Changelog 7.0

7.0.68 - 2015-06-01

- Fixed possible error when using the center camera of a Maya stereo camera rig for rendering (issue 5896).
- The *Render Settings*' MEL script attributes inside the *Common* tab are not hidden anymore (issue 5868).
- Fixed issue when rendering animated XGen description attributes - they were rendered with their default value.
- Fixed display subset in layers generating outlines.

7.0.67 - 2015-05-25

- Fixed possible error when trying to render XGen objects while AbcExport plugin is not loaded.
- XGen intermediate files are now put in a folder specified in the *Project Window*.
- Fixed broken *Shadow Objects* attribute of a *Light Attribs Node* when assigned to a light casting ray-traced shadows (issue 5876).

7.0.66 - 2015-05-21

- Fixed *3Delight Hair* performance when used with *Shave & a Haircut*.
- Fixed XGen issues with custom primitive variables.

7.0.65 - 2015-05-06

- Fixed issue that prevented XGen *Export Selection as Archives...* operation from exporting proper archives for *3Delight for Maya* rendering when the *XGenToolkit* plug-in was loaded before the *3Delight for Maya* plug-in.
- Fixed issue that prevented proper XGen primitve rendering when the *Render Mode* is set to 'Export RIB File and Render' on OS X and Linux.

7.0.64 - 2014-04-22

- Fixed issue that prevented XGen Archive primitive export operation from producing archives usable with *3Delight for Maya*.

7.0.63 - 2015-04-20

- Fixed possible swatch rendered with wrong shader attributes for one of *3Delight for Maya*'s materials.
- Reduced annoyance of a Maya 2015 SP5 bug in the Node Editor that could consistently trigger shader recompilations.

7.0.62 - 2015-04-16

- Fixed the 'mesh.displaySmooth' attribute. Pressing '3' on a selected mesh was not rendering subdivision meshes. This was introduced in 7.0.59.

7.0.61 - 2015-04-08

- Added support for XGen in Maya 2015; such primitives can now be rendered directly by *3Delight for Maya* without any extra steps. Simply hit *Render*!

7.0.60 - 2015-04-06

- *3Delight for Maya* now automatically attaches the faced primitive variable If one of the layers output such a variable.
- Automatically output reference geometry if a *Maya* texture reference node is present.
- Area Lights can now be tagged as visible to primary rays as well as double sided.
- Added a new attribute to all mesh *Maya* nodes to render polygon as subdivision surfaces. This is more handy that assigning Geometry Attributes.

> ⓘ The *Geometry Modifiers* have been deprecated. Functionality provided by these nodes is better served through the features mentioned above. Scenes using these attribute will still work.

7.0.59 - 2015-03-31

7.0.58 - 2015-03-29

- Fixed token replacement that occurred, in some cases, before the DL_userGetExpandedString was called (issue 5724).
- DL_userGetStringTokens can now override pre-defined 3Delight for Maya token / values.
- Area lights intensity can now be normalized (issue 5637).

ⓘ

The Area Light attribute group in the Light Attributes have been deprecated. Samples settings are available in the Pass quality settings as well as the *3Delight* materials.

Deprecated *Category* attribute group in Light Attributes. This functionality has been completely superseded by the Mult-Light feature. If manually setting light categories is required, simply name a set with the name of the category and put lights in it.

7.0.57 - 2015-03-12

- Fixed several issues in the *Image Layers* section when renaming a *Render Pass* (issue 5749).
- Fixed possible Maya hang / crash when connecting certain shading nodes (such as a PSD File 2D node) to a 3Delight shader (such as the *3Delight Material*) (issue 5748).
- Fixed MEL error when the default light option is enabled in the *Maya Render Settings* and the render camera is locked.
- GI intensity now works correctly when larger than 1 and when using multiple bounces. Perviously, intensity increased exponentially with each ray level.

