How to Videos

How to make a boat following a curve using Active Bodies

The video below shows how to use the Active Bodies to make a boat float and follow a predefined trajectory, reacting to the simulation automatically — without the need to create keyframes by hand.

How to wash away objects in a flood using Active Bodies

The video below shows how to use the Active Bodies to wash away objects in a flood.

How to render thinkingParticles using the Particle Shader and Particle Texture

The video below shows how to use the Phoenix Particle shader and the Phoenix Particle Texture to read and render tP particles and custom data channels. This way, you can shade your particles based on their age, position — or any other custom data channel you have created inside of thinkingParticles.

How to create and advect thinkingParticles using Phoenix FD

The video below shows how to create and influence tP particles based on the data from Phoenix simulations.

How to inherit the UVs of your emitter objects using TexUVW

The video below shows how to use the TexUVW channel and recreate effects such as melting, where the texture of the melted object sticks to the mesh.

How to add more detail to the color and opacity of volumes using TexUVW

The video below shows how to use the TexUVW channel and a texture to modify the color and opacity or add detail through displacement.

How to spawn smoke along a surface using the Voxel Tuner

The video below shows how to use the Voxel Tuner and emit fluid using the distance between objects.

How to emit smoke when temperature reaches certain value using the Voxel Tuner

The video below shows how to use the Voxel Tuner to emit smoke when the temperature reaches certain value.

How to mix and divide liquids based on their color with the Particle Tuner

The video below shows how to use the Particle Tuner to mix and divide particles from different sources and change their properties depending on the source that created them.

How to delete particles using Velocity data with the Particle Tuner

The video below shows how to use the Particle Tuner to filter the fastest particles that are in a specific part of the simulator and remove them.

How to melt an object using the Particle Tuner

The video below shows how to use the Particle Tuner to create a melting candle.

How to render Phoenix FD VDB caches with Redshift

The video below shows how to render Phoenix VDB caches with Redshift.

How to render Phoenix FD VDB caches with Arnold

The video below shows how to render Phoenix VDB caches with Arnold.

How to restore Phoenix FD simulation

The video below shows how to restore a Phoenix simulation.

Simulation with Phoenix FD using Autodesk Backburner

The video below shows how to run a Phoenix simulation using Autodesk Backburner.
Simulation with Autodesk Backburner
1
Click the Phoenix Simulator Output rollout Set output cache file location.
2
Start Backburner Manager, Server and Monitor.

Default Path: **C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Autodesk Backburner 20xx**
3
In the Backburner Monitor go to Manager Connect manager and set the corresponding IP address.
4
Click the Phoenix FD top menu Submit Simulation to Backburner.
5
Set the name or the IP address for the Backburner Manager.
6
Turn on "Run only the Simulation and do Not Render".
7
Press the "Run" button.

How to use Phoenix FD Wetmap

The video below shows how to use the Phoenix Wetmap.
Using Phoenix FD Wetmap
1
Click the Phoenix Simulator Dynamics rollout Enable "Wetting".
2
Click the Phoenix Simulator Output rollout Make sure that the Wetmap particles are enabled for export.
3
Open the Material editor and create two V-Ray materials.
4
Create a V-Ray Blend Material and connect the already created V-Ray materials as Base color and Coat 1.
5
Create a Phoenix Particle Texture Select the Source Particle System Select the Phoenix Simulator and pick the Wetmap particle group.
6
Connect the Phoenix Particle Texture as a blend amount mask for the V-Ray Blend Material.
7
Assign the V-Ray Blend Material to your geometry and render.

How to export a Phoenix FD cache to Alembic

The video below shows how to export a Phoenix cache to an Alembic file.

Exporting the Liquid Mesh

1
Set Phoenix Simulator Export rollout Export As: Mesh.
2
Go to File Export Export Selected... (with the Phoenix Simulator selected).
3
Under the Alembic Export Options dialog, make sure Extra Channels is set to UVW. Set the Animation Range according to your needs.

Exporting Particles

1
Set Phoenix Simulator Export rollout Export As: Particles.
2
Select the Phoenix Particle Group in the Scene Explorer and go to File Export Export Selected...
3
Under the Alembic Export Options dialog, make sure Extra Channels is set to UVW. Set the Animation Range according to your needs.

Importing through a V-Ray Proxy

1
Create a Standard Primitives V-Ray V-Ray Proxy and select the exported alembic file.
2
When loading a sequence of Alembic files, you can use the "#" symbol as a hint to V-Ray that the file path is a sequence. "C;\alembic_0001.abc' becomes 'C:\alembic_####.abc".
3
You can assign any V-Ray material to the imported alembic files.

In 3ds Max, while you have "Export as" set to "Mesh", the vertex velocity is in Map Channel 2 of the mesh, named "velocity". 3ds Max's built-in exporter names the Color Set in the exported Alembic file "Max_Map_Channel velocity".

Importing the Alembic file back into 3ds Max via the 3ds Max built-in Alembic importer requires you to set the "Velocity channel" to 2 in the V-Ray object properties dialogue, so you can render it with motion blur using V-Ray.

Importing the Alembic file in any host via VRayProxy will render with motion blur without any additional adjustments. It requires V-Ray Next Update 1.1, or newer.

Importing the vertex velocity of the Alembic file into Maya using Maya's native importer (Cache Alembic Cache Import Alembic) is not supported.

How to use Phoenix FD Surface Texture

This video shows how to use the Surface Texture option inside of Phoenix.

Texture-Based Mesh

1
Set Phoenix Simulator Rendering rollout Surface section drop-down to Texture.
2
Click the No Map button and assign a texture (e.g. Cellular).
3
Make sure that Phoenix Simulator Preview rollout Show Mesh is enabled. The generated mesh should now be visible in the Viewport.
4
Tweak the Phoenix Simulator Rendering rollout Surface section Isosurface Level parameter if necessary.

How to export a Phoenix FD simulation to OpenVDB

This video shows how to set the output format to OpenVDB and import the cached simulation inside of a V-Ray Volume Grid.

Exporting OpenVDB

1
Click the Phoenix Simulator Output rollout "**...**" button below the Simulation Cache Save Path option.
2
Select Browse and navigate to a preferred folder. Set the File Name option and choose **OpenVDB (*.vdb)** from the **Save As Type** drop-down.
3
Start the simulation as usual. The output cache files are now OpenVDB instead of AUR.