

Turtle Release Notes

Illuminate Labs AB

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Turtle 3.1 (v3.1.0.7, svn 3527)

Improvements

Added support for considering transparency on high-res surfaces in surface transfer.

Fixed support for memory allocations above 2GB (large address aware).

Improved IBL visualizer.

Added utility MEL script for rendering and baking animation sequences (ilrRenderAnimationSequence, ilrTextureBakeAnimationSequence).

Added utility MEL script for texture baking a bake layer with custom override shader (ilrBakeWithCustomShader).

Bug Fixes

Fixed bug with rotations in IBL visualizer.

Fixed bug with image output path in batch renderings.

Fixed bug with ray differentials in transparent ambient occlusion.

Fixed small 2D motion blur bug.

Made layers/update shaders work correctly.

Made the license file more silent.

Fixed bug with adding camera background color to FG via reflections in shaders.

Fixed small issue with photon map settings.

Added check for invalid scene bounding boxes.

Fixed color clamping problem in vertex baking.

Turtle 3.1 (v3.1.0.6, svn 2863)

Improvements

Added support for alpha in hwBakeVisualizer.

Added alpha support in psd file texture.

Added getTangentU() getTangentV() support to LUA.

Fixed missing flags in the command line parser.

Support for directional occlusion in occsampler.

Support for directional occlusion in hw visualizer.

Added -texturecachepath to cmdline.

Made the license checking order smarter (render nodes always prefers render node licenses).

Bug Fixes

Precision problem in camera code.

Fixed crash bug in vertex baking when using reflective materials.

Fixed crash bug when vertex baking surfaces containing polygons with no material set.

Fixed crash bug in linux 64.

Fixed bug with using lowres tangent basis in surface transfer.

Added force load of correct pluginversion that fixes problem with 64 bit turtle.

Fixed license server issue in 64 bit turtle.

Turtle 3.1 (v3.1.0.4, svn 2746)

Bug Fixes

Fixed bugs with micro-triangle displacement mapping causing holes in the displaced surface.

Fixed support for bump mapping in direct/indirect illumination passes.

Fixed stencil in alpha option for surface transfer so it doesn't edge dilate misses inside the uv layout.

Fix for receiving GI on target surfaces in surface transfer.

Fixed cpu count detection for modern intel CPU's.

Fixed problem with license directories.

Fixed bug in surface transfer making the source surface visible to secondary rays.

Fixed motion blur bug. Sometimes rendered black tiles for fast movements.

Fixed problem with openexr default layer not being available.

UV coordinate computation fix in texture baking / surface transfer.

Fixed renderlayer behaviour in scenes with references.

Fix for bumpmap that makes sure the tangent and bitangent uses the same uv-set as the uv coordinate.

Fixed bug with Turtle Subdiv and wrong materials.

Fixed problem with link failure when missing certain light source attributes.

Fixed cpu dedection for single core P4 with hyper threading.

Fixed crash bugs when using displacement shader with no shader assigned.

Fix to handle namespaces.

Fixed user interface bugs.

Updated error reporting in license system.

Fixed crash bug for degenerated uv-sets.

Fixed bug with facing ratio.

Fixed bug in gamma correction node.

Fixed issues with bake visualizer and bake shader assignment.

Fixed bug in Edit UV's menu.

Fixed problem with HW shader not MP safe.

Turtle 3.1 RC (v3.1.0.2, svn 2678)

Improvements

Added mel command, `ilrInternalVarCmd`, to access build number and compile date.

Bug fixes

Fix for receiving GI on target surfaces in surface transfer.

Turtle 3.1 Beta3 (v3.1.0.1, svn 2671)

Improvements

PTM quality improvement

Bug fixes

Fixed cpu count detection for modern intel CPU's.

Fixed problem with license directories.

Fixed bug in surface transfer making the source surface visible to secondary rays.

Turtle 3.1 Beta2 (v3.1.0.1, svn 2661)

Improvements

Added support for Albedo output pass.

Added support for using the lowres surface when no highres surface is found in surface transfer.

Added new custom decay controls to light sources.

Added support for bump mapping in direct/indirect illumination passes.

Enabled stencil in alpha option for surface transfer so it doesn't edge dilate misses inside the uv layout.

Large performance improvement, especially on x64 plug-in.

Improved displacement rendering for plug-in renderer.

Bug fixes

Fixed crash bug for degenerated uv-sets.

Fixed bug with facing ratio.

Fixed bug in gamma correction node.

Fixed issues with bake visualizer and bake shader assignment.
Fixed bug in Edit UV's menu.
Fixed problem with HW shader not MP safe.
Fixed GUI spelling errors :-)

Turtle 3.1 Beta1 (v3.1.0.0, svn 2621)

New features

Maya 8.0 support

Turtle has been compiled to support Maya 8.0, including the 64-bit versions of Maya 8.0 on Windows and Linux. As of this Maya 6.5 is no longer supported.

64-bit support

Turtle now includes 64-bit versions (for Windows and Linux), which allows you to address far more memory and render larger and more complex scenes than you ever could before.

Separate light source intensity controls for different ray types

All light sources now has separate intensity controls for primary rays, reflection rays, refraction rays and indirect diffuse rays. By using these you can easily create a light source that only emits indirect light, doesn't emit any indirect light, only emits light in reflections, or whatever setup you can think of.

Radius Of Influence control on light sources

Point-, Spot- and Ambient light sources has a new control for radius of influence. Inside the sphere spanned by this radius light is emitted as usual, but outside the sphere no light is emitted. You have controls to set the decay/falloff between the center and boundary of the sphere to get a smooth transition to zero light at the sphere's boundary. This will also optimize shadow calculations since no shadow rays will be cast from surfaces outside the sphere.

Improved pre-tessellation of displacement maps

The algorithm for pre-tessellating displacement mapped objects has been rewritten. It can now be set to tessellate adaptively and only create as many triangles are needed, depending on the size and amount of displacement of the base triangles.

Render time smoothing of mesh normals

Polygon objects can be set to have their normals smoothed at render time. This is useful for pre-tessellated displacement mapping where you can have a much lower tessellation setting but still get a smooth result. It's also useful for getting

a continuous sampling when doing Surface Transfer on objects with sharp edges.

Gamma correction

Controls for gamma correction has been added. You can adjust gamma on both input (textures and colors) and output (rendered frames).

Automatic hardware visualization of baked textures inside Maya

A new hardware shader has been added that can be used to visualize the results of texture baking and surface transfer, directly in Maya's model view. Light maps, normal maps, occlusion map, polynomial texture maps, e.t.c. can be rendered on objects in real-time. With a simple check box click, the setup for this is done automatically when a texture is baked, so you can see the results directly in the model view. This feature is currently only available on Windows.

Comman line texture baking and surface transfer

Texture baking and surface transfer can now be done from the command line. You can specify which bake layers to bake and/or bake individual objects. You can also override any render or bake option in the scene by using argument flags.

Option to ignore inconsistent normals when using Surface Transfer

With this option you can choose to ignore intersections where the normals of the highres and lowres surfaces are inconsistent (pointing in opposite directions). The search will then continue until a surface with consistent normal is found (or no surface is found). This will help you to pick the right surface intersection in areas with both front facing and back facing surfaces, e.g. around the ears or in the armpits of a character.

Simple shared uv creator tool

A simple tool for creating non-overlapping uv's for multiple shells.

Cleaner PTM baking interface

The interface for PTM baking is now more intuitive to simplify the setup.

Bugfixes

Fixed motion blur bug. Sometimes rendered black tiles for fast movements.

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