This version will produce different renders than the previous version if all of the following are true:

1. You use path tracing for global illumination
2. You have more than one indirect illumination bounce
3. Indirect illumination intensity is larger than 1.
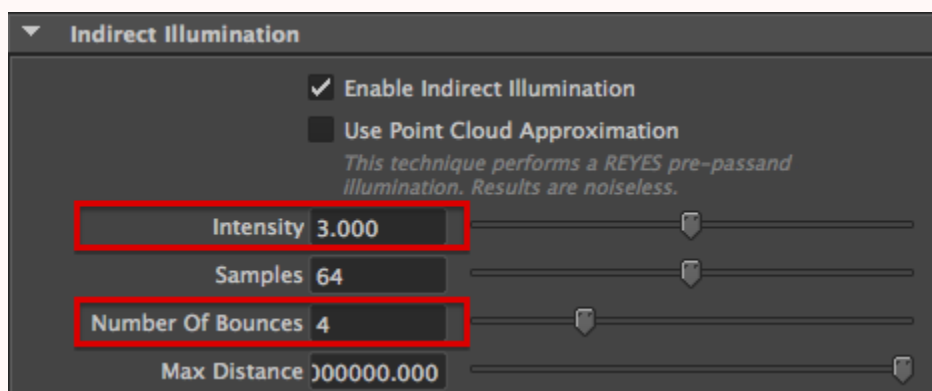
Example settings that will break compatibility.

7.0.56 - 2015-02-19

- Added ability to edit OpenVDB shader during an IPR session.
- Fixed issue with the 3 per-layer output toggle buttons for mask layers.
- Fixed possible wrong display of the *Image Layers* section of the *Render Settings* when *Render Camera* is set to '<none>'. (issue 5721).

The *OpenVDB* node is not a in separate *Maya* plug-in anymore. It is part of the main *3Delight for Maya* plug-in. This means that scenes saved with the previous version won't load in this one.

7.0.55 - 2015-02-06

- Added OpenVDB plugin to package.

7.0.54 - 2015-02-05

- Fixed broken HyperShade's *Create* menu items for the 3Delight shading nodes.
- Fixed possible out-of-sync swatches for the various 3Delight materials (issue 5699).
- Object-level assigned nodes are now exported along when doing a *File Export Selection...* operation (issue 5122).

7.0.53 - 2015-01-24

- Revised default color and number of samples of 3Delight Skin material (issues 5685 and 5698).
- Fixed issue with Mask Sets in namespaces that would not render properly (issue 5687).

7.0.52 - 2015-01-22

- Fixed an issue with the "Use Background" surface shader where shadowed zones with contributions from both regular light sources and from the environment used with the pass' "Enable Indirect Illumination" were incorrectly normalized. Scenes that are using "Use Background" surface shaders and rendered with an environment and "Enable Indirect Illumination" option activated will render slightly differently.
- "Use Background" now catches shadows from area lights (issues 5544 and 5691).

7.0.51 - 2015-01-10

- Added "Skip Completed Frames" toggle in the *Frame Range* group of the Render Pass (issue 5653). There is also a new `-skipframes` flag available in the Render command line options.

7.0.50 - 2015-01-06

- Cumulates 3Delight changes since previous package.

7.0.49 - 2014-12-29

- Faster rendering of *Maya Fluids* in the path tracer.

7.0.48 - 2014-12-17

- Cumulates 3Delight changes since previous package.

7.0.47 - 2014-11-23

- Using orthographic camera as per-display camera now works (issue 5630).
- Fixed export of tangents on polygon meshes rendered as subdivision surfaces which could cause incorrect rendering and excessive memory use (5633).
- 3delightSkin better matches to the epidermis color. No necessary to change the color profile of a texture anymore.

7.0.46 - 2014-11-15

- Fixed possible crash when using the "Render" command line utility (issue 5621).

7.0.45 - 2014-11-14

- Added matte subset UI to image layers.

7.0.44 - 2014-11-12

- Fixed MEL error for "File Import..." operation.
- Fixed issue that prevented a Maya binary scene to be opened again if it contained a render pass with a layer using the "Environment" multi-light light group (issues 5623 and 5626).

