



VR-Vantage 1.4.1 Release Notes

This document provides the following release-specific information for VR-Vantage™ 1.4.1:

Systems Supported and System Requirements.....	2
Third Party Library Support.....	2
VR-Vantage for Windows.....	2
3D Video Boards Supported.....	3
Operating System.....	2
Compiler Compatibility on Windows	3
FLEXIm Support.....	3
Using Libraries and Binaries Built with Visual Studio 2005 and Later.....	3
Network Compatibility.....	4
FOM Support.....	4
Backwards Compatibility.....	4
New Features and Product Updates.....	5
Documentation Updates.....	6
Fixed Bugs	6
Known Problems and Product Restrictions	7

Copyright © 2012 VT MÄK, 68 Moulton St., Cambridge, MA 02138 All rights reserved.
VR-Exchange™, VR-TheWorld™, and VR-Vantage™ are trademarks of VT MÄK. MÄK Technologies®, VR-Forces®, RTIsPy®, B-HAVE®, and VR-Link® are registered trademarks of VT MÄK.
Document ID: VRV-1.4.1-3-121022

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>.

VR-Vantage is available for the following operating systems:

Table 1: Platforms supported

Operating System	Compiler
Windows XP Windows Vista Windows 7	Microsoft Visual C + + 8.0, 9.0 (32 and 64 bit), 10.0 (64 bit)
Red Hat Enterprise Linux 5.0. (32 bit libraries)	default compiler

Third Party Library Support

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

- ♦ VR-Link 4.0.4
- ♦ Qt 4.7.4
- ♦ OpenSceneGraph 3.0.1
- ♦ Boost 1.45
- ♦ FreeGlut 2.4.0
- ♦ GL-Studio 4.2.3.

MÄK will provide modified source code for OSG and osgEarth upon request, as per the OSGPL license. Please contact support@mak.com for download links.

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, Windows Vista, or Windows 7.
- ♦ 10 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 1.4.1 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, 9.0, and 10.0 (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 on the same computer can result in program instability.

FLEXlm Support

VR-Vantage 1.4.1 uses FLEXlm 11.8.

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.

Unfortunately, the C Runtime Libraries required by Microsoft Visual Studio 2005 (MSVC++8.0) and later cannot 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 distributes 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.

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. The MSVC++ 10.0 version uses the default values for these flags.

Network Compatibility

HLA only

VR-Vantage 1.4.1 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, 4.x
- ♦ Pitch RTI 1.3 C++ interface.

Other RTIs that support the HLA 1.3 specification, the SISO DLC HLA API 1516 version of the IEEE 1516 specification (SISO-STD-004.1-2004), and HLA Evolved. To use an RTI with VR-Vantage it must use the same operating system and be built with the same compiler.

DIS only

VR-Vantage 1.4.1 supports DIS 4, 5, and 6, and can therefore interoperate with DIS applications of any of these versions.

FOM Support

VR-Vantage 1.4.1 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 1.4.1 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 1.4.1 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 1.4.1 application cannot control a VR-Vantage 1.3 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 1.4.1 is a maintenance release. It has no new features. The following changes have been made:

- Support for streaming features from VR-TheWorld Server 2.0. If you are connected to a server running VR-TheWorld Server 2.0 and it is streaming features, VR-Vantage can visualize them.
- New VR-TheWorld *.earth* files. *VR-TheWorld Online.earth* (available previously) provides the base VR-TheWorld imagery and elevation. *VR-TheWorld Online - MAK Earth.earth* includes streaming feature data for Oahu, Hawaii and Boston, Massachusetts, and additional high-resolution elevation and imagery data for these areas. *VR-TheWorld Online - MAK Earth Base.earth* provides imagery, cut-in areas, and elevation for Oahu, Hawaii, but it does not include streaming features and other data that is not supported by VR-Forces. This terrain is for use by VR-Forces to create scenarios that correlate with *VR-TheWorld Online - MAK Earth.earth* when it is used in VR-Vantage.
- The modelMapImporter executable has been replaced by the ability to import Stealth 6.x model mapping files directly in VR-Vantage using the Model Mapping GUI.
- The mftTool has a new command line option, `--extendLevelZero distance`. This option lets you extend the page-in range (in meters) of grid level zero in the MEDF and MetaFlight files that the mftTool creates. Use of this option is indicated if the terrain disappears when you zoom out, particularly in PVD mode.
- Some dependencies (VR-Link and Qt) have been upgraded.
- The DIS and HLA simulation connection pages have been updated. DIS now has a localhost option. This uses your computer's loopback address instead of a network address.

