

Vega Prime

Release Notes

Version 2.1.2.2

June 2007



MultiGen-Paradigm

VISUALIZE REALITY

Vega Prime Release Notes, Version 2.1.2.2

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Vega Prime 2.1.2.2 Release Notes

These release notes describe Vega Prime software release 2.1.2.2, and when applicable, includes information available after the manuals were published.

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Bug Fixes

Version 2.1.2.2

The following bugs have been fixed in Vega Prime v2.1.2.2:

vp

- Allow channel updates even if there is no scene.
- Bug 0016427: Game motion model uses frame rate to scale look speed, wreaks havoc with DR.

vpEnv

- Bug 0014761: Changing the number of puffs in a cloudvolume crashes active preview.
- Bug 0016346: Bump map causes terrain fog and clipping errors.

vpFX

- Bug 0008282: Scale FX particle color based on brightness.

vpMarine

- Bug 0016404: a grid pattern anomaly exists in the normal map for observer centered oceans when choppy waves=0.
- Bug 0016412: EMBM has color clamping/wrapping artifacts.
- Bug 0016469: simple marine sample: huge number of state changes.

vpMotion

- Bug 0016201: vpmotion_spin does not return to same center of spin when changing radius.
- Bug 0016427: Game motion model uses frame rate to scale look speed, wreaks havoc with DR.

VSG

- Bug 0016376: VBO doesn't render correctly for objects with multi-texture

Version 2.1.2.1

The following bugs have been fixed in Vega Prime v2.1.2.1:

vpEnv

- Bg 0016286: Black Sun – appears when running Active Preview with the template ACF.

vpOverlay

- Bug 0016287: vpOverlay does not blend correctly when alpha blending.

vpSpeedTree

- Bug 0016290: Leaf meshes not drawn correctly.

Updated Files

The following files will be updated by the Vega Prime 2.1.2.2 installer:

Windows VC7 and VC8

bin\textureTiler.exe
bin\vp2_1.dll
bin\vp2_1.pdb
bin\vp2_1D.dll
bin\vp2_1D.pdb
bin\vpenv2_1.dll
bin\vpenv2_1.pdb
bin\vpenv2_1D.dll
bin\vpenv2_1D.pdb
bin\vpfx2_1.dll
bin\vpfx2_1.pdb
bin\vpfx2_1D.dll
bin\vpfx2_1D.pdb
bin\vpmarine2_1.dll
bin\vpmarine2_1.pdb
bin\vpmarine2_1D.dll
bin\vpmarine2_1D.pdb
bin\vpmotion2_1.dll
bin\vpmotion2_1.pdb
bin\vpmotion2_1D.dll
bin\vpmotion2_1D.pdb

bin\vpoverlay2_1.dll
bin\vpoverlay2_1.pdb
bin\vpoverlay2_1D.dll
bin\vpoverlay2_1D.pdb
bin\vsppeedtree2_1.dll
bin\vsppeedtree2_1.pdb
bin\vsppeedtree2_1D.dll
bin\vsppeedtree2_1D.pdb
bin\vpvt2_1.dll
bin\vpvt2_1.pdb
bin\vpvt2_1D.dll
bin\vpvt2_1D.pdb
bin\vsgn_builder2_1.dll
bin\vsgn_builder2_1.pdb
bin\vsgn_builder2_1D.dll
bin\vsgn_builder2_1D.pdb
bin\vsgnflt2_1.dll
bin\vsgnflt2_1.pdb
bin\vsgnflt2_1D.dll
bin\vsgnflt2_1D.pdb
bin\vsg2_1.dll
bin\vsg2_1.pdb
bin\vsg2_1D.dll
bin\vsg2_1D.pdb
bin\vsgs2_1.dll
bin\vsgs2_1.pdb
bin\vsgs2_1D.dll
bin\vsgs2_1D.pdb
bin\vsgu2_1.dll

bin\vsgu2_1.pdb
bin\vsgu2_1D.dll
bin\vsgu2_1D.pdb
bin\wavetools2_1.dll
bin\wavetools2_1.pdb
bin\wavetools2_1D.dll
bin\wavetools2_1D.pdb

