

# 3.50.01 to 3.50.04

## Build 3.50.04

*Official release*

**Date** – Mar. 3, 2017

**Download** – [Build 3.50.04](#)

## Modified Features

V-Ray / V-Ray RT

- Optimize compiling geometry for scenes with displacement on machines with many cores

V-Ray IPR

- Add settings rollout IPR options whether to track changes to the VFB size and whether to always use progressive sampling

V-Ray RT

- Add an option to only render the visible part of image for OpenVR and Oculus renders (Follow VR headset)

V-Ray GPU

- Do not consider Intel GPUs for V-Ray GPU
- Take the adaptive lights number of lights into account

VRayDirt

- Make unoccluded sub-textmap slot default when keeping replaced texture as subtexmap

VRayMDLMtl

- Show MDL enum parameters as combo boxes instead of spinners

img2tiledexr

- img2tiledexr should store its version and build date into the converted OpenEXR files

## Bug Fixes

V-Ray

- Animated Noise in VRayLightMtl with Direct Illumination On slows down the rendering drastically
- Artifacts with Adaptive Lights in certain scenes
- Deep image result is overwritten when post effects are enabled
- Distributed rendering with no Use local host requires additional license
- Improve saving time of progressive resumable files to a network location
- Log flood with "Invalid normal index found on face" with specific geometry
- Saving to raw images with non-ANSI names fails when post effects are present
- The main thread hangs when some of the license servers are offline
- Very slow compile geometry phase on particular scenes
- Wrong VRayZDepth with use camera clip boundaries enabled and the physical camera's clipping planes disabled

V-Ray IPR

- Constant refresh with VRayPhysicalCamera and V-Ray Exposure Control
- Crash when adding a render element during IPR
- Crash when using adaptive lights and a new light is added to the scene
- Rendering hangs and 3ds Max 2017 UI freezes when Physical camera Lens Shift is modified

V-Ray RT

- Export display sRGB parameter to *.vrscene*
- Some machines can't load IFL files when accessing them from shared location
- Unhandled exception when rendering scenes with Ormatix feathers and displacement in production rendering mode

## V-Ray GPU

- Black regions with Projections
- Different results with V-RayClipper and Camera rays only option enabled
- Adaptive Lights are not updated after change in region/resolution during ActiveShade
- Compensate camera exposure of V-RayLightMtl is not working
- CUDA error 719 with specific scene
- Fix potential crash with unsupported render elements
- Alpha pixels missing with matte/shadow plane
- Overexposed lighting when rendering with V-Ray GPU
- The specular contribution does not get adjusted by the fog attenuation

## VFB

- Denoiser hardware acceleration type is not updated at render end
- Denoiser is not applied progressively when rendering with V-Ray RT
- Do not apply denoiser on load from history
- Lens effects hardware acceleration mode doesn't work
- Selecting a point in the curves color correction window causes the point to move
- The curves color correction in the VFB should be applied after the exposure
- Turning off the Select object mode during ActiveShade leaves the wrong cursor

## V-RayDenoiser

- Denoiser is calculated every time before V-Ray RT rendering start if it was used before
- The option Only generate render elements is producing corrupt file

## V-RayFur

- Not properly generated with Bitmap texmaps

## V-RayGLSLMtl / V-RayGLSLTex

- Materials are transparent in BRDF mode

## V-RayGLSLMtl / V-RayMDLMtl / V-RayOSLMtl

- None of the General shader properties are accessible through MAXScript

## V-RayOSLMtl / V-RayOSLTex

- Crash with 1000+ shader nodes
- Exporting OSL materials with unconnected textures for V-Ray RT produces broken scenes

## V-RayProxy

- Crash with Alembic file with containing incorrect UVW mapping indices in V-Ray RT
- Custom attributes for alembic files are lost in Show whole mesh display mode

## V-RayToon

- Active checkbox not exported for V-Ray RT
- Add render element export for V-Ray RT
- Missing toon effect with 3ds Max standard cameras

## V-RayMDLMtl

- Crash when loading an *.mdl* while V-Ray RT is running and then stopping it
- Exporting empty MDL materials fails
- Merging light cache passes is very slow when rendering scene with missing MDL resource files
- Shows as incompatible when V-Ray RT is set as production render engine
- Spinners reject negative parameter values
- Treat *df::bsdf()* as black diffuse
- Wrong rendering of MDL texture with bump on geometry with incorrect tangents

## V-RayScatterVolumeMtl

- NaN pixels occur

#### V-RayScene

- Animation is not working for V-Ray RT
- Missing objects from imported vrscene when rendered with V-Ray RT
- Snippet override with wildcards doesn't work on Windows 7

