications to the resulting libraries.

Before applying the FGW 6.01 update, you should make sure the disk drive on which the library or unit files reside has at least 500,000 bytes of free space (this space is needed only during the update process). After the update, all successfully patched files will be dated 10-16-00 (October 16, 2000) and have a 6:01 a.m. time stamp.

The files in this distribution are:

FGW601.PDF	This file
FGW601.RTP	Fastgraph 6.01 update patches
PATCH.EXE	RTPatch application utility program
FGWIN.H	Fastgraph 6.01 header file for C/C++
ExBuilder1.zip	Updated example programs for C++Builder 1
ExBuilder3.zip	Updated example programs for C++Builder 3/4/5
ExC.zip	Updated example programs for C/C++
ExDelphi.zip	Updated example programs for Delphi
ExMFC.zip	Updated example programs for MFC
ExPB.zip	Updated example programs for PowerBASIC
ExVB.zip	Updated example programs for Visual Basic

Fastgraph/Fonts and Fastgraph/Image Updates

Separate updates are available on the Fastgraph web page for Fastgraph/Fonts 6.01 and Fastgraph/Image 6.01. If you have either or both of these Fastgraph add-on products, you must also apply the patch updates for those products after you apply the FGW 6.01 update.

New Features Added in Fastgraph 6.01

24 new 3D geometry functions have been added in Fastgraph 6.01. For more information about these functions, please refer to the updated *Fastgraph 6.0 User's Guide* and *Fastgraph 6.0 Reference Manual*.

fg_3Daxisangle()	fg_3Daxisangleobject()	fg_3Dbehindviewer()	fg_3Dgetmatrix()
fg_3Dgetpov()	fg_3Dlookat()	fg_3Dmove()	fg_3Dmoveforward()
fg_3Dmoveforwardobject()	fg_3Dmoveobject()	fg_3Dmoveright()	fg_3Dmoverightobject()
fg_3Dmoveup()	fg_3Dmoveupobject()	fg_3Droll()	fg_3Drollobject()
fg_3Drotate()	fg_3Drotateobject()	fg_3Drotateright()	fg_3Drotaterightobject()
fg_3Drotateup()	fg_3Drotateupobject()	fg_3Dsetmatrix()	fg_3Dupvector()

The new **fg_ddsetblt()** function lets you specify if certain functions in Fastgraph's DirectX libraries use their own native code, or if they use the DirectX **Blt()** or **BltFast()** blitting methods. This affects **fg_copypage()**, **fg_erase()**, **fg_fillpage()**, **fg_vbcopy()**, and **fg_vbtzcopy()**. By default, these functions use the DirectX blitting methods.

Fastgraph now supports DirectX version control. By default, Fastgraph will use the highest supported version of DirectX available on your system. The new **fg_ddsetversion()** function lets you specify the lowest and highest DirectX versions a program can use. The new **fg_ddgetversion()** function returns the DirectX version number a program is using.

The **fg_ddapply()** function has been modified to accept a parameter specifying what version of DirectX is being used. If you set up DirectX external to Fastgraph, this change lets you use any supported version of DirectX.

The **fg_flicplay()** and **fg_showflic()** functions now work with flic files that have incorrect FLI_COPY chunk sizes stored in the file.

The new **fg_tmevict()** function moves all Direct3D managed textures from video memory to system memory.

Programs linked with Fastgraph's DirectX libraries no longer need to link with the DDRAW.LIB import library.

Problems Corrected in Fastgraph 6.01

The **fg_3Dpov()** and **fg_3Dsetobject()** functions did not work correctly if two or more of the rotation angles were not zero.

The **fg_ddapply()** function did not correctly set up the alpha channel mask when using high color or true color virtual buffers. This caused **fg_vballoc()** to fail under some DirectX implementations if you set up DirectX external to Fastgraph.

A z-buffering problem was fixed in **fg_drawz()**, which also affected **fg_3Dline()**.

Calling **fg_kbtest(0)** to test for any key pressed did not always work correctly.

Under Windows NT4, **fg_vballoc()** could not create 16bpp or 32bpp virtual buffers when using a 256-color display.

The **fg_xvb()** and **fg_yvb()** functions now return -1 when a different application is the foreground window. This change also corrects a problem in **fg_mousepos()**.

