



# Bluegfx

## Welcome to thinkingParticles™ 6 More than 13 Years of Procedural Particle Effects

thinkingParticles™ 6 packs more than 10 years of product development and engineering into one massive procedural dynamics special effects system for 3ds Max and 3ds Max Design

### thinkingParticles 6.0 - Subscription Drop 7

Subscription Drop 7 released in October 2018 is offered as an inclusive update to all Subscription users in good standing. The following are the updated powerful new features, workflow and operator enhancements, plus Bug Fixes, in Drop 7.

## New Features

### SurfaceForce

Drop 7 new SurfaceForce Operator allows you to create a force field to continuously displace particles. This new Force Operator is perfect for creating waves and other particle effects with greater ease and amazing flexibility.

### WaterLevel

More ways to create particles from the Generator is always good news! This new particle generator offers many creative ways to spawn particles. A simple mouse click to fill a whole landscape with puddles or lakes how much faster can you get.

### FlowSolver 6.7 - New

Fluid solver 6.7 is the best fluid solver offered by thinkingParticles so far. It has always been one of the fastest and most stable particle based SPH solvers in the industry, but it got even better. More stability, more predictable and faster results than ever.

### OpenVDBShape

Industry standard OpenVD brings many more new toys!

The new OpenVDBShape operator is a lightning fast surfacier offering an optimized multi-threaded approach to surface generation with great flexibility and filtering options.

### ShapeDeform

This operator offers a fully procedural approach to deforming objects right within thinkingParticles. Similar to a particle skinner approach, particles 'attached' themselves to the nearest vertex and influence it.

### VolumeDiffusion

Simulating true volume diffusion is a tough one, but it can be done in thinkingParticles. Any value attached to a particle can now diffuse within a volume in a physically accurate and fully procedural way. Spreading color, heat or whatever value is fast and simple to achieve.

## **PSelCollect**

PSelCollect operator combines with PSelection operator to collect particles into a pool of accessible particles than can be easily accessed later on in a simulation.

## **PSelection**

A new Collect mode has been added to this operator. This new mode works in conjunction with the PSelCollect node.

## **ShapeCutter**

Boolean operations re-invented. ShapeCutter is more than just a simple cutter operator, it's a true 3D boolean operator! Any mesh can be procedurally booled - it is automatically turned into a true 3D volume before any boolean operation is applied. It creates always water tight results.

## **APFInputFrom 2**

A new weight Data Channel parameter has been added for the All Purpose Fields. This data channel contains a factor per particle, defining the strength of dissipation within a volume. Existing data channels can now be used as a source of values to feed the cells in the grid.

## **APFOutputTo 2**

Powerful new controls and functionality has been added to the AP-Fields. A new transmission time value along with a weight data channel selector is available to create enhanced volumetric diffusion effects for various parameters in a simulation.

## **Workflow and Operator Enhancements**

- A new Operator Category has been added to the main menu: Force. In this category, you will find existing and new force operators offered by thinkingParticles.
- Unique ID - thinkingParticles now uses a Unique ID concept. A particle ID assigned at birth will stay the same throughout the animation and once killed it will not be recycled. As long as the amount and order of particle generation is not changed 'in between' Dynamic sets.
- Flow Operator Enhancements - new visualization types for fluid parameters are available now.
- There is now a new dedicated write to data channel roll up menu has been added; many fluid specific data can now be easily transferred and used to render or control certain effects.
- Drop7 added 'whitewater' effects fully supported by the solver.
- Use Sub Group is now available as an option for PPass and PPassAB.
- Drop7 also gives a much faster reaction time on cancel of a simulation, better response time when resetting back to Frame '0'.
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## **Fluid and Rigid Body Enhancements**

Fluid and rigid body interactions have been enhanced a lot in Drop 7.

Multi-Physics - is a complex beast in need of taming, thinkingParticles is one step closer to the holy grail of combining all natural phenomena calculated in one simulation step. Drop 7 brings you a much more refined and controllable integration of all physics solvers it offers. Rigid bodies now shows much better buoyancy and interaction with fluid simulations. Transfer of momentum between fluid particles and rigid bodies is resolved much faster and

more accurate. Objects engulfed within a fluid will start to rise or sink depending on their specific physical properties.

### **Other Enhancements**

HydroField - wave height, choppiness and time scale can now be fully animated.