VR-Forces 5.0.3 Release Notes

This release note contains the following release-specific information for VR-Forces 5.0.3.

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Systems Supported and System Requirements

For information about platform and system support, see the Product Specifications & Dependencies page on the MAK website at: https://www.mak.com/mak-one/support/help/specs.

For hardware requirements, see https://www.mak.com/mak-one/support/help/hardware-recommendations.

Compiler Compatibility on Windows

MAK provides versions of product releases that have been compiled with different versions of Microsoft Visual C++. MAK ONE products built with VC 14 and later are binary compatible and will work together. Products compiled with VC 12 and earlier can experience instability when used in conjunction with products built with different compiler versions. When you run MAK ONE products together on the same computer, for example, VR-Vantage and VR-Forces, we strongly recommend that you run versions compiled with the same compiler or binary compatible compilers.

Disk Space Requirements

A full installation of VR-Forces requires approximately 6 GB of disk space (plus 2 GB for the *VR-Forces Developers Guide*, installed separately on Windows) and an additional 69.8 GB for the complete makData 16 package, including the supplemental data package.

The makData Package

VR-Forces 5.0.3 is compatible with the makData 16 package. MAK applications can share the same data package. For instructions on installing the data, see "The makData Package" in the *VR-Forces Users Guide*.

The MAK data package contains data that VR-Forces requires. See the *Installing VR-Forces* chapter of the users guide.

License Manager

VR-Forces 5.0.3 uses FLEXlm 11.17.1. You must install the license management software to run VR-Forces.

The MAK License Manager files are not part of the VR-Forces installer. You can download them from the MAK ONE Product Downloads page (https://www.mak.com/mak-one-downloads).

Installation of the license manager is covered in the *MAK ONE Installation Guide*, available online at https://mak.com/mak-one-installation-guide. Support is also available at https://www.mak.com/mak-one/support/portal.

Major Updates

VR-Forces 5.0.3 has the following updates.

- Users are now encouraged to install PDBs. If the application crashes, a "mini-dumper" generates a callstack.log file that is useful for debugging the crash. For more information, see "Installing VR-Forces PDB Files for Debugging Purposes" in the *Installing VR-Forces* chapter of the *VR-Forces Users Guide* or online help.

There are new and updated simulation objects.

- Ground vehicles: Amphibious Combat Vehicle (ACV), GAZ-233114 Tigr Kornet EM, M1278 L-ATV-GP (JLTV).
- Fixed wing aircraft: U-28A Draco.
- Humans: Fixed the USMC uniforms.

We have improved how VR-Forces presents task information.

- When you configure VR-Forces to show the ground truth for only some of the forces, objects in the other forces are now hidden from the sync matrix unless they are detected.

  Suppressing this information is useful when you want to hide information about one or more forces from a VR-Forces user, such as a trainee who should not be allowed to "peek" at forces with which they have no contact.
- The ETA for movement task visualizations now displays in Zulu time.

There are also other enhancements.

- Improved the runtime performance of aggregate-level objects.
- Made changes to system descriptions and names to prevent conflicts between the aggregate- and entity-level SMSs.

For the features and fixes included in the 5.0, 5.0.1, and 5.0.2 releases, see the *VR-Forces 5.0 Release Notes*, *VR-Forces 5.0.1 Release Notes*, and *VR-Forces 5.0.2 Release Notes* (found in the *./doc* folder of the installation).

