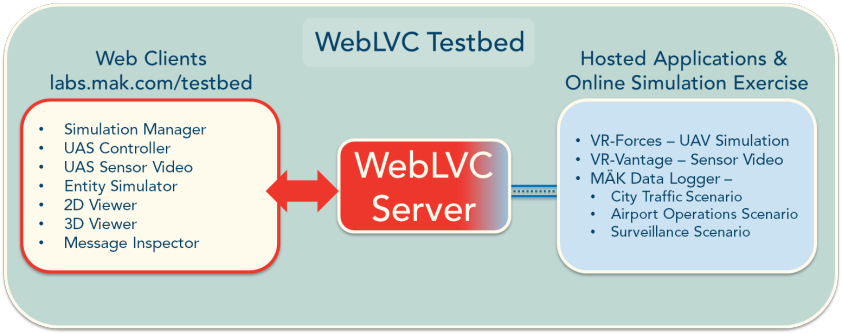
What's Up MÄK

WebLVC: Bringing Live, Virtual, and Constructive Simulation to the Web



See for yourself at labs.mak.com/testbed

Try out our WebLVC Testbed, experience the possibilities, and give us some feedback. Join in the discussion in our WebLVC Forum.

MÄK has a vision! We see the entire Modeling and Simulation community working together to create interoperable web applications.

The web is everywhere. People all over the world use applications in their browsers to shop, stream movies, or even produce important documents. But what about us Modeling & Simulation professionals who are busy in our labs, deep behind secure firewalls? Well, the time is right for the M&S community - we, too, can take advantage of this powerful technology. Even if we can't get to the wide world of the internet, we **can** take advantage of web technologies and use lightweight client applications made to run in our browsers. The M&S community can use web technologies to take control of our distributed simulation exercises, get a view of what's going on in the Sim Lab, even participate with client-side entity simulations.

At MÄK, we're building on our twenty year pedigree of open standards and interoperability to bring Live, Virtual, and Constructive Simulation to the Web. We've launched an "LVC Meets the Web" initiative - and it's big! We initiated WebLVC protocol standards activity within SISO, and have developed a WebLVC Server and a WebLVC Testbed.

WebLVC Protocol

MÄK has taken the initiative to prototype and submit a new protocol to SISO, called WebLVC, designed specifically to support interoperability between web-based client applications and traditional modeling and simulation federations (which may be using DIS, HLA, TENA, or another distributed simulation architecture). WebLVC defines a standard protocol for encoding simulation object attributes and interactions as JSON (JavaScript Object Notation) messages, exchanged over WebSockets. Get involved - join us at the Fall Simulation Interoperability Workshop (SIW) in Orlando on September 10-14, 2012.

WebLVC Server

The WebLVC protocol is designed to be an open standard that can be implemented by anyone. But why go through the trouble of doing all of that work, when MÄK has already done it for you? Our WebLVC Server, based on our VR-Exchange interoperability portal, implements the server side of the WebLVC protocol so your web-based federates can participate in a Live, Virtual, Constructive Simulation. The federation may be using DIS, HLA 1.3, HLA 1516, HLA Evolved, TENA, or any other protocol for which a VR-Exchange "Broker" exists. On the client side, we offer a set of JavaScript libraries we are calling VR-Link.js – a JavaScript implementation of some of the key functionality in VR-Link (our industry-leading C++ interoperability toolkit). VR-Link.js implements the client side of the WebLVC protocol, easing the job of building WebLVC-compliant JavaScript federates.

WebLVC Testbed

Our WebLVC Testbed is the place for you to evaluate, experiment, and innovate on the Web. The testbed has a collection of web clients that demonstrate the possibilities of M&S moving to the web; MÄK has hosted copies of our simulation tools, VR-Forces, VR-Vantage, and The MÄK Data Logger. These applications provide a persistent simulation exercise running in the cloud for you to use and test against. We are also hosting the MÄK WebLVC Server to allow web clients to interact with the hosted simulation exercise. We encourage you to give it a try! Launch the web applications, download the client app source code, and use them to build your own web applications. Share what you like and what you learn in MÄK's WebLVC Community Forum.

