

February
2018

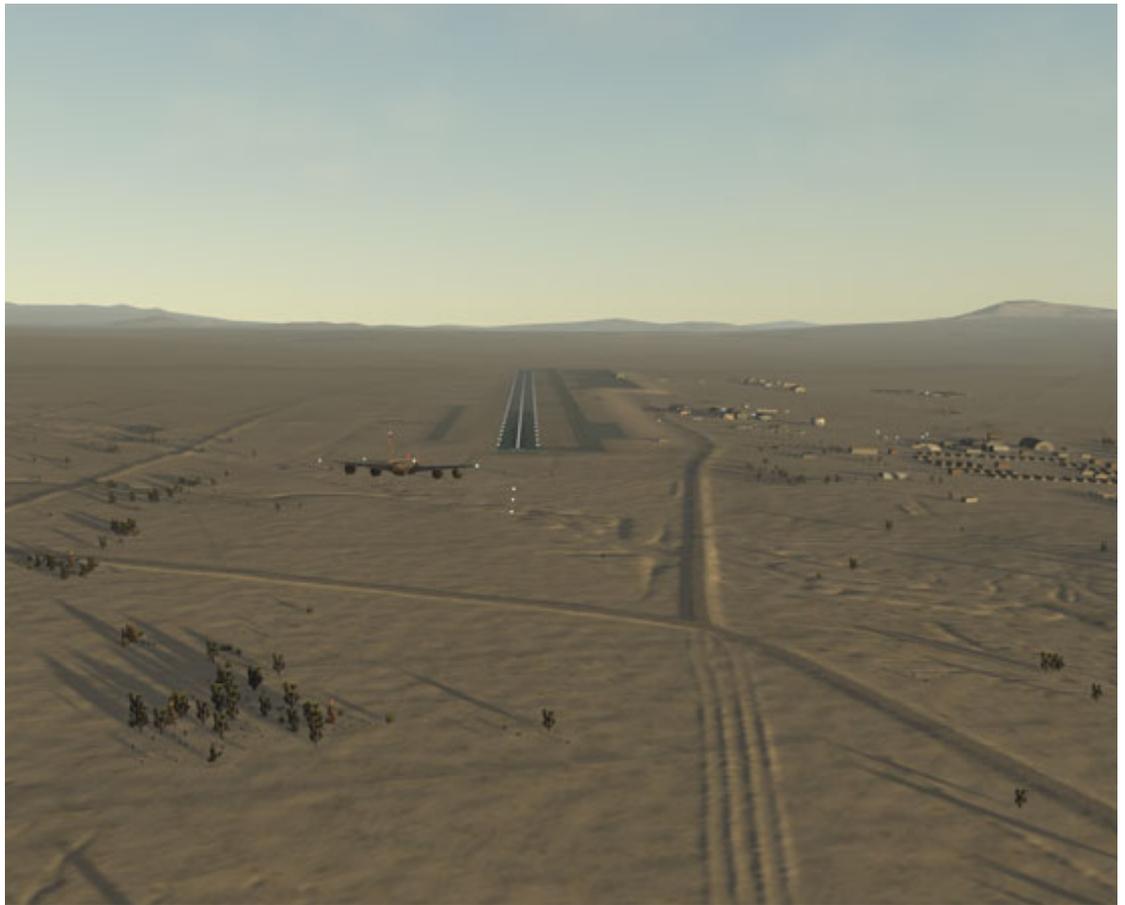
What's Up MAK

VR-Vantage IG: Checking off all the boxes

VR-Vantage 2.3 is
our most complete
IG yet

NewsMAKers

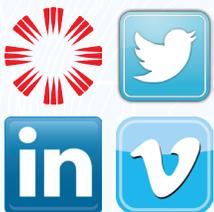
We announce
upcoming training
and seminars,
as well as trade
shows we're
attending



VR-Vantage IG: A fully-fledged solution

VR-Vantage 2.3 represents the culmination of years of effort at MAK to meet the needs of our Image Generator (IG) customers. We've worked tirelessly with our customers on an individual basis to deliver IG solutions that exceed project requirements - for example, our IG is used by pilots to fly live planes with humans aboard at the **Air Force Test Pilot School**. Each time we've delivered individual projects, we've added those advancements into the out-of-the-box product, resulting in the robust IG we offer today.

VR-Vantage IG provides the high performance and features expected in an IG to be used in fully-immersive training simulators. Its unique position in the market is its ability to be easily configured by users and system integrators. This allows it to fit in a wide variety of simulation environments and system architectures. Some new features combined with ones we've accumulated over time make this our most complete IG solution yet:



Performance Tuning (Improved in VR-Vantage 2.3)

VR-Vantage IG includes tools to help customers measure performance and manage tradeoffs between scene content and performance.

Image generation for immersive display systems requires smooth 60Hz (or higher) update rates. Achieving this standard of performance while maximizing content density is a delicate balance. VR-Vantage IG helps users and system integrators manage this fundamental balance.