#### V-Ray scene converter

- Broken lights instances after conversion

#### img2tiledexr

- Fails to convert files properly after 3.50.03

## Build 3.50.03

*Official release*

**Date** – February 8, 2017

**Download** – [Build 3.50.03](#)

## New Features

#### V-Ray GPU

- Distortion support for physical camera

## Modified Features

#### V-Ray

- Move the V-RayDenoiser progressive update frequency in the System rollout

#### V-Ray RT

- The IPR button in the VFB should work when V-Ray RT is the production renderer
- ActiveShade should render with the current VFB resolution and should track changes to the VFB size
- Export Forest Color information as color instead of 3 float numbers

#### V-Ray GPU

- Add a warning when users have Adaptive Lights and Shadows RE enabled
- Support V-RayUserColor to be used for mapping channels
- Support the noise parameters for Gradient Ramp texture

#### V-Ray IPR

- Add MAXScript callback when IPR completes rendering
- Production IPR should fill the VFB and react to changes in the VFB size and changes to render resolution
- Production IPR should react to changes in the render region in the VFB
- Track changes to node properties both V-Ray and user during IPR
- Track changes to the environment overrides in the render settings during IPR

#### VFB

- Add command for VFB display control (vfbControl #show)
- RGB button switches between RGB color and effectsResult channels
- Show HSV values in the VFB pixel information window

#### V-RayMDLMtl

- Add displacement support to MDL
- Display texture parameters in MDL materials as file buttons

#### VRayScene

- Override material with 3ds Max native materials

#### VRayVolumeGrid

- Option to disable the Optimizing Volumetrics rendering pre-pass

#### V-Ray Scene Converter

- Blend material to VRayBlendMtl conversion support for sub materials and textures
- Convert Corona's native materials, textures, and lights to V-Ray ones

## Bug Fixes

#### V-Ray

- Adaptive lights don't work with fly-through light cache
- Concatenated node user attributes on VRayProxy objects
- effectsResult channel is not saved with .vring file from Render Setup
- Resumable rendering with bucket sampling and post effects stops with an error after the first completed frame
- When saving a scene with GLSL, OSL or MDL the full path to the file is not always written

#### V-Ray RT

- Incorrect adaptive lights with production (non-ActiveShade) renders
- Light cache from map is not used in out of process rendering
- Not located alembic proxies with local paths
- Not updating the IFL sequences properly during time slider change
- Some scenes with multiple MDL materials fail to export
- Wrong rendering with light cache from file saved with adaptive light grid

#### V-Ray GPU

- Adaptive lights with VRayClipper with affect lights off in some cases has artifacts
- Artifacts with Skylight portal and adaptive lights
- Artifacts with VRayLight exclude lists and Adaptive lights
- Bump looks wrong with object-space UVW generator
- Compiling geometry takes too long in a specific scene when using GPU
- Crash when tweaking the displacement amount in specific scene
- Crash with adaptive lights and disabled light portals
- Discrepancy in rendering of Normal, Average and Multiply Blending Modes of Tint in Forest Color texture
- Crash with empty Forest Color map channel
- Don't save matte render elements for GPU when writing to image
- ForestPro objects not rendered when Displacement is enabled in specific scene
- Gradient Ramp connected to Gradient Ramp renders wrong
- Lens effects Object/Material ID is not working with GPU rendering
- Max ray intensity is not applied to self-illumination and light cache bleeding
- Noisy results even though the sampling settings are high
- Occasionally wrong lighting with adaptive lights
- Random crash when using light cache with adaptive lights
- Some Render Elements render wrong in specific setups
- Render is very slow floods the kernel with invalid messages when rendering with On-Demand textures but there are no textures in the scene
- Tweaking assigned Color Correction maps to Environment changes the output
- Visible mesh edges on refractive objects
- XRef Multi/Sub-Object material renders black with CUDA

#### V-Ray IPR

- Changing properties of the VRayPhysicalCamera are not updated in IPR
- Crash after using the V-Ray Light Lister during production IPR
- Crash when accessing the Material Editor during an ActiveShade session with Clear cache on render end enabled
- Crash when adjusting curves in VRayHDRI during IPR
- Crash when cloning a specific object during IPR
- Crash when creating instances in a particular scene during IPR
- Crash when creating VRayLight without dragging for setting the size during IPR
- Crash with IPR with VRayFastSSS2's object-based pre-pass

- Crash with XRef materials during IPR
- IPR crashes with VRayExtraTex Render Element
- IPR render from camera that has Skew modifier applied doesn't match production render
- Locked camera view is not respected in IPR
- Making an object a shadow catcher from the V-Ray toolbar is not updated in IPR
- Modifying VRayLight created in IPR as a Copy crashes 3ds Max
- Occasional crash with IPR related to texture shortcut buttons
- Unhandled exception with instanced objects during IPR
- VRayLightMtl intensity is not properly updating in IPR
- Hiding and unhiding of nodes is not reflected in production IPR
- Render mult parameter of VRayHDRI is not working in IPR

