



VR-Vantage 1.2.1 Release Notes

This document provides the following release-specific information for VR-Vantage™ 1.2.1:

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Document ID: VRV-1.2.1-3-101116

Systems Supported and System Requirements

This section describes platform support and system requirements for VR-Vantage. For the most up-to-date information about systems supported, see the Product Versions page on the MÄK web site at: <http://www.mak.com/support/productversions.php>.

The VR-Vantage is available for the following operating systems:

Table 1: Platforms supported

Operating System	Compiler
Red Hat Enterprise Linux Workstation 4	gcc 3.4
Red Hat Enterprise Linux Workstation 5	gcc 5.1
Windows XP	Microsoft Visual C++ 7.1, 8.0
Windows Vista	Microsoft Visual C++ 7.1, 8.0
Windows 7	Microsoft Visual C++ 7.1, 8.0

Third Party Library Support

VR-Vantage uses the indicated versions of the following libraries:

- ♦ VR-Link 3.13.2
- ♦ Qt 4.5
- ♦ OpenSceneGraph 2.8.0.

VR-Vantage for Windows

VR-Vantage for Windows requires the following:

- ♦ A Pentium-class PC (or higher) with minimum 2 GHz processor
- ♦ An OpenGL 2.0-compliant graphics card with 256 MB or more of memory.
- ♦ Windows XP SP2 or Windows Vista.
- ♦ 2 GB of disk space.
- ♦ 1 GB of RAM; more is desirable depending on the size of the terrain database and the number of models to be loaded.

3D Video Boards Supported

In general, VR-Vantage 1.2.1 should support any board that claims to support OpenGL 2.0. VR-Vantage has been tested with current versions of NVidia graphics cards. There are known problems with ATI graphics cards (in particular, the ATI Radeon X1950 Pro).



You should always try to use the latest drivers available for your video board.

Compiler Compatibility on Windows

MÄK provides versions of product releases that have been compiled with Microsoft Visual C++ 7.1, 8.0, and 9.0 (some products are not available on all compilers). When you run MÄK products together, for example, the Logger and a VR-Vantage application, we strongly recommend that you run versions compiled with the same compiler. Mixing products compiled with different versions of the compiler can result in program instability.

FLEXlm Support

VR-Vantage 1.2.1 uses FLEXlm 11.6.

Using Libraries and Binaries Built with Visual Studio 2005 and Later

All MÄK products built with Microsoft Visual Studio require the C Runtime Library to function. The C runtime libraries have always been available from Microsoft for download, they are also installed on a user's machine when a Microsoft compiler is installed. The C runtime libraries are not part of the normal Windows installation. For customers who plan to use MÄK products on machines that do not have a compiler installed, MÄK has historically distributed a copy of the C Runtime Libraries with MÄK products. These libraries were put in the *bin* directory used by the MÄK products. MÄK products would then use the libraries in the *bin* directory and customers would not have a problem if copies of the libraries were not already installed.

Unfortunately, with the release of the new C Runtime Libraries required by Microsoft Visual Studio 2005 (MSVC++8.0) and later, the libraries can no longer just be copied into the *bin* directory of an application. The libraries need to be installed correctly into Windows system folders. (The process is actually a little more complicated, a manifest file needs to be created to tell Windows where to find the libraries.)

To accommodate this change, MÄK is distributing the Windows installer for the C runtime libraries with all MÄK products released for MSVC++8.0 and later. The 32-bit installer is named *vc redistrib_x86.exe*; the 64-bit installer (if supported) is named *vc redistrib_x64.exe*. They are in the base directory of any installed MÄK product that requires them.

Running the installer requires Administrator privileges for the machine the installer is run on. MÄK has chosen to not integrate the MÄK installer and the Microsoft installer so as not to require users to have Administrator privileges to install MÄK products. Therefore, if you who do not have a compiler installed, or get error messages like "Software has not been installed correctly, please re-install", you must apply the patch.

For more information see this Microsoft URL:

<http://msdn2.microsoft.com/en-us/library/ms235299.aspx>



You must ensure that the preprocessor defines `_SECURE_SCL=0`, and `_HAS_ITERATOR_DEBUGGING=0` are set for MSVC++8.0 and MSVC++9.0 builds. If these are not set, random crashes and assertions may be encountered during runtime."

Patch Required for AMD Dual-processor Windows PCs

VR-Link-based products use a high resolution counter for time calculations on Windows PCs. Customers who are running Windows on PCs with multiple AMD Athlon 64-bit processors may notice clock jitter, which may cause time in MÄK products to run backwards. This occurs when the Windows scheduler changes the CPU the MÄK process is using. If the high resolution counters on each processor are not synchronized, the application may witness a decrease in the high resolution counter value stored in the processor causing an incorrect time calculation. To fix this problem customers, apply the AMD Dual-Core Optimizer patch provided by AMD. You can get the patch at:

http://www.amd.com/us-en/Processors/TechnicalResources/0,,30_182_871_9706,00.html



If you get an error when you try to access this URL, reload the page.

