



VR-Link for Unity 1.2 Release Notes

This release note provides the following release-specific information for VR-Link for Unity Release 1.2:

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Systems Supported

VR-Link for Unity 1.2 is supported on Microsoft Windows XP, Vista, and Windows 7. It was compiled using Microsoft Visual C++ 10.0, 32 bit.

Compiler Compatibility on Windows

MÄK provides versions of product releases that have been compiled with Microsoft Visual C++ 7.1, 8.0, 9.0, and 10.0 (some products are not available on all compilers). 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 on the same computer can result in program instability.

License Manager

To run the licensed version of VR-Link for Unity, you must install license management software. VR-Link for Unity 1.2 uses FLEXlm 11.11. If you are upgrading from a version of the VR-Link for Unity that used an older version of FLEXlm, you must upgrade your license management files. You do not need a new license. Licenses are forward compatible.

The License Manager files are not part of the VR-Link for Unity installer. You can download them at:

<ftp://ftp.mak.com/out/MAKLicenseManager-win-setup.exe> (for 32-bit systems)
<ftp://ftp.mak.com/out/MAKLicenseManager-win64-setup.exe>

A license manager support is available at:

<http://www.mak.com/support/license-support.html>

Network Compatibility

HLA only

VR-Link for Unity 1.2 is compliant with:

- ♦ RPR-FOM 0.5, 0.7, 0.8, 1.0, and a subset of 2.0 (draft 6, 14, and 17)
- ♦ MÄK RTI 2.x, 3.x, 4.x (HLA 1.3 and 1516-2000 only)
- ♦ MÄK RTI 4.0.4 or later (HLA Evolved)
- ♦ Pitch RTI 1.3 C++ interface.

Other RTIs that support the HLA 1.3 specification, the SISO DLC HLA API 1516 version of the IEEE 1516 specification (SISO-STD-004.1-2004), and HLA Evolved. To use an RTI with VR-Link for Unity it must use the same operating system and be built with the same compiler.

DIS only

VR-Link for Unity 1.2 supports DIS 4, 5, 6, and 7, and can therefore interoperate with DIS applications of any of these versions.

Backward Compatibility

VR-Link for Unity 1.2 is highly compatible with past versions.

RPR FOM Versions Supported

VR-Link for Unity 1.2 has built-in support for versions 0.5, 0.7, 0.8, 1.0, and 2.0, drafts 6, 14, and 17, of the RPR FOM. By default, VR-Link for Unity 1.2 uses RPR FOM 1.0.

VR-Link does not officially support RPR FOM 2 Draft 18 at this time. However, the draft appears to be similar enough to RPR FOM 2 Draft 17 that the 2.0017 FOM Mapper may be used for federates wishing to interoperate with RPR FOM 2 Draft 18.

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, 2.0006, 2.0014, or 2.0017) 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-Link20017", "MyApp", new DtRprFomMapper(2.0017));
```

VR-Link for Unity examples like *f18* and *hlaNetdump* have a command line option, `--rprFomVersion`, that you can use to choose a RPR FOM version, using one of the version numbers listed in the previous paragraph.

RTI Support

VR-Link for Unity 1.2 has been tested with the MÄK RTI 4.2 for HLA 1.3, HLA 1516, and HLA Evolved. It has also been tested with Pitch's pRTI 4.3.1 for HLA 1.3 and HLA Evolved.

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

Applications built with VR-Link for Unity 1.2 for HLA can use any RTI that conforms to the relevant dynamic link compatible HLA standard (1.3, SISO DLC 1516, HLA Evolved) and was built using the same operating system and compiler.

New Features and Changes

VR-Link for Unity 1.2 has the following new features and updates:

- Upgraded VR-Link from 4.0.8 to 5.0.1.
- Support for DIS 7.
- Changed terrain coordinate system initialization to a single message, TerrainInit. In previous versions when the terrain strategy initialized, it would request (pull methodology) the terrain coordinate system init data from Unity via a request message that the geoBehavior responded to, but dynamically loaded terrains sometimes failed to receive this message. Now TerrainInit messages should be sent after a network connection is made and the terrain is loaded (push methodology). TerrainInit messages should be sent any time the terrain origin changes, such as with streaming terrains.
- Added Data and SetData messages.
- Added ability to turn specific translation strategies on and off. This prevents the processing of unwanted messages in both Unity and Gamelink.
- Added ability to set the dead reckoning algorithm used.
- Added the ability to change default thresholds and heartbeat times for dead reckoning per entity or for all entities.
- Added the ability to change the timeout for reflected entities.
- The *DtHandle* class was removed from the Developers API.
- Added a post build copy menu command to copy HLA support files (FED, FDD, etc) to the built project directory.
- Added support for Acknowledge interactions.
- Added support for Action Request/Response interactions.
- Added support for Start/Resume, Stop/Freeze interactions.
- Added support for Collision interactions.

Fixed Bugs

Unsigned 64 bit numbers were not encoded and decoded correctly.