What's Up MÄK

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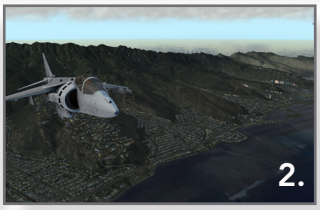
Content Is King!

MÄK delivers a world of content with MÄK products


Petr's Pond Terrain Database


1.


2.


3.


4.


Emergency Responders in Brooklyn Database

MÄK is continually increasing the quantity and quality of the content provided with our products. When you use MÄK products you get a world of content: terrain databases, simulation models, human characters, behaviors – all kinds of awesome content to make your virtual environments rich and effective for training and experimentation.

VR-Forces has hundreds of simulation models representing different vehicle types you can use to develop your urban, military, or maritime scenarios. DI-Guy 13 adds more than 100 new human appearances and with the DI-Guy variation system, you can randomly mix bodies, faces, and clothing to make virtually unlimited unique appearances - build huge crowds where you never see the same person twice! Our SpeedTree animated 3D vegetation and foliage gives your outdoor scene the look and feel of the real world. And layer all of this content on top of our many terrain databases, including Hawaii and a Middle Eastern Village:

- **Hawaii** - Hawaii is a beautiful example of streaming terrain with cut-in sites. This terrain was built to demonstrate how the many terrain techniques supported by MÄK's VR-Vantage, VR-Forces, and VR-TheWorld Server can be combined to cost-effectively build a correlated, seamless, global 3D environment. (Pictures 1 and 2 illustrate our Hawaii database.)

- **Middle Eastern Village** - Developed and sold by B-Design3D (www.b-design3d.com), the Middle Eastern village includes four villages at ultra-high resolution and detail. It's a large terrain, over 10,000km^2, and is suitable for air and ground operations over sprawling Middle Eastern villages. The villages are surrounded by fields and dense forests allowing for a wide variety of training operations. B-Design3D also has Driving Town Day & Night terrains perfect for urban driving simulations, as well as a Nevada terrain for flight simulation. (Pictures 3 and 4 show B-Design3D terrains.) *All B-Design3D databases may be used "as-is" inside VR-Forces and VR-Vantage simulations for non-commercial applications and for demonstration and technical evaluation only. A non-watermarked version can be purchased from B-Design3D.*

We've created a lot of content for a lot of different purposes; sometimes we create full environments that our customers can use to solve training and experimentation problems, and other times we build sample databases and content to test individual product capabilities. We continually grow our libraries of models to represent different entities. When you're looking for great content to build and populate your virtual environment, know that MÄK has what you need.

INSIDE THIS ISSUE

Why Web & Mobile?

Our customers are telling us the benefits of Web & Mobile technology

Many of our customers operate large and complex systems. With Web & Mobile technologies, they can show prospects the inner workings of the systems without having to teach them to use the real equipment. They are making simple mobile applications that extract information from complex systems and present it in understandable ways.

When asked, "Why Web & Mobile? Why not just build desktop applications using C++ or some other more familiar computing architecture?" this is what they say:

1. "We can leverage inexpensive content creators – web developers are more visually oriented, more available, and less expensive than our simulation and subject matter engineers. We farm out the UI development and have been getting great results. Even when we do the work ourselves, the web development tools and techniques are more fluid than heavier development environments. We are able to get more iterations of our applications in front of our users; more iterations results in higher quality."

2. "We can share content with our customers and deploy it to where they are. We found that we can engage our customers earlier and more often in the development process. Getting feedback in smaller, more frequent, doses allows us to better meet customer needs and exceed expectations."

3. "Customers expect to use mobile devices for display and control functions. Let's face it, every commercial industry is making progress in leaps and bounds using web technology and mobile devices. Well-designed and easy-to-use applications are not gimmicks anymore, they're expected."

4. Those who are not confined to private networks remark on the value they receive from data and applications that are freely available on the internet. They are able to mash-up Google Earth, for example, with other data sources and use WebLVC to inject their simulation activity. Even customers working on private or secure networks are benefiting from centralized data distribution strategies.

Some of our customers started using web technology in their business development activities. However, after building simulations capable of presenting operational concepts to customers, they realized they had an asset that could benefit their systems engineering efforts. They are now using their "demonstration" facilities to experience and study the operation of the systems and to test upgrades prior to deployment.

Here's Your Chance: Get Web & Mobile Free

Interested in learning how Web & Mobile technology can improve your efficiency? MÄK wants to help you build your first web & mobile app for free.