Network Compatibility

HLA only

VR-Vantage 1.2.1 is compliant with:

- ♦ RPR-FOM 0.5, 0.7, 0.8, 1.0, and a subset of 2.0 (draft 6, 14, and 17)
- ♦ MÄK RTI 2.x, 3.x
- ♦ Pitch RTI 1.3 C++ interface.

VR-Vantage 1.2.1 is not compatible with RTI-NG Pro because it uses a non-standard version of *xerces_c_2_7.dll*.

Other RTIs that support the HLA 1.3 specification or the SISO DLC HLA API 1516 (SISO-STD-004.1-2004 version of the IEEE 1516 specification.)

DIS only

VR-Vantage 1.2.1 supports DIS 4, 5, and 6, and can therefore interoperate with DIS applications of any of these versions.

FOM Support

VR-Vantage 1.2.1 has built-in support for versions 0.5, 0.7, 0.8, 1.0, and 2.0, drafts 6, 14, and 17, of the RPR FOM. It also supports VR-Link's ability to support alternative FOMs through the FOM Mapper. By default, VR-Vantage 1.2.1 uses RPR FOM 1.0.

If you want to use VR-Vantage with VR-Forces 3.9 or later and RPR FOM version 2, draft 17, use the *VR-Link20017-1.fed* file.

Backwards Compatibility

VR-Vantage 1.2.1 applications and some files are not backwards compatible. Specific incompatibilities are as follows:

- ♦ Applications from a given release cannot control display engines from a different release. (In other words, a VR-Vantage 1.2.1 application cannot control a VR-Vantage 1.1 display engine.)
- ♦ Plug-ins built against one version cannot be used with the other.
- ♦ Model files (MEDF and MEIF) built with one version do not work with the other.

New Features and Product Updates

VR-Vantage 1.2.1 is a maintenance release. It has no new features.

Bug Fixes

VR-Vantage 1.2.1 fixes the following bugs:

- ♦ It was not possible to connect to terrain servers without an internet connection even though the data was cached locally.
- ♦ VR-Vantage crashed when using the `--entTypeMap` command-line option.
- ♦ Fixed bad detonation mappings.
- ♦ Some particle systems were not displayed.
- ♦ Fixed a *dted.dll* conflict.
- ♦ The overlay did not have the correct viewport.
- ♦ Resizing the number of segments in a line could cause a crash.
- ♦ Fixed the bind observers command line option so that it works when loading a terrain from the command line. (Previously it put the observer at 0,0,0 instead of the bound location.)
- ♦ Fixed a memory leak when creating and removing inset views. 38655
- ♦ Fixed a bug in display of labels with multiple channels open. 42336
- ♦ Added mappings for additional detonation types.
- ♦ Improved observer speed scaling for paged terrains.
- ♦ The Clear Instancing Cache button did not work.

- Added driver plug-in example.
- The option to find the closest match to an entity enumeration in the Entity Type Mappings dialog box did not work correctly. 42038
- Removed shadows cast by non-realistic objects, for example, fire/detonate lines).
- Improved the API for setting model visibility.
- Fixed a memory leak in ground clamping

Known Problems and Product Restrictions

VR-Vantage has the following known problems:

- SpeedTrees do not work on geocentric terrains.
- Clouds do not work on geocentric terrains.
- Adding props to streaming terrains only works after the highest elevation has been streamed in.
- SpeedTree wind is not synchronized among remote display engines.
- Particle systems (smoke) is not synchronized between remote display engines.
- SpeedTrees do not show up in Plan View mode.
- When you load a geocentric terrain, clouds are displayed in the center of the earth.
- If a graphics card does not support shaders, you may receive the following error message when you load a terrain that uses them:

Shader [Branches] validation failed

To work around this problem, set the SpeedTree Performance Profile to Disabled, as follows:

- a. Choose **Settings** → **Display**. The Display Settings dialog box opens.
 - b. Select the SpeedTree Settings page.
 - c. In the Performance Profile drop-down list, select Disabled.
- VR-Vantage applications may freeze for a period of time if you close a terrain while you are connected to a simulation and there are DI-Guy characters in the scene. The application will eventually unfreeze after a variable period of time. The work-around is to disconnect from the simulation before closing the terrain.
 - On external display engines, particle effects, such as smoke and trailing effects, sometimes restart spontaneously.
 - When you enter coordinate values into the Add Terrain Patch dialog box, it does not convert lower case letter to uppercase. The result is that VR-Vantage incorrectly interprets the coordinate values.
 - If you load the *LittlePondInset* or *LittlePondInsetNoSpeedTrees* terrains, it may appear as if nothing has loaded. This is because the default eyepoint is above the terrain. To see the terrain, look down, or load the *LittlePondTutorial.osrx* saved views file and select the saved view.

- ♦ On Linux, when an application linked with Qt 4, such as the `embeddedExample`, loads the DI-Guy plug-in, it crashes. The DI-Guy plug-in has a dependency on Qt 3. The crash is due to Qt 3 initialization calling functions that are defined by Qt 4 in the main application.

To work around this problem, do not use Qt 4 in the main application. If necessary write the Qt 4 user interface in a separate plug-in, or disable loading the DI-Guy plug-in (by explicitly adding it to the excluded plug-in files in the *DtVrvApplicationConfiguration*, or by removing the file from the *./plugins/release* directory).

