

## News Release

### **MAK Technologies Announces 2021 Release of MAK ONE**

**Cambridge, MA, March 31, 2021** - MAK Technologies (MAK), a company of ST Engineering North America, today announced the spring 2021 release of [MAK ONE](#), a whole-world synthetic environment simulation platform. The latest release to the MAK ONE suite builds on the capabilities and features in the 2020 release to include new enhancements in its [VR-Forces](#) simulation solution, [VR-Engage](#) multi-role virtual simulator, [VR-Vantage](#) 3D simulation visualization and [VR-Link](#) toolkit.

MAK ONE features rich libraries of models, behaviors, and environmental effects, allowing users to model, simulate, and visualize the most realistic scenarios. Trainees can immerse in beautiful virtual reality rendered in high-resolution accurate detail, both visually and through imaging sensors. Instructors are able to create rich scenarios to fill the entire earth environment with activities spanning the air, land, sea and space domains. Developers will benefit from the flexibility of application programming interfaces (APIs) to plug in their custom models and behaviors, while scientists and engineers leverage controls over the environment that enable the design of new system concepts, prototypes, and doctrines.

“The enhanced capabilities of this MAK ONE release will enable our customers to provide better, faster, and more realistic training systems for warfighters. This release is especially well suited to those needing to simulate Multi-Domain Operations. It underscores our continued dedication to creating leading-edge products that push the limits of simulation technology and exceed our customers’ expectations,” said Bill Cole, President and CEO, MAK Technologies.

“I often think of MAK ONE features as threads that run through time, crossing individual releases,” said Jim Kogler, Vice President of Products, MAK Technologies. “As we weave the intricate MAK ONE tapestry, we introduce new threads or complete threads that we started earlier. We may spend years working on a significant feature or enhance bits of its functionality throughout product releases, to deliver richer experiences and capabilities.”

This release of MAK ONE features several new, completed, and continuing threads to the MAK ONE tapestry of products:

- **New Indirect Rendering pipeline.** The VR-Vantage render engine has been moved to the new Indirect Rendering pipeline, enabling users to generate scenes with significantly more models that are more complex with better performance than ever before.
- **Content pipeline overhaul.** While many in the industry continue to use OpenFlight for traditional runtime-ready moving models, this release adds support for a full Autodesk/FBX pipeline, allowing customers to create and import models in the same way they would for modern game engines. This new pipeline enables MAK customers to add and modify content quickly, using resources from artists worldwide.
- **Updates to the atmosphere.** Users can now define multiple wind levels ("winds aloft") and numerous environmental conditions, like blowing dust and blowing snow. Customers can also define areas of turbulence to stimulate their high-fidelity pilot training flight simulators.
- **Model enhancements.** Aircraft can now be tasked to fly using Air Speeds, like True Air Speed (TAS), Indicated Air Speed (IAS), or Mach. When tasked to fly at 569 knots (IAS), the aircraft will consider local weather conditions, altitude, and other factors to maintain that airspeed even when flying through local weather areas or wind corridors. VR-Forces aircraft can also now take advantage of VR-Forces full Earth magnetic model. Users can task vehicle movement (ships, aircraft, etc.) to follow a magnetic course with a correct magnetic declination worldwide.
- **More dynamic terrain.** This release introduces persistent vehicle tracks. Vehicles will leave tracks on the ground-based on the land use conditions such as dirt, hardpack, pavement and grass, and those are published on the network as part of the simulation. Information about vehicle location during the exercise is visualized and can be manipulated by instructors and saved in the scenario.

**For more information** about the spring 2021 MAK ONE release, visit <https://www.mak.com/mak-one-spring-2021>

As part of this latest release, MAK will host a series of virtual and interactive MAK ONE seminars to share product roadmap updates, application of MAK ONE in cloud environments and other use cases. To register for MAK ONE seminars, visit <https://mak.com/live>.

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**ST Engineering North America** is the U.S. headquarters of ST Engineering, a global technology, defense and engineering group with a diverse portfolio of businesses across the aerospace, smart city, defense and public security segments. Based in Alexandria, VA, it has major operations across 16 cities in 12 states and employs about 5,000 people providing innovative products and solutions to commercial and government customers across diverse market segments.

**MAK Technologies** is a global leader in modeling and simulation software that links, simulates and visualizes virtual worlds in networked synthetic environments. Continuing a tradition that stretches back almost three decades, our tools are used by the world's top organizations for training, experimentation, mission rehearsal, research and development, and virtual prototyping. We empower our customers to build on top of our open standards-based COTS platforms, and assist customers in creating winning systems.

Media contacts:      Morgan McElroy  
                                 Sr. Marketing Communications Manager  
                                 MAK Technologies  
                                 Phone: (1) 617-876-8085 x131  
                                 Email: [mmcelroy@mak.com](mailto:mmcelroy@mak.com)

Guy Shields  
Director of Corporate Communications  
ST Engineering North America  
Phone: (1) 703-399-2769  
Email: [guy.shields@stengg.us](mailto:guy.shields@stengg.us)