Applying the Fastgraph 6.01 Patch

Follow these steps to apply the Fastgraph 6.01 patch:

Step 1: Copy the files PATCH.EXE and FGW601.RTP to the directory where you've installed the Fastgraph 6.00 libraries or unit files, and make that directory your current directory. If you've installed FGW for more than one compiler or platform and the library files reside in different directories, you'll need to apply the patch from each such directory (see Step 5).

Step 2: If you're using Delphi, rename the DCU files as follows:

For Delphi 2.0:
```
    RENAME FGWIN*.DCU *.D20
```
For Delphi 3.0:
```
    RENAME FGWIN*.DCU *.D30
```
For Delphi 4.0:
```
    RENAME FGWIN*.DCU *.D40
```
For Delphi 5.0:
```
    RENAME FGWIN*.DCU *.D50
```

Step 3: If you're using Watcom C/C++ 11, rename the library files as follows:

```
RENAME FGWWC32.LIB  FGWVC32.LIB
RENAME FGWWC32D.LIB FGWVC32D.LIB
```

Step 4: Apply the patch by entering

```
PATCH FGW601
```

from the DOS command line. The PATCH utility will update all Fastgraph 6.00 libraries and unit files found in the current directory.

Descriptive messages will appear as the individual patches are applied. When the PATCH command completes, it will display a summary showing how many files were updated and how many were "missing". The missing files do not indicate a problem but merely mean you haven't installed FGW support for that particular compiler or platform.

Step 5: If you've installed FGW for more than one compiler, you must repeat Steps 1 to 4 from each directory where the library or unit files are stored for a given compiler. For example, suppose you've installed FGW for Borland C++ (with library files in C:\BC5\LIB) and Delphi 5.0 (with unit files in C:\DELPHI5\LIB). First copy the files PATCH.EXE and FGW601.RTP to the C:\BC5\LIB directory and issue the PATCH command to update your Borland C++ libraries. Following this, update the Delphi units by copying PATCH.EXE and FGW601.RTP to C:\DELPHI5\LIB and issue the PATCH command again. The order in which you apply patches for different compilers does not matter.

Step 6: If you're using Delphi, rename the unit files back to their original names:

For Delphi 2.0:
```
RENAME FGWIN*.D20 *.DCU
```
For Delphi 3.0:
```
RENAME FGWIN*.D30 *.DCU
```
For Delphi 4.0:
```
RENAME FGWIN*.D40 *.DCU
```
For Delphi 5.0:
```
RENAME FGWIN*.D50 *.DCU
```

Step 7: If you're using Watcom C/C++ 11, rename the library files back to their original names:

```
RENAME FGWVC32.LIB  FGWWC32.LIB
RENAME FGWVC32D.LIB FGWWC32D.LIB
```

Step 8: If you're using Visual Basic, you must now update the FGWin.bas and FGWinD.bas module files. Copy the files PATCH.EXE and FGW601.RTP to the directory where you've installed the module files, and make that directory your current directory. Then apply the patch again as done in Step 4.

Step 9: If you're using PowerBASIC, you must now update the FGWin.inc and FGWinD.inc include files. Copy the files PATCH.EXE and FGW601.RTP to the directory where you've installed the include files, and make that directory your current directory. Then apply the patch again as done in Step 4.

Step 10: If you're using C/C++ or C++Builder, copy the FGWIN.H header file to a directory where the compiler normally searches for such files. The FGWIN.H file supplied in this distribution replaces the same file from earlier versions of Fastgraph for Windows.

Step 11: After applying the patch, you may delete all extra copies of the PATCH.EXE and FGW601.RTP files. You should keep one copy of these files in case you later install libraries for other compilers from the Fastgraph 6.00 CD.

New Versions of the Fastgraph 6.0 Examples

We recommend updating your FGW example programs with the versions supplied in this distribution. You can do this as follows:

C/C++	unzip ExC.zip into \FGW6\Examples\C
C++Builder 1	unzip ExBuilder1.zip into \FGW6\Examples\Builder1
C++Builder 3/4/5	unzip ExBuilder3.zip into \FGW6\Examples\Builder3

MFC	unzip ExMFC.zip into \FGW6\Examples\MFC (use -d switch)
Delphi	unzip ExDelphi.zip into \FGW6\Examples\Delphi
PowerBASIC	unzip ExPB.zip into \FGW6\Examples\PB
Visual Basic	unzip ExVB.zip into \FGW6\Examples\VB

Note that the above zip files contain only the example programs that have changed with this release.

If you've made any custom changes to the Fastgraph examples, you may first want to rename your modified examples or move them elsewhere.