

# Turtle Release Notes

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## **Turtle (v4.1.0.5, svn 4083)**

### **New Features**

Added support for override materials in Turtle.  
Mac version now uses modules instead of plug in path.

### **Bug Fixes**

Vertex Bias now works.  
Turtle does not visualize non-sh-data as sh-data in pointcloudvisualizer.  
Made reading of returned LUA array (from bake() and basis() functions) more robust.  
Made the SSS shader work better with Global Illumination.

## **Turtle 4.1 (v4.1.0.4, svn 3914)**

### **New Features**

Added support for volume lights.  
Added support for Lua and RNM vertex baking.  
Added render GI prepass only.

### **Bug Fixes**

Removed buggy delete functionality in light rig editor.  
Fixed PSD texture crash.  
Fixed occlusion bug causing occlusion cache not to be generated for all frames when texture baking and not merge to one map.  
Fixed crash bug when using adaptive occlusion during vertex baking.  
Fixed Uv-Sets crash bug. Turtle now handles zero UV-sets.

## **Turtle 4.1 (v4.1.0.3, svn 3830)**

### **Improvements**

Improved the scene loading time by restricting the use of animation detection.

## **Turtle 4.1 (v4.1.0.2, RC1, svn 3798)**

### **Bug Fixes**

Fixed bug with light linking in vertex bakings.  
Fixed premultiply filter to work with custom float layers.  
Fixed memory leak with global illumination.  
Fixed scaling problem for global illumination with high resolution high frequency environment maps.  
Fixed crash bug when saving empty occlusion maps to file.  
Fixed bug with indirect light sources, causing bright artifacts.  
Fixed error report when adding layers already present in a frame.  
Fixed error reporting in memory mapped files.

## **Turtle 4.1 (v4.1.0.1, beta2, svn 3776)**

### **New Features**

Support for Maya 2008.  
Added feature "Light Leakage Reduction", to reduce light leaks in corners when final gather is used with photon mapping or path tracer.

### **Improvements**

Improved default values for render settings.  
Disabled saving of final gather and path tracer points on non GI surfaces, e.i. image planes.  
Disabled path tracer pre-filtering.  
Added gamma correction to ConstantEnvironmentShader (Sky Light and some other things).

### **Bug Fixes**

Removed Maya API call from projection node (not thread safe and very slow).  
Fixed bugs with Cast/Receive GI in path tracer.  
Fixed bugs with user set indirect lights.  
Fixed rotation bugs in IBL environment shader and IBL light emission.  
Fixed orientation/rotation problems with IBL visualization.  
Fixed bug with ilrOccData node.  
Fixed problem with image planes leaving uv nodes.  
Fixed point cloud xml reader bug.  
Fixed bug with jpeg images on mac.  
Fixed problem with breaking network paths in batch rendering.

Fixed bugs with GI prepass commands in point cloud baking.  
Fixed bug in shading; crash due to missing transparency node.  
Fixed update of regions when region rendering.

## **Turtle 4.1 (v4.1.0.0, beta1, svn 3715)**

### **New Features**

New Path Tracer global illumination algorithm.  
New Radiance Cache global illumination algorithm.  
New system for global illumination settings.  
New system for environment settings.  
See the *What's New* document for more details.

### **Improvements**

Automatic calculation of photon map radius.  
Support for extracting triangle barycentric coordinates in shading networks.  
The attribute "barycentric" (Vec2) can be added dynamically to get these coordinates.  
Added gamma display slider to `ilrPointCloudShape`.  
Added optimization so that surface transfer from same shape and target reverts to texture baking.  
Added presets for Surface Transfer ranges.  
Added support for colored skylights in RNM.

### **Bug Fixes**

Fixed bug with dithering in IFF image writer.  
Fixed bug with SSE triangles and shadow cache.  
Fixed some bugs with the `ilrClearScene` MEL command.  
Fixed bug with updating the render view when region rendering.  
Fixed bugs with some 2d texture nodes.  
Fixed bug with caustics generation for default photon shader.  
Fixed bug with `rangePreset` attribute for surface transfer.  
Fixed issue with bias in hemisphere sampling.  
Fixed bugs with using gathering on micro displaced geometry.  
Fixed HDR file format gamma, removed special gamma from IBL.  
Fixed bug where frame was cleared between each pass during batch rendering (only last pass ever got written out in multi-layer exr).  
Fixed bugs with GI maps loading and invalid filenames.  
Fixed file path handling in Point Cloud baking.  
Fixed DAG path handling for vertex baking (relative group-level paths converted to full paths).  
Fixed broken output when assigning complex types with non matching type.  
Fixed output gamma for vertex baking.