7.0.43 - 2014-10-30

- Improved tiles size in progressive rendering.
- Removed random black lines in progressive rendering.
- Added "3Delight RIB Archive" file format to the available formats of "File Export All...", "File Export Selection..." and "File Import..."

7.0.42 - 2014-10-16

- Reduced noise in non-final passes of progressive rendering.

7.0.41 - 2014-10-07

- Fixed broken raytraced subsurface with refraction in 3Delight Material.

7.0.40 - 2014-10-02

- Fixed broken raytraced subsurface with transparency in 3Delight Material.

7.0.39 - 2014-10-01

- Cumulates 3Delight changes since previous package.

7.0.38 - 2014-09-30

- Cumulates 3Delight changes since previous package.

7.0.37 - 2014-09-24

- Cumulates 3Delight changes since previous package.

7.0.36 - 2014-09-18

- Fixed hypershade translation of some complex networks where nodes were skipped (issue 5553).
- Fixed issue with the *Gamma Correct* node, where its *Gamma* attribute would be altered when *Color Management* is turned on.
- Fixed wrong shader generated for swatches & IPR when disconnecting a node from a surface shader's *Normal Camera* attribute (issue 5548).
- Added UI for cylindrical and fisheye projections to camera nodes.

7.0.35 - 2014-09-17

- More robust handling of bad normals in meshes.
- Statistics are now on by default.
- Added *-stat <bool>* flag to Maya's Render command line utility.
- Removed obsolete *-statl flag* from Maya's Render command line utility.
- Fixed issue with when rendering RIB archiving passes.
- Fixed a possible issue when creating a RIB archiving pass & a user render pass init script is provided (issue 5540).
- Fixed 3Delight Hypershade shading nodes being automatically deleted when all their upstream nodes were deleted (issue 5549).

7.0.34 - 2014-08-20

- Adding a new displacement algorithm based on vertex displacement.

7.0.33 - 2014-08-14

- Fixed assignment manipulation in the *Assignment Panel* that was causing multiple shader swatch recompilation & render for Hypershade shaders (issue 5498).
- Improved accuracy of displacementShader node when object space is far from the camera.
- The geometry used for Area Lights is now listed in the AE.

7.0.32 - 2014-08-05

- Cumulates 3Delight changes since previous package.

7.0.31 - 2014-07-29

- Added 'Scattering Depth' parameter to the *3Delight Hair* material. Default value of 0 does local illumination with correct environment lighting. Higher values create more realistic looks at the expense of longer render times.
- Fixed crash in Maya 2015 when displaying a RenderMan shader node in the Attribute Editor.
- Avoid displaying a "checker " ("map") button in the AE for RenderMan shader & RenderMan Material attributes that should not receive a value from an Hypershade node. Now displaying that button for all RenderMan Material node's attributes related to method call parameters.
- Fixed issue with method calls that have no connections to any of their attributes in the RenderMan Material node - this produced non-compiling SL code.
- Fixed possible MEL error when a "ramp" 2D texture node is in a shading network.
- Fixed possible Maya hanging when adjusting a File 2D Texture node that is part of a shading network used by a 3Delight shader (issue 5485).
- Fixed wrong 3Delight HyperShade shader swatches following an open scene / new scene operation.
- Fixed some issues with File 2D Texture node when UV Tiling mode is set to "UDIM (Mari)" (issue 5387).
- Added Area Light geometry support for the area light node. It is available in the Attribute Editor, under the 3Delight group. It is recommended to use models with low polygon count for better performance.

7.0.30 - 2014-07-18

- Fixed <camera> token - it now expands to per-layer camera, when relevant (issue 5470). Note that this token now expands to the name of the camera shape's parent. For instance, it could now be replaced by "persp", instead of "perspShape".
- Area light shaders can now be edited in IPR.