Table 1. Fixed Bugs

Key	Summary	Release Notes	Fix Version/s
VRF-3118	Last Click Location does not return with CDB with no landcover	Fixed issues to ensure that the Last Clicked Location shows the soil type correctly for CDB terrains.	VRF-IPB10, VRF-4.10, VRF-IPB16, VRF-5.1, VRF-5.0.1-f, VRF-5.0.3, VRF-5.0.2-c
VRF-4058	Issues with even distribution load balancing units with subordinates	The new load balancing option, Unit Based Distribution, keeps aggregates and subordinates on the same sim engine (back-end).	VRF-4.9-a, VRF-5.1, VRF-IPB17, VRF-5.0.1-h, VRF-5.0.2-a
VRF-5508	Squad leader has unreasonable orientation after a dismount	Updated the script to have the squad leader face the appropriate direction as part of the Dismount Squad task.	VRF-5.1, VRF-5.0.3, VRF-IPB18, VRF-5.0.2-c
VRF-5719	Performance Monitor gives bad info in Fixed Frame mode	Fixed the information that displays in Performance Monitor when in Fixed Frame mode. Corrected what value displays for Begin frame.	VRF-IPB16, VRF-5.1, VRF-5.0.2-c
VRF-5943	Path resolution issue when Shared data and installer is not on the same drive	Fixed path resolution issue to allow VR-Forces to find the SharedData directory in the user-specified location.	VRF-IPB16, VRF-5.1, VRF-5.0.3
VRF-5948	VR-Forces New scenario event, event content data deletion	Previously, if someone entered a more text than could be stored in the Event Content of a Scenario Event (35 lines), there was no warning and the text was erased. The user now receives a warning when they enter more than 35 lines of text, explaining that the event contents are too large to be sent over the network, and they are prompted to reduce the amount of text.	VRF-IPB16, VRF-5.1, VRF-5.0.2-b
VRF-6069	Range rings do not appear once enabled	The weapon controller tried to find the range of missile launchers by looking up the DtMtlParameterDbEntry of the associated missile types and checking their ranges. What was desired was the missile's DtVrfObjectParameters. Made a change to look up the DtVrfObjectParameters directly.	VRF-5.0.2-a
VRF-6173	Lua call SimObject:getName() crashes sim in some cases	It was possible to crash the sim engine (back-end) by calling SimObject:getName() for SimObjects that were created purely by string, rather than from a current script object. This fix checks whether the object is valid and, if it is not, returns the name stored locally.	VRF-4.10-k, VRF-4.9-Gladiator, VRF-5.0.3, VRF-5.0.2-a
VRF-6209	Loading CDB terrains is much slower since VR-Forces 4.9	Made numerous enhancements to improve the loading of CDB terrains.	VRF-IPB16, VRF-5.1, VRF-4.10-l, VRF-5.0.2-a

Table 1. Fixed Bugs (continued)

Key	Summary	Release Notes	Fix Version/s
VRF-6237	Users Guide still references Entity-Level aggregated and disaggregated units	The documentation was corrected. It no longer references aggregated and disaggregated units; that functionality was discontinued in the 5.0 release. All units are considered disaggregated.	VRF-5.1, VRF-5.0.3, VRF-IPB17, VRF-5.0.2-c
VRF-6279	GUI crashes when Lua task deleted while task dialog is open	Added a check to ensure that the GUI does not crash.	VRF-IPB16, VRF-5.1, VRF-4.9-Gladiator, VRF-5.0.3, VRF-5.0.2-a
VRF-6281	VRF Radio Comm model does not work to the external comm model specification	Changed the VR-Forces internal radio communications model to allow for interoperability with other non-VR-Forces based radios per open standards. This change breaks network compatibility between this version of MAK ONE applications and previous releases when using the radio.	VRF-5.1, VRF-5.0.3, VRF-IPB17, VRF-5.0.2-a
VRF-6282	Embarking then disembarking from Carrier, fixed wing would get stuck	Fixed an issue that caused problems when an entity was embarked and then disembarked from an aircraft carrier.	VRF-IPB16, VRF-5.1, VRF-5.0.2-a
VRF-6302	Fixed Wings fire missiles while embarked	Added a check to prevent fixed-wing entities from firing weapons when embarked on another entity, such as an aircraft carrier. Previously, if the CGF detected opposing forces they would fire, which could damage or destroy the entity on which the fixed-wing was embarked.	VRF-5.1, VRF-5.0.3, VRF-IPB18, VRF-5.0.2-c
VRF-6306	VR-Forces GUI crashes when accessing a planned task for a second time	Added a null pointer check for variables that are not used when a UI element does not have a label.	VRF-5.1, VRF-IPB17, VRF-5.0.2-a
VRF-6309	VRF sim engine crashes with Hellfires and laser designators	There was an issue with cleaning up laser designators and hellfire missiles, which would cause the network thread to fail. The application now looks up the correct ID and removes it properly.	VRF-5.0.3, VRF-5.0.1-h, VRF-5.0.2-c
VRF-6313	Changing of spot report icon in SOE does not seem to work when viewing changed spot report	Updated the visual model loading to look for spot report elements in the correct place (in either the application data or the SMS) for loading spot reports.	VRF-5.1, VRF-5.0.1-a, VRF-IPB17, VRF-5.0.2-a
VRF-6320	VRF land aggregates move on water features	Fixed a bug where a highly concave area feature that provides mak_soil_type data for aggregate movement was not processed. This happened when the feature was clipped to page boundaries internally and produced multiple disjoint areas.	VRF-5.1, VRF-5.0.3, VRF-IPB17, VRF-5.0.1-h, VRF-5.0.2-c