#### VFB

- Environment variables not re-read defined in OCIO
- Fix scaling of non-native resolution images in the history
- Hide lens effects ID masks when loading from the history
- Lens effects are not updated every time the update button is pressed

#### VRayCurvatureMap

- Crashes when rendering with VRayCurvatureMap inside VRayExtraTex Render Element

#### VRayGLSLMtl/VRayGLSLTex

- Shader inputs are not shown when using Quick Shader

#### VRayMDLMtl

- 3ds Max occasionally crashes on closing in shutdownNeuray()
- Crash when changing parameters during out of process ActiveShade session
- Crash when referencing missing textures
- Materials with textures crash when connected to VRayBlendMtl
- MDL files are not loaded on scene open
- Reloading the same MDL material makes the preview disappear
- The gamma mode is ignored

#### VRayNormalMap

- The normal map is affected by the bump map multiplier

#### VRayProxy

- User attributes aren't distributed to all references/instances

#### VRayScene

- Alembic preview is not loaded

#### VRayToon

- Map for color is not exported for V-Ray RT
- The hidden edges of objects with non-fully opaque materials are drawn

#### VRayVolumeGrid

- The Loop Overlap option is not exported to V-Ray RT and vrscenes from 3ds Max

#### vrimg2exr.exe / img2tiledexr.exe / V-Ray

- Slow EXR saving process on network location

## Build 3.50.02

*Beta release*

**Date** – January 12, 2017

**Download** – [Build 3.50.02](#)

## New Features

### V-Ray

- Add V-RayRawDiffuseFilter, V-RayRawReflectionFilter and V-RayRawRefractionFilter render and bake elements
- Fallback to limited functionality Demo mode if no license is present

### V-Ray RT

- Add support for adaptive lights

### V-Ray GPU

- All supported procedural textures to work for bump maps, when used through V-RayColor2Bump texture
- Implement support for Forest Color texture
- Support for Mapped, Linear and 4 corners Gradient types in Gradient Ramp texture
- Support for adaptive lights in CUDA (both in Production and in ActiveShade)
- Support for the planar V-RayClipper

### VFB

- Lens effects work on the denoised result if a denoiser render element is present
- Lens effects can be enabled and adjusted during rendering

### V-RayMDLMtl

- Integrate support for NVIDIA MDL
- Initial support for V-RayMDLMtl in V-Ray RT

### V-RayScene

- Implement scene node that supports rendering geometry and materials from a .vrscene file and settings override with another file

### V-RayToon

- Ability to store the toon outlines in a separate render element

### V-RayVRmatMtl

- Does not update on filename change in V-Ray RT

### V-Ray Toolbar

- Add button to make selected objects shadow catchers

## Modified Features

### V-Ray

- 3ds Max render effects should be applied when the Stop button is pressed in the render progress
- Adaptive lights sampling improvement when the total lights are less than the Adaptive lights count
- Bucket resuming writes its own .vrimg output if other output format is set
- Enable adaptive lights by default
- Faster 2d displacement on machines with many cores
- Faster rendering of proxies on many-core machines
- Improve the HDR images loading speed
- Make 1 a possible value for Geometry samples in Render Setup
- Remove limitation on parameters count for OSL and GLSL shaders
- Restore the 3ds Max project folder after DR render
- Rework post-effects pipeline to avoid Lens effects overriding the denoised image in particular
- Right-click on parameters' spinners should reset them to the default values instead of zero for most of V-Ray plugins
- The light grid for adaptive lights does not take specular light contributions into account

### V-Ray RT

- Allow irradiance map and light cache from saved file in ActiveShade

- Change mouse cursors for some of the right click modes during Active Shade
- Implement export of V-RayToon
- Implement the glossy Fresnel options
- Improve random by render ID values generation for V-Ray RT and matched with V-RayMultiSubTex

## VFB

- Add a render stamp variable noiseThreshold for the reached noise threshold of the progressive sampler
- Add toolbar button for copying the current channel to clipboard
- Increase default VFB history maximum files count to 100 and the size on disk in MB to 10000
- Show a progress bar in the VFB during IPR session

## V-RayALSurfaceMtl

- Support for Raytraced SSS ID V-Ray object property

## V-RayMtl

- Disabled by default the GI checkbox for self-illumination

## V-RayMtlReflectIORBake

- Replace the Store in fixed point format (rg.ba) option with an Invert value one

## V-Ray Bitmap to V-RayHDR converter

- Bitmaps in objects/modifiers/environment should be handled

## Bug Fixes

### V-Ray

- Adaptive lights don't work with fly-through light cache
- Adding lights during IPR session produces wrong results when adaptive lights are enabled
- Artifacts with adaptive lights and V-RayFastSSS2 material
- Crash when modifying matte object material in IPR
- Deep merge strategy set as None renders incorrectly with non-fully opaque objects
- Different bump with bitmaps since 3.50.01
- Environment map ghosting through objects when matte/shadow objects are in the scene
- