MAXWELL RENDER

A physically correct, unbiased rendering engine, Maxwell Render™ is capable of simulating light exactly as it behaves in the real world. Maxwell Render™ can fully capture all light interactions between all elements in a scene no matter how complex they are, while offering a straightforward user interface and effective workflow through plug-ins to a large range of 3D and CAD applications.

Maxwell Render™ has been acclaimed as a landmark in next-generation rendering technology, having produced the best photorealistic images to date, and continues as the leader in unbiased rendering for photorealistic imagery and advanced lighting, especially in architecture, interior design, product design and film and TV production markets.


Winzenrender


Stack! Stud...


Kentarofj

KEY BENEFITS TO USERS

- **EASY TO USE**
  Maxwell's approach to rendering is based on real-world units and settings. It is not necessary to learn strange new concepts and a long list of render parameters that are based purely on computer graphics terminology, not reality. For example, the settings of the Maxwell Render camera work and adjust just like the settings of a real camera and the strength of the lights in your scene is based on real-world units. Because of this, it is straightforward to create and render scenes, and setup times are extremely low compared to other renderers.

- **VALUE**
  A Maxwell Render license not only gives you access to the most realistic renderer on the market, you also get free plug-ins to a wide range of popular 3D and CAD applications (see below for a list of available plug-ins) so you can use Maxwell Render while staying in the comfortable environment of the modeling software with which you are already familiar. This also entitles you to an online library of over 3500 free and ready-to-use materials, skies, illumination pre-sets, free tutorials and community support.

- **HYPER REALISM**
  The technology behind Maxwell Render is physically correct and unbiased, enabling users to create materials, set lights and cameras, and render scenes, all in a hyper realistic manner resulting in images that are indistinguishable from photographs. Maxwell's physically correct creations and data can help architects, designers and VFX supervisors understand what lighting inside or outside a building would look like once realized, or what a final product would look like in production.

KEY FIELDS OF APPLICATION

- **ARCHITECTURE & INTERIOR DESIGN**
  Maxwell Render is the perfect solution for the high end, photo quality visualizations that architects and interior designers need. Maxwell Render's physically correct simulation helps architects and designers to envisage how natural and artificial light will affect their creations, and its high-level integration with many of the major 3D and CAD applications provides a fast and straightforward workflow, while innovative features like Multilight enhance the workflow even further.

- **INDUSTRIAL/ PRODUCT DESIGN**
  Used extensively in the automotive, jewelry and product design industries, Maxwell Render offers a complete package for designers. While it is possible to create unlimited numbers of physically correct materials, the software also comes with a library of thousands of free, ready-to-use shaders for your designs. Maxwell's physically correct lighting enables designers to create images that look like photographs, saving the high expenses of actual studio shoots and giving a clear idea of what the final product will look like.

- **FILM AND TV PRODUCTION**
  Maxwell Render is a new render option for the VFX production industries, offering extremely realistic and easily variable lighting solutions for advertisements and films as already seen in several high-end productions. Maxwell's robust and easy to use network system provides the speed and control needed in the complex pipelines and demanding environments of high-end film and TV production.

KEY FEATURES

- **Multi-processor, Multi-platform and Cross-platform**
  Maxwell Render can exploit all the processors available on your system, is compatible with Windows (32 and 64 bits), Mac OSX and Linux (64 bits), and connects via plug-ins to the most popular 3D design and CAD applications.

- **Physical Sky System**
  The Physical Sky system in Maxwell Render uses a novel approach, offering a wide range of real-life and physically correct parameters to control the look of the sky and the subsequent lighting in the scene. Results range from common Earth values to exaggerated fantasy skies. Users can create pre-sets of sky settings to quickly load a new sky, or share their pre-sets with other users. It's also possible to save the current sky as an HDR map.