We're helping ten companies build their first Web & Mobile app in 2014. There's room for a few more - will yours be one of the ten? The first customers have already signed up and we've begun providing free consultation to help them make sense of where web applications fit in their system architectures.

Web & Mobile technology can add tremendous value to your training systems and experimentation projects - and we want to help you succeed! If you're interested in trying out our WebLVC technology, we'll provide all the software you need to get started, free of charge. And since you may be new to Web/Javascript development, we'll make our own developers available to help you build your first web or mobile application.

We can take advantage of the mass market technologies that are making companies successful in all sorts of industries. **Lets work together**.

Learn more about this Web & Mobile offer. Contact us at info@mak.com if you have questions!

VR-Link for C# is now available!

Continuing MÄK's dedication to interoperability, we have expanded the ways you can use VR-Link. If your simulation applications use C#, take advantage of our VR-Link for C# library!

Get in touch with us at info@mak.com to learn more!

Tips & Techniques

Get Bumpier, Shinier, and Shadier Graphics in VR-Vantage

What's the difference between a dull, old model and a bright shiny, new model?

Turns out, it's just texture maps. Oh yeah, and the VR-Vantage rendering engine. With VR-Vantage 1.6 all you have to do to get bumpy, shiny, and shady effects in your models is add normal, specular, and occlusion maps. That might sound pretty complicated. But really these are all textures that you can create with tools like Crazybump, Blender, and Photoshop.

Crazybump will take your texture map and guess what shape it is and then use that shape to generate (bake) specular, normal, and occlusion maps. But it's just guessing. If you have a high-polygon count 3D model, then you can use tools like Blender to bake specular, normal, and occlusion maps from that model. And in Photoshop, you can paint specular maps by highlighting the shiny spots of your original texture.

All you have to do to tell VR-Vantage which textures specify which part of the lighting equation is add a few specific characters to their file names. For example, if your original texture was "rock.png" then your normal map texture will be named "rock_NML.png." Your specular map will be named "rock_SPC.png." And your ambient occlusion map will be named "rock_AO.png."

Just put these textures in the same folder as your original texture, run your VR-Vantage application, and see the difference.

(Bonus tip: In VR-Vantage, change the time of day to move the sun and see the lighting effects you've created.)

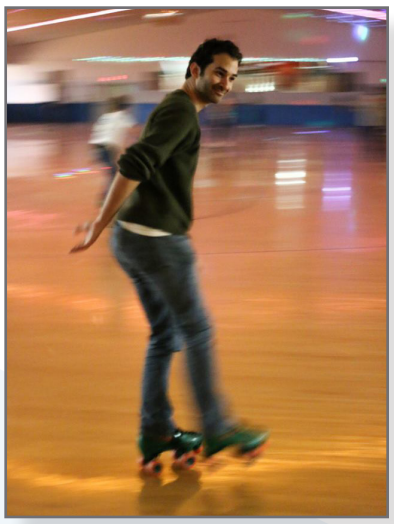
To learn more about this technique, email us at info@mak.com.

DI-Guy 13 is right around the corner.

Check out our latest blog to learn what to expect, including a streamlined appearance configuration system, instancing system, and animation upgrades.

MÄKer Spotlight: Gedalia Pasternak

DI-Guy Engineering Lead



It's time for the spotlight to shine on one of our DI-Guys - Gedalia Pasternak! Gedalia is the DI-Guy Engineering Lead here at MÄK and spends a lot of his time investigating ways to bring new technologies into the visual simulation world. He also oversees the general growth and evolution of the DI-Guy product line, which gets pretty deep in the software development kit side of things. He often writes code and frequently helps his fellow DI-Guy engineers and artists get things done in the DI-Guy code base.

Gedalia studied Computer Science and Math at The Cooper Union in New York. After that, he worked in a variety of computer graphics jobs, where he wrote shaders and particle systems code that appeared in TV commercials (don't tell the kiddos, but Pixie Dust turns out to be mostly linear algebra). Gedalia has also built tools and game systems for Massively Multiplayer Online Games. He then wound up with Boston Dynamics where he was hired to work on simulation tools, where he moved into the real-time DI-Guy group.

A fun fact you might not know about Gedalia: on his bachelor party weekend, he and his groomsmen ran into Jackie Mason (a famous rabbi turned comedian) on a Miami boardwalk at 11pm at night. Jackie gave Gedalia his blessing on his upcoming nuptials - once Gedalia promised that his wife was a nice Jewish girl! He enjoys hiking, rollerblading, and developing the occasional iPhone app. With a new infant at home, his hobbies also include making funny faces and navigating nap time.

We hope we've piqued your interest in our MÄK team! Stay tuned to all things MÄK at our blog and Twitter!