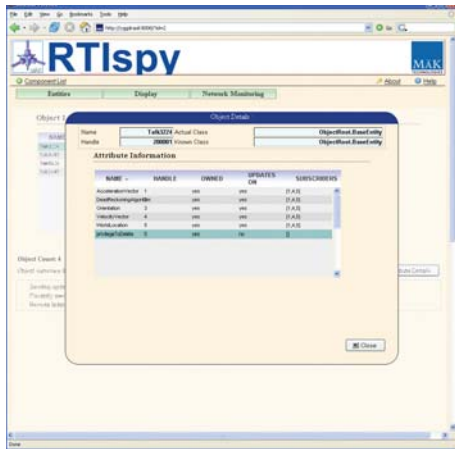


What's UP MÄK

CUSTOMER NEWS :



Lockheed Martin Chooses MÄK RTI & VR-Link for F-35 Joint Strike Fighter Program

Lockheed Martin has chosen the MÄK RTI and VR-Link for the HLA networking needs of the F-35 Lightning II Joint Strike Fighter program. The products were purchased as part of a Program Protection Plan, under which Lockheed Martin will receive licenses, prioritized technical support, and specialized ports of both products.

The Joint Strike Fighter Program is defining the next-generation aircraft for U.S. Navy, U.S. Air Force, U.S. Marine Corps, as well as the United Kingdom, and other partner nations. The F-35 Lightning II is a multi-role fighter, combining cutting edge technologies like stealth supersonic performance and advanced sensor fusion. The MÄK RTI and VR-Link will be used in developing interoperable, HLA compliant training for the fighter.

Lockheed Martin's previous experience with MÄK products in the F-16 Mission Training Center program led to the expansion of the tools on JSF. The Program Protection Plan gives the flexibility and special features they needed.

"The MÄK RTI and VR-Link have a strong pedigree and play a vital role in simulation and training for premiere programs, now including the Joint Strike Fighter program," said Marc Schlackman, vice president of sales and marketing for MÄK Technologies.

"Our goal has been to build tools that make simulation development faster and easier, and the continued use of these tools by programs like JSF shows that we're succeeding."

Lockheed Martin joins a long list of leading organizations who have selected the MÄK RTI for major simulation programs, including: Northrop Grumman Mission Systems' US Air Force Distributed Mission Operations lab, US Navy DDG 1000, the US Marine Corps Tactical Environment Network (TEN), Canadian DND War in a Box, and Australian Defence Simulation Office Joint Simulation Capability. An RTI is a key component of the HLA networking architecture. Customers typically choose the MÄK RTI based on its focus on efficiency and performance.

Both products were purchased under the MÄK Program Protection Plan which offers tailored packaging and pricing for large programs and companies. The plan can be customized to meet the special needs of a large program, offering options like early access to new features, prioritized technical support, on-demand porting, on-site consulting, and custom product features. ■

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A PUBLICATION OF



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B-HAVE Module for VR-Forces — Powered by Kynapse

The B-HAVE Module for VR-Forces (Brains for Human Activities in Virtual Environments) leverages advanced AI technology to provide more complex and realistic behaviors within MÄK's VR-Forces simulation environment. Using the B-HAVE Module, VR-Forces entities can analyze terrain topology, intelligently navigate through complex urban environments, automatically plan and follow paths through 3D building interiors, dynamically avoid collisions with obstacles or other entities, and flee from threats. The B-HAVE Module is powered by the Kynapse Toolkit from Kynogon SA, the world's leading supplier of AI technology for behavior simulation in the video game industry.

The B-HAVE Module is packaged as a set of plug-ins to VR-Forces' Terrain Database Tool (TDB Tool), Simulation Engine, and GUI. The TDB Tool plug-in allows you to automatically generate navigation maps ("PathData") from your 3D terrain data. The VR-Forces Run-Time plug-ins take advantage of this PathData to allow entities to enter and leave buildings, go up and down stairs and ramps, and realistically navigate around trees, fences and other obstacles. The B-HAVE Module also extends the set of built-in tasks available to VR-Forces users, to include Hide, Wander, Follow and Flee, and supports custom behavior scripting in the Lua lightweight programming language.

The B-HAVE Module for VR-Forces will be available in early 2007.

MÄK GIS-Link

This January, MÄK will launch MÄK GIS-Link. This new product brings the power of simulation networking protocols to ESRI's ArcGIS Geographic Information System (GIS) software suite. Now you can embed native support for DIS, HLA, or TENA into your ArcGIS development. (TENA support is available as a separate module.) The seamless integration of GIS-Link and ArcGIS eliminates the divide between the simulation and operational domains.