- **Multilight™**
  Don't re-render – adjust the lights in real time.
  The Multilight feature removes the need to re-render images when light changes are required; instead you can simply adjust the lights in real time. Multilight™ allows the user to change intensities of individual lights and multiple scene emitters during and after the rendering process, eliminating the need to run various renders to tweak the lighting set up. This gives you infinite possibilities and you can save numerous different lighting versions of the same scene without rendering it over and over again. This feature is the first of its kind in a commercial render engine and it is extremely powerful.

- **Realistic Camera Model**
  Maxwell Render simulates a real camera with the associated parameters, such as f-stop, focal length, shutterspeed, etc. By using this type of camera model Maxwell Render can automatically simulate depth of field, natural 3d motion blur, and other effects. With Maxwell's camera model, it is very straightforward to match the lighting levels of a real photo with a render. If you are familiar with photography you will feel right at home!

- **Simulens™**
  Advanced bloom and glare controls that bring a new level of realism and quality.
  SimuLens allows the user to define a pattern to simulate the shape of the camera diaphragm that will model the pattern of light reaching the camera film, creating realistic lens diffraction effects (glare). Users can add a second pattern which defines 'obstacles' in the lens such as dust, fingerprints or eyelashes adding to a more realistic diffraction effect.

- **Maxwell Materials**
  Based on real optical properties, creating unrivaled realism.
  The Maxwell Material Editor offers real-life parameters that define the materials in a natural and accurate way. It is possible to create Sub-Surface Scattering effects (see below), thin layers, light-emitting materials and advanced stacked materials. A large library with thousands of free, ready-to-use materials is also available.


Green Glass by paperalessa


Swimmingpool Tiles by FantasticPlastic


Black Rough Leather by 3dworks

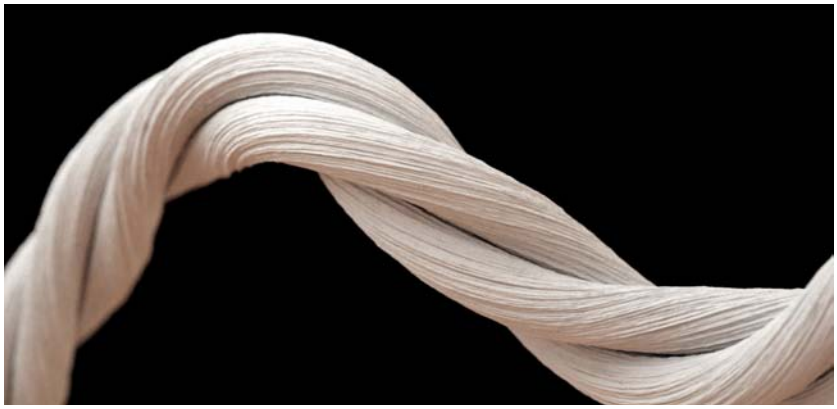

Chinese Satin by henriquelana


Carbonized Bamboo Flooring by paxreid

- **Stacked Material System**
  A material in Maxwell Render can consist of several components, one stacked above the other much like layers in an image editing application. This makes it very easy and intuitive to create interesting and complex materials, such as a rust material showing through a car paint material, or applying a logo on top of a combination of different materials.


- **Sub-Surface Scattering (SSS)**
  Sub-Surface Scattering (SSS) simulates the effect of light entering a translucent object and scattering inside it. It is a crucial component that allows users to accurately simulate many kinds of materials including plastics, marble, milk and skin. It can also simulate translucency for single sided surfaces, perfect for creating leaves, lamp shades, paper etc. The SSS component in Maxwell Render follows an entirely new approach compared to any other SSS system currently available, offering unprecedented, photorealistic effects in material creation.

- **Maxwell Displacement**
  Displacement is a powerful texture-driven tool that can help users to create real geometric detail on objects on-the-fly while rendering. As opposed to many other displacement solutions currently available in the industry, Maxwell Render offers you its very own, unique displacement technology which is capable of simulating any detail without extra memory consumption.
  Many of the other displacement methods presently offered, pre-tesselate the given geometry, which wastes a lot of memory resources before and during the render. Maxwell Displacement does not use triangle tesselation methods and does not prepare subdivided/tesselated geometry before rendering. In addition, Maxwell Displacement has very few parameters and is very comfortable to control.




