

4.40.00

Official release

Date – 15 April, 2021

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Active Bodies collision

Complete control over collisions between Active Bodies using the Bullet solver. Easily create effects such as colliding ice cubes in liquid, floating ocean debris or objects washed away in floods.

[Watch video](#)



Color Absorption

A whole new level of volume rendering effects using Colored Absorption. Achieve more control over smoke shading—change the light's color as it travels through smoke.

[Watch video](#)



Massive Wave Force

Build highly realistic ocean simulations. Create real-world ocean waves, using the Massive Wave Force feature.

[Watch video](#)



Extended motion blur support on V-Ray GPU

Leverage GPU power to add motion blur to splashes and bubble mode in the Particle Shader.



Faster rendering and simulations

Take advantage of various speed gains on simulation, rendering and previews.

Property Lister window

Quickly access and change the Phoenix properties of each object in your scene—all in one place.

Autodesk 3ds Max 2022 support

Phoenix is now compatible with the latest Autodesk releases.

With Phoenix FD 4.40 we added support for 3ds Max 2022 (note that the GPU preview and velocity streamline preview are disabled temporarily due to changes in the 3ds Max viewports).

We implemented mutual collisions between Active Bodies so now you can create complex rigid body dynamics with Phoenix. In order to aid scenes with many interacting objects, we added a new Property Lister window, allowing you quick access to the per-node properties of the scene nodes.

Simulations of large scale stormy oceans or tunnel waves are now possible with the new Massive Wave Force.

A new colored absorption option allows for more interesting volume rendering effects, and can also be mapped via a texture. We added support for motion blur of Bubbles and Splashes in V-Ray GPU (requires a latest V-Ray 5).

The Phoenix standalone previewer can now be fully controlled via the command line, allowing you to change options and save image sequences of cache files in all different preview modes.

In this version of Phoenix, we multithreaded all remaining parts of the simulation, and also sped up the simulation, previews and rendering significantly.

We improved our toolbar presets, added more options to the cache converter tool, and as always, fixed many issues.

NEW	PHOENIX	Support for 3ds Max 2022 (GPU preview and velocity streamline preview are temporarily disabled)
NEW	ACTIVE BODIES	Mutual interaction between Active Bodies, using the Bullet Solver option
NEW	SIMULATION GENERAL	Phoenix Property Lister window for quickly editing many obstacles or Active Bodies in the scen
NEW	VOLUME SHADER	Absorption color for volume rendering which can also be mapped by a texture
NEW	VOLUME SHADER	Render the Fully Visible Fire Opacity Mode together with the Use Probabilistic Shading option
NEW	PARTICLE SHADER	Render the Particle Shader in Bubbles/Splashes mode with motion blur on V-Ray GPU, requires V-Ray 5, update 1.2
NEW	STANDALONE PREVIEW	Command line interface allowing to script image saving using different preview modes and options
NEW	WAVE FORCE	Massive Wave Force allowing to exactly replicate the Ocean waves, to affect any Phoenix channel, even without Fillup for Ocean, and use any Level Of Detail of the Ocean Texture

