



VR-Vantage 1.2 Release Notes

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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 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 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 *vcredist_x86.exe*; the 64-bit installer (if supported) is named *vcredist_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 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.

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

FOM Support

VR-Vantage 1.2 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 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 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 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 has the following updates and new features:

- ♦ Vantage IG and MÄK Stealth have been rebranded as VR-Vantage Stealth and VR-Vantage IG. VR-Vantage XR has been added to the VR-Vantage product line of visualization applications. For details, please see [Section 1.1, "The VR-Vantage Product Line"](#), in *VR-Vantage Users Guide*.
- ♦ The menu structure has been consolidated. In previous releases, most of the options on the Terrain, Visual Mappings, Connections, and Settings menu represented pages on parent dialog boxes. These page-specific options have been removed. The Terrain, Visual Mappings, and Connections menu have been removed. All configuration options are now accessed by choosing the appropriate parent dialog box on the Settings menu.
- ♦ Support for CIGI. For details, please see Chapter 16, [Mapping CIGI Models and Components](#) and Appendix D, [CIGI Host Emulator Tutorial](#), in *VR-Vantage Users Guide*.
- ♦ Support for Presagis MetaFlight files. For details, please see [Section 5.6, "Loading MetaFlight Terrains"](#), in *VR-Vantage Users Guide*.
- ♦ Support for a 2D projection (VR-Vantage XR only). For details, please see Chapter 13, [Using VR-Vantage XR](#) and sections in Chapter 9, [Moving the Observer](#), in *VR-Vantage Users Guide*.
- ♦ New 3D Colorized Models and 2D Icons model sets (VR-Vantage XR only). For details, please see [Section 13.3, "VR-Vantage XR Model Sets"](#), in *VR-Vantage Users Guide*.

- ♦ Ability to switch model sets (VR-Vantage XR only). For details, please see [Section 13.3.1, "Changing the Model Set"](#), in *VR-Vantage Users Guide*.
- ♦ New concept of model sets for organizing models of a particular style. For details, please see [Section 4.5.2, "Model Sets"](#), in *VR-Vantage Users Guide*.
- ♦ New concept of observer modes for organizing model sets, observer key mapping, entity display settings, and choice of projection. For details, please see [Section 4.3.1, "Observer Modes"](#) and Chapter 8, *The Observer and Observer Modes*, in *VR-Vantage Users Guide*.
- ♦ Support for interest management (DDM). For details, please see [Section 11.14, "Filtering Entities Using Interest Management"](#), in *VR-Vantage Users Guide*.
- ♦ Automatic save for changed settings. For details, please see [Section 3.5, "Managing VR-Vantage Settings"](#), in *VR-Vantage Users Guide*.
- ♦ Ability to configure the visual elements for scene objects using element definitions. For details, please see Chapter 15, *Model and Element Definitions*, in *VR-Vantage Users Guide*.
- ♦ Support for tether track and mimic track attach modes in the GUI. For details, please see [Section 10.2.4, "Mimic Track Mode"](#) and [Section 10.2.6, "Tether Track Mode"](#), in *VR-Vantage Users Guide*.
- ♦ New terrain databases.
- ♦ Key mapping has been moved from the Observer Control Panel to the Application Settings dialog box. For details, please see Appendix E, *Creating and Editing Key Mappings*, in *VR-Vantage Users Guide*.
- ♦ Toolbars for quick access to common user actions.

The VR-Vantage Toolkit has the following changes:

- ♦ Support for a remote draw API. For details, please see Chapter 10, *VR-Vantage Remote Draw API*, in *VR-Vantage Developers Guide*.
- ♦ The Stealth Control Toolkit has been deprecated and replaced with the VR-Vantage Control Toolkit. For details, please see Chapter 11, *The VR-Vantage Control Toolkit*, in *VR-Vantage Developers Guide*.
- ♦ New API examples. For details, please see the Examples page in the class documentation.
- ♦ New classes to support the changes to settings management. For details, please see [Section 3.4, "Managing Settings"](#) and [Section 3.5, "Implementing Save/Restore for Dialog Box Pages"](#), in *VR-Vantage Developers Guide*.
- ♦ New classes to support element definitions and the object dictionary. For details, please see the `exampleObjectDictionary`, `exampleVisualDefinitionSet`, and `exampleElementDefinition` examples in the class documentation.
- ♦ New `vrvMerge` tool that allows developers of VR-Vantage plug-ins to merge plug-in-specific settings into VR-Vantage settings. For details, please see [Section 9.6, "Distributing Data with Plug-Ins"](#), in *VR-Vantage Developers Guide*.

Documentation Updates

All VR-Vantage documentation has been updated for release 1.2. There may be some slight discrepancies between screen captures and the final versions of dialog boxes and icons. In addition to documenting all new features, *VR-Vantage Users Guide* includes several new tutorials.

Known Problems and Product Restrictions

VR-Vantage has the following known problems:

- ♦ SpeedTrees 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).