5.01.00

Official release

Date – 13 July, 2022

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With the Chaos Phoenix 5.01 hotfix we added support for V-Ray 6.

Using V-Ray 6, now Phoenix's Particle Shader will render in Points mode with V-Ray GPU.

Also, now with V-Ray 6 CPU Phoenix can render the Normals, Velocity, Cryptomatte and Multimatte render elements in the default Volumetric mode, without needing to switch to the slower Volumetric Geometry mode of the Simulator or the Render as Geometry mode of the Particle Shader.

With any version of V-Ray CPU, Phoenix can now render volumetrics using a custom Phase Function, allowing you to control of the Smoke does forward scattering of light (allowing you to render realistic clouds) or backscattering (allowing you to render more realistic dust and smoke).

With V-Ray 6 for 3ds Max, the Probabilistic Volumetrics options are no longer in the Phoenix atmosphere and can be controlled from V-Ray's render settings.

Now all of the Simulator options are available in the Phoenix Standalone Simulator - we added Splash, Mist and Foam, as well as Resimulation.

Sources can now emit Mist particles into the simulation directly.

As always, we sped up different parts of the simulation and rendering and fixed a few bugs, most notably in the FLIP liquid solver and Active Bodies, as well as in the Particle Shader and Standalone Previewer.

NEW	VOLUME SHADER	Phase Function control in Ray-Traced Scattering mode for the Smoke Color allowing to render realistic clouds with V-Ray CPU
NEW	STANDALONE SIMULATOR	Foam, Splash/Mist and Resimulation options of the Simulator are now supported, except for Time-Bend Resimulation
NEW	STANDALONE SIMULATOR	Restore option for the Standalone Simulator (-restoreFromFrame=nnn)
NEW	FLIP LIQUID SOLVER	Emit Mist particles from Liquid Sources
NEW	RENDER ELEMENTS	Velocity, Normals, Cryptomatte and Multimatte render elements in Volumetric mode with V-Ray 6 CPU for the Simulator, Voxel Shader and Particle Shader
NEW	PARTICLE SHADER	Point mode rendering on V-Ray 6 GPU
NEW	GRID TEXTURE	'Render-time Only' option for the Grid Texture
NEW	USER INTERFACE	Added tooltips to all options in the Simulator, Voxel Shader, Active Body Solver and helpers, thinkingParticles operators

IMPROVED	SIMULATION GENERAL	Added Custom Start and Stop frames for Resimulation
IMPROVED	PATH FOLLOW	Support for Multi-Splines in the Path Follow force
IMPROVED	VOLUME SHADER	Enabled "Use Probabilistic Shading" by default for new scenes and moved it from the Phoenix atmosphere to V-Ray 6's Settings->Volumetrics rollout
IMPROVED	USER INTERFACE	Added a "Get Support..." item in the Phoenix FD menu, leading to chaos.com's support request form
IMPROVED	INSTALLATION	The installer for V-Ray 6 no longer places vray_phoenix, field3dio_phx, openvdbio_phx and distance_measurer_phx in V-Ray's plugins directory; Instead it appends the VRAY_FOR_3DSMAXXXXX_PLUGINS environment variable

FIXED	FIRE/SMOKE SOLVER	Buffered conservation produced different results on each run
FIXED	FLIP LIQUID SOLVER	Restoring a simulation with Initial Fill Up when the first frame was a backup frame doubled the liquid particles
FIXED	FLIP LIQUID SOLVER	Hang during simulation if there was a Birth volume object outside of the simulation grid, since Phoenix 5.00

FIXED	FLIP LIQUID SOLVER	If a Birth Volume geometry exited the Simulator, the Birth Volume stopped working and particles started getting created
FIXED	FLIP LIQUID SOLVER	Splash and Mist born from Sources didn't turn into liquid when they hit a solid or liquid surface when Affect Liquid was nonzero
FIXED	FLIP LIQUID SOLVER	Splash splitting to Mist with nonzero Affect Liquid could create liquid particles in mid air, since Phoenix 5.00
FIXED	FLIP LIQUID SOLVER	Initial Velocity Multiplier was applied only to some, but not all newly created Splash particles when Affect Liquid was nonzero
FIXED	FLIP LIQUID SOLVER	The Liquid Simulator's Adaptive Grid expanded incorrectly in Jammed directions if the opposite wall was open
FIXED	FLIP LIQUID SOLVER	Pausing a simulation with Active Bodies or animated bodies could cause a hang
FIXED	ACTIVE BODIES	Could not change the Center of Mass of Active Bodies, since Phoenix 5.00
FIXED	VOLUME SHADER	Render pre-processing of volumetrics used just the first NUMA node on NUMA machines
FIXED	PARTICLE SHADER	Particle Shader's Under/Above Water Subgroups ignored the Liquid Simulator's Isosurface Level and always used 0.99
FIXED	PARTICLE SHADER	Particles in Splashes mode did not get hidden if they were underwater when the liquid was displaced in case Count Multiplier was above 1
FIXED	PARTICLE SHADER	Collecting and Count Multiplying particles used just the first NUMA node on NUMA machines
FIXED	PARTICLE SHADER	Crash when rendering using Corona when using the Size Multiplier PA (animated by Particle Age)
FIXED	PREVIEW	Voxel, Particle, Mesh and GPU Preview preparation used just the first NUMA node on NUMA machines
FIXED	GPU PREVIEW	Rare GPU Preview crash, since Phoenix 5.00
FIXED	CACHE I/O	AUR and VDB export and import used just the first NUMA node on NUMA machines
FIXED	STANDALONE PREVIEW	The frame of 'Draw Just A Slice' disappeared when it reached the limits of the Simulator
FIXED	STANDALONE PREVIEW	Crash when Detail Reduction was too low and the volume information could not fit in memory. Now an error is displayed
FIXED	STANDALONE PREVIEW	The 'Step Size As % Of Cell Size' control in the Standalone Preview was 10 times wider than it should be, since Phoenix 5.00
FIXED	STANDALONE PREVIEW	Volumes were displayed incorrectly when the GPU Preview and the Orthographic Projection were enabled
FIXED	PRESETS	The Speedboat quick setup toolbar preset had the Pure Ocean checkbox enabled and thus hid the waves created by the boat
FIXED	SUBMITTING SIMULATIONS	The default path to PhoenixFDSimulateDeadline.ms was wrong with 3ds Max 2022 and 2023
FIXED	SCRIPTING	The phxAddNodeProps, phxRemoveNodeProps and phxGetNodeProps MaxScript methods were not visible in 3ds Max since Phoenix 5.00