ArcGIS is the premier solution for creating and deploying intelligent geographic applications. It provides the foundation for the next-generation C4I systems and it is becoming a preferred framework for providing geographic visualization and analysis for modeling and simulation applications. GIS-Link is based on VR-Link, MÄK's industry-leading toolkit for simulation networking applications. GIS-Link combines the advantages of both tools by wrapping and extending the functionality of VR-Link within the development architecture of the ArcGIS framework. GIS-Link's powerful, easy-to-use API, backed by expert technical support, reduces the risk, cost, and time necessary to enable ArcGIS-based applications to be fully DIS-, HLA-, or TENA-compliant to visualize simulated data.

MÄK GIS-Link provides an ideal foundation for development of ArcGIS-based simulation or operational applications. It enables bi-directional communication between your ArcGIS application and DIS, HLA, or TENA applications. With GIS-Link you can also visualize real-time data as rapidly updating symbology within an ArcMap®, or as dynamic 3D models within ArcGlobe®.

MÄK GIS-Link functionality can be accessed in three ways:

- As ArcObjects available for use with other ArcGIS Engine components
- As an extension toolbar for ArcMap
- As an extension toolbar for ArcGlobe. ■

VR-Forces 3.10 and MÄK Plan View Display 2.10

We're proud to announce the release of VR-Forces 3.10. This Feature Release includes significant new functionality, including the following:

- A completely revamped TDB Tool (Terrain Database Tool) — The new TDB Tool allows you to manage a terrain "project", graphically select a set of source files, set import options, import and position raster images, choose which source files to include in the output terrain, preview your terrain, and then build a VR-Forces' GDB terrain, and a new MÄK Terrain Descriptor file that associates metadata such as imagery with GDB files. The new TDB Tool also allows you to set soil types for selected polygons, and to create and add new vector features to your terrain (in addition to pre-existing vector deletion and editing capability).
- Support for building VR-Forces plug-ins. Previously, extending the VR-Forces applications involved recompiling "main.cxx", and generating new executables. Now, you can package your VR-Forces extensions as plug-ins that can be loaded by the standard executables.
- "Global Plans" — including the ability to create and delete entities from a plan during scenario-execution time, based on triggers and conditionals
- Spot reports and Fog-of-War — VR-Forces entities can now publish spot reports when they detect enemy forces. The VR-Forces front-end can take advantage of this capability to display perceived truth from the perspective of friendly or opposing forces.
- Load-time load-balancing — When running with multiple back-ends, VR-Forces now supports automatic round-robin distribution of entities across various back-ends, and also supports manual control of entity distribution through the GUI.
- HLA Time Management, allowing the use of VR-Forces in non-real-time HLA federations.
- Support for the VMAP (.vpf) vector data format
- Ability to load multiple Object Parameter Databases in a scenario
- Improvements to the front-end API to facilitate embedding PVD functionality into custom applications

In conjunction with VR-Forces 3.10, we have also released a corresponding version of the MÄK Plan View Display — version 2.10.

MÄK Data Logger 4.0

MÄK is proud to announce the release of MÄK Data Logger 4.0. For this Major Release, we have completely redesigned the Logger's graphic user interface to provide a much more visual interface to recording and playing back distributed simulation exercises. While the previous Logger interface was similar to that of a VCR, the new Logger GUI more closely resembles a modern audio or video editing application.

ITT Uses MÄK Tools for CB Simulation Suite

For over twelve years, ITT has been providing the US Department of Defense with a toolset for nuclear, chemical, biological, and radiological simulation and modeling. And for over twelve years, MÄK tools have been an integral component of ITT's efforts.

ITT's CB Simulation Suite is used to support the research, development, and testing of and training for nuclear, chemical, biological, and radiological active and passive defense equipment. This includes detection, reconnaissance, and warning systems. The CB Sim Suite has been successfully used in support of simulation-based acquisition activities. The Suite serves as the WMD environment for the Fox NBC Reconnaissance Vehicle and several CB detection system trainers at the US Army Chemical School, the Close Combat Tactical Trainer at Ft. Hood, and Ft. Polk, LA. System developers have used the Suite to support system design, virtual testing (the CB Sim Suite is the core of the US Army's Dugway Virtual Proving Ground), and TTP development for several Joint CB Defense detection and messaging systems.

As a distributed simulation, the CB Simulation Suite has to be compliant with DIS and HLA. To support the networking compliance requirements, ITT has been using VR-Link and the MÄK RTI.

"Using MÄK's tools, particularly for our simulation networking requirements, lets us focus on what we do best-simulating CB environments, effects, and CB defense materiel," said Dennis Jones, ITT's Simulation Section Manager. "MÄK takes care of the details of the networking, like keeping up with the standards and protocol changes. We just need to recompile. It's a small cost versus doing it ourselves-and significantly reduces the risk for our customers."