Table 1. Fixed Bugs (continued)

Key	Summary	Release Notes	Fix Version/s
VRF-6330	CDB load GT/GS models sometimes seem to hang (tough to repro) and sometimes takes time to shutdown	In CDB terrains, intersections can be very slow, so you might want to disable intersections for certain model layers: This addresses a problem where it can take a long time for simulation objects to appear after they are placed. If you do not need to intersect with certain layers, enter <enable_ intersections>false</enable_intersections> in the <model> block for that layer. This applies to geotypical as well as geospecific layers.	VRF-5.1, VRF-4.10-l, VRF-IPB17, VRF-5.0.2-a
VRF-6333	Use_supplies aggregate-level script when decrementing ammo doesn't fully empty when it should	Fixed the aggregate-level code to set values of supplies such as ammunition, which comes in whole numbers, to change to 0 when the amount drops below 1. Previously, it would sometimes go to a decimal value, which caused problems.	VRF-5.1, VRF-5.0.3, VRF-5.0.1-h, VRF-5.0.2-c
VRF-6339	AggregateLevel move along controller has hard-coded values that constrain how they determine vertex arrival	There is a new descriptor that allows for changing values. This allows users to adjust values when they have aggregate-level simulation objects with large footprints.	VRF-5.1, VRF-5.0.3, VRF-5.0.1-h, VRF-IPB18, VRF-5.0.2-c
VRF-6340	You can overassign health in Aggregate Level	Users are now constrained to the entity's maximum health. They cannot exceed that value.	VRF-5.1, VRF-IPB17, VRF-5.0.1-h, VRF-5.0.2-b
VRF-6342	Clean up aggregateLevel Movment sysdefs	Corrected the sysdef file to allow it to be read by MTL reader.	VRF-5.1, VRF-5.0.2-b
VRF-6350	Move to Location (Plan Along Roads) does not scale well over long distances	Made a change to the road controller so that the elevations of the road segments are still obtained from the terrain, but no more than one segment is processed per tick. This addresses performance issues when the plan involves traveling long distances.	VRF-5.1, VRF-5.0.3, VRF-IPB17, VRF-5.0.2-c
VRF-6352	DiGuyCharacter.leaf being overwritten	Fixed a case of slash fixing to get file name in line with VR-Vantage.	VRF-5.1, VRF-IPB17, VRF-5.0.2-b
VRF-6413	After a few rewinds, Trigger plan behaves differently	This was caused by an initialization bug. Now, when reusing memory pages, the application forces initialization of under fire and sensor killed to false.	VRF-5.1, VRF-IPB17, VRF-5.0.2-b
VRF-6419	SIM: null pointer exception in DtPlan::abandonPlan()	Added a null pointer check in the tick() for the plan executor.	VRF-5.1, VRF-IPB17, VRF-5.0.2-c, VRF-5.0.1.12-ST-Wargame

Table 1. Fixed Bugs (continued)

