What's Up MÄK

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Taking Image Generation to the Next Level

VT MÄK makes an IG that breaks all the rules

Every image on this page is a video! Click on the banner and the two images below to see amazing renderings created by VR-Vantage.

INSIDE THIS ISSUE

IG's are a crucial part of a simulation — their ability to take data and allow you to visualize scenarios is key to understanding and making sense of what is happening. Visualization is so universally important in simulation training that its used everywhere from child pedestrian studies at The Ben-Gurion University Human Factor Engineering Center to full-mission flight training.

When customers select their simulation solution, many have to make tradeoffs between scene-complexity and real-time performance.

Solutions that prioritize scene-complexity apply tremendous effort to data preparation to create content specific to each scene (e.g. Hollywood movies and consumer-video games). This creates beautiful, rich scenes, but limits the scenarios and circumstances to a narrow predetermined scope.

Solutions that prioritize real-time performance focus on maintaining high frame rates (at least 60Hz) and are typically used in full mission trainers where a pilot's sense of motion and immersion is paramount. These IG's have historically been designed to connect to a host vehicle simulation through a highly specified interface (CIGI). As a consequence of performance optimization, scene content and detail are sacrificed to ensure consistency and frame rate.

MÄK has always believed that there is a place for a flexible option that lets customers build the simulation with their own priorities in mind. Flexibility begins with a product that is designed from the ground up as an API, so you can customize and extend the system to achieve the balance you desire. Flexibility used to come with some compromise — in the past, a flexible option couldn't give you the content of a quality-prioritized system or the frame rate of a performance-optimized system. Read More...

Next-Level IG continued...

VT MÄK recognized this and we have developed software that provides the flexible IG solution — fully flexible software that is capable of 60 Hz performance on 4K displays well as a stunning array of content and an agile terrain strategy* to satisfy any point on the quality–performance scale. We take advantage of graphics-rendering technology that is subsidized by the gaming industry and deliver it in a completely customizable software framework. With VR-Vantage, instead of being locked into what your vendor has prioritized, you have the freedom and control to tune the software to meet your specific needs for your particular simulation. Have a look at our latest video VR-Vantage—Get Ahead of the Game to see what an uncompromising solution looks like.

*Read our new white paper Terrain Strategies in VR-Vantage and VR-Forces

Tips and Techniques: VR-Vantage Webinar

This month we were pleased to have Tim Langevin, MÄK's Technical Lead for the VR-Vantage product line, hold a webinar for customers to learn more about the architecture of VR-Vantage. Tim covered topics ranging from application components, the display engine, distributed objects, design patterns, and Vantage API layering. We highly recommend that you check out the webinar recording. Tim's expertise on the subject is invaluable to both prospective users of VR-Vantage who want to learn more detailed information before making a decision, as well as current users who want to better understand and improve their experience. Join the community at MÄK.com and you will also be notified of upcoming webinars in advance.

MÄK Making the News

Aaron Dubois, one of MÄK's Principal Software Engineers, stockpiled three awards at the 2015 Fall Simulation Interoperability Workshop in Orlando. Aaron was recognized for his work developing the RPR FOM 2.0 standard, which we recently discussed in our September newsletter. The first was for outstanding contributions to the development of the guidance document (SISO-STD-001-2015), and the second was for outstanding contributions to the development of the FOM itself (SISO-STD-001.1-2015). He also received a Technical Merit Award for "substantial contributions to the processing and publication of Standard for Guidance, Rationale, and Interoperability Modalities for the Real-time Platform Reference Federation Object Model."

MÄK Product Updates

As autumn arrives in Boston, we kick off the season with a new release of our software:

DI-Guy 13.1 — This release focuses on increasing our content library and improved performance for large scenarios. We made improvements to how entities are updated to reduce the performance cost of entities that are far away or not in the scene. MÄK has taken advantage of advanced photogrammetry to produce high fidelity characters from a small number of photographs. New content brings many new character types, including firemen, ISIS characters, and vehicles.

MÄK Events Calendar

AUSA — October 12th - 14th, Washington, DC
Held every October, the AUSA Annual Meeting is a three day event that includes over 500 industry and military exhibits, as well as presentations.
This year MÄK will be focusing on our solutions for Intelligence, Surveillance and Reconnaissance, Unmanned AirCraft Systems and Ground Vehicle training, as well as for Command and Staff training from Company level through Brigade. Danny Williams will be on-site representing VT MÄK, so make sure to say hello!

MÄKer Spotlight: Paul Zimmons

Senior Graphics Programmer

This month, we'd like to introduce you to Paul Zimmons, a Senior Graphics Programmer at MÄK. As a graphics programmer, he adds awesome new graphical features, like improved depth of field and window reflections inside of VR-Vantage. Previous to joining MÄK, Paul developed graphics for Electronic Arts and Irrational Software. At EA, he worked primarily on the Madden franchise for XBOX 360 and Playstation 3, collaborating with the artists to develop the look of the game. At Irrational Software, he was a part of their technology group, adding new features to their Unreal Engine 3-based graphics code.

Paul graduated with a Bachelor's Degree in Computer Science from Cornell University, and went on to receive a Ph.D. in computer graphics from the University of North Carolina at Chapel Hill.

Paul once dissected an entire box of Count Chocula and ate only the marshmallow bits. Castlevania: Symphony of the Night is his favorite game and he has a strong affinity for Stroopwafels.

In his free time, Paul enjoys running, watching Formula One races, gaming, and exploring Boston.

We hope we've piqued your interest in getting to know the MÄK team! Stay tuned to our blog and Twitter to get the latest on MÄK happenings!