



Plan View Display 2.10.1 Release Notes

This release note contains the following release-specific information for Plan View Display Release 2.10.1:

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Systems Supported

Plan View Display 2.10.1 is available for the platforms listed in [Table 1](#). For the availability of other platforms, contact your MÄK salesperson. For toolkit users, application code must be built with the indicated compilers in order to link to Plan View Display libraries.

Table 1: Platforms supported

Operating System	Compiler	glibc
Red Hat Enterprise Linux Workstation 3	GNU C++ (GCC) 3.2.3	2.3.2
Red Hat Enterprise Linux Workstation 4	GNU C++ (GCC) 3.4.4	2.3.4
Red Hat Fedora Core 3	GNU C++ (GCC) 3.4.4	2.3.6
Windows 2000 SP2, XP	Microsoft Visual C++ 7.1	
	Microsoft Visual C++ 8.0 SP1	

Applications running on newer AMD CPUs, without the latest CPU drivers from the manufacturer, may experience performance problems, regardless of whether those applications are provided by MÄK Technologies. It is highly recommended that the latest versions of the drivers be installed. The drivers are available from AMD at the following URL:

http://www.amd.com/us-en/Processors/TechnicalResources/0,,30_182_871,00.html

Libraries and Binaries Built with Microsoft Visual Studio 2005

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), 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. The installer is named *vc8dist_x86.exe* and is in the base directory of any installed MÄK product.

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>

Building on Linux

The example Makefiles require a patched version of gmake 3.80, which has been included for your convenience in the *./mkbin* directory. This version of gmake is based on version 3.80, but includes a memory fix that is needed to use our makefiles. The source code for the modified gmake is freely available from <http://ftp.mak.com/out/gmake3.80-patch1.tar.gz>. This patch will be included in future versions of gmake.

Before you compile the examples, go to the top level of your installation and create a symbolic link 'VR-Link' to your VR-Link installation and another called 'RTI' to your RTI installation.

Disk Space Requirements

A full installation of MÄK Plan View Display requires approximately 500 MB of disk space. Terrain databases use approximately 106 MB and documentation (primarily the class reference) uses 100 MB.

Compiler Compatibility on Windows

MÄK provides versions of product releases that have been compiled with Microsoft Visual C++ 7.1 and 8.0. When you run MÄK products together on the same computer, for example, Plan View Display and the Stealth, 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.

MÄK Product Compatibility

To build Plan View Display applications, you must link with VR-Link 3.10.1. If you are building for HLA and want to link with the MÄK RTI, use MÄK RTI 3.x.

Plan View Display 2.10.1 is a parallel release to VR-Forces 3.10.1.

Qt Release Compatibility

If you want to do development using the Plan View Display GUI API, you need to use Qt, a cross-platform GUI toolkit from Trolltech. The Plan View Display GUI was built with Qt release 3.3.5. A Plan View Display developer's license includes a Qt development license. MÄK provides you with a Qt license key. However, you must download the correct version of Qt from www.trolltech.com.

FLEXlm Support

Plan View Display 2.10 uses FLEXlm 10.8. You must copy the files in *./flexlm10.8* to your license server directory. You do not need to change license files (unless your maintenance agreement has expired.)

Third-Party Library Requirements

DtTerrainProfileWidget is based, in part, on the work of the Qwt project (<http://qwt.sf.net>). To compile examples or user projects, you must download the QWT distribution at <ftp://ftp.mak.com/out/qwt-0.4.1.zip>. This distribution is known to work with Plan View Display. Set the MAK_QWTDIR environment variable to point to the location of the QWT library.

Network Compatibility

HLA only

Plan View Display 2.10.1 was built against VR-Link 3.10.1 and is compliant with:

- ♦ RPR-FOM 1.0 and a subset of 2.0 (draft 6 and 17)
- ♦ MÄK RTI 3.x.x and other RTIs that meet the HLA 1.3 or IEEE 1516 SISO DLC API specifications and are built with the same compilers as Plan View Display.

Plan View Display 2.10.1 is compatible with applications that use earlier versions of VR-Link if they support versions of the RPR FOM listed.



The Plan View Display is no longer compatible with the DMSO RTI-NG v6, because that RTI was not built using any of the compilers supported by Plan View Display 2.10.1. Plan View Display 2.10.1 should be compatible with commercial successors to the DMSO RTI if they conform to the HLA 1.3 or 1516 (SISO DLC API) specifications and are built with a compiler supported by Plan View Display.

DIS only

Plan View Display 2.10.1 supports DIS 2.0.4, IEEE 1278.1, 2.1.4, and IEEE 1278.1a, and can therefore interoperate with DIS applications of any of these versions.

Backwards Compatibility

The Plan View Display 2.10.1 APIs are not compatible with Plan View Display 2.9 or earlier. Scenarios and object parameter databases from previous versions are forward compatible.

RPR FOM Versions Supported

Plan View Display 2.10.1 has built-in support for versions 1.0 and 2.0 (draft 6 and 17) of the RPR FOM. It also supports VR-Link's ability to support alternative FOMs through the FOM Mapper. By default, Plan View Display 2.10.1 uses RPR FOM 1.0.