Key	Summary	Release Notes	Fix Version/s
VRF-6429	Character animations table doesn't correctly override display names.	Display names added to the character animations table now correctly override the data from DI-Guy.	VRF-5.1, VRF-5.0.2-b
VRF-6434	Crash of VR-Forces sim engine on 5.0.2 with the Logger running	In the fire manager, the application now checks for a valid terrain database before processing a detonation interaction.	VRF-5.1, VRF-IPB17, VRF-5.0.2-b
VRF-6442	Aggregate creates Entity State component based on entity type not on component found in PsuedoAggregate.ope	If aggregate kind is 11, the supertype will now always be 3.	VRF-5.1, VRF-IPB17, VRF-5.0.2-b
VRF-6450	Keep event dialog displayed if data entered is too long	Added more information in the warning when there is too much text in the Event Content for a Scenario Event, letting the user know that clicking Create or Update will not preserve the text.	VRF-5.1, VRF-IPB17, VRF-5.0.2-b
VRF-6459	HIMARS entities have bad art. part attachments	Corrected the attachment points for the azimuth mount, elevating mount, and gun.	VRF-5.1, VRF-5.0.2-b
VRF-6461	Move Along Route (Treat Route as Road) doesn't clean up/prevents future tasks	Fixed to allow entities to perform further tasks after completing this movement task.	VRF-5.1, VRF-5.0.2-b
VRF-6464	Crash in Air scenario	Fixed an issue in the code that caused crashes when an aircraft was tasked to follow an entity while on the ground.	VRF-5.1, VRF-IPB17, VRF-5.0.2-c, VRF-5.0.1.12-ST-Wargame
VRF-6467	SIM: aggregate level artillery unit depleting anti-personnel with indirect fire.	Fixed an issue that caused aggregate-level units to deplete some of the wrong type of munition, as well as the correct type. It now finds the value by key and, if value is not found, defaults to the old order. This ensures the values for the property coming from Lua is set into the map correctly.	VRF-5.1, VRF-IPB17, VRF-5.0.2-b, VRF-5.0.1.10-ST-Wargame
VRF-6475	DI-Guy controller not choosing correct dead action	The application was not checking the next frame for damage state in choose animation. This is fixed.	VRF-5.0.2-b, VRF-5.0.2-c
VRF-6484	Entity embarking then immediately disembarking causes crash	Fixed the issue in the embarkation controller.	VRF-5.0.2-c
VRF-6493	IFF Code assignment doesn't persist when entered	Fixed to ensure that existing IFF information for aircraft entities displays in the IFF parameters for the IFF set data request.	VRF-5.0.3, VRF-5.0.2-c

Table 1. Fixed Bugs (continued)

Key	Summary	Release Notes	Fix Version/s
VRF-6506	Confusion between ground speed and taxi speed	In the SOE, corrected the settings for aircraft. The Maximum Speed has been changed to control the Maximum Flight Speed (Over Ground), and the Maximum Ground Speed is now the Maximum Taxi Speed.	VRF-5.1, VRF-IPB17, VRF-5.0.2-c
VRF-6512	SIM: checkpoints stop after max num snapshots hit	Needed a separate counter for the last time a periodic snapshot was made rather than using an internal list of the number of periodic snapshots we have because they might not always match.	VRF-5.1, VRF-IPB17, VRF-5.0.1.10-ST-Wargame, VRF-5.0.2-c
VRF-6516	Drive on the Left Side of the Road functionality not working VRF 5.0.2	The dialog was not sending the setting to the sim engine. This is fixed.	VRF-5.1, VRF-IPB17, VRF-5.0.2-c
VRF-6524	Crash when a custom plan conditional	Added a check for whether a conditional was created. Ensure that conditionals are added only when they have been created.	VRF-5.1, VRF-IPB17, VRF-5.0.2-c
VRF-6529	The Emitter does not detect the target entity with HLA1516e	Fixed the ID used to track entities.	VRF-5.1, VRF-IPB17, VRF-5.0.2-c
VRF-6530	VRF remote controller resets global factories without testing to see if factories are already set	VR-Forces now set the factories only if they are not set when creating the remote controller. This addresses an issue in VR-Engage, which creates a remote controller after the CGF is created.	VRF-5.1, VRF-IPB17, VRF-5.0.2-c
VRF-6532	Users Guide stated incorrectly that weather zones don't affect back end	The Weather Zone section of the Users Guide and online help has been updated to correctly explain that Precipitation and the Visibility setting in the Atmospheric Conditions do affect line of sight, while other weather effects do not.	VRF-5.1, VRF-5.0.3, VRF-5.0.2-c
VRF-6535	relative*To methods in DtSimObject for acceleration/velocity are off	Corrected the code so that acceleration/velocity vectors are correct.	VRF-5.1, VRF-IPB17, VRF-5.0.2-c
VRF-6536	The Emitter Track/Jam List is not cleared after entity deletion, with HLA1516e	Added code to track when an object is deleted and remove it from the emitter beam track/jam list once deleted.	VRF-5.1, VRF-IPB17, VRF-5.0.2-c
VRF-6541	SIM: task empty PA to move, crash.	If there is no leader, VR-Forces cancels the task before building offset routes.	VRF-5.1, VRF-IPB17, VRF-5.0.2-c

