



MÄK RTI 2.3.2 Release Notes

This document provides the following release-specific information for MÄK RTI 2.3.2:

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Supported Systems

Table 1 lists the platforms supported by the MÄK RTI 2.3.2. Please contact MÄK if you need it for another platform. Application code must be built with the indicated compilers in order to link to the MÄK RTI libraries.

Table 1: Platforms supported

Platform	Compiler
SGI IRIX6.5	MipsPro7.3 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 9.0	GNU C++ (g++) distributed with Red Hat distribution. gcc version 3.2
PC with Windows 2000/XP	Microsoft Visual C++ 6.0 and 7.1 (.NET)

MÄK RTI 2.3.2 was built with VR-Link 3.9.3.

Qt Release Compatibility

The MÄK RTIspy GUI uses Trolltech's Qt cross-platform GUI toolkit. In particular, the GUI included with MÄK RTI 2.3.2 relies on Qt version 3.3.1. (The Qt run-time libraries are distributed with the MÄK RTI). If a federate also uses Qt, it must be sure to use the same version of Qt as the MÄK RTIspy GUI, in order for the RTIspy GUI to function properly for that federate. Federates built with other versions of Qt should disable the RTIspy GUI to avoid these incompatibility problems.

Patching the Microsoft Visual C++ 6.0 Compiler

If you use Microsoft Visual C++ version 6.0, you must install a patch to a standard header file, in order to successfully build applications against the IEEE 1516 header files. The patch comes from Dinkumware, Ltd (the company that developed the Standard C++ Library header files for Microsoft), but for convenience, we are distributing it with MÄK RTI releases.

The patch fixes a bug that would cause applications to crash if they pass `std::sets` or `std::maps` from an application to a DLL or vice-versa, something that IEEE 1516 federates must do. For details about the patch go to http://www.dinkumware.com/vc_fixes.html.

To install the patch:

1. In the top level MÄK RTI directory, is a file called *XTREE-msvc++patch*. Rename this file *XTREE*.
2. Make a back-up version of the original *XTREE*.

3. In the Visual Studio *include* directory (for example, *C:\Program Files\Microsoft Visual Studio\VC98\Include*), replace the original version of *XTREE* with the patched version.

Backwards Compatibility

The MÄK RTI 2.3.2 libraries are not run-time compatible with previous versions. (In other words, you cannot have a federation execution in which some federates use MÄK RTI 2.3.2 and some use a previous version of the MÄK RTI.) However, the MÄK RTI 2.3.2 is link compatible with previous versions, so a federate does not need to be recompiled to use this version. We recommend that all federates use the same version of the RTI when operating within the same federation (or using the same *rtiexec*).

Network Compatibility

The MÄK RTI is not network compatible with other RTIs. (In general, no two RTI implementations are network compatible, due to differences in the low-level network mechanisms that they use (which include, but are not limited to packet layout.)) Applications that want to interoperate in the same federation execution must all use the same RTI implementation. A federation can easily switch from one RTI implementation to another between runs, but during each run, all participants must agree on which RTI to use, much as they must also agree on which FOM to use.

Compatibility with the DMSO RTI

With the exception of several additional functions (such as, *DtReadFileDescriptor()*, described in MÄK RTI documentation), the MÄK RTI 2.3.2 for HLA 1.3 has the exact same API as the DMSO RTI 1.3 NG (except v5). Unless you are using the *RtReadFileDescriptor* function, an application built against the DMSO RTI NG does not need to be recompiled in order to be used with the MÄK RTI 2.3.2, or vice versa (except that the Linux version is not compatible with the DMSO RTI).

MÄK RTI 2.3.2 uses the same FED file format as the DMSO RTI, but a different RID file format. (RID file formats depend on the RTI-implementation.)



MÄK products, including the MÄK RTI 2.3.2, are not compatible with the DMSO RTI NG v5 due to changes in the how the DMSO RTI handles namespaces.

New Features and Updates

MÄK RTI 2.3.2 has been released to fix some bugs. It has no new features.

Documentation Updates

Note the following updates to *MÄK RTI Reference Manual*:

- ♦ The printed version of *MÄK RTI Reference Manual* states that the MÄK RTI comes with, or is included with, all MÄK products. These statements mean that the MÄK RTI software is on product CDs. It does not mean that purchase of a MÄK product includes a MÄK RTI license. The MÄK RTI is licensed separately from other MÄK products.
- ♦ The *MÄK RTI Reference Manual* has not yet been updated to reflect support for HLA 1516.
- ♦ The following note has been added to “Starting the rtiexec,” on page 3-7, in *MÄK RTI Reference Manual*:



The *rtiexec* is a server application. Do not run more than one *rtiexec* per federation.

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- ♦ The RTISpy Network Monitoring Tool is based in part on the work of the Qwt project (<http://qwt.sf.net>).

Bug Fixes

The following bugs have been fixed in this release:

- ♦ A bug has been fixed where time constrained federates could be delivered receive order messages out of order. This bug did not affect TSO messages. The receive order messages from any given federate are now delivered by the RTI in the same order as they were sent by that federate.
- ♦ A bug has been fixed which resulted in a crash of the RTI Exec under certain conditions for Time Managed federations when the Time State GUI display was enabled.
- ♦ Broken links for the online class reference have been fixed.

Known Problems

This release has the following known problems:

- ♦ The RTI can sometimes fail to throw an "ObjectAlreadyRegistered" exception if a federate tries to register an object with a name that is already being used by another object. The federate can register an object using a name that belongs to another object that is unknown to the local RTI component (LRC). The LRC only maintains the names of objects that are registered or discovered by the federate. While we plan to fix this problem, a good preventive measure is to always subscribe and tick the RTI before registering objects.
- ♦ If you are using the Linux version of the MÄK RTIspy with versions of MÄK products earlier than the most recent releases, the MÄK products may crash. If this happens, contact MÄK technical support and we will provide you with a fix for your application.