7.0.29 - 2014-07-16

- Fixed possible 3Delight hypershade node creation errors through the "Create Render Node" window & "Assign new material" window.
- New swatch rendering for Maya 2015; they are also rendered in the Hyphershade for 2015.
- Fixed issue 5468.
- Fixed possible swatch rendered with default surface shader.
- Fixed assignment issues when using one of the 3Delight shaders shelf button (issue 5452).

7.0.28 - 2014-06-26

- Fixed 3Delight shader shelf buttons that did not assign the new shader to the currently selected geometry.
- Introducing a more evolved scene for swatch renders, the "Composition" swatch (refer to The 3Delight Preferences for explanation on how to select the swatch scene) . An example render is shown below.
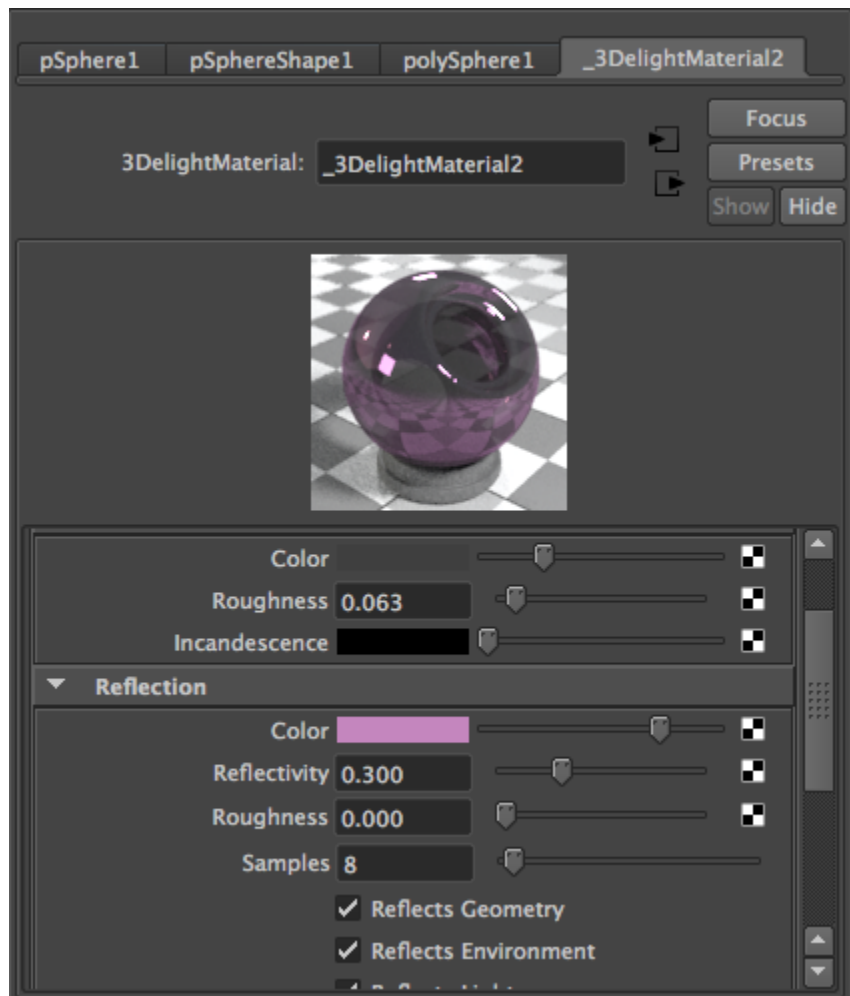
7.0.27 2014-06-24

- Fixed node creation issues for the various 3Delight nodes created through the Hypershade.
- Fixed sometimes missing shading group connected to 3Delight shaders when they are created through the shelf buttons.
- Windows installer changes. **Note: for this version, on Windows, a system restart is required after the installer completes if you are not updating an existing installation.**