Table 1. Fixed Bugs (continued)

Key	Summary	Release Notes	Fix Version/s
VRF-6544	Setting a state property that is not bound when loading the scenario does not save the set value	Fixed by setting the out state property variable reference to false to make sure it is written out to the Order of Battle as a bound variable if it was not read in as bound.	VRF-IPB17, VRF-5.0.2-c
VRF-6547	Could not create a UAV with multiple sensors	Fixed to allow users to create multiple sensors on one UAV. Needed to add code similar to the radio transmitter to correctly find the correct read state for the sensor field of view component.	VRF-IPB17, VRF-5.0.2-c
VRF-6556	PVD spot report symbols don't show as destroyed when they are destroyed	Fixed to set the destroyed state of the object from the spot report appearance.	VRF-5.1, VRF-5.0.3, VRF-IPB18
VRF-6579	VR-Forces running Time Managed and Absolute Timestamps is broken	Fixed issues that arose after the architecture changes made for VR-Forces 5.0.x. This allows timestamps to populate correctly from RTI messages sent from VR-Forces sim engine (back-end). VR-Forces also properly deletes instances and publishes objects to the network.	VRF-IPB18, VRF-5.0.2-c
VRF-6596	Users Guide lists --framerate argument for the GUI	The quick reference card at the back of the VR-Forces Users Guide erroneously listed --frameRate as a command-line argument that could be used. It has been removed from the documentation.	VRF-5.1, VRF-5.0.3
VRF-6616	Incorrect Precipitation attribute values in METOC FOM	Updated the Humidity slider in the Advanced Weather settings so its top range for humidity is now 1000000. (It was previously 50000.) This makes sense for network purposes (METOC) because users want to set this to higher than 5% (where the percentage is parts per million reinterpreted).	VRF-5.0.3, VRF-IPB18
VRF-6617	Typo error in Entity files pointing to non existant system file	Corrected the spelling of "maneuverability" where entity files were pointing to the fixed-wing-high-maneuverability-fighter.sysdef file.	VRF-5.0.3, VRF-IPB18
VRF-6633	vrfSim.log does not generate on Linux	Made a fix to ensure that the vrfSim.log file generates properly for Linux users.	VRF-5.0.3, VRF-IPB18

Table 1. Fixed Bugs (continued)

Key	Summary	Release Notes	Fix Version/s
VRF-6638	Hole in getPolygons on border of high res/low res tiles can cause VRE entities to fall through terrain	This problem caused holes in the terrain for VR-Engage entities using Vortex on the border between high/low res tiles. Those VR-Engage ground vehicles could fall through the terrain. This problem happened around the MAK Earth Range 220, but it could happen in many other places as well. It does not affect VR-Forces vehicles that are using heightfield data and not polygonal mesh.	VRF-5.1, VRF-5.0.3, VRF-IPB18
VRF-6662	DtTerrainInterface::trianglesInArea() can sometimes fail to return all terrain surface triangles on borders between terrain resolutions.	Fixed an issue where DtTerrainInterface::trianglesInArea() did not always return all of the polygons needed for certain situations. To ensure that VR-Forces returns the correct data in cases where tiles have no sub-tiles with data, we have limited an optimization. This prevents problems that occurred when the application returned a tile and wouldn't search for other tiles, even ones that were needed. (This primarily affected VR-Engage's ground entities using Vortex.) Note that the optimization does not operate for tiles that overlap a data resolution change.	VRF-5.0.3, VRF-IPB18
VRF-6669	Inaccurate documentation on heading line on range rings	Corrected documentation to state that the heading indicator shows the heading of the entity, not its weapon(s).	VRF-5.1, VRF-5.0.3
VRF-6674	VRF GUI crash when editing a task's object list in a plan	When removing items from a multi-list selection, items were not disconnected correctly. This caused VR-Forces to crash when there were updates to a state view. Fixed so that VR-Forces no longer tries to read items after they have been removed.	VRF-5.0.3
VRF-6691	Manage Reactive Task dialog issues erroneous Delete Task error and locks up	There is a check to see whether a scripted task or set was deleted from the system while the dialog box for that task or set was open. This caused problems when users clicked the Parameters button for a reactive task. There is now a flag to check whether the user opened the task/set parameters dialog box from a reactive tasks dialog box.	VRF-5.0.3, VRF-IPB18
VRF-6696	Human can fall through terrain when transitioning between swimming and walking on the shore	There was an issue where human entities that were floating in water and then tried to exit via a steep shore would instead fall through the terrain. The application now accounts for floating entities and allows them to make a larger step onto the terrain than they normally would.	VRF-5.1, VRF-5.0.3

