MÄK Stealth 4.2-ngc Release Notes

This document provides the following release-specific information for MÄK Stealth 4.2-ngc:

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Systems Supported and System Requirements

This section describes platform support and system requirements for the MÄK 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 IRIX

Stealth 4.2-ngc is available for systems running IRIX 6.5 or later, with OpenGL and Performer 2.2.

The Stealth for SGIs requires 256 MB of RAM, 512 MB if you plan to use the complete dismounted infantry models, and approximately 640 MB of disk space.

Stealth 4.2-ngc for SGIs was built under IRIX 6.2 against OpenGL 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), and install it in */usr/lib32/libpfdb*, or some other location contained in your LD_LIBRARYN32_PATH environment variable.

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.
- 580 MB of disk space. 540MB is for terrain databases and model files.
- 256 MB of RAM, 512 MB if you plan to use the complete dismounted infantry models.
- A 3D video card that has OpenGL or Direct3D drivers.

Stealth Plug-ins

To create a Stealth plug-in, you must install VR-Link 3.7.3. See the VR-Link 3.7.3 Release Notes for compiler requirements for your platform.

3D Video Boards Supported

In general, Stealth 4.2-ngc should support any board that claims to support OpenGL or Direct3D (Windows only). This version of the Stealth has been tested and is known to work with the following boards and configurations:

- For OpenGL - NVIDIA GeForce2 Ultra, GeForce3, or GeForce2 GTS
- For Direct3D.

Java Support for Model Mapper

The Model Mapper is a Java application. To use it, you must install Java 1.3 or later.

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, which must be enabled.

Network Compatibility

HLA only

Stealth 4.2-ngc was built against VR-Link 3.7.3-ngc and is compliant with:

- RPR-FOM 1.0 and a subset of 2.0 (draft 6)
- MÄK RTI 1.3.7-ngc and 2.0-ngc
- DMSO RTI NG 4.0, and 6.0.

Stealth 4.2-ngc is compatible with applications that use earlier versions of VR-Link if they support versions of the RPR FOM listed above.

DIS only

Stealth 4.2-ngc 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 MÄK RTI is included on all MÄK product CDs. It is link-compatible with the DMSO RTI NG. Stealth 4.2-ngc has been tested with DMSO RTI NG 4.0 and 6.0.

If you use the MÄK RTI, be sure that the Stealth can find your FED file, and optional *rid.mtl* file, by putting them in the directory from which you are running, or by setting the environment variable RTI_CONFIG to the directory that contains them.

FOM Support

Stealth 4.2-ngc has built-in support for versions 0.5, 0.7, 0.8, 1.0, and 2.0 of the RPR FOM. It also supports VR-Link's ability to support alternative FOMs through the FOM Mapper. By default, Stealth 4.2-ngc uses RPR FOM 1.0.

The keywords for specifying different versions of the RPR FOM are:

- RPR FOM 0.5: `vlRPR05`
- RPR FOM 0.7: `vlRPR07`
- RPR FOM 0.8: `vlRPR08`
- RPR FOM 1.0: `vlRPR10`
- RPR FOM 2.0: `vlRPR20`.

For information about FOM mapping and specifying the FOM version to use, see section 8.2.2, "Specifying the FOM Version", in *MÄK Stealth User's Guide*.

Installing the Stealth for SGI IRIX

The Stealth archive for SGI must be extracted with the GNU gtar utility.

If you extract the files with tar, you will receive the following error when you run the Stealth:

```
iopen: bad magic in image file 0
```

The gtar utility is freely available from SGI at http://freeware.sgi.com/.

This is free software provided by SGI. Although we believe it to be harmless, MAK offers no warrantees on this software, and neither does SGI (see http://freeware.sgi.com/legal_notice.html).

The MAK Product CD contains gtar, and the installation script is configured to use it automatically.

New Features and Product Changes

This release of the MÄK Stealth brings it up to date with the latest releases of MÄK VR-Link and the MÄK RTI. It also contains some bug fixes.

MÄK Stealth 4.2-ngc does not support Glide.

The following enhancements have been added to the Stealth Plug-in API:

- Added support for using OpenGL calls directly.
- Added support for obtaining mouse input.

Bug Fixes

This release fixes the following problems in earlier releases:

- Problems with articulated parts have been fixed.
- Aggregate marking text now appears in the entity list
- The removeModel() call in the Plug-in API has been fixed.
- Incorrect display of the emitter system BeamAzimuthSweep and BeamElevation-Sweep has been fixed.

Known Problems and Product Restrictions

- The Berkeley database is large and may load slowly on PCs if you have a lot of models. On UNIX, the Stealth may have difficulty loading the Berkeley database if you have a lot of models. Increasing swap space should resolve this problem.
- The stealthCtrl utility is not included in this release. If you need a current version of this utility, please contact MÄK Technologies at support@mak.com.
- Some DirectInput joysticks do not work correctly with the Stealth for PCs.
- On UNIX, trailing effects do not work properly when dynamic scene origin is enabled. If you want to use dynamic scene origin, disable trailing effects. (Set **dynamicSceneOrigin** to 1 in *params.mtl* and **enableEntityTrailingEffects** to 0 in *TrailMap.mtl*.) (Dynamic scene origin is no longer used on PCs.)
- If the frame rate is unacceptably low, try disabling trailing effects.
- The sky setting does not work with asymmetric frusta. If you use asymmetric frusta, set the **ViewState->earthSkyMode** parameter to zero.
- 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 *q3dsgld3.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 Direct3D.
- On Windows 98, using the preview option of the Model Mapper may hang the Stealth. To exit the Stealth, you need to press Control-Alt-Delete, select the Stealth in the list of applications, and click End Task.
- Fire and detonation lines are not supported on UNIX.
- On some Windows systems, the Stealth may crash if it does not have a sound card and sound is enabled. Disable sound to avoid this problem.
- The standard Stealth distribution does not work on Windows XP. Please contact MAK support at support@mak.com to obtain a version of the Stealth that works on Windows XP.