7.0.26 2014-06-18

- Attributes of 3Delight Material, 3Delight Glass, 3Delight Hair, 3Delight Skin and 3Delight Sky are now key able. They will now be displayed and editable in the Channel Box.
- Temporary removal of the Hypershade swatch rendering feature for the 3Delight materials as this is causing instability. It is recommended to delete existing ".mayaSwatches" folders if 3Delight for Maya 7.0.25 or 3Delight Studio Pro 11.0.76 were used.
- Fixed issue with material buttons of the 3Delight shelf that created broken material nodes.
- 3Delight Skin subsurface algorithm is now controllable. It can be set to either ray-trace or point-based.
- Added support for PTEX in the *Maya File* node. It's available only with Subdivision surfaces.
- Added support for <light> token in image output filenames. Refer to *File Path Expressions* for more information about path tokens.

7.0.25 2014-06-04

- **Possibly instable package related to the Hypershade swatch renderings of 3Delight materials.** Prefer 3Delight for Maya packages 7.0.24 or 7.0.26; 3Delight Studio Pro packages 11.0.75 or 11.0.77.
- Fixed glass shader refraction effect. Glass was rendering with too much reflection.

- 3Delight materials now render correctly in the HyperShade view.
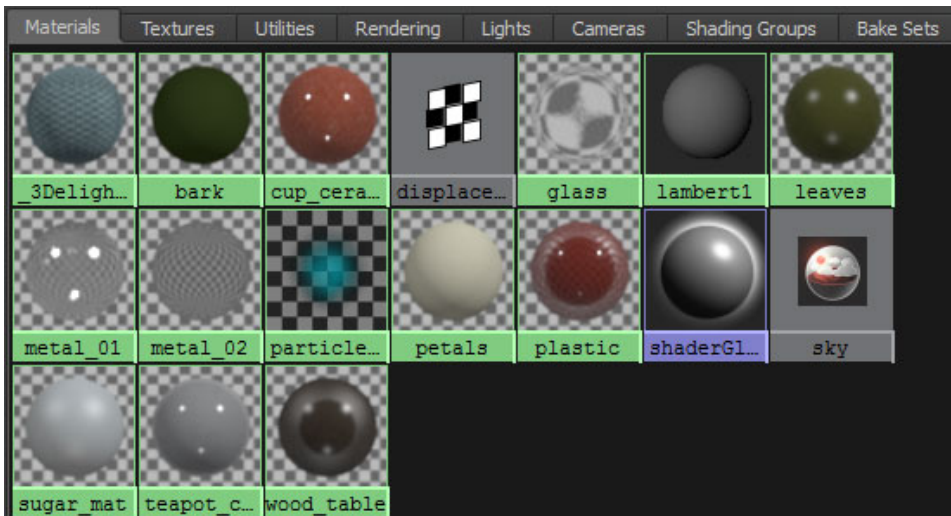
- 3Delight Material now outputs Surface Color and Luminance Depth AOVs.
- 3Delight Material know behaves better with the Layered shader.
- IPR renders start in the center of the image instead of the usual "horizontal" order.