- **Instances**
  Support for Instances means that you can have thousands of high polygon objects in your scene and Maxwell Render will render them using the same amount of memory as if you only had one of those objects in the scene. Instances are handled very well in Maxwell Render and are extremely useful to reproduce objects such as plants, bricks, stones and furniture.

- **Networking**
  In high-end productions, it is often necessary to distribute a render job over a number of machines in a farm to quickly obtain all the frames needed for a sequence or to calculate a very large image. Maxwell Render's networking capabilities are very powerful (more computers equals more speed in a very linear way), and very flexible - networking is multi-platform allowing a mixture of Windows, Mac and Linux systems to be connected together. The software's wizard system makes setting a network job a straightforward task. With networking, you can tell Maxwell to render the same image on all your computers (cooperative rendering), or each computer can render one frame of an animation.

- **Maxwell Render and RealFlow**
  Maxwell Render is compatible "out of the box" with Next Limit's own RealFlow software, giving RF users an option to use Maxwell as their render engine of choice. Procedural geometry and meshes can be generated at render time, and it is also possible to render individual fluid particles, resulting in an easy and accelerated workflow.

COMPONENTS

- **MAXWELL.EXE:** The Maxwell rendering engine. This component is called "Maxwell.app" in Mac and "Maxwell" in Linux.
- **PLUG-INS:** Maxwell Render connects to the most popular 3D and CAD applications through a range of free plug-ins. See below for a complete list.
- **MXED: MAXWELL MATERIAL EDITOR:** Standalone material editor with material browser and powerful, physically correct materials.
- **MAXWELL STUDIO:** Sophisticated scene editor with a full 3D environment, allowing the user to manipulate objects, set up lights, apply materials, specify camera and environment settings and send to render. An alternative workflow to employ applications that do not have a Maxwell plug-in.

WORKFLOW

...via Plug-ins

Platforms supported through plug-ins:
3ds Max (7, 8, 9, 2008, 2009 and 2010)
VIZ (06, 07, 08)
Maya (8, 8.5, 2008 and 2009)
LightWave (8.x and 9.x)
Rhino (4 SR5 and 5 X64 WIP)
Cinema 4D (9.6 and up)
SolidWorks (2007 s.p.3.1, 2008 and 2009)
Form Z (6.1 and up, 6.6 recommended)
SketchUp (6 and 7)
ArchiCAD (10, 11 and 12)
XSi (5.x, 6.01 and 7.01)
Modo (302 and 401)

...via Maxwell Studio

Import objects into Maxwell Studio to create, edit and assign materials, set up lights and cameras and send the scene to Maxwell for rendering. Currently supported file formats are .mxs, .3ds, .dxf, .lwo, .obj, .fbx, .stl, .xc2, .ply and .dae.

Other Maxwell Render plug-ins developed and/or available through third parties include:

AllPlan
solidThinking
Houdini
MicroStation

SUPPORTED OPERATING SYSTEMS & SYSTEM REQUIREMENTS

Windows (32 and 64)

- Windows XP, Windows Vista, or Windows Server 2008.
- 2 GHz Intel® Pentium® 4 processor, Athlon 64 AMD or better.
- 1GB RAM minimum. 2 GB of RAM memory is highly recommended.
- 400 MB available hard disk space for installation.
- 3 button mouse.

Linux 64

- 64 bits distribution with a 2.6 Kernel and glibc 2.5.
- Accelerated OpenGL drivers
- 1 GB RAM minimum. 4 GB of RAM memory is highly recommended.
- 300 MB available hard disk space for installation.
- 3 button mouse.

Macintosh (32 and 64)

- Mac OSX 10.5 and up.
- G4, G5 or Intel® CPU. G5 or Intel® is strongly recommended
- 1 GB RAM minimum. 2 GB of RAM memory is highly recommended.
- 400 MB available hard disk space for installation.
- 3 button mouse.

NEXT LIMIT TECHNOLOGIES