

What's Up MÄK

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Put thousands of ready-to-use human characters, appearances, and motions into your simulation

DI-Guy brings real-time human visualization, simulation, and artificial intelligence to the VT MÄK product line



DI-Guy's new flight deck crew models

MÄK products have long been endowed with rich DI-Guy characters representing humans and animals in our VR-Forces Computer Generated Forces (CGF), VR-Vantage Stealth battlefield visualizations, and VR-Vantage IG scenes. With the recent addition of DI-Guy to the MÄK product line, we are now expanding the ways MÄK can bring your simulations to life!

Integrate characters into your simulation and visualization products with the DI-Guy Software Development Toolkit (DI-Guy SDK). MÄK did it with VR-Forces and VR-Vantage. Presagis did it with Vega Prime and Stage. FlightSafety did it with VITAL X. It's even been done for the Unity3D game engine. With the DI-Guy SDK, you too can add human characters to your simulation and visualization systems.



Oil rig workers created in DI-Guy Scenario and rendered in Unity 3D

Take your simulations to a more personal level with DI-Guy Expressive Faces, which provides facial animation for realistic, up-close 3D human simulation. This level of realism is imperative for simulations like checkpoint trainers, where judging the subtle nuances of behavior is critical to screening passengers.

Extend the character set to include your simulation specific actions and gestures with the DI-Guy Motion Editor. With the Motion Editor, you can start with predefined motions and add subtleties to make the default characters fit your specific needs. You can even create brand new motions. For example, by modifying certain DI-Guy behaviors, a specialized set of hand signals was made for an aircraft director to train landing transport helicopters on the deck of a busy aircraft carrier.



DI-Guy characters used in unmanned aerial surveillance

Give your human characters the ability to move and perform with DI-Guy Scenario and DI-Guy AI. DI-Guy Scenario lets you create performances of hundreds of characters using innovative techniques, like using brush strokes to paint characters into the scene. And because of DI-Guy AI, those characters will all behave like they are supposed to – moving, gesturing, and acting appropriately.

Populate distributed simulations with rich, interactive human performances using DI-Guy Lifeform Server – a network-ready and human-oriented Semi-Automated Forces (SAF) application that uses MÄK's DIS and HLA interoperability technology. The US Marine Corps, Air Force, and Army all use DI-Guy Lifeform Server to populate virtual training exercises.

Train your combat operations center staff with the Enhanced Company Operations Simulation (ECO Sim). EcoSim joins Battle Command and QuickStrike in MÄK's growing collection of end user training systems. ECO Sim is the fruit of a five-year collaboration between the US Marines, JIEDDO, and DI-Guy that simulates friendly force tactical behavior, insurgent network behavior, and civilian patterns & reactivity to ongoing events. It's currently used by the United States Marine Corps. Tactics & Ops Group (MCTOG) to model non-player blue forces, oppositional forces, and civilian pattern-of-life to train Marine Captains for IED defeat missions. It is designed so that a non-programming Marine can be trained in 10 minutes to operate the system. *(continued on page 2...)*

Watch DI-Guy in action!

youtube.com/vtmak

DI-Guy's human simulation software visualizes realistic human characters and models their motions and behavior in real-time. Now, it's all part of MÄK's suite of world-class Modeling & Simulation software products. Enjoy MÄK's full spectrum of interoperability, simulation, visualization, terrain, and web & mobile software, with top-notch human characters, in addition to the expert technical support you've come to expect.

Want to learn more about how DI-Guy can help you? Contact us at info@mak.com. 🌸

Tech Tip

Simplifying ISR Simulation Scenarios with DI-Guy

To ensure successful training of Intelligence, Surveillance, and Reconnaissance (ISR), the simulation scenario must be believable; to deliver that training scenario to many students, it must be repeatable. To be believable, the scenario needs accurate background activity to clutter the scene and make it difficult to identify and track the suspected high valued individual (HVI). The HVI needs to have subtle behavioral clues that expose the HVI. To be reproducible, the HVI must perform his predetermined task regardless of what the background entities are doing - any unpredictable actions lead to inconsistencies that detract from the training.

To make such a training exercise using DI-Guy Scenario, we recommend that you take advantage of two types of characters: scripted characters and artificial intelligence (AI) characters. Use the scripted character to precisely define the behavior of the HVI, and then generate lots of background activity using the pattern-of-life characteristics of the AI characters. The AI characters will go about normal activities throughout the day while appropriately coexisting with the scripted HVI character. This way, you can repeat the scenario and get consistent behavior for the subject HVI, while saving time generating the activity of hundreds of background characters. You're on your way to a win-win scenario with DI-Guy. 🌸

MÄKer Spotlight: Matthew Descoteaux



DI-Guy 3D Artist

As part of the DI-Guy product team at MÄK, Matthew is responsible for modeling, texturing, and animating the realistic characters, vehicles, and environments found in DI-Guy's extensive library. Matthew's work requires a keen eye for detail, ensuring the highest fidelity models that the Sim/Training industry has to offer. In addition to his artistic contributions, he has acted as lead graphic designer for DI-Guy's updated branding, directed motion capture sessions, and traveled the world as an ambassador for the product serving as demonstrator and trainer.

In addition to his role at MÄK, Matthew has an eclectic professional life. He has been a professional musician for 20 years as a keyboardist/vocalist. He is a music director for a Catholic church, and is a solo jazz musician. (In his free time, he enjoys volunteering his music education services to low-income children.) Additionally, he is an entrepreneur. Matthew and his wife, Franky, own a Baja-Mexican restaurant called Mambo Grill, as well as a cute women's fashion boutique called Humanity. These businesses are located in the heart of the historic district of Matthew's hometown of Lowell, MA.

Matthew received his art education from Massachusetts College of Art & Design, and earned a degree in Music Education from UMASS Lowell.

Matthew has two children, ages 11 and 8, whom he loves to tire out by playing baseball, basketball, football, skiing, snowboarding, hiking, etc. Matthew also loves cooking - a skill he completely lacked prior to opening his restaurant! While running his businesses, Matthew made two citizen's arrests which involved a dramatic chase through the crowded streets of the city. While Matthew made his childhood hobbies into his career, he also recently made his stage debut in a production of the musical, Forever Plaid. It was a 4-man show featuring heavenly harmonies and hilarious high-jinx of the barbershop quartet, Forever Plaid, who were resurrected from the dead for "one last show".

We hope we've piqued your interest in our MÄK team! For more info, visit www.mak.com. 🌸