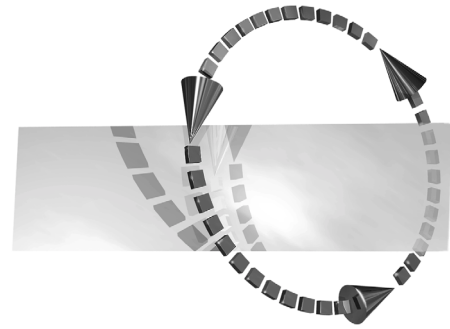




MÄK VR-Link 3.7-ngc Release Notes

This release note provides the following release-specific information for MÄK VR-Link Release 3.7-ngc:

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Systems Supported

Table 1 lists the platforms currently supported by MÄK VR-Link 3.7-ngc. Please contact MÄK if you are interested in purchasing VR-Link for other platforms. Application code must be built with the indicated compilers in order to link to VR-Link libraries.

Table 1: Platforms supported

Platform	Compiler
SGI IRIX6.5	MipsPro7.2.1 C++ compiler (available from SGI)
Sun Sparcstation with Solaris2.7 or later	SPARCompiler C++ version 5.2 (available from Sun)
PC with Red Hat Linux 6.0 (Linux 2.2.16-3)	GNU C++ (g++) distributed with Red Hat distribution. The command: <code>g++ -v</code> returns: <code>gcc version egcs-2.91.66</code> <code>19990314/Linux (egcs-1.1.2 release)</code>
PC with Windows NT, Windows 95/98/2000	Microsoft Visual C++ 6.0.

Disk Space Requirements

On SGI IRIX, you need approximately 270 MB for VR-Link files and 60 MB for all documentation files. Other UNIX installations require approximately 50 MB for VR-Link files and an additional 60 MB for documentation files.

On PCs, you need 50 MB for VR-Link files and 60 MB for all documentation files.

Online Help Browser Requirements

The online help system for the FOM Mapper Builder 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.

Backward Compatibility

VR-Link 3.7-ngc is completely compatible with VR-Link 3.6-ngc. There is a high degree of backwards compatibility with VR-Link 3.5-ngc. For example, the *talk* and *listen* example programs from VR-Link 3.5-ngc compile and link unmodified against VR-Link 3.7-ngc.

Network Compatibility

HLA only

VR-Link 3.7-ngc is compliant with:

- ♦ RPR-FOM 0.5, 0.7, 0.8, 1.0, and 2.0
- ♦ MÄK Real-time RTI 1.3.5-ngc
- ♦ DMSO RTI NG v1, v2, v3.0, v3.1, v3.2, and 4.0.

DIS only

This release 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.

RPR FOM Versions Supported

VR-Link 3.7 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, VR-Link 3.7 uses RPR FOM 1.0.

If you want to use a version of the RPR FOM other than 1.0, pass the version number (0.5, 0.7, 0.8, or 2.0) 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-Link20", "MyApp", new DtRprFomMapper(2.0));
```

VR-Link examples like *f18* and *hlaNetdump* have a command line option, `-f`, that you can use to choose an RPR FOM version by passing either `v1RPR05`, `v1RPR07`, `v1RPR08`, or `v1RPR20` as the argument to `-f`.

RTI Support

VR-Link 3.7-ngc comes with the MÄK Real-time RTI 1.3.5-ngc, which is link-compatible with DMSO RTI NG. VR-Link 3.7-ngc has been tested with DMSO RTI NG v1, v2, v3.0, and v3.2.

VR-Link 3.7 may work with older versions of the MÄK Real-time RTI, but we recommend using it with release 1.3.5-ngc.

If you use the MÄK Real-time RTI, remember to make sure that VR-Link can find your FED file, and optional *rid.mtl*. Put the FED file in the directory from which you are running, or set the environment variable RTI_CONFIG to the directory that contains it. See the MÄK Real-time RTI 1.3.5-ngc Release Notes for a list of the options for specifying the location of the *rid.mtl* file.

Library Names

VR-Link 3.7 expects library names that match those of DMSO RTI NG v3.2. If you run VR-Link 3.7 with DMSO RTI NG v3.2, both the UNIX and PC versions work without any modification. If you want to run VR-Link 3.7 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 VR-Link 3.7 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*).

New Features and Changes

This section describes the following features and changes to VR-Link:

- ♦ The class *DtObjectType* has been renamed *DtSyntheticEnvironmentObjectType* to eliminate a name space conflict with VR-Forces.
- ♦ Support for RPR FOM 2.0. See “[RPR FOM Versions Supported](#)”, on page 3.
- ♦ You can specify a pause between VR-Link RTI subscription calls. This feature resolves problems running VR-Link applications on Windows 98 with the DMSO RTI NG.
- ♦ Added a mechanism for intercepting print messages before they are printed in *vlprint.h*. This feature is useful for redirecting VR-Link messages to GUI widgets such as a text edit view.
- ♦ Provided a means to override the function *DtAbort()*
- ♦ Changes to the class documentation and reference material provided with VR-Link.

Intercepting Print Messages

To intercept print messages:

1. Override the virtual method *putString()*, in the class *DtPrinter* (in *vlprint.h*).
2. Tell VR-Link to use your derived class using the function *DtSetVrLinkPrinter()*.

Overriding DtAbort()

You can override *DtAbort()* with the function *DtSetAbortFunction()*, in *vlprint.h*. The default behavior is to call *exit(-1)*.

Miscellaneous Changes

- ♦ Added the FED file name accessor to *hExerciseConn.h*
- ♦ Needed *DT_DLL_VL* macro in *hRefIffList.h*
- ♦ Changed the default *MaxPacketSize* to 15000 in *Socket.h*. You can change the size using *DtSetMaxPacketSize()* (in *Socket.h*).

Class Documentation

We are no longer distributing *MÄK VR-Link Reference Manual* or class documentation in PDF format. Class documentation is now provided in HTML format. It is in the *./doc/reference* directory. To view the class documentation, open the file *./doc/reference/vrlclassdoc.htm*.

Documentation Update

On page 2-7 of *MÄK VR-Link Developer's Guide*, the instructions for obtaining a license key say to go to www.mak.com/support/keyintro.htm. This URL is incorrect. Go to www.mak.com/licenses.htm.

Bug Fixes

VR-Link 3.7 fixes the following bugs:

- ♦ hlaNetdump would crash when printing out aggregate articulated parts information.
- ♦ The encoding of RTI Object Identifiers was incorrect.
- ♦ When using the DMSO RTI, registering an object with a name that had already been registered would crash VR-Link.

Known Problems

- ♦ On Linux, if you are running MÄK products and using the MÄK Real-time RTI, they must all have been compiled against the same version of VR-Link.
- ♦ On UNIX, RPR FOM 2.0 spatial attributes have four additional bytes padding at the end of the network structure.
- ♦ In HLA, the marking text attribute for aggregates is longer than specified by the RPR FOM.