NEW	3DS MAX INTEGRATION	Option to start a render after each simulation frame is completed - 'Render On Each Sim Frame' in the Simulation rollout, to go together with Cacheless Simulation
IMPROVED	SIMULATION GENERAL	Sped up low res simulations (below 10 million voxels) with up to 15%
IMPROVED	SIMULATION GENERAL	Enabled Grid Velocity for all Simulators and presets by default
IMPROVED	FLIP SOLVER	Emit pressure from Liquid Sources In Volume Inject mode without emitting liquid
IMPROVED	FLIP SOLVER	Allow Birth Volumes to interact with the simulation even if they are hidden
IMPROVED	FLIP SOLVER	Sped up FLIP simulations with up to 25%
IMPROVED	ACTIVE BODIES	A new 'Collision Margin' parameter which you can lower in order to keep groups of bodies in contact
IMPROVED	SOURCES	Affect Motion Velocity of Sources emitting from geometries and particles, using Discharge Modifiers
IMPROVED	SOURCES	Sped up texture mapped emitters by improving their multithreading
IMPROVED	PARTICLE SHADER	Sped up frame begin and frame end of the Particle Shader in Bubbles/Splashes/Cellular and Points Mode, especially with huge numbers of particles
IMPROVED	OCEAN MESHER	Hidden "oceanpriority" option for controlling which is the primary ocean contained when several ones are merged
IMPROVED	CACHE I/O	Sped up particle compression when writing AUR files. Older Phoenix versions will not be able to read the new AUR files
IMPROVED	CACHE I/O	Read VDB particle channels named 'point_velocity', 'point_size' and 'point_age'
IMPROVED	PRESETS	Improved the Gasoline Explosion toolbar Quick Setup preset
IMPROVED	PRESETS	Improved the Burning Fuel toolbar Quick Setup preset
IMPROVED	PREVIEW	Sped up viewport performance of many Simulator copies
IMPROVED	STANDALONE PREVIEW	Options for specifying the resolution of the saved images
IMPROVED	STANDALONE PREVIEW	Option for enabling orthographic projection
IMPROVED	CACHE CONVERTER	-exportchannels option allowing you to write only specific channels to the output cache files
IMPROVED	CACHE CONVERTER	-removegridch and -removeprt options allowing stripping of grid and particle channels from the cache files
IMPROVED	SCRIPTING	Allowed adding, removing and getting the Phoenix Node Properties on an object via MaxScript - new phxAddNodeProps, phxRemoveNodeProps, and phxGetNodeProps functions
IMPROVED	SCRIPTING	Equalized all MaxScript names for the Phoenix Node Properties options with the names in Maya
IMPROVED	SCRIPTING	New IPhoenix interface, with getVersionString(), getTargetString() and getCopyrightsString() methods
IMPROVED	TOOLBAR	Delete caches from the Phoenix toolbar without a selected Simulator
IMPROVED	3DS MAX INTEGRATION	Allowed animating all float and world unit Simulator options
IMPROVED	3DS MAX INTEGRATION	Allowed animating of the Solid, Wetting and Voxel Mode Override node properties
IMPROVED	USER INTERFACE	Added a new 'Credits and Copyrights' window, accessible via the 'Phoenix FD' menu
IMPROVED	USER INTERFACE	Moved the 'Preferences' and 'About' dialog from the Simulator to the 'Phoenix FD' menu
REMOVED	PHOENIX	Dropped support for 3ds Max 2016 and 2017
REMOVED	USER INTERFACE	Hidden the Particle TexUVW export option from the Output rollout