lib\vp2_1.lib
lib\vp2_1D.lib
lib\vp2_1S.lib
lib\vp2_1SD.lib
lib\vpenv2_1.lib
lib\vpenv2_1D.lib
lib\vpenv2_1S.lib
lib\vpenv2_1SD.lib
lib\vpfx2_1.lib
lib\vpfx2_1D.lib
lib\vpfx2_1S.lib
lib\vpfx2_1SD.lib
lib\vpmarine2_1.lib
lib\vpmarine2_1D.lib
lib\vpmarine2_1S.lib
lib\vpmarine2_1SD.lib
lib\vpmotion2_1.lib
lib\vpmotion2_1D.lib
lib\vpmotion2_1S.lib
lib\vpmotion2_1SD.lib
lib\vpoverlay2_1.lib

lib\vpoverlay2_1D.lib
lib\vpoverlay2_1S.lib
lib\vpoverlay2_1SD.lib
lib\vpstree2_1.lib
lib\vpstree2_1D.lib
lib\vpstree2_1S.lib
lib\vpstree2_1SD.lib
lib\vpvt2_1.lib
lib\vpvt2_1D.lib
lib\vpvt2_1S.lib
lib\vpvt2_1SD.lib
lib\vsgn_builder2_1.lib
lib\vsgn_builder2_1D.lib
lib\vsgn_builder2_1S.lib
lib\vsgn_builder2_1SD.lib
lib\vsgnflt2_1.lib
lib\vsgnflt2_1D.lib
lib\vsgnflt2_1S.lib
lib\vsgnflt2_1SD.lib
lib\vsgr2_1.lib
lib\vsgr2_1D.lib
lib\vsgr2_1S.lib
lib\vsgr2_1SD.lib
lib\vsgs2_1.lib
lib\vsgs2_1D.lib
lib\vsgs2_1S.lib
lib\vsgs2_1SD.lib
lib\vsgu2_1.lib
lib\vsgu2_1D.lib

lib\vsgu2_1S.lib
lib\vsgu2_1SD.lib
lib\wavetools2_1.lib
lib\wavetools2_1.lib
lib\wavetools2_1D.lib
lib\wavetools2_1D.lib

Linux

bin\textureTiler

bin64\textureTiler

lib/libvp2_1.so
lib/libvp2_1-g.so
lib/libvp.a
lib/libvp-g.a
lib/libvpenv2_1.so
lib/libvpenv2_1-g.so
lib/libvpenv.a
lib/libvpenv-g.a
lib/libvpfx2_1.so
lib/libvpfx2_1-g.so
lib/libvpfx.a
lib/libvpfx-g.a
lib/libvpmarine2_1.so
lib/libvpmarine2_1-g.so
lib/libvpmarine.a
lib/libvpmarine-g.a

lib/libvpmotion2_1.so
lib/libvpmotion2_1-g.so
lib/libvpmotion.a
lib/libvpmotion-g.a
lib/libvpoverlay2_1.so
lib/libvpoverlay2_1-g.so
lib/libvpoverlay.a
lib/libvpoverlay-g.a
lib/libvpspeedtree2_1.so
lib/libvpspeedtree2_1-g.so
lib/libvpspeedtree.a
lib/libvpspeedtree-g.a
lib/libvpvt2_1.so
lib/libvpvt2_1-g.so
lib/libvpvt.a
lib/libvpvt-g.a
lib/libvsgn_builder2_1.so
lib/libvsgn_builder2_1-g.so
lib/libvsgn_builder.a
lib/libvsgn_builder-g.a
lib/libvsgnflt2_1.so
lib/libvsgnflt2_1-g.so
lib/libvsgnflt.a
lib/libvsgnflt-g.a
lib/libvsgr2_1.so
lib/libvsgr2_1-g.so
lib/libvsgr.a
lib/libvsgr-g.a
lib/libvsgrs2_1.so

lib/libvsgs2_1-g.so
lib/libvsgs.a
lib/libvsgs-g.a
lib/libvsgu2_1.so
lib/libvsgu2_1-g.so
lib/libvsgu.a
lib/libvsgu-g.a
lib/libwavetools2_1.so
lib/libwavetools2_1-g.so
lib/libwavetools.a
lib/libwavetools-g.a

