

POPCORNFx

Persistent Studios is working on a major update to its powerful particle effects middleware. We check in with the latest from the French tools firm

T rue to the cinematic spectacle its name evokes, PopcornFX is a real-time particle effects middleware for games developed by French tech and art firm Persistent Studios.

The tool is comprised of a dedicated effect editor and a multi-platform C++ runtime, which can be integrated directly into an engine – ready-made plugins for Unity and Unreal are offered directly by Persistent.

Artists create the desired effect – whether that’s dust, fire, sparks or something else – in the editor before they are baked into the game’s assets and played back by the engine. The properties of each effect can subsequently interact with and be changed by gameplay mechanics.

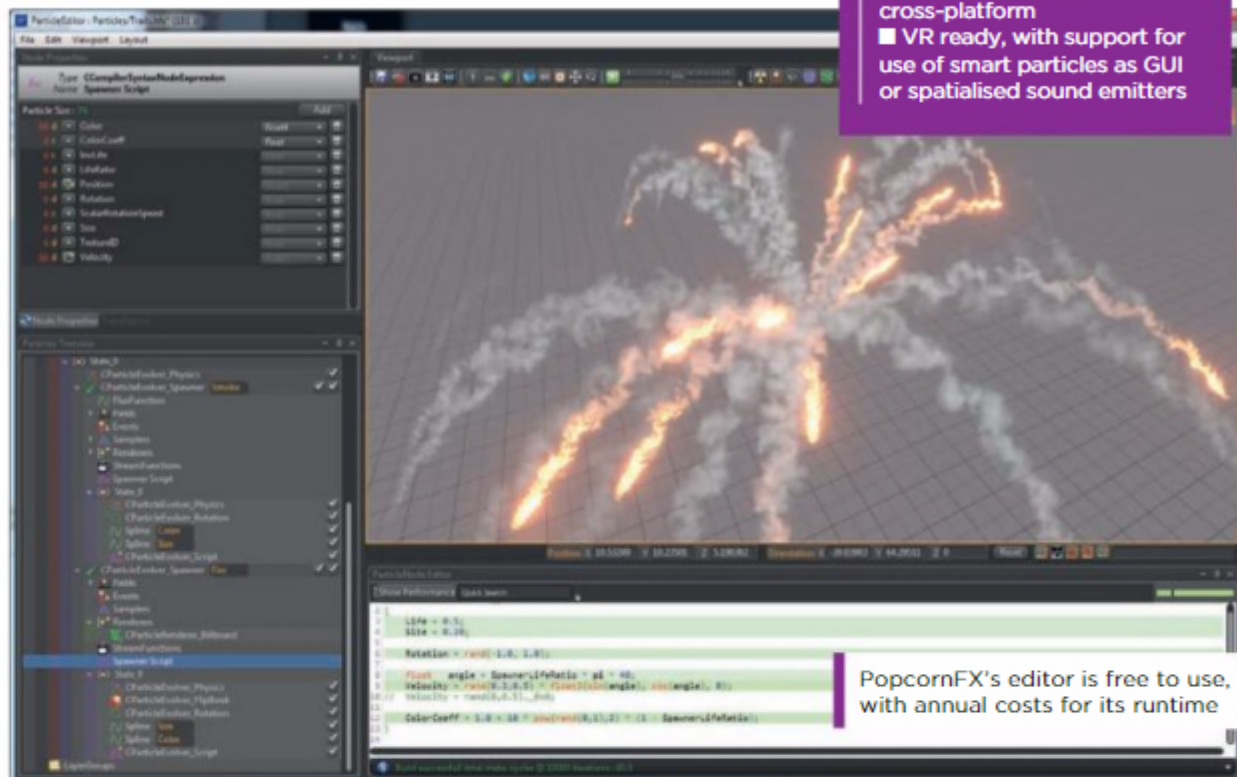
PopcornFX boasts stream processing architecture and scriptable particles, allowing devs to achieve complex particle behaviours with minimal impact on performance. This extends to support for mobile and virtual reality, with smart particles able to be used as GUI for VR applications or spatialised sound emitters in 3D environments.

PopcornFX’s editor offers unlimited free use, with Persistent charging for the tool’s runtime. Annual costs start at €5,000 for basic support and extend up to €20,000 for top-of-the-line premium access. Separately, two types of types of licence are available for PopcornFX’s engine plugin: the €25 Personal edition designed for non-commercial and educational use, and the €250 Studios offering for indies and small to mid-size teams.

FAR-REACHING FX

Indies and triple-A studios alike have made use of PopcornFX, with notable users including *Trials* creator Red Lynx, MMO specialist Trion Worlds, Twisted Pixel Games, and Kylotonn Games in racing franchise *WRC*.

“There’s a whole team of dedicated developers working full-time on the middleware, so it changes and gets



PRODUCT: PopcornFX
DEVELOPER: Persistent Studios
WEBSITE: popcornfx.com
PRICE: Free (Editor), €5,000 (Basic), €10,000 (Extended), €20,000 (Premium) annually
KEY FEATURES:
 ■ Scriptable particles to achieve complex particle behaviors
 ■ Cross-engine and cross-platform
 ■ VR ready, with support for use of smart particles as GUI or spatialised sound emitters

PopcornFX’s editor is free to use, with annual costs for its runtime

improved pretty fast,” observes Persistent CEO Camille Mirey.

“We recently added a new GPU simulator to the runtime that uses your video card’s massive power to process massive amounts of particles.

“Scripting allows creation of very complex effects while having excellent performance.”
Camille Mirey, Persistent

“In parallel, we’ve introduced a bunch of cool new features, including the ability to generate particles inside volumetric meshes, particle/particle interactions, some pretty heavy memory and performance improvements, and much more.”

To help creators make the most of its software, Persistent has launched educational partnerships with

universities around the world to help train artists versed in its tool. The firm also offers workshops and training for in-house artists wanting to learn more. For smaller studios looking to outsource art and effects creation, the company has started offering its own outsourcing services, too.

READY TO POP

While PopcornFX continues to expand its feature set and improve performance and usability, Persistent has plans for a major revision to the software.

“We are currently working hard on the PopcornFX V2, with the primary aim of providing a node-based interface that will allow devs to hide complex custom behaviors in simpler nodes that they can create and share, to widen the tool’s userbase, which currently mainly targets technical artists,” explains Mirey.

“As a matter of fact, our main strength is currently also our main weakness. Scripting allows creation of very complex effects while having excellent performance, but its downside is that artists need good technical skills to master it. With this new version, we

still want to allow the scripting of complex particle behaviours, but this complexity will be encapsulated into nodes in order to allow better workload repartitions amongst the team between technical artists and FX artists.”

Mirey adds that attracting relative newcomers to the tool is a large focal point.

“Asset-wise, the tools shall have a more progressive approach and shall be usable at different levels of technicality, ranging from plugging high-level template nodes and behaviors to digging all the way down to scripting,” he says.

“On top of that, the new editor will address a very common issue our current users have: customising the shaders, to allow a better match with the game’s final rendering.

“Last but not least, as physically-based rendering is now fully accepted among the industry, we are currently researching PBR for particles and volumetric effects.

“All those things are aimed at unlocking many new interesting possibilities, improving the workflow and overall power of the tool.” ■