Table 1. Fixed Bugs (continued)

Key	Summary	Release Notes	Fix Version/s
VRF-6698	Sensors can miss detections in some cases when more than 100 entities are nearby.	This is fixed. There were issues with the spatial index. This caused it to potentially skip nodes in the index that it should not. The extent also had to be sufficiently large that the corners of the extent that were being skipped were far enough away from the corners that were not skipped when they were all projected onto the earth's surface. This meant that larger sensor ranges (like the 16km IR sensor of the Apache) were more likely to hit the problem.	VRF-5.0.3, VRF-IPB18
VRF-6704	Dynamic craters don't fully disappear and sometimes cause sim crash on rewind	Made some changes in osgEarth to address issues with refreshing dynamic terrain.	VRF-5.0.3
VRF-6705	SIM crash tiling terrain after dynamic terrain change	Fixed an issue where craters (terrain deformations) could cause a crash in vrfSim because there was a condition that could delete the tile data as successive detonations occurred.	VRF-5.0.3, VRF-IPB18
VRF-6707	Human entities are not considering soil type for movement speed	Human entities now correctly detect the soil type they are currently on and move at the appropriate speed.	VRF-5.1, VRF-5.0.3, VRF-IPB18
VRF-6754	SOE: Loadout Items display corrupted in Aggregate Level	Removed an erroneous mapping to fix the problem.	VRF-5.1, VRF-5.0.3
VRF-6756	GUI: issues with display & synchronization of aggregate-level loadouts	In the Information dialog box, there were some issues with updating the values in the Supplies page when people used set data requests. The information would not populate until the scenario had been running for a few seconds. The values now update promptly by forcing an update.	VRF-5.1, VRF-5.0.3
VRF-6764	Crash when tasking PseudoAggregate with Behavior Engine script	The application now checks whether a subordinate function is found and throws an exception if it doesn't exist. This prevents crashes at a null pointer check.	VRF-5.1, VRF-5.0.3
VRV-4087	TG Visualizer definitions override first network packet.	Tactical graphic visualizers now check for a value set on the listener before using them. They also now access and set these values after the visualizer definition values have been loaded. The listener values take priority over the visualizer definition values. This ensures that values set in VR-Vantage take precedence over those set in the application it's connected to, such as VR-Forces.	VRV-3.1, VRV-IPB16, VRV-3.0.2a

Table 1. Fixed Bugs (continued)

