

3.10.00

Official release

Date – Feb. 14, 2018

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New Features

FLIP Solver

- Variable viscosity for the FLIP solver. Added to the Sources, Grid Texture and Mapper
- Default RGB color for Initial Fill Up of the simulation and Initial Liquid Fill of interacting geometries

Particle Shader

- Use texture RGB color to shade particles in the Particles Shader

Ocean Texture

- Implemented looping and direct frame index option for the Ocean Texture

Particle Flow

- Implement caching of the Simulator frames in order to speed up the Phoenix Particle Flow operators
- Option to delete PFlow particles exiting the Simulator grid when using a Force Operator

3ds Max Integration

- Support XForm modifiers in Volumetric render mode for the Simulator
- Added the Flip Y/Z option to the Input rollout in 3ds Max

Improvements

FLIP Solver

- WetMap particles are now able to stick to deforming and fast moving geometries
- Improved the thread loading of the FLIP solver
- Added a Fill Up for Ocean option which can be disabled so Initial Fill Up would not produce liquid voxels and mesh under the fillup level

Volumetric Shader

- Render negative Fire from caches imported from FumeFX
- Speed up rendering of scenes with Simulators and Particle Shaders in volumetric mode in 3ds Max

Animation

- Renamed Cache Start to Cache Origin and Play Start to Timeline Origin

V-Ray RT and IPR

- Ignore the Optimize Big Volumetric Grids option when the current render is V-Ray RT

Ocean Mesher

- Allow simultaneous use of the Vertical Fade Level and Fade Above Velocity displacement options
- Added a hidden cache stretching parameter used to fill air pockets in imported Houdini VDB caches used for ocean meshing - "cachestretchzone"

Ocean Texture

- Optimized the Ocean Texture

Path Follow

- Reverse the direction or attraction of FollowPath using a negative Follow Speed or negative Pull Speed

VRScenes

- Resolve environment variables in Phoenix paths during rendering and not during export

Cache I/O

- Multithreaded writing and loading of AUR caches. After this change, old versions of Phoenix won't be able to open new caches. New Phoenix versions will open old caches without problems.
- Merged the OpenVDB DLL into the Phoenix plugin

User Interface

- Added options for using the Timeline beginning/end as the simulation start/stop frame

3ds Max Integration

- If the connection to the license server is lost, automatically try to reconnect

SDK

- Allow providing custom motion blur start and end frame times through the Phoenix SDK

Removed Features

Phoenix FD

- Dropped support for 3ds Max 2013

Bug Fixes

FLIP Solver

- Random crash with liquid simulation when particles exit the grid and there is an obstacle on the border
- Random crash while simulating liquid in contact with moving solid source geometries
- Hang when not all existing FLIP particle systems are affected by a Phoenix force
- Solid bodies with Clear Inside kill liquid particles on contact
- Can't use another simulator as an obstacle to FLIP liquid
- Restoring liquid simulation with moving simulator creates incorrect velocities at the borders
- Load & Start of a non-backup liquid cache does not load all the liquid particles
- Animated object entering the simulator does not emit liquid from its entire surface
- Liquid cannot wet the inside of a Confine Geometry

Grid Solver

- Overlapping non-solid Surface Force sources sum their temperatures to very high values
- Crash with fire/smoke simulations and Confine Geometry if Object Voxels is different than Circumscribed

Simulation General

- Crash during simulation when Phoenix FD runs out of memory
- Pressing Start quickly and repeatedly could crash the simulation with enabled Force Preview
- Repeated Stopping and then Starting the simulation quickly could lead to a crash in 3ds Max
- Hang when using Load & Start for a Resimulation
- After a recent Windows Update, simulation in 3ds Max could hang on Start
- Can't Start a simulation from the toolbar after a failed Restore

V-Ray RT and IPR

- Crash when the Ocean Texture is used as liquid simulator displacement when rendering with V-Ray RT

Volumetric Shader

- No scene shadows if Visible to Camera is disabled in Volumetric Geometry mode
- Fire/Smoke in Volumetric Geometry mode does not render at all when Min Visible Opacity is set to 0.0

Particle Shader

- Crash when rendering a Particle Shader with Liquid Geometry set to a Simulator used by a Particle Texture with motion blur
- Particle Shader without particles slows down rendering of the entire scene in 3ds Max

Rendering

- Crash when rendering a simulator without a cache with Velocity render element enabled

Animation

- Precise Tracing and Interpolation methods don't work smoothly for particles if the original simulation has SPF above 1

Sources

- Lag when displaying the Modify panel for Liquid Sources in 3ds Max 2018
- Wrong texture mapping when using a Grid Texture to transfer data from one simulator to another via a Source

Forces

- 3ds Max forces need huge multipliers in order to work with Phoenix

Body Force

- Body Force using geometry with modifiers may not use the proper geometry transform in 3ds Max
- Crash when a body used by Body Force is moved far away from the simulator

Wave Force

- Wave Force icon helper position in the viewport affects the simulation

Mapper

- Mapper's Time-Constant is not working correctly with a mask

Grid Texture

- Crash when trying to add a quick Paint preset with open Material editor and previously used Grid Texture in it

Ocean Texture

- Crash when rendering Ocean simulation using V-Ray Standalone with -numThreads command

Ocean Mesher

- Handled out-of-memory when rendering high-poly Phoenix ocean on large resolutions

VRScenes

- Particle Shaders are not correctly exported to VRscenes from 3ds Max in Phoenix FD 3.05

PRT I/O

- Export of PRT files from an unsaved scene does not expand the \$(cachedir) macro correctly
- Cannot export PRT files for negative frames

Particle Flow

- Some PFlow particles randomly get stuck when exiting the Simulator grid when using a Force Operator

3ds Max Integration

- Cannot render a simulator with modifiers since Phoenix FD 3.05
- Sources stop emitting through Particle Flow in 'Use Particle Shape' mode if test operators remove some of the particles
- Crash when setting a Phoenix Simulator as a Clipper mesh
- Crash when shift+clicking on a Simulator with the move tool

SDK

- All Phoenix nodes returned NULL for getPhoenixSDKInterface()