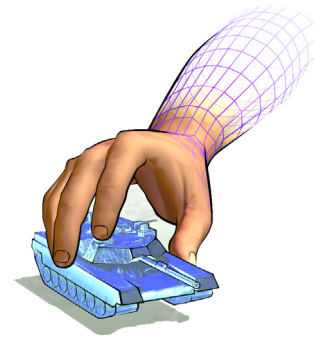




Plan View Display 2.12 Release Notes

This release note contains the following release-specific information for Plan View Display Release 2.12:

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Systems Supported

Plan View Display 2.12 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
Red Hat Enterprise Linux Workstation 4, 5	Default compiler
Windows XP	Microsoft Visual C++ 7.1
	Microsoft Visual C++ 8.0 SP1
	Microsoft Visual C++ 9.0 SP1
Windows Vista	Microsoft Visual C++ 8.0 SP1
	Microsoft Visual C++ 9.0 SP1

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.

Building on Linux

The example Makefiles require gmake 3.81 or later. For operating systems with an older version of gmake (currently only Red Hat WS 4), a binary has been included for your convenience in the `./mkbin` directory. This version 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>.

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 Plan View Display requires approximately 1.3 GB of disk space. Terrain databases use approximately 690 MB and documentation (primarily the class reference) uses 130 MB.

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. 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.

MÄK Product Compatibility

To build Plan View Display applications, you must link with VR-Link 3.13.2. If you are building for HLA and want to link with the MÄK RTI, use MÄK RTI 3.x.

Plan View Display 2.12 is a parallel release to VR-Forces 3.12.

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 Qt Software. The Plan View Display GUI was built with Qt release 4.5. Qt is available as a free download under the LGPL version 2.1 license at www.qtsoftware.com. This version should be satisfactory for most Plan View Display customers. If you need a Qt commercial license, you must purchase the license from Qt Software.

FLEXlm Support

Plan View Display 2.12 uses FLEXlm 11.6. You must copy the files in *./flexlm11.6* to your license server directory. You do not need to change license files (unless your maintenance agreement has expired.)

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

Plan View Display 2.12 was built against VR-Link 3.13.2 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 2.12 is compatible with applications that use earlier versions of VR-Link if they support versions of the RPR FOM listed.

DIS only

Plan View Display 2.12 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 2.12 APIs are not compatible with Plan View Display 2.11.x or earlier.

RPR FOM Versions Supported

Plan View Display 2.12 has built-in support for versions 1.0 and 2.0 (draft 6 and 17) of the RPR FOM and RPR FOM 2.0, draft 17 with DI-Guy extensions. It also supports VR-Link's ability to support alternative FOMs through the FOM Mapper. By default, Plan View Display 2.12 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 2.12 relies on the LgrControl and ViewControl custom MÄK extensions.

New Features and Updates

Plan View Display 2.12 has the following new features and updates:

- ♦ The main window has a console output window
- ♦ Concave overlay areas are supported
- ♦ Configurable toolbars: You can now customize the icon toolbars for frequently used tasks. You can edit existing toolbars and create new toolbars using any of the menu commands. (For details, please see Appendix B, *Customizing the GUI*, in *MÄK Plan View Display Users Guide*.)
- ♦ Display line-of-sight over several points using the Terrain Profile dialog box. (For details, please see [Section 11.9, "Analyzing Terrain Using a Terrain Profile Line"](#), in *MÄK Plan View Display Users Guide*.)
- ♦ Improved configuration of measurement units in dialog boxes. (For details, please see [Section 5.4.11, "Changing Measurement Units"](#), in *MÄK Plan View Display Users Guide*.)
- ♦ Plugins dialog box. This new dialog box lists all of the plug-ins loaded in the Plan View Display. (For details, please see [Section 4.8, "Viewing a List of Loaded Plug-ins"](#), in *MÄK Plan View Display Users Guide*.)
- ♦ Display and configuration of tactical smoke. You can enable and disable display of tactical smoke in the Display Options dialog box, on the Symbols tab. You can configure tactical smoke in the Tactical Smoke dialog box. (For details, please see [Section 8.6, "Displaying Tactical Smoke"](#), in *MÄK Plan View Display Users Guide*.)
- ♦ Display of laser target designators and target lines. You can enable and disable display of laser designators and laser lines in the Display Options dialog box, on the Symbols tab. (For details, please see [Section 8.8, "Enabling and Disabling Laser Targeting Graphics"](#), in *MÄK Plan View Display Users Guide*.)
- ♦ Some terrain databases that were included with prior releases have been dropped from this release. The list of dropped terrains include Monterrey, Colorado-dted, Hunter, and Antigua-shape.
- ♦ New terrain databases have been included in this release. These include Little Pond and San Luis Obispo. The terrain directories have been reorganized to be more consistent.
- ♦ Support for Microsoft Visual C++ 9.0.
- ♦ The sound feature is no longer supported
- ♦ `--deviceAddress` command-line argument: Specifies the address of the ethernet card to use for UDP traffic. Use this argument if your computer has multiple network cards.
- ♦ TDB Tool improvements:
 - Improved ability to build large terrains: If the TDB Tool detects that the terrain conversion process may exceed the amount of available memory, it prompts you to change the conversion algorithm. ([Building Large Terrain Databases](#), in *MÄK Terrain Database Tool Users Guide*)

- Ability to load large bitmaps: The TDB Tool can detect when bitmaps are too large to load into memory and offers options for how to handle the file. ([Section 2.3.4, "Loading Large Images"](#), in *MÄK Terrain Database Tool Users Guide*)
- Support for vector product format (VPF) terrains. This feature supersedes the support for VMAP terrain. ([Section 2.4.4, "Importing VPF Files"](#) and [Section 7.1.8, "VPF Metafile Records"](#), in *MÄK Terrain Database Tool Users Guide*)

Documentation Updates

All manuals and online help have been updated for this release.

- The Antigua-shape database is referenced in several places in the documentation set. However, it is no longer included in the release. For an example of a terrain that includes shapefile data, please see the Little Pond terrain.
- Qt Linguist has changed slightly from the screen shots in *MÄK Plan View Display Users Guide*. The Plan View Display includes the following translation files:
 - *pvd_untranslated.ts* – Plan View Display GUI
 - *tdbtool_untranslated.ts* – TDB Tool
 - *cw_untranslated.ts* – FlexLM licensing dialog boxes.

Bug Fixes

This release fixes the following problems that were present in prior releases:

- VR-Forces (and TDB Tool) no longer crash when loading C7L terrain databases containing water features.
- Images can now be correctly draped over a terrain in geodetic coordinates.
- The -m command line argument of TDB Tool now supports wildcards. This can be useful when importing paged terrain databases consisting of large numbers of individual files.
- DTED data can now be loaded from the command line.
- The outputLogFile command line argument now works.
- Mirroring extents now works when you change extents through the minimap.

Known Problems

Plan View Display Release PVD-2.12-2-090714 has the following known problems:

- ♦ Intersection lines in intervisibility fans sometime change colors as you change the zoom level.
- ♦ Entity intervisibility with point features does not work correctly.
- ♦ 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.
- ♦ Terrain databases processed with the balance option may display incorrectly.
- ♦ You cannot load vector data on geocentric terrain.
- ♦ Features cannot be selected on geodetic terrain databases in the TDB Tool.
- ♦ Transmitter lines are not drawn if the sender is off screen.
- ♦ You cannot save selection groups.
- ♦ 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.