Key	Summary	Release Notes	Fix Version/s
VRV-4587	CDB loads are slow because of repeated osg driver loads, non-multithreaded getElevations()	Improved the CDB initial load speed by multithreading the osgEarth getElevations() call and preloading the OSG drivers for FLT, RGB, RGBA, MEDF, MEIF, and CDBFLT.	VRV-3.1, VRV-2.8i, VRV-3.0.2a, VRV-IPB18
VRV-4618	VR-Vantage not showing the correct moon phase	Fixed an issue where the moon's phase was forced to be full all of the time.	VRV-3.1, VRV-3.0.2a, VRV-IPB18
VRV-4620	VRV Crashing when opening/closing/using multiple windows (related to multiple contexts and driver version > 527.56)	Fixed a crash caused by a driver bug released for NVIDIA drivers after November 2022. The crash was related to the use of multiple graphics contexts and showed up when using multiple windows in VR-Vantage-based applications. NVIDIA plans to fix the driver but has not yet released a fix, therefore we developed a workaround for the problem in our own code.	VRV-3.0.3
VRV-4628	CDB load GT/GS models sometimes seem to hang and sometimes takes time to shutdown	Intersections can be very slow. You can now disable intersections for certain model layers, as described in VRV-4653.	VRV-3.1, VRV-3.0.2b, VRV-3.0.3
VRV-4652	Crash when loading CDB in VR-Forces GUI	Added a fix to remove sections that are not thread safe.	VRV-3.1, VRV-3.0.2b, VRV-3.0.3
VRV-4653	Enable users to disable intersections with certain layers on CDB terrains	In CDB terrains, intersections can be very slow. You can now disable intersections for certain model layers: This addresses a problem where it can take a long time for simulation objects to appear after they are placed. If you do not need to intersect with certain layers, enter <enable_ intersections>false</enable_intersections> in the <model> block for that layer. This applies to geotypical as well as geospecific layers.	VRV-3.1, VRV-3.0.2b, VRV-3.0.3
VRV-4742	API level control for attached gimbaled sensor missing information in overlay HUD	Fixed the rendering so that the compass appears with multiple channels. Increased the font size to make it more readable.	VRV-3.0.2d, VRV-3.0.3
VRV-4750	XR Model set does not support particle systems	When the observer is in XR mode, you can now see smoke plumes, flames, and other particle systems.	VRV-3.1, VRV-3.0.2e, VRV-3.0.3
VRV-4764	Channels flicker when swapping to a SensorFX observer mode	Fixed the logic for initializing a channel sensor to prevent flickering in channels when the user selects a SensorFX observer mode for any of the existing channels.	VRV-3.0.2c, VRV-3.0.3

Table 1. Fixed Bugs (continued)

Key	Summary	Release Notes	Fix Version/s
VRV-4766	Compress and Shared Memory Video Streaming broken	Fixed an issue that caused a crash when streaming video using Compressed and Shared Memory using the GPU encoding method and the compression type of JPG, PNG, or BMP.	VRV-3.1, VRV-IPB17, VRV-3.0.2e, VRV-3.0.3
VRV-4830	Gimbaled Sensor Window Overlay Information incorrect for camera boresight position	Corrected the display to show the boresight information in the lower right-hand corner. Previously it displayed the ownship information.	VRV-3.1, VRV-3.0.2f, VRV-3.0.3
VRV-4837	Gimbaled Sensor Window Overlay incorrect heading and azimuth scale	Corrected the numbers that display on the horizontal bar at the top of the window. The numbers on the horizontal bar that are associated with the arrow now show where the sensor is looking relative to the entity.	VRV-3.1, VRV-3.0.2f, VRV-3.0.3
VRV-4899	Crash on Loading NTC online terrain and clicking NTC Medina Wasl Overwatch	Fixed a crash caused by the application incorrectly parsing data on terrain models with switch nodes.	VRV-3.0.3
VRV-4905	Crash in scenario with launchers on DIS	Fixed a crash that could sometimes occur with named DI-Guys.	VRV-3.1, VRV-3.0.3, VRV-IPB18
VRV-4908	When HDR streaks are disabled, visual artifacts can appear in sensor views	Fixed an issue that could cause rendering artifacts in sensor views when the Enable Streaks option in High Dynamic Range Settings is initially disabled.	VRV-3.1, VRV-3.0.3, VRV-IPB18
VRV-4909	Craters do not always reset	Fixed an issue where all craters would be reset in the sim engine but some were not cleared from the GUI.	VRV-3.0.3
VRV-4914	GUI: symbol missing for disembarked aggregate-level units	Corrected the order in which embarked flags were set to ensure that the icons for disembarked units display correctly in the window.	VRV-3.0.3
VRV-4922	VR-Vantage does not start correctly with Pitch pRTI when using MAK-VRLExt-1_evolved.xml	The default connection for HLA Evolved now uses the new MAK-VRLExt-2_evolved.xml. Previously, it used MAK-VRLExt-1_evolved.xml, but this caused crashes for users of the Pitch pRTI. The new file resolves that issue.	VRV-3.0.3

Known Problems

Problems can arise with any product. MAK has a knowledge base of the problems that we know about, which is always changing as new problems are identified and new solutions are found. To learn how to address known problems with VR-Forces and other MAK ONE products, click the Knowledge Base link on the Self Help Resources page: https://www.mak.com/mak-one/support/help.

If the problem you are experiencing is not addressed in the knowledge base, contact support for assistance: https://www.mak.com/mak-one/support/portal.