7.0.24 - 2014-06-04

- Full linear workflow is now possible out of the box:
    - Color swatches of Hypershade shaders are now managed (previously, only textures were color managed). To use it, turn on "Enable Color Management" in the Common tab of the Render Settings.
    - When "3Delight" is set as the current renderer, there is a new "Monitor Profile" option under "Color Management" where you should pick what your monitor is calibrated to (sRGB is a good default).
    - Color swatches of displacement shaders and their upstream nodes are unmanaged since they are usually chosen by value, not as per their on-screen appearance.
    - To avoid color swatch value manipulation (i.e. keep previous 3Delight for Maya behaviour), set "Monitor Profile" to "Linear".
- The "3Delight Render" menu item's accelerator ("hotkey") can now be user-defined through Maya's HotKey Editor.
- Several improvements to the `displacementShader`:
    - Fixed *Vector Displacement*. It was not behaving properly in some orientations. For example, the "ear" displacement provided by Autodesk was not correctly rendered.
    - The *Displacement Bound* is now 1.0 by default. This default value is good for most situations. Users should lower this value if the scale of the displacement maps is lower in than 1. For example, if a displacement map has a [0 .. 0.5] range, then this value should be put to 0.5 . After a proper value is set for the Bound, there is no need to adjust it when changing the Scale parameter, the Bound is multiplied by the Scale.
    - *Vector Space* : the space now also applies to scalar displacement.
    - *Vector Encoding* : fixed signed encoding which was producing displacement twice as large as needed.
- Fixed range of the "*Attenuation Strength*" parameter in *3Delight Glass*.
- Default *Maya Curve* width is now 0.01 instead of 1.
- Area lights now use the correct *Oren-Nayar* BRDF instead of the *cosine* BRDF in the *3Delight Material*.
- Fixed wrong subsurface renders when using area lights and the *3Delight Material*. Symptoms were black regions on the material when enabling subsurface.
- Added many tool tips to the *Output: Image Layers* section of the *Render Settings*.
- Anisotropy in the *3Delight Material* is now oriented, by default, in a more predictable direction (aligned with surface parametric direction).
- JPEG are written in sRGB color space by default (and not in linear space as before).
- JPEGs were broken when bit depth was set to something else than 8 bits. Fixed.
- JPEG file extension is now `.jpg` (and not `.jpeg` as before).
- Fixed attenuation in the *3Delight Glass* material. Attenuation was producing incorrect dark areas.
- It is now possible to assign Maya shaders through the Assignment Panel.
- Objects that are set to be lit by linked lights by 3dfm but are not light-linkable due to Maya restrictions (Maya Hair, Paint Effects, etc.) are now lit by all lights that have their "illuminates by default" attribute set to "on". The alternative is to use a geo attribs node to specify a light set as its "illumination from" attribute, which still works.
- Reworked the "Common" tab in Maya Render Settings when *3Delight* is the current renderer to display only supported attributes.
- Added new shelf buttons to create and assign to current selection new *3Delight Material, 3Delight Glass, 3Delight Skin* and *3Delight Hair* shaders.
- UDIM textures are now supported. You can use either Maya's expected notation (i.e. "filename_<UDIM>.tif") or 3Delight's ("filename_UDIM.tif"). (related to issue 5342).

7.0.23 - 2014-05-21

- The *3Delight Material* has been slightly simplified : the IOR parameters for both the coating and the base layer are replaced by an easier to use (and to texture) *Reflectivity* parameter. This parameter is in the range [0 .. 1] and specifies the reflection intensity at normal incidence. The material takes care of computing the effective IOR from that value. A value of 1 for *Reflectivity* specifies a perfect mirror and a value of 0 specifies an object with is only reflective at grazing angles.
- *Default Image Format* is now 16-bit float EXR.

7.0.22 - 2014-05-12

- Updated windows installation method to use module files. The paths to plug-ins and scripts have changed so previous autoload settings may be lost after an upgrade. Its recommended to uninstall the previous package before installing.

7.0.21 - 2014-05-01

- Fixed broken Render Pass' "Progressive Refinement" attribute (issue 5182).
- Fixed MEL error produced by the assignment panel (issue 5180).
- Fixed severe bug when unassigning nodes in the 3Delight Relationship editor in object-centric mode in Maya 2015.
- Added plug-in for Maya 2015 Linux.
- **Please note that Viewport 2.0 is not yet supported for 3Delight nodes.** Since this is the default in Maya 2015, the scene view renderer needs to be set to one of the two "legacy" modes offered in the "Renderer" menu of the scene view.
- Fixed minor issues in the Attribute Editor templates for 3Delight for Maya nodes.
- Important fixes for read-only (referenced) scenes that contains 3Delight for Maya nodes. 3Delight for Maya cannot safely update read-only nodes, so it will detect outdated nodes and notify the user about it.
- Revised 3Delight for Maya node versioning; this will reduce the number of warnings about outdated nodes in the future (i.e. starting now with new or up-to-date nodes).
- Fixed issue where 3dfm plugin would not load in Maya 2012 without errors (issue 5230).
- Fixed issue where referenced nodes would incorrectly be reported as outdated.
- Fixed possible multiple outdated, referenced 3Delight for Maya nodes warning dialog.

