



MÄK Stealth 3.6 Release Notes

This document provides the following release-specific information for MÄK Stealth 3.6 and 3.6-ngc:

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Because DMSO RTI 1.3 NG is not link compatible with the previous generation of DMSO RTI releases, we have (for PCs only) released two versions of the Stealth – one that works with RTI NG, and one that works with RTI 1.3vx. The default directory for the version that supports RTI NG is *stealth3.6-ngc*. The default directory for the other version is *stealth3.6*.

Systems Supported and System Requirements

This section describes platform support and system requirements for the Stealth. For the most up-to-date information about system requirements, see the Product Versions page on the MÄK web site at: http://www.mak.com/product_version.htm.

Stealth for UNIX

Stealth 3.6 runs on the SGI IRIX and Linux operating systems.

SGI IRIX

Stealth 3.6 is available for SGI IRIX systems running IRIX 6.2 or later, with OpenGL and Performer 2.2.

Stealth 3.6-ngc is available for systems running IRIX 6.5 or later, with OpenGL and Performer 2.2.

Stealth 3.6 for SGIs was built under IRIX 6.2 against IRIS Performer 2.2 using the N32 ABI. Stealth 3.6-ngc for SGIs was built under IRIX 6.5 against IRIS Performer 2.2 using the N32 ABI. The Stealth executables are statically linked with Performer, so you don't need to have Performer installed on your system in order to run the Stealth.

The smaller, *Stealth.dynamic* executable, is dynamically linked with Performer, and with the OpenFlight Performer loader. If you are using *Stealth.dynamic*, you need performer_eoe version 2.2 or a compatible version installed. You must also have a version of the MultiGen-Paradigm loader DSO (*libpfflt_ogl.so*) that is compatible with the *pfflt.h* header file that comes with Performer 2.2.



The loader DSO that comes with Performer 2.2 is a version 14.2 loader. In order to load files of more recent OpenFlight versions using the dynamically linked Stealth, you need to obtain a later version of the loader DSO (*libpfflt_ogl.so*) from MultiGen-Paradigm's FTP site ([ftp.multigen.com/pub](ftp://ftp.multigen.com/pub)), and install it in */usr/lib32/libpfd*, or some other location contained in your LD_LIBRARYN32_PATH environment variable.

Linux

Stealth 3.6 supports Linux. It is built with Performer 2.4. The Stealth is statically linked with Performer, so the performer_eoe is not needed.

Stealth for PCs

The Stealth for PCs requires the following:

- ♦ A Pentium-class PC (or higher) with a standard VGA or SVGA video board and CD-ROM drive.
- ♦ Windows NT 4.0 or Windows 95/98/2000.
- ♦ 35 Mb of disk space for program files, and 100 Mb for optional data files.
- ♦ A 3D video card that has OpenGL, Direct3D, or Glide drivers.
- ♦ A second monitor enhances ease-of-use with cards based on the Voodoo chip set and is highly recommended, but is not required.

3D Video Boards Supported

In general, Stealth 3.6 should support any board that claims to support OpenGL, Direct3D (Windows 95/98 only), or Glide (version 2 or 3). This version of the Stealth has been tested and is known to work with the following boards and configurations:



Due to Glide's current inability to support switching between 2-D desktop and 3D graphics view on a single monitor, this version of Stealth cannot support boards with the 3Dfx Voodoo3 chipset.

Recommended Boards and Configurations

Based on our testing, we recommend the following configurations:

- ♦ For Glide - Quantum3D Obsidian2-200SB
- ♦ For OpenGL - ELSA's "ERAZORX"
- ♦ For Direct3D - Dell Inspiron 7000 (or 7500) notebook.

Support for Glide 2 and Glide 3

This release of the Stealth includes executables for both Glide 2 (*glide2x.dll*) and Glide 3 (*glide3x.dll*). They are listed on the Start menu, as follows:

- ♦ Stealth5 - Glide 3 for DIS
- ♦ StealthHLA - Glide 3 for HLA
- ♦ Stealth5_g2 - Glide 2 for DIS
- ♦ StealthHLA_g2 - Glide 2 for HLA.

You need to know which version of Glide you have installed so that you can select the correct option on the menu.

Online Help Browser Requirements

The online help system included with this release of the Stealth is an HTML-based system. To view online help, you must have a web browser installed that supports Javascript and Java. Java and Javascript must be enabled.

Network Compatibility

HLA only

Stealth 3.6 is built against VR-Link 3.6. This change makes the Stealth compatible with:

- ♦ RPR-FOM 0.5, 0.7, 0.8, and 1.0
- ♦ MÄK Real-time RTI 1.3.3 and 1.3.3-ngc
- ♦ DMSO RTI 1.3v4 or later, RTI NG v1, v2, v3.0, v3.2.

Stealth 3.6 is compatible with applications that use earlier versions of VR-Link if they support versions of the RPR FOM listed above.

DIS only

Stealth 3.6 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.

RTI Support

The DMSO RTI NG-compatible version of Stealth 3.6 comes with a version of the MÄK Real-time RTI 1.3.3 that is link-compatible with DMSO RTI NG (makRti1.3.3-ngc). Stealth 3.6-ngc has been tested with DMSO RTI NG v1, v2, v3.0, and v3.2.

The non-NG-compatible version of Stealth 3.6 comes with a version of the MÄK Real-time RTI 1.3.3 that is link-compatible with DMSO RTI 1.3 v4 or later (makRti1.3.3). This release has been tested with those DMSO RTI 1.3 releases.

