RenderMan 21 for Maya

RENDERMAN

The RenderMan Tools

RenderMan for Maya

RenderMan for Maya (RfM) provides easy access to RenderMan features via either a Maya-centric workflow (including Maya-style pattern nodes, etc.) or in conjunction with the other tools. The plugin also connects Maya with RenderMan Pro Server, through its RIB-out functionality and advanced integration with the renderer. RfM provides seamless access to RenderMan's speed, power, and stability for Maya users, who can maintain a simple, Maya-centric workflow, or take advantage of the plugins' flexibility to create an optimal, customized pipeline.

> RenderMan for Maya requires the installation of RenderMan Pro Server as well as the RfM plugin in order to function correctly. The RenderMan installer does this automatically.

"it"

"it" is a robust framebuffer/render view window, offering complete floating point support and a powerful and flexible catalog, as well as a fast and powerful imaging tool that is capable of production-quality image manipulation and compositing usually found only in high-end standalone products. Thanks to its integration with the plugin and an all-new Python scripting interface, "it" gives users the ability to incorporate sophisticated post-render image operations into their rendering pipeline.

RenderMan Features



RenderMan for Maya supports advanced rendering features that are not native to Maya. Because these advanced features are not supported directly by Maya, RfM provides its own techniques for creating and controlling these effects. These techniques are usually as simple as attaching and configuring RenderMan-specific attributes to geometry, lights, and/or materials. Photo Realistic RenderMan (PRMan) is designed to be fast and easy to use while generating production-quality renders and global illumination works out of the box and interactive rendering provides rapid iteration for artists.

Analytic Area Lights

Area Lights are a powerful way to create physically accurate lighting while optimizing sampling budgets and, in turn, performance. PRMan's area lights sup port light filters, as well as light-linking, groups, per-group AOVs, and IES profiles and portals.



With the UI changes in Maya 2016.5, you must set your Viewport Rendering Engine to "OpenGL - Legacy" to see RenderMan Manipulators correctly. You can find this in Maya: Windows > Preferences > Display - Viewport 2.0

Global Illumination

Sometimes called "Indirect Illumination," RenderMan for Maya supports Global Illumination effects, subtle diffuse shading effects that are created by sampling the lighting of a scene many times from a given point. This technique can yield highly realistic results. Occlusion, which merely samples the "coverage" of a point (and is cheaper than Indirect Illumination), is also supported automatically or through the PxrOcclusion Integrator.

Volume Rendering

RfM includes PRMan's first class volumetric rendering capabilities, enabling the creation of volumetric effects, including Maya's Fluid Effects, with full PRMan support - motion blur, multi-scattering, non-homogenous, etc.

True Curved Surfaces

Tessellation settings are never an issue with RenderMan when rendering NURBS and subdivision surfaces. Since RenderMan renders true curved surfaces, NURBS and subdivision surfaces will never have faceting artifacts. Maya's tessellation mode settings are simply ignored and the benefits of RenderMan are immediately realized.

Subsurface Scattering

RenderMan for Maya supports subsurface scattering, an important effect for realistically rendering translucent materials, like skin, flesh, fat, fruits, milk, marble, and many others. Subsurface scattering is responsible for effects like color bleeding inside materials, or the diffusion of light across shadow boundaries. RfM includes support for ray-traced subsurface scattering through materials shipped with RenderMan.

Secondary Outputs

RenderMan for Maya supports secondary outputs (AOVs, or Arbitrary Output Variables), which can be any arbitrary information contained in a shader. Users may also take advantage of Light Path Expressions (LPE) for powerful control over outputs.

Studio Quality RenderMan Shaders

RenderMan ships with the same shaders use by Pixar on their feature films. This allows artists to bring the full power of RenderMan to their projects, providing a higher level of control than what is possible using Maya's built in materials.

Ri Procedurals

As the foundation of a RIB-based pipeline, RenderMan for Maya supports all manner of procedurals. Additionally, RenderMan for Maya provides simple support for procedurals via a MEL script attribute either on a shared geometric attributes node or directly on a transform or shape node.

Down the Pipe(line)

RenderMan for Maya is one piece of a potentially sophisticated production pipeline. In order to get your work from script-to-screen you may need more, and that is where Tractor and RenderMan Pro Server enters the picture. By implementing RfM in concert with Tractor and RenderMan Pro Server (RPS), users can achieve a seamlessly integrated rendering workflow from desktop to renderfarm.

Tractor

Tractor is a system for distributing tasks from queued jobs across a network of compute servers. It includes a central queueing mechanism, a remote execution server, a monitoring subsystem, and a browser-based user interface. Tractor was designed as a high-performance replacement for Alfred and can be used in any work distribution capacity, but it is particularly well-suited for managing a RenderMan for Maya-to-RenderMan Pro Server pipeline.

Tractor is provided as a separate, standalone product, with its own documentation.

RenderMan Pro Server

RenderMan Pro Server is the foundation of a high-performance rendering pipeline. It provides standalone implementations of the renderer and its corresponding rendering utilities as well as access to APIs that allow savvy users to extend functionality. As the core technology, RenderMan Pro Server is the font from which all pixels flow.