MÄK has always been a technical visionary and leader in interoperability - our "LVC meets the Web" initiative is the next logical extension as the M&S world inevitably moves to the web. We want to help our customers and our industry connect to the web wherever you are, on whatever technology you have. Wherever you go, MÄK is there; always have been, always will be.

INSIDE THIS ISSUE

MÄK's Tech Tip by Felix Rodriguez

Pattern of Life: Spawn and Sink Points

If you've taken a look at B-HAVE's new pattern of life feature, you may have noticed that spawned entities have a pretty basic plan. By default, every spawned entity is tasked to move to a sink point and upon reaching it, destroy itself. This basic plan, along with with all the options available with Pattern of Life, can quickly create some pretty realistic background traffic.

You are not limited to those simple plans, however. If you look in your spawn point options panel, there is an easily overlooked button called "Custom Plan". That button lets you replace the basic "Move To Spawn Point" plan with anything you want using the VR-Forces plan language! Now you can have patterns as complex as you want. Some obvious ideas for this capability include ordering all spawned entities to patrol a specific route or multiple points. But you can do more than that. Here are some examples:

- Lets say you have a spawn point in an airport as people are getting off an airplane. You could make a plan for people to walk to the nearest taxi stand and wait there for a taxi. Then you could have taxis pick up their passengers, take them to their final location, and then come back to the airport for another pick up. The taxis themselves can be created using spawn points and custom plans too.
- You could also have a spawn point create an undesirable with high variance. This person could be carrying a bomb and you want to stop her. But because you have a high degree of variance, not even the scenario creator knows when exactly she will show up. If you mix that in with a regular spawn/sink full of people doing normal things then you've made a very re-playable threat finding trainer with very little work.
- For another scenario, you could create continuous streams of threats. You can make a spawn point with a maximum amount of units set to some small number. Then you can create a custom plan that sends those units to battle instead of a sink point. When a unit gets killed, you delete it after a short delay. This would immediately cause the spawn point to create a new entity that would move right back into battle. Now your enemies recreate themselves automatically. There is no need to reload or rewind your scenario.

When I'm playing around with Pattern of Life, however, I like to get a little creative. So I made a unit called "Pied Piper". Then I created spawn points of rats. They, of course, immediately go on a "Follow Task" and chase the piper around the city. When the entourage of rats gets big enough, the piper will take them outside the city and the process repeats.

I hope this gives you some new ideas to make your scenarios look more complete. If you have any interesting things you've done that you want to share, we would love to hear it!

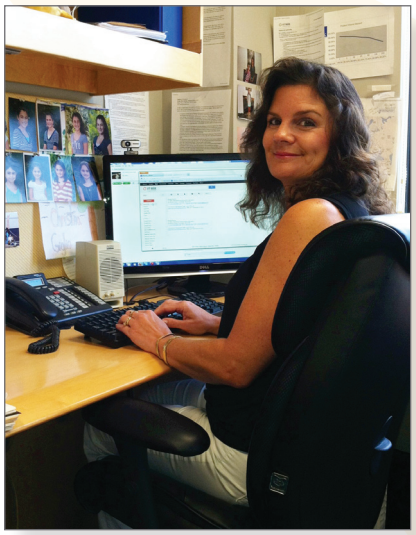
Speaking of Pattern of Life...

Don't forget about our limited time Pattern of Life offer - you have less than a month left to get up to 75% off realistic background traffic!

Our offer ends on September 25, 2012.

MÄKer Spotlight: Jean Giglio

Channel Manager for European Resellers



Say hello to Jean Giglio, MÄK's Channel Manager for European resellers. Jean works with our resellers to meet any and all customer requirements - this can include negotiating site license agreements, handling license and maintenance purchases, leading maintenance renewal programs, and getting input for customer software needs. If a reseller has an issue, Jean makes it her personal mission to resolve the request as quickly and efficiently as possible – all with a smile. She works with just about every part of MÄK (sales, marketing, engineering, administration, accounting, IT, and QA) on a day-to-day basis to ensure that resellers have the information and resources needed to be successful.