Stealth 3.6 may work with older versions of the MÄK Real-time RTI, but we recommend using it with release 1.3.3.

When using the MÄK Real-time RTI, remember to make sure that the Stealth can find your FED file, and optional *rid.mtl*, file by either putting them in the directory from which you are running, or by setting the environment variable RTI_CONFIG to the directory that contains them.

RTI Library Names

Stealth 3.6-ngc expects library names that match those of DMSO RTI NG v3.2. If you run Stealth 3.6-ngc with DMSO RTI NG v3.2, both the UNIX and PC versions work without any modification. If you want to run Stealth 3.6-ngc with DMSO RTI NG v1 or v2, you must make the following changes:

- ♦ For UNIX, you must use the libraries *libRTI-NGv2.so* or *libRTI-NGv1.so*, which are supplied by MÄK in the *.lib* directory. These libraries correspond to DMSO RTI NG v1 and v2. To use Stealth 3.6-ngc with RTI NG v1 or v2, copy the appropriate library to the DMSO RTI NG *lib* directory and rename it *libRTI-NG.so*. (You might want to rename the v3.x *libRTI-NG.so* library first.)
- ♦ For PCs, rename the libraries that come with RTI NG v1 or v2 to the names used by the RTI NG v3.2 libraries (*libRTI-NG.lib* and *libfedtime.lib*).

FOM Support

Stealth 3.6 has built-in support for versions 0.5, 0.7, 0.8, and 1.0 of the RPR FOM. It also supports VR-Link's ability to support alternative FOMs through the FOM Mapper. By default, Stealth 3.6 uses RPR FOM 1.0.

For information about FOM mapping and specifying the FOM version to use, see section 8.2.2, "Specifying the FOM Version".

New Features and Product Changes

This release of the MÄK Stealth has the following new features:

- ♦ Updated *MÄK Stealth User's Guide*
- ♦ Complete HTML-based online help system for all supported platforms
- ♦ Support for plug-ins using the Stealth Plug-in API
- ♦ Support for aggregate entities on the Stealth for PCs
- ♦ Support for the stealthCtrl utility on the Stealth for PCs
- ♦ Ability to automatically respond to HLA synchronization points.
- ♦ Sequencing of model-map commands is no longer order dependent
- ♦ The Stealth for PCs requires VR-Link DLLs, which are supplied
- ♦ The Stealth Model Mapper, a separate application that allows you to graphically map model files to entities.

The new features are described in *MÄK Stealth User's Guide*.

Synchronization Points

The HLA version of the Stealth will automatically respond when a synchronization point is announced to it by the RTI. The Stealth will immediately indicate that it has achieved the synchronization point, so that it will not hold up the federation execution.

Sequencing of Model Map Commands

In the past, model mapping (using model-map "...") were order dependent. That is, you needed to list the mappings in order of least specific to most specific to avoid undesired results when the Stealth learns of a certain entity on the network and displays a model for it. This part of the Stealth code has been changed to a hierarchical search in which the order is no longer important. The whole list is searched, and the closest match returned regardless of the order of mapping in the MTL file.

VR-Link DLLs Required

The Stealth now requires VR-Link DLLs. The DLLs are installed in the root directory of the Stealth installation.

Documentation Updates

MÄK Stealth User's Guide has been revised and updated. It replaces the previous version and all interim addenda.

Known Problems and Product Restrictions

- ♦ The Voodoo3 chip set is not supported (see “3D Video Boards Supported” on page 3)
- ♦ The following diagnostic message is sent to the output file *Stealth.txt*:
`'DtDcmDcmRotAxis warning: sign indicator near zero: 0.000000e+000'`
This message may be repeated many times. This is a harmless message and can be ignored.
- ♦ In dual monitor mode, the OpenGL Stealth graphics output appears on the secondary display and is positioned in the lower left corner of the display. The Stealth viewport is the same size as the original OpenGL window (measured in pixels). However, it will usually be larger or smaller than the original unless the two display resolutions are made to be the same. You will need to resize the OpenGL 2D window if this is the case.
- ♦ In Windows 95/98, the 2-D OpenGL window prevents the graphics view from being enabled. You must press Ctrl-F9 to switch to the graphics view, even in dual monitor mode.
- ♦ In Windows NT, when you use the spaceball to move the eyepoint, there is a 'stuttering' phenomenon under certain conditions. The graphics view will stop getting updates for a noticeable period of time (< 1 second), then resume. This is a thread priority issue and the Windows function to remedy this does not work. However, you can solve the problem as follows:
 1. Open the Control Panel.
 2. Open the System applet.
 3. Select the Performance tab.
 4. Move the slider for Application Performance all the way to the left (do not boost the performance of the foreground application).
- ♦ If you use Creative Technology's '3D Blaster', which uses NVIDIA's RIVA TNT2 Ultra processor, clouds have a tendency to change color spontaneously.
- ♦ If you run the Stealth with a Direct 3D board, you must use the version of *q3dsd3.dll* that we ship with the Stealth (4.2.Q3D_VERINFO_PATH.0122-122 as reported in the Properties dialog box.)
- ♦ The ability to draw into the scene using the Stealth plug-in API has not been thoroughly tested for all systems (most notably Glide and Direct3D).
- ♦ On some systems, when you activate the on-line help, if you already have a web browser open, the online help does not open up. If this occurs, close your open browser, then activate online help again. It should open up the default browser and display the help file.