7.0.20 - 2014-04-14

- Cumulates 3Delight changes since previous package.

7.0.19 - 2014-04-08

- Added plug-ins for Maya 2015 in Windows & OS X packages.
- Introducing 3Delight Multi-Mask.
- Fixed issue that prevented "cloud" particles or fluid instances as particles from rendering.

7.0.18 - 2014-03-31

- Displacement bound & space attributes on RenderMan displacement shader nodes are now used in the shader preview & swatch renderings.
- Hair Material can now output the following sub-components: aov_specular_prm (R), aov_specular_trn (TT) and aov_specular_sec (TRT).

7.0.17 - 2014-03-25

- Maya Displacement Shader nodes now display a "3Delight" group in the AE where a new "Displacement Bound" attribute can be found. It is overridden by a geo attribs' displacement bound attribute. Only available in Maya 2013 and up.
- RenderMan Displacement Shader nodes now display a "Displacement Bound" group in the AE; it contains "Displacement Bound" and "Displacement Bound Space". It can be overridden by a geo attribs node's displacement bound attributes.

7.0.16 - 2014-02-27

- Major improvement when the useBackground shader is used along with environment light that casts directional shadows. Noise in unshadowed areas is gone and rendering time is improved (issue 4974).
- Fixed a crash with multiple fluids.

7.0.15 - 2014-02-20

- Added ray-traced subsurface to the 3Delight Material.
- Fixed inverted sun evaluation in 3Delight Sky. There was inverted day/evening. The effect of the bug was that the sky was much "greener" than is physically correct.

Before | After
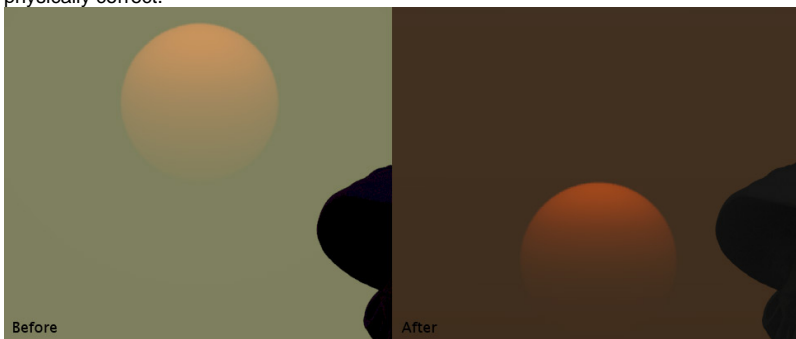
7.0.14 - 2014-02-15

- Object faces that have no surface shader assigned, or assigned to a shading group without any surface shader, are now rendered transparent. They used to be opaque (i.e. visible in alpha channel). This is valid only for objects using per-face shader assignment (issue 4982).
- Properly anti-alias the sun disk in 3Delight Sky.
- Preliminary support for GI's directional shadows in useBackground shader. The output is less noisy in float aov_shadow than in the beauty's alpha channel (issue 4974).

7.0.13 - 2014-01-31

- Fixed issue where statistics options were output to a RIB archive.
- Added command-line option "-engine" to select the *REYES* or *Path Tracer* render engine.
- Changed the default Render Engine to *Path Tracer*.
- Fixed issue where objects could disappear from rendered image due to wrong shutter / shutter offset values used by 3dfm.

7.0.12 - 2014-01-24

- Image Layers file output is now turned on by default.
- Area lights now use the trace sampling mode by default.
- 3Delight Material, Skin and Glass now use the new area light sampling technology.
- Added 3Delight Sky to the list of materials. The sky models is based on the following paper: An Analytic Model for Full Spectral Sky-Dome Radiance by Lukas Hosek and Alexander Wilkie.

