



A preview of Unity 3

With the summer release of Unity 3 just months away, **Thomas Grové** details some of the key features in place to make work with the engine more efficient, whatever the power of your target platform...

UNITY 3 WILL SHIP THIS SUMMER PRE-ORDER TO GET A DISCOUNT AND ACCESS TO THE BETA

THE PAST year has seen some pretty amazing Unity releases: Unity 2.5 added Windows support and a completely customisable editor; Unity 2.6 ushered in the democratisation of game development by making the base version of Unity free for commercial use while adding support for external version control, performance profiling, and a state of the art animation editor.

Meanwhile, Unity iPhone 1.5 and Unity iPhone 1.6 were also released – bringing with them significant performance optimisations and features such as piracy protection, multiplayer networking, and GPS support.



In parallel to these developments, Unity engineers have been quietly

working on what was internally referred to as the 'mega merge'; Unity

Wii and Unity iPhone began their lives as branches of Unity 2.1 – now they're finding their way back into the core version of Unity.

That means that Unity Wii and Unity iPhone will benefit from the many improvements that have been introduced into Unity over the past year, as well as the features and improvements being added in Unity 3.

It also means that with Unity 3 you'll have one editor that deploys to all of Unity's target platforms: PC, Mac, Web, iPhone, iPad, Android, Wii, PS3, and Xbox 360.

For more information visit unity3d.com

WHAT'S NEW IN UNITY 3?



ONE OF Unity's strengths has always been its ability to run gracefully on older or less powerful hardware. Unity 3 adds features that really enable high production value projects to shine on high end PCs and consoles, but it also includes features and optimisations that allow Unity content to play better than ever on less powerful machines. The Unity 3.X roadmap has lots in store for it, but here is some of what was on display in the Unity booth at last month's GDC:

Foreign Language Text Support:

Both in the Unity editor and in games. This might not sound like a mega

feature for native English speakers, but if you have any aspiration to localise your game for different regions then this feature is pure gold. It will also allow Unity to become more widely adopted as a development platform in these other regions.

Full Debugger: Unity 3 introduces script debugging with MonoDevelop on both Windows and Mac. You can pause your game, do line-by-line single stepping, set breakpoints, and inspect variables. This is probably the feature that programmers have been pining for the most so I'm super excited that we're including it with this release.

Project Browser: When you're working with large projects you want to find your assets fast. Unity 3, adds a content browser which includes tagging and searching and shows everything with nice previews so you always have the assets you need at your fingertips.

Advanced Audio Features: Unity 3 brings reverb zones, filters, tracker file support, and a bunch of other goodies such as editable falloff curves for all major audio parameters. Reverb zones and falloff curves in particular were demonstrated in Unity's GDC booth via the Dark Unity example project (above).

Deferred Rendering: Another feature being shown in Dark Unity was a cutting-edge deferred rendering system. Deferred rendering allows you to have hundreds of real time point lights in your scene with only a marginal cost to performance. The same G-Buffers used for the lighting can also be reused for plenty of other high-end image effects without additional performance loss.

BEST-IN-CLASS MIDDLEWARE INTEGRATIONS:

Integrated Beast Lightmapper: We want your artwork to look its best so we licensed the best lightmapping technology. Beast is typically licensed at up to \$90,000 per title, but we are including it with your Unity licence for free. Beast lightmaps interact beautifully with real-time dynamic lights; as objects come closer, Unity seamlessly fades to real-time lighting so you get full shading and bump details.

Integrated Umbra Occlusion Culling:

Performance is your number one concern on mobile devices, but even on powerful hardware you want to pull off as much as possible. That's why we've licensed the number one occlusion culling system and integrated it into Unity. Best of all: instead of paying tens of thousands per title, it's included with your Unity licence at no extra charge.