A MÄKer since October 2003, Jean has held a number of roles at MÄK, including Channel Manager for all of MÄK resellers worldwide (in 2009, Jean was excited to have Steve Peart come on board to handle resellers outside of Europe). She has also been in charge of maintenance renewals for all resellers, in addition to purchase order processing, license key issuance, maintenance of price lists, and the tracking of sales.

In her free time, Jean is an avid reader – nothing beats a good mystery in her book (pun intended). Her husband and two daughters, age 10 and 14, also keep her busy outside work. It's rumored that when attending overseas tradeshows, Jean's luggage is equal to multiple MÄKer's suitcases combined. But this is just a rumor.

We hope we've piqued your interest in getting to know our MÄK team. Stay tuned to our website for the latest on MÄK!

Customer Success!

The Federal Aviation Administration Chooses VR-TheWorld for NextGen Projects

The Federal Aviation Administration (FAA) is using its Next Generation Air Transportation System to transform the world of flight management and operation as we know it. NextGen is an ongoing overhaul of our current National Airspace System (NAS), planned and demonstrated to enhance safety, reduce delays, and save fuel - all while diminishing aviation's negative impact on the environment. The initiative uses new and existing technologies, including satellite navigation and advanced digital communications, to connect airports and aircraft in our NAS with continually shared real-time information.

The NextGen Integration and Evaluation Capability (NIEC) Laboratory is the FAA's research platform to explore, integrate, and evaluate NextGen concepts through simulation activities. It has chosen VT MAK's VR-TheWorld as the streaming terrain server to stream imagery and elevation data into several of these NextGen simulations, including Aircraft Access to SWIM, or System Wide Information Management, (AAtS), and a Weather Technology in the Cockpit (WTIC) study.

Aircraft Access to SWIM (AAtS)
Promoting collaborative decision-making among all players in air traffic management, AAtS will increase the efficiency of air traffic operations by sharing relevant information to flight crews through a common information source. It will evaluate pilot situational awareness (SA), workload, and voice communications, in addition to the strategic planning of increased and more timely delivery of weather, flight, and aeronautical information to the cockpit through day-flight simulations. The FAA's first study using VR-TheWorld, this human-in-the-loop experiment features the Dallas Fort Worth International Airport inset into the VR-TheWorld database.

Aircraft Access to SWIM is the flight deck extension of SWIM, which provides an open, flexible, and secure information management architecture for sharing NAS advisory data and enabling increased common situational awareness and improved NAS agility.

Weather Technology in the Cockpit (WTIC)
In an effort to better understand pilot decision-making in adverse weather conditions during flights through the Inter-tropical Convergence Zone (ITCZ), the FAA, in partnership with the National Centre for Atmospheric Research (NCAR), are developing a cockpit flight simulator for conducting experiments for NextGen pilot aids. They are using VR-TheWorld for a level 4 fixed-base flight training device. The goal is to determine how auxiliary avionics – in the form of an electronic flight bag, an electronic display system used primarily in the cockpit or flight deck– can boost the safety of transoceanic flights.

The study will include two airline crews flying simulated moonless night missions from Miami to Lima, Peru to investigate methods of displaying satellite-based weather in the cockpit. The fixed-base simulator used an Airbus A320 cockpit with sidestick, rudder pedals, flight management system and ACARS thermal printer, but with reconfigurable displays featuring touchscreen controls to model other avionics and hardware.

Why VR-TheWorld
Delivered with a global base map, VR-TheWorld can be easily populated with custom source data through a web-based interface. The server can be deployed on private, classified networks to provide streaming terrain data to a variety of simulation and visualization applications behind a firewall. MÄK's most recent release, VR-TheWorld 2.0, adds the ability to store and stream feature data including roads, buildings, and trees to multiple applications simultaneously. The amount and quality of imagery and elevation data included with the server has been expanded, and also allows the user to add geospatial data to distribute in real-time.

By using VR-TheWorld, the FAA and the NIEC Laboratory have the most accurate feature and elevation data of the "virtual globe" at their fingertips, helping them to determine the most cost-effective and practical methods of bringing satellite-linked systems to all of the National Airspace System.

If you would like MÄK to publish your success story,
contact marketing@mak.com.

Check out some of our recent Customer Success Stories:

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