7.0.11 - 2014-01-16

- Fixed issue that prevented user-defined light nodes from being considered suitable for light shader & light attribs nodes assignment in the Assignment Panel & the 3Delight Relationship Editor.
- The "Render" command line utility can now render multiple render passes by specifying a render pass list or "all" with the "-rp" flag.

7.0.10 - 2014-01-06

- New "Custom Frame Buffer" option for the "Render View" preference. You can choose which display driver is used in this case using the "/displaytype/framebuffer" entry of your rendermn.ini file; it is set to i-display by default.
- Added support for vector displacement attributes of the Hypershade's *Displacement Shader* node.
- **Shading Change:** the Hypershade's *Displacement Shader* node's *Displacement* float attribute was previously handled in world space to mimic what the Maya Software renderer does. It is now computed in object space, which fits with what Mental Ray does and works better with object transforms. To keep the previous behaviour, assign any value to the _3DFM_WORLD_SPACE_DISPLACEMENT environment variable.
- "CPU Time" AOV has been added to the list of *Auxiliary AOVs*. It highlights the region of the image where the renderer spent more time (#4961).

7.0.9 - 2013-12-17

- Fixed issue with texture filename edits during IPR sessions.
- Environment shape texture edits are now a bit faster during IPR.

7.0.8 - 2013-12-14

- New "Always Use Maya Render View for IPR" preference.
- AOV Selector list behaviour now encourages multiple selection.

7.0.7 - 2013-11-29

- Added missing Motion Vector AOV (issue 4922) and fixed broken Surface Color AOV.
- Fixed compatibility with pre-2013 Maya (issue 4923).

7.0.6 - 2013-11-27

- Fixed global illumination artifacts with per face shader assignment.
- Fixed a memory leak.

7.0.5 - 2013-11-23

- Cosmetic fixes in AOV selector dialog.

7.0.4 - 2013-11-22

- Introducing a new "Layers" section in the Render Pass. This different approach for configuring what images are produced by the pass replaces the "Displays" section.
- New "Render View" preference in the 3Delight Preferences window. This is set to "Maya Render View" by default.

7.0.3 - 2013-11-18

- Fixed incorrect width of some gadgets when displaying a RenderMan shader in the Attribute Editor (issue 4901).

7.0.2- 2013-11-07

- Maya 2008, 2009 and 2010 are no longer supported.
- Fixed possible crash when using nParticles systems with instancers. More specifically, a crash could occur when requesting some nParticle system attribute to be output as primitive variables via a geometry attributes node, while the nParticle system is used with an instancer (issue 4858).
- Fixed possible issue when rendering a scene that contains multiple RIB Archive nodes with connected RIB archiving render passes (issue 4824).
- Fixed issue where user attributes were not exported as primitive variables for trimmed NURBS (issue 4886).

7.0.1 - 2013-10-16

- **This is the last package that supports Maya versions older than 2011.**
- Render Passes created using the RIB Archive node AE's "checker" button are created with fewer, relevant attributes.
- Fixed issue with objects having Maya surface shaders (like blinn) assigned to some faces while other faces have a Mental Ray shader assigned to them (issue 4839).
- Mental Ray shaders now correctly handle primitive opacity (Os). **Objects that have an opacity different than 1.0 and are using a Mental Ray shader will render differently**.
- Motion blur of secondary cameras is now correctly exported. This fixes stereo rendering with the raytrace hider.
- Fixed possible 3Delight warning about shaderid that should be declared varying when rendering an object that uses per-face shader assignments.
- Fixed a crash when several instances of the same fluid are rendered.

7.0.0 - 2013-10-02

- Shader parameter modification during and IPR render is x100 times faster, even for complex geometry.
- Fixed crop region from i-display that now renders in a separate thread.
- Clean up of the "Extra Attributes" section of 3Delight for Maya custom DAG nodes for more recent Maya versions.