lib64/libvp2_1.so
lib64/libvp2_1-g.so
lib64/libvp.a
lib64/libvp-g.a
lib64/libvpenv2_1.so
lib64/libvpenv2_1-g.so
lib64/libvpenv.a
lib64/libvpenv-g.a
lib64/libvpfx2_1.so
lib64/libvpfx2_1-g.so
lib64/libvpfx.a
lib64/libvpfx-g.a
lib64/libvpmarine2_1.so
lib64/libvpmarine2_1-g.so
lib64/libvpmarine.a
lib64/libvpmarine-g.a
lib64/libvpmotion2_1.so

lib64/libvpmotion2_1-g.so
lib64/libvpmotion.a
lib64/libvpmotion-g.a
lib64/libvpoverlay2_1.so
lib64/libvpoverlay2_1-g.so
lib64/libvpoverlay.a
lib64/libvpoverlay-g.a
lib64/libvpspeedtree2_1.so
lib64/libvpspeedtree2_1-g.so
lib64/libvpspeedtree.a
lib64/libvpspeedtree-g.a
lib64/libvpvt2_1.so
lib64/libvpvt2_1-g.so
lib64/libvpvt.a
lib64/libvpvt-g.a
lib64/libvsgn_builder2_1.so
lib64/libvsgn_builder2_1-g.so
lib64/libvsgn_builder.a
lib64/libvsgn_builder-g.a
lib64/libvsgnflt2_1.so
lib64/libvsgnflt2_1-g.so
lib64/libvsgnflt.a
lib64/libvsgnflt-g.a
lib64/libvsgr2_1.so
lib64/libvsgr2_1-g.so
lib64/libvsgr.a
lib64/libvsgr-g.a
lib64/libvsgs2_1.so
lib64/libvsgs2_1-g.so

lib64/libvsgs.a
lib64/libvsgs-g.a
lib64/libvsgu2_1.so
lib64/libvsgu2_1-g.so
lib64/libvsgu.a
lib64/libvsgu-g.a
lib64/libwavetools2_1.so
lib64/libwavetools2_1-g.so
lib64/libwavetools.a
lib64/libwavetools-g.a

Known Problems

This section contains known issues or problems. Make sure you check the MultiGen-Paradigm, Inc., website often for the latest fixes, patches, and functionality enhancements, which can be found at:

http://www.multigen-paradigm.com/support/sc_runtime.shtml

Installation

- RedHat Linux Enterprise 5 Users: The current InstallShield GUI used with Vega Prime does not support the 32-bit or 64-bit versions of RedHat Linux Enterprise 5. The Installer will notify the user it is unable to initialize the GUI and will suggest installing via console mode. The solution to this issue is to install the “Legacy Software Development” packages included in this Vega Prime 2.1.2 distribution. See the RedHat5_README file or the *Vega Prime Getting Started Guide* for more information.

Microsoft Visual C++ 8.0

- Certain preprocessor settings can significantly impact the performance of applications when compiling using Visual C++ 8.0. To ensure your project settings are configured properly for performance, please see the *Vega Prime Programmer’s Guide* for instructions on setting up solution and project files in Microsoft Visual Studio 2005.

Static Builds

- To build Vega Prime static samples, users will need to install NVIDIA Cg 1.5 toolkit. The installer will set the \$(CG_LIB_PATH) system environment variable which is referenced by the .vcproj file as Additional Library Path. Visit the NVIDIA website to download the CG 1.5 toolkit.

LynX Prime

- The Active Preview tool does not support creating instances of certain classes. Some items that cannot be modified while the Active Preview tool is running are not grayed out.
- Bug 0007197 – The following warning will be printed on the console:
Empty type? SoundUsed
Unable to find lpXXXSchema to connect to 'Sound'
These warnings can be ignored.
- Bug 0007934 - The cpp code exported from LynX Prime may contain incorrectly named variables that will result undeclared identifier compiler errors. You will need to manually fix the variable names with the correct ones defined in the file.
- Windows only: if you launch the Vega Prime application by dropping the ACF file on the executable file, then the current directory is undefined. That means “.” and “..” are undefined in the file search path. This is not a bug in Vega Prime. It is how Windows handles the drag and drop operation.
- Bug 0013584 – Motion Models wizard does not include tether motion models
- Bug 0015323 - Relative paths don't work in Lynx Prime
When using the File->Open menu to open an ACF that reference other files with relative paths, those files are unlikely to be found because the working directory is not updated. It is recommended that the user reference resource files using portable dataset notation, which prefixes the resources with the use of an environment variable.