FIXED	FLIP SOLVER	Emitting Foam/Splash from rigged geometry via a Source in Surface Force mode with Motion Velocity did not set the initial velocity of the particles
FIXED	FLIP SOLVER	The Foam Birth Volume did not prevent foam to be born by the Splash's Foam On Hit
FIXED	FLIP SOLVER	Lower Sticky Liquid multiplier values in scenes with overall low Sticky strength resulted in stronger Sticky interaction
FIXED	FLIP SOLVER	Foam and Splash particles could be born by a Source one voxel further outside the grid's positive sides
FIXED	FLIP SOLVER	Liquid Particles flew to infinity when animated Time Scale reached value of 0
FIXED	FLIP SOLVER	Using Foam Patterns caused some foam particles to get stuck at the liquid surface near geometries
FIXED	FLIP SOLVER	Liquid was creeping up the walls of Confine Geometry, and Liquid and Foam particles sometimes got shot away on collision with Confine Geometry
FIXED	ACTIVE BODIES	If an Active Body was made See-Through, starting the simulation created a clone with See-Through OFF
FIXED	ACTIVE BODIES	The Active Bodies Ground plane elasticity affected the elasticity of the collision objects as well
FIXED	CACHELESS SIMULATIONS	Sometimes more than 1 frame remained in RAM
FIXED	CACHELESS SIMULATIONS	The Grid RGB channel was not visible in Cacheless frames
FIXED	SOURCES	Turning off Phoenix Source's Motion Velocity checkbox did not disable the velocity effect in Surface Force mode
FIXED	VOLUME SHADER	Volumes were not affected by the V-Ray GI engine multipliers
FIXED	VOLUME SHADER	Setting the Self-Shadowing of the Fire lights to None fell back to the Ray-Traced mode using V-Ray, since Phoenix 3.13
FIXED	VOLUME SHADER	Rare random crash or memory leak when starting and stopping V-Ray GPU rendering
FIXED	VOLUME SHADER	Wrong sampling of smoke opacity maps by the Volume Shader when TexUVW was enabled
FIXED	VOLUME SHADER	Volumetrics which used any texture maps rendered slowly and didn't utilize the CPU fully with Corona 6
FIXED	VOLUMETRIC ILLUMINATION	Fire Lights were visible in surfaces with Reflection Glossiness below 1
FIXED	VOLUMETRIC ILLUMINATION	Create Lights Even If Not Renderable created the lights in the wrong positions with V-Ray 5
FIXED	PARTICLE SHADER	Incorrect motion blur rendering particles in Bubbles/Splashes/Cellular Mode from a Simulator, moving together with an animated camera
FIXED	PARTICLE SHADER	Disable Liquid Shadows was not working in Points mode with Volume Light Cache enabled, or Bubbles and Cellular mode, since Phoenix 4.10
FIXED	V-RAY IPR	Crash during IPR of a Particle Shader in Bubbles mode with Render as Geometry ON
FIXED	V-RAY IPR	Moving the timeline in did not update the Particle Shader when rendering in IPR with V-Ray GPU if the Simulator was hidden
FIXED	OCEAN MESHER	Rendering in Mesh Mode with Smoothing and Motion Blur enabled lost the smoothed normals
FIXED	TEXUVW	Crash when simulating TexUVW interpolation with certain Time Scale values
FIXED	CACHE I/O	Crash when exporting the ID channel of a particle system with more than 536'870'911 particles. Older Phoenix versions will not be able to read the new AUR files
FIXED	BODY FORCE	Body Force's Spread Speed could create huge velocities if the affected channel had negative values
FIXED	WAVE FORCE	Lowering the Rate of Change of the Ocean Texture reduced the effect of the Wave Force
FIXED	PREVIEW	Missing frames in the viewport right after simulation restore
FIXED	PREVIEW	Crash when previewing particles and simulating the same frame with less particles since Phoenix 4.30

FIXED	PREVIEW	Auto Reduction didn't raise the Detail Reduction correctly with many Simulators in the scene
FIXED	PREVIEW	Crash with particle preview of certain numbers of particles with Detail Reduction
FIXED	PREVIEW	Crash when turning on Velocity Streamlines preview while having Force preview turned on
FIXED	PREVIEW	Graph Cells did not work when there wasn't a loaded cache
FIXED	PRESETS	Toolbar Quick Setup presets could be created over the Active Body Solver icon
FIXED	GPU PREVIEW	GPU preview was stretched and skewed in ortho mode
FIXED	GPU PREVIEW	Particle System nodes were shown as Simulators in the Classic GPU Preview
FIXED	GPU PREVIEW	GPU Preview was drawn incorrectly in inactive viewports, when "Active View Only" is deselected
FIXED	GRID TEXTURE	Grid Texture was not updated correctly when used by multiple Simulators in fire/smoke rendering based on a Texture
FIXED	PARTICLE TEXTURE	Particle Texture was not working in Corona when Render-time Only was enabled
FIXED	3DS MAX INTEGRATION	Merging a scene with a Simulator named the same as an existing one renamed the caches of the existing Simulator
FIXED	3DS MAX INTEGRATION	Phoenix textures lost any custom names when saved to a scene
FIXED	3DS MAX INTEGRATION	Crash when using a Phoenix Simulator as a particle source for a V-Ray Instancer using V-Ray CPU (the fix requires both latest Phoenix and V-Ray)
FIXED	3DS MAX INTEGRATION	Splashes Foam on Hit Amount was named 'Size Distribution' in Track View
FIXED	3DS MAX INTEGRATION	Repeating Undo in the Phoenix MAXScript editor window ultimately erased all the script
FIXED	USER INTERFACE	Stopping the simulation using Esc/Shift+Esc sometimes worked even when the 3ds Max window was not focused
FIXED	USER INTERFACE	Aborting a Simulation where the Output cache path didn't exist was not working, since Phoenix 4.30
FIXED	SUBMITTER	Submitting \$(scene_path).vdb from 3ds Max for Backburner simulation wrote AUR caches