



MAXWELL RENDER SUITE 2.6 NEW FEATURES & BUGFIXES



Highlights

- Hair rendering: Introducing a new procedural primitive for rendering hair- compatible with the most popular hair systems (Shave & Haircut, Maya Hair, Max Hair, Ornatrrix, Cinema Hair)
- Particle rendering: New procedural primitive for particles- compatible with the most popular particle systems (RealFlow particles, Maya particles, 3dsMax)
- Support for Vector displacement has been added
- Much faster (transform) motion blur
- Referenced MXS files: It is now possible to load references of MXS files in your main scene file, which are added only at render time, dramatically reducing export times especially for animations, and reducing scene transfer times when network rendering.
- Support for referenced materials has been added
- Scripting: Maxwell Render SDK now includes a standalone python editor and scripting examples
- Displacement: A second displacement algorithm has been added, much faster than the previous one
- Big improvements in image processing, filtering and aliasing: Enhances overall quality of the render, aliasing, sharpness, chromatic noise, dithering, etc and faster image generation routines. A new interactive parameter -sharpness -interactively controls the aliasing

- Advanced integration with RealFlow- a new smart workflow which allows you to handle RealFlow output and generate both meshes and particles in render time, saving precious disk space and greatly reducing export times. The following extensions have been added:
 - i. Maxwell particles: A particle loader that converts .bin particles generated in RealFlow to Procedural spheres in render
 - ii. Maxwell mesher: Particle loader and Mesh loader which converts .bin particles and .bin meshes produced by RealFlow to a triangle mesh to render
 - iii. Maxwell cloner: An instancer that uses .BIN particles and an object in the scene to place instances of the object on each point of the BIN cloud
 - iv. RF_meshes: A geometry loader that loads .BIN mesh generated in RealFlow to render
 - v. RW_meshes: A geometry loader that loads an SD produced by RealWave to render

Other New Features and Bugfixes

- New "Normal Vectors" and "Position" render channels
- Added support for new IES multiplicator parameter
- New checkbox in the render options panel to select whether the MXI and the image are saved to disk
- New color space added (HDTV (Rec.709))
- Separated Multilight controls for sun and sky
- Multilight now works with real units for sky- as it does for emitters:
 - i. For normal emitters the slider represents its emission in real units
 - ii. For IES the slider represents the IES factor
 - iii. For HDR emitters the slider represents the intensity parameter
 - iv. When there is constant sky, it shows the intensity (in cd/m²)
 - v. When there is constant sky plus sun the Multilight panel shows 2 parameters, one represents the dome intensity and the other the sun power parameter
 - vi. When there is physical sky the slider represents the sun power parameter (as this controls also the dome emission in this case). When there is physical sky plus sun the Multilight panel shows 2 parameters, one represents the dome intensity and the other the sun power parameter
 - vii. When there is HDR the slider represents the IBL global intensity factor
- New option in File menu "Import Multilight settings", that imports Multilight settings from an mxs file back into the scene
- Displacement + Instances is now possible
- Displacement + Motion blur is now possible
- When opening an MXI file, if the MXS used to render it is found, it is loaded into the render options panel and the scene is prepared for resuming
- Improved error handling when opening invalid MXS files
- Fixed: sun + emitter caustics failures
- Fixed: limitation of instances of objects with emitter material applied
- Improvements in multithreading routines
- Added support for instances with motion blur
- Fixed: bug in bump when tiling was not 1
- Fixed: "Open MXI" menu option that would make Maxwell crash when opening MXI's generated from images (not MXI generated on render)
- Fixed: memory leak with some texture formats
- Fixed: handling of padding channels output paths when padding was not separated with a dot or " _ "