For HLA, the "Federate Name" parameter has been changed to the more correct term "Federate Type". Federate Type can be used to distinguish different categories of federates, and its only practical use is in save-and-restore.

The Federate Name parameter has a special meaning for HLA Evolved. Therefore it could no longer be used to specify the federate type, as in previous versions. The Federate Type parameter is available for all versions of HLA. The Federate Name parameter is only used in HLA Evolved and is on the Advanced display.

Other minor corrections were made for consistency with other MAK products.

- The OSG statistics now display the number of paged LODs in the scene.
- The exampleRangeLine example has been removed.
- New examples, tutorials, and high level conceptual material has been added to the class documentation.



YOU MUST INSTALL THE VR-VANTAGE DATA PACKAGE.

It is not optional. It contains data that is required by VR-Vantage applications.

Documentation Updates

VR-Vantage Users Guide has minor corrections. In *VR-Vantage Developers Guide*, the instructions for building VR-Vantage applications and examples have been updated. New examples, tutorials, and high level conceptual material has been added to the class documentation.

Fixed Bugs

VR-Vantage 1.4.1 fixes the following problems that were present in previous releases:

- Fixed inconsistencies with HLA connection terminology between VR-Vantage and other MÄK products. 47612
- Corrected an error in the Federation Name for RPR FOM 2.0 draft 17. 47598
- The model for the RQ-11 Raven was too large. 47210
- The VC 10 debug version had a crash in HLA. 47329
- Some examples did not work in Linux. 47495
- Some classes in the VR-Vantage Control Toolkit were not exported. 47296
- The version of DI-Guy used in VR-Vantage 1.4 links with Qt 4. Therefore crash issues with the Linux version of VR-Vantage should no longer be an issue.
- Ground clamping did not work correctly unless the Linear Extrapolation/Interpolation Enable parameter was disabled in the Entity Control Packet in question. 47656
- The makefile for building examples did not work. 47527
- Loading a frustum from a configuration file did not work. 47623
- CIGI entities remained in the Objects List after VR-Vantage disconnected from CIGI. 44718
- VR-Vantage crashed if you ran the VC 10 version in debug mode and tried to connect to an HLA 1516 exercise. 47329
- Adding a new Interaction DEfinition in the Interaction Definition Editor, did not work as expected due to problems with selection processing. 47466
- The Grid Lines Settings Unit Type did not reset to factory settings or revert to startup settings. 47651
- The size of 3D text changed between VR-Vantage 1.3.1 and 1.4. 47666
- If a .earth file referenced VR-TheWorld Online and local geotiff files, there was a white boundary between the images and the geotiff images were cropped. 47586

Known Problems and Product Restrictions

VR-Vantage has the following known problems:

- ♦ VR-Vantage may crash on exit on Linux if your Linux installation is not at the latest version of *libsdlmixer* (as of the date of this release).
- ♦ The Linux version of VR-Vantage crashes intermittently when connecting to or disconnecting from a running exercise. 47690
- ♦ Some strings in the graphical user interface are not included in the translation files. 47806
- ♦ The exampleExtendDialogByAddition and exampleExtendDialogBy Deriving examples do not work in Linux. 47639, 47638
- ♦ The tutorialDistributedSimulations tutorials do not work in Linux. 47644
- ♦ The TerraSimSampleUrbanMetaFlight terrain is not initially visible when loaded in VR-Vantage PVD or in PVD mode in VR-Vantage XR. To see the terrain, press **e** to zoom in. This problem potentially exists for all paged terrains whose page-in distance is less than the default observer distance in PVD mode.
- ♦ If you install VR-Vantage and view online help, then reinstall VR-Vantage and try to view online help again, no content is displayed in the help viewer. To work around this problem, delete the help cache directory. On Windows XP, it is C:\Documents and Settings\<user>\Local Settings\Application Data\MAK\VR-VANTAGE1.4.1. On Windows Vista and Windows 7, it is C:\Users\<user>\AppData\Local\MAK\VR-VANTAGE1.4.1. On Linux, it is /home/vrv/.local/share/data/MAK/VR-VANTAGE1.4.1. 47721
- ♦ You cannot connect to a remote display engine running on Linux from a VR-Vantage application running on Windows. 45176
- ♦ Changing the hierarchy of raster map layers may cause a crash in VR-Vantage Stealth or VR-Vantage FreeView. 44498
- ♦ 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.