High performance graphics systems, like VR-Vantage IG, make use of myriad sophisticated graphics techniques to render beautiful full-motion scenes of the world. Many of these techniques come with a performance cost that can adversely affect frame update rates. VR-Vantage IG configuration GUIs present all these techniques to the users, so that they can choose the techniques that most benefit the rendered scenes for the specific type of their simulation. VR-Vantage IG also provides tools to help diagnose performance bottlenecks, which is key to addressing issues with content and configuration settings — a precursor to resolving performance problems.

A Deeper Dive >>> Want to learn more about MAK's performance tuning tools? [Click here](#) to read about them and get some visuals on our blog.

Light Points (Improved in VR-Vantage 2.3)

VR-Vantage IG offers accurate light points and the most interactive approach to tuning lighting systems. This ability to interactively edit the lighting systems allows users a unique ability to interactively tune the lights in the short amount of time they typically have with subject matter experts on site, even as late in the delivery process as Factory Acceptance Testing.

Light points are of vital importance in flight simulation where real-world lights are specifically designed to aid pilots in navigating and landing, as well as obstacle avoidance and runway/taxiway operations. For non air-centric uses, VR-Vantage IG's easy ability to control lighting systems will help the general appearance of the environment particularly cities, roadways and other cultural features.

A Deeper Dive >>> Want to read more about our light points? To learn about the new ways you can customize them on our blog, [click here](#).



CDB Support + Southern California Database (Improved in VR-Vantage 2.3)

VR-Vantage IG supports CDB – the “common database” format, originally developed by SOCOM to support mission rehearsal flight simulations. CDB has been gaining adoption in recent years and consistent with MAK’s Terrain Agility strategy we’ve added support for CDB.

Introducing the MAK SoCal CDB with built-up areas in Twentynine Palms and Range 220. This terrain database is available to MAK customers by request. The SoCal terrain covers 13,600 square kilometers with 10 meter elevation and one meter imagery detail. The Twentynine Palms area has 0.2 meter imagery detail including a functioning airfield. Range 220 includes 22,267 building models that provide a ground level simulation area for military operations in urban terrain (MOUT).

Edge-Blended Multi-Channel Display

VR-Vantage IG has been built from the ground up with multi-channel distributed rendering. This means that users can add VR-Vantage IG Remote Display Engines to extend the image generation to fill all the displays in their training devices. And when their display solutions involve curved screens, VR-Vantage IG’s built in support



for Scalable Display Technologies’ software enables them to setup image warping and edge blending to match the specific geometry of the display.

CIGI Compliance

VR-Vantage IG connects to host simulators using CIGI (also HLA and DIS), a major requirement for many projects. CIGI is the Common Image Generator Interface initially developed by Boeing and widely adopted as the standard way to connect host simulators to their IG. Compatibility with CIGI lets users upgrade their IG’s independently of their host simulators.

Performance tuning, light points, and CDB support are just a few examples from a long list of new and improved features available in VR-Vantage 2.3 - for more details, [check out the product page](#). These features, in combination with some of the long-time strengths of VR-Vantage (edge-blended-displays, and CIGI compliance, just to name a couple), position VR-Vantage IG as the perfect visual solution for any system integrator.

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We have a set of upcoming training classes scheduled for February:

February 21st 9:00 AM-10:00 AM EST: VR-Forces 204 Webinar - Best Practices for configuring & adding new sensors

Webinar will focus on demonstrating the best practices for configuring and adding new Sensors. Specifically, the course will demonstrate the use of the Simulation Object Editor and OPD Editor tools to create new systems.

February 21st 11:00 AM - 12:00 PM EST: VR-Forces 103 Webinar - Customizing the GUI

Webinar will focus on understanding the configuration options to tailor the VRF GUI to meet your specific needs.

Feb 26th - March 2nd: VR-Forces on-site training class in Cambridge

To sign up, please contact your salesperson. This course is tailored specifically for users, not developers/programmers. If you would like to experience an on-site course designed around your needs, including in-depth programming, please email us at info@mak.com.

We exhibited at I/ITSEC in November, where we showed off the Synthetic Training Environment Demo, which features all of the MAK products working in unison to create a complete simulation system, including after-action review. To see the demo in its entirety, [check out this video](#). If you missed us entirely at I/ITSEC, [check out our recap video](#).

We'll be attending two events in February:

Singapore Airshow - February 6th - February 11 - Changi Exhibition Centre, Singapore

Come see us at the Singapore Airshow in 2018! MAK's local reseller, TME will be exhibiting on Booth A35, and Steve Peart will also be there attending the show. MAK will be exhibiting in the ST Engineering booth, conducting demos of all our latest products, including VR-Engage!

Marine West - February 7th - February 8th - Camp Pendleton

Stop by and say hello to Dan Brockway and Danny Williams, who will be manning MAK's booth (#231) and showing the latest demos MAK has to offer! Simulation is a key to preparing Marines for the opportunities and challenges of the future.

Steve Peart and Ivan Diaz will be conducting a **modeling and simulation seminar** in Bogota, Colombia on Tuesday, March 13th. Attendees will see the latest applications and developments within MAK software, including the Synthetic Training Environment, STE product summary, critical infrastructure protection, visual sensors (EO/IR, NVG), and joint training applications. If you're interested in attending, [email Ivan](#) for more information.