Vega Prime

- Windows only: Microsoft Visual C++ Compiler Limit-If you get a fatal error C1076: Compiler limit: internal heap limit reached, use /Zm to specify a higher limit by doing the following:
 - Open Dev Studio.

- Click Project Settings.
 - Click C/C++ tab.
 - Go to Category field.
 - Go to Preprocessor.
 - Select Project Option field.
 - Add /Zm300.
- Windows only: Bug 0003113 - At certain elevations, fog causes the terrain textures/materials showing black and white test patterns. This only occurs on Wildcat graphics card when the visibility range is nearly zero (<0.001).
 - Bug 0010646 - unref'ing an observer causes the application to crash
 - The NVIDIA Cg dlls are not multi-thread safe which causes crashes on single-system multi-pipe Vega Prime applications with shader-based features enabled.
 - When running the default Camp Pendleton database black lines might be seen in the texture running across the database. On NVIDIA graphics cards go to the Advanced 3D properties and set the Texture Conformant Clamp to either "off" or "use hardware" to solve this problem.
 - Statistics collection and on-screen rendering may introduce a performance impact. The impact is actually mostly due to the glFinish call that is executed by default when collecting Channel draw time. Note that calling glFinish is the recommended OpenGL method for draw time estimation. However, the actual behavior is driver specific. You can disable calls to glFinish by setting the MPI_VSG_GLFINISH_NOOP environment variable to 1. Also, consider using the FRAPS program if frame rate estimate is all you need.

There is a known stability issue with the NVIDIA driver and Linux kernel versions < 2.6.14 on the 64-bit platform which can cause the X-server to lockup. The NVIDIA drivers rely upon the Linux kernel's `change_page_attr()` interface to modify the kernel's mappings cache attributes for system memory pages while performing DMA transfers. This issue has been resolved and fixed in the kernel version 2.6.14. Please refer to

<http://www.nvnews.net/vbulletin/showthread.php?t=58498>

for workarounds if running with a kernel version lower than 2.6.14

- In some cases of 64-bit Linux installations, clip planes may show anomalies such as flickering or not clearing the color correctly. There is an NVIDIA driver setting that disables Buffer Flipping and is enabled by default. Disabling Buffer flipping when this anomaly occurs can solve the issue.

- Render strategies are not compatible with Shader Infrastructure; therefore, they are also not compatible with SkyLight. In order for render strategies to work properly within an application, SkyLight must be disabled via the vpEnvGlobals class, or the Shader Infrastructure must explicitly be turned off.

Distributed Rendering

- Bug 0016267: Synchronization of Virtual Texture across DR doesn't work.

vpEnv

- vpEnvSnow and vpEnvRain effects cannot be created dynamically after vp::configure() has been called. Doing so will result in a crash.

vpLADBM

- When specifying a stereographic projection in MetaFlight, the value specified for ScaleCentral is ignored when initializing the projection, so the value given for ScaleLatitude must be correct. Ideally it is only necessary to specify one or the other, since one can be computed from the other, but due to a limitation in the current code, ScaleLatitude is the one that must be specified correctly for the projection to get properly initialized.

vpLightlobe

- (Windows only) The auto-hide of the Taskbar appearance has to be enabled in order for the light lobe to work properly. To enable the auto-hide, right-click on the Start button -> Properties -> Taskbar tab -> check 'Auto-hide the taskbar' check box.
- vpLightlobe is currently not compatible with the SkyLight Atmospheric and Illumination model.

vpMarine

- Bug 0016386: Marine and vpCamera do not work together with marine shaders

vpShadowPlanar

- Scaling a shadow caster does not scale its shadow. The work around is to embed the scale in the model vertices using Creator.
- Changing a DOF/Transform on a shadow caster does not affect its shadow.

vsgn_batch loader

- This loader does not currently support the loading of horizontal quads that can be output with the Creator 3.3 IBR tool.

Getting Technical Support

The following table contains MultiGen-Paradigm, Inc. contact information for product support.

Contact Method	For Product Support
Email	vegaprime@multigen-paradigm.com
Website	http://www.multigen-paradigm.com
Customer Support and Licensing	877-289-5670 (toll free)