If you are building an application with the Plan View Display toolkit and you want to specify a version of the RPR FOM through code, pass the version number (for example, 2.0006) to the *DtRprFomMapper* constructor and pass the resulting object to the *DtExerciseConn* constructor. Also, make sure you are using a federation execution name that corresponds to the right FED file. For example:

```
DtExerciseConn conn("VR-Link20006", "MyApp", new DtRprFomMapper(2.0006));
```

In order to support RPR FOM 1.0, we have added the following extensions (which are supported in later versions of the RPR FOM):

- ♦ EnvironmentProcess
- ♦ GriddedData
- ♦ EmbeddedSystem.IFF
- ♦ EmbeddedSystem.IFF.NatoIFF
- ♦ EmbeddedSystem.IFF.NatoIFF.NatoIFFTransponder
- ♦ EmbeddedSystem.IFF.NatoIFF.NatoIFFInterrogator
- ♦ EmbeddedSystem.IFF.SovietIFF
- ♦ EmbeddedSystem.IFF.SovietIFF.SovietIFFTransponder
- ♦ EmbeddedSystem.IFF.SovietIFF.SovietIFFInterrogator
- ♦ EmbeddedSystem.IFF.RRB
- ♦ BaseEntity.AggregateEntity
- ♦ ObjectRoot.BaseEntity.PhysicalEntity.Lifeform.

For both RPR FOM 1.0 and 2.0 Plan View Display 2.10.1 relies on the LgrControl and ViewControl custom MÄK extensions.

New Features and Updates

Plan View Display 2.10.1 is a maintenance release. It includes a maintenance release for MÄK Terrain Database Tool (4.0.1). It has no new application features or updates.

Plan View Display 2.10.1 includes an updated version of *vcredist_x86.exe*. This is the version distributed with Microsoft Visual C++ 8.0 SP 1. If you previously installed the version of *vcredist_x86.exe* distributed with Plan View Display 3.10, you must replace it with the new version.

Documentation Updates

Plan View Display 2.10 did not include API documentation. Release 2.10.1 includes *MÄK Plan View Display Developer's Guide*, which documents the GUI and terrain APIs.

For details about installing TrueType fonts on Linux systems, please read *./data/symbols/ttf/Readme.txt*. This replaces the section in Chapter 2.

Command-line options for loading plug-ins are briefly described in Chapter 4, *Starting the Plan View Display*, in *MÄK Plan View Display User's Guide*. More detailed instructions for loading plug-ins are in Chapter 2, *The Plan View Display API*, in *MÄK Plan View Display Developer's Guide*.

The *plugins.mtl* File

The *plugins.mtl* file specifies plug-ins that you want to load automatically. The Plan View Display does not include this file in the distribution. However, *./plugins/readme.txt* explains the syntax of a *plugins.mtl* file and includes sample text. If you want to load plug-ins automatically, create a *plugins.mtl* file and put it in the *./plugins* directory.

The following section explains how to load plug-ins from the command line and will be added to Chapter 4, *Starting the Plan View Display*, in future versions of *MÄK Plan View Display User's Guide*.

Loading Plug-ins

You can load plug-ins from the command line or by specifying them in a *plugins.mtl* configuration file.

To load a plug-in from the command line, use the `--loadPlugin` command line option, for example:

```
Pvd --loadPlugin pluginA --loadPlugin pluginB
```



Do not specify the extension of the plug-in (for example, *.dll*). If the extension is included, the plug-in will not load.

For information about the *plugins.mtl* file, please see Appendix A, [Plan View Display Configuration Files](#), in *MÄK Plan View Display User's Guide*.

Bug Fixes

This release fixes the following problems:

- ♦ Plug-ins built for HLA 1516 in debug mode did not load properly when they were specified in *plugins.mtl*.
- ♦ Loading *.c4b* files caused applications to hang on Linux.
- ♦ Entities were not displayed after they disembarked.
- ♦ When creating an intervisibility line between two objects, the endpoint of the intervisibility line did not immediately snap to the second object. It only did so after the second object was moved.
- ♦ When zooming in the with keyboard, the zoom level was not applied when the screen was printed.
- ♦ The emitter display options dialog box did not handle input correctly in units other than meters.
- ♦ If you translated the View menu, the `addViewToolbar` convenience method did not work.
- ♦ Puff were always drawn as circles, when they should be ellipses.
- ♦ The terrain profile widget did not display correct terrain height for units other than meters.
- ♦ Loading CTDB databases on Linux took a very long time, during which VR-Forces might become unresponsive.
- ♦ Plan View Display 2.10 was distributed with a broken symlink for the QT Library on Linux.
- ♦ An incorrect instruction in *Readme_Classdoc.txt* was fixed.
- ♦ Broken links in the class documentation were fixed.

TDB Tool

- Vector features created using the TDB Tool that have non-zero height above terrain did not work correctly with the VR-Forces path planning algorithm.
- The TDB Tool was only able to load *.dfd* files when coordinate system was UTM.
- When creating a new vector feature in the TDB Tool, you could not change any of the parameters even though the box is editable.
- In the TDB Tool, when you selected the "Hard Paved Road" feature, the feature was drawn with the wrong image.
- The TDB Tool could not load GeoTIFF files.
- The TDB Tool could not load project files containing a filename with spaces.

Known Problems

Plan View Display Release 2.10.1 has the following known problems:

- The intervisibility display does not always reflect what simulated entities perceive in the back-end. For example, the intervisibility does not ignore water surface polygons while entity models do.
- Intersection lines in intervisibility fans sometime change colors as you change the zoom level.
- Entity intervisibility with point features does not work correctly.
- Vector feature orientation is not displayed correctly in the GUI. Features are always displayed with an orientation of 0.
- Geometry files referenced by a MetaFlight file must be in OpenFlight format, and not in Vega Prime's binary format (*.vsb*). MÄK's terrain libraries do not support *.vsb* files.
- File paths that are used within a MetaFlight file to designate the OpenFlight data files must be fully qualified absolute paths. Relative paths, and paths that include environment variable expansions are not supported.
- Terrain databases processed with the balance option may display incorrectly.
- You cannot load vector data on geocentric terrain.
- Loading *.c4b* files may cause application to hang on Linux.
- CADRG files cannot be configured through the TDB Tool GUI. You must manually edit MTD files to include them.