The CB Sim Suite also uses the MÄK Stealth 3D viewer, MÄK PVD 2D viewer, and the MÄK Data Logger for simulation recording and replay.

CONTINUED ON PAGE 4

The Logger now graphically represents the timeline of your recording, and allows you to:

- Zoom to an area of interest
- Visually select a portion of a recording for playback
- Jump in time by clicking on the timeline
- Finely control fast-forward and rewind by dragging the time cursor
- Create, display, and visually edit both point and range annotations
- Display an interactive graph of object statistics during record or playback
- Connect and disconnect from your DIS or HLA exercise during run-time
- Filter by entity type, PDU kind, or HLA FOM class

Although this release introduces some changes to the Logger file format, Logger 4.0 retains the ability to load and play back files recorded with older versions of the Logger. Similarly, Logger 4.0 can import existing Annotation files.

Please note that there are a few features from previous Logger versions that have not yet been transitioned to the new Logger 4.0 architecture. Missing functionality includes: Time Management, command-line Logger utilities, and the export of Logger data to an SQL database. We will, of course, continue to support customers who are using these features in Logger 3.12 as we work to re-introduce similar functionality in future Logger 4.x releases.

Contact Us

If you are a current **product customer with up-to-date maintenance**, please contact **Fay Nickles** at keys@mak.com for the latest product versions. You must have your MÄK invoice number available when requesting updated versions. **For additional information or pricing**, please contact the MÄK sales department at info@mak.com or **617.876.8085 x2**.

TECH TIP

: Tech.Tip – Looping a MÄK Data Logger 4.0 Recording TIP 2006.8.3

The MÄK Data Logger 4.0 makes it very easy to loop a portion of a recording for repeated viewing.

1. Load a recording.
2. Click the Loop at End button. (Figure 1)
3. Set up the loop with one of the following methods:
 - a. Drag the start time slider to the beginning of the segment and the end time slider to the end of the segment. (Figure 1)

Or

 - a. Create a range annotation for the segment you want to view.
 - b. Select the annotation.
 - c. Choose Annotations -> Bound to Annotation. (Figure 2)
4. Play the recording. ■



Figure 1

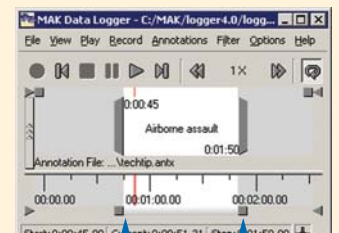


Figure 2

The three principal components of the ITT CB Sim Suite include:

- Nuclear, Chemical, Biological, and Radiological (NCBR) Environment Server
- CB Exposure Toxicity Server (ETS)
- CB Dial-a-Sensor™

The NCBR Environment Server calculates, in real-time, high-fidelity 3D hazard environments. The calculations are based on threat delivery system, weather, and terrain. The ETS tracks the contamination status and exposure levels of entities in a distributed simulation exercise, notifying entities when they've reached certain exposure thresholds for miosis, incapacitation, and death. ETS is built on a modular and scalable architecture that allows it to operate as a standalone server or as a module in a larger simulation. CB Dial-a-Sensor(tm) lets users dial in parameters to set performance characteristics for a known or proposed set of detector technologies. The user is able to attach these sensor models to a variety of platforms including UAVs and unmanned ground vehicles.

"ITT has built the core of their system on MÄK products," said Marc Schlackman, vice president of sales and marketing. "Because all our tools have APIs they could extend and customize what we offer to exactly suit their needs."

"We like MÄK because we are able to put faces with products," said Jones. "We get great support. It's the developers who answer our support questions. We know the folks who write the code." ■

RESELLERS

For a full list of MÄK's international resellers, please visit www.mak.com/products/resellers.php

- Australia
- China
- Czech Republic
- Cyprus
- Egypt
- Ecuador
- Finland
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- Germany
- Greece
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- Indonesia
- Israel
- Italy
- Japan
- Korea
- Malaysia
- The Netherlands
- Norway
- Poland
- Portugal
- Russia
- Singapore
- Spain
- Sweden
- Taiwan
- Turkey
- United Kingdom

WHERE WE'LL BE :

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December 4 – 7, 2006
BOOTH 1801

Orange County Convention Center
Orlando, Florida

FOR INFORMATION & ATTENDANCE VISIT:
www.iitsec.org

ITEA Modeling & Simulation Conference

December 11 – 14, 2006

Hotel Encanto De Las Cruces
Las Cruces, New Mexico

FOR INFORMATION & ATTENDANCE VISIT:
www.itea.org

Spring SIW

March 25 – 30, 2007

Mariott Waterside Hotel
Norfolk, Virginia

FOR INFORMATION & ATTENDANCE VISIT:
www.sisostds.org

Link – Simulate – Visualize