

The World's Leading Simulation Networking Toolkit

Overview

With the VR-Link networking toolkit, you can quickly and easily network simulators and virtual reality applications using the industry standard High Level Architecture (HLA) or the Distributed Interactive Simulation (DIS) protocol. VR-Link's easy-to-use programmer's interface and powerful code generation tools reduce the risk, cost, and time necessary to maintain existing simulations or develop new ones. VR-Link simulations can be fully HLA compliant while maintaining the DIS compatibility vital to legacy projects.

Protocol-Independent API

VR-Link saves development dollars by providing a single documented API that abstracts away the details of the networking protocols. When you write your code to the VR-Link API, your applications become natively compliant with DIS, HLA 1.3, IEEE 1516-2000, and HLA Evolved. For example, most applications that already use VR-Link to support HLA 1.3 can switch to IEEE 1516-2000 or HLA Evolved by merely recompiling.

Behind the API

VR-Link's top level protocol-independent API is used to set the current state of locally simulated entities and objects. Any needed information is automatically sent to other applications through the HLA's RTI, the DIS network, or TENA Middleware. On the incoming side, VR-Link processes information from other applications and provides access to the current state of remote objects. Dead reckoning, thresholding, coordinate conversions, responding to attribute requests, and filtering are all handled by VR-Link. Of course, you can still fully control low-level networking details if you want. A lower layer API provides direct access to the RTI, to the contents of individual updates and PDUs, and to DIS networking parameters.

FOM Agility

For HLA, VR-Link's FOM-Agile infrastructure allows you to build a simulation once and have it switch among several different federations by choosing an appropriate FOM Mapper plug-in. For instant, out-of-the-box interoperability, VR-Link comes with a FOM Mapper for the RPR FOM, but it also provides tools and examples to help you develop new FOM Mappers for other FOMs. Once a FOM Mapper for a particular FOM has been created, all VR-Link-based applications (including VR-Vantage®, the MÄK Data Logger®, VR-Exchange®, and VR-Forces®) can use it to interoperate.

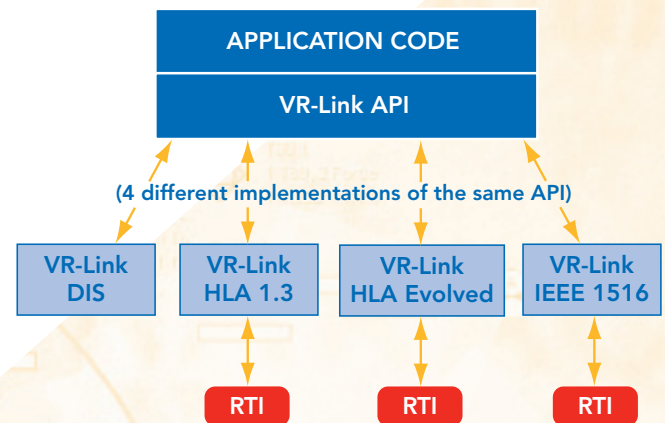
FOM-based Code Generation

Although the VR-Link API covers many of the most common concepts required by distributed simulations, some users need to extend VR-Link to support custom FOM elements. Whether your FOM just adds a few classes to the RPR FOM, or represents entirely different simulation concepts, the VR-Link Code Generator can help. The VR-Link Code Generator reads any HLA FOM, and automatically generates VR-Link

FEATURES

- HLA AND DIS COMPLIANT
- FOM-AGILE
- BUILT-IN RPR FOM SUPPORT
- FOM-BASED CODE GENERATION
- EXPERT TECHNICAL SUPPORT
- USER-EXTENSIBLE
- HLA 1.3, IEEE 1516-2000, AND HLA EVOLVED
- C++ API
- SUPPORTS HLA TIME MANAGEMENT
- GEOGRAPHIC FILTERING USING DDM

Protocol-Independent VR-Link API



Write your application code once, and switch between native DIS, HLA 1.3, IEEE 1516-2000, or HLA Evolved compliance just by recompiling.

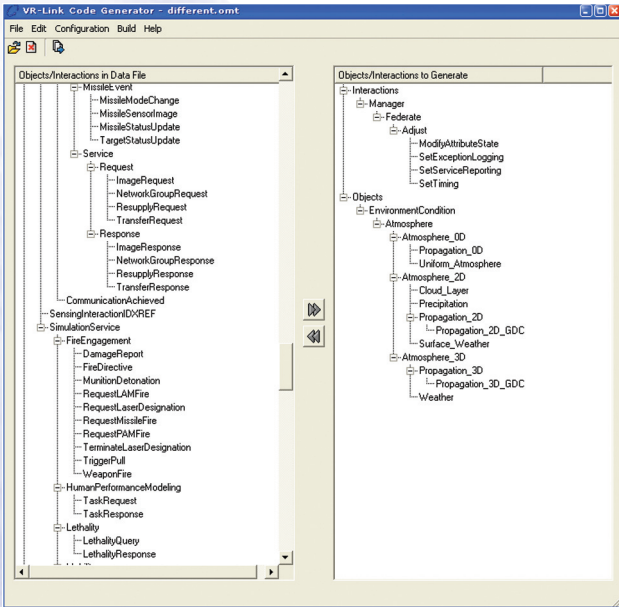
extensions for that FOM. The tool produces fully-formed C++ source and header files, along with the Microsoft Visual C++ solution files and the UNIX® Makefiles required to compile them into a VR-Link extension library. The generated classes are ready to use for publishing and reflecting new classes of HLA objects, and for sending and receiving custom interactions. The VR-Link Code Generator works with both HLA-1.3-style OMT files and IEEE-1516-style XML-based FOMs.

Flexible, Portable, Supported

VR-Link's object-oriented design and C++ implementation provide you with the flexibility to override default functionality and extend the toolkit to work with modified or new FOMs, or user-defined DIS PDUs. A cross-platform toolkit, VR-Link includes source code examples and an extensive Developer's Guide, and is backed by MÄK's renowned technical support. Customers have direct access to VR-Link's core engineers. And because of MÄK's participation in standards development groups, you can be confident that VR-Link will always keep up with evolving networking protocols.

Supported Platforms

- Windows® XP/Vista/7
- Linux®
- Custom ports to other platforms available



VR-Link Code Generator