- Fixed: `overrideMaterial:off` command line option was not properly parsed
- Fixed: now the "Recent MXI files" menu shows the latest MXIs generated in render properly
- Fixed: 32 bit outputs (TIFF32, HDR, EXR) do not match MXI
- Fixed: name of multi-emitter materials was not properly displayed in Multilight
- Fixed: pure black pixels were not storing 0,0,0 in some image formats but there was a precision error that could change it to 1E-6 instead of zero.
- Fixed: Some TGA files crashed with compression
- Fixed: metadata was not properly saved in multilayered exr's and tiff's
- New command line option to get a small proxy of the image output. It is especially useful in animations with a lot of large frames, when this option is enabled Maxwell saves a scaled preview (in 8 bits) of the image output. `ProxyPath:"D:\proxy.png" -proxyres:320x240` (If resolution Y = 0 the aspect ratio is preserved)
- The macro `%scene%` has been deprecated for clarity's sake, use `%scenename%` and `%scenepath%` instead
- New command line option `-removemxs` to remove the mxs file after the render finishes.

Network

- Improvements in error handling when the render process fails
- Improvements in stability and general robustness
- Improvements in performance, especially when rendering animation sequences with a lot of frames
- Option added for resuming jobs that are already finished.
- Full support for MXS references in animations
- Fixed support for several cameras. Now when the active camera is changed in the job wizard, the resolution is properly updated
- Fixed: image depth and embed channels flags were not properly read when loading a scene in the job wizard
- Fixed: render time parameter was ignored in batch jobs when "Use scene settings" option was checked
- Support added for new v2.6 render channels
- Now the monitor displays the percent of mxi sent from nodes to manager
- Improved algorithms for transferring dependencies
- Hidden command line argument `-keeptempfiles` for keeping temp mxi files after merging
- Fixed: render channels in batch render
- Fixed: dependencies of override material are sent if it is enabled
- New "search in console" option, accessible through the menu or the shortcut `Ctrl+F`. With `F3` it goes to the next entry found
- New command line argument `-maxwell:path` to specify a path to maxwell different to the one set in the environment variable `MAXWELL2_ROOT`
- New command line argument `-nocheckversion` to disable the version checking (by default the network checks the version of both `mxnetwork` and Maxwell is the same in all the nodes)
- Fixed: channels depth in the add job wizard were always set to 16b, even if the mxs has them set to something else

Studio/MXED

- Support added for referenced materials. Now a material can be embedded in the scene or pointing to an external MXM path.
- External references are not directly editable but they have to be embedded into the scene (and also the referenced MXM file can be edited in MXED)
- Checkbox added to save mxi/image
- New preference added to set a default command line string
- Support added for setting sun position not only through latitude/longitude but also through angles or direction
- Support added for geometry proxies and new 2.6 primitives
- IES intensity multiplicator new parameter added
- An IBL global intensity control added that affects the 4 IBL channels. It matches the number shown in the IBL slider of the MultiLight panel
- LWO importer now accepts not only triangles but quads
- Fixed: bit depth in Render options not retained between sessions
- Improved GUI of IBL panel to have a better control over every HDR channel
- Fixed: embed channels flag was not retained between sessions
- Fixed: studio ignores the default material set in preferences
- Fixed: Studio adds "_tmp" to macros in Render Options
- Improvements in opengl shading
- Fixed: Fire updates when changing any render option, even the ones that should not trigger an update
- Fixed: normal mapping flip flags were not properly transferred in drag'n dropping operations
- Fixed: Fire "isolate selection" option
- Fixed: if only a group (not its children) was selected and "export selection to mxs" was called, the materials of its children objects were not saved.
- Added GUI controls for the new channels (normals/position)
- Environment panel rebuilt. Now it is more usable, parameters are more accessible and redundancies have been removed
- Displacement "Gain" has been renamed "Subdivision"
- Fixed some minor GUI issues
- New shortcuts in material editor to switch the preview scene quickly. Now it can be done with Up and Down arrow keys
- Fixed: Shift+Enter shortcut was not working in color picker control (this shortcut is used to introduce a numeric value in all the fields at the same time)
- Fixed: Refresh problem in Fire with the interactive engine
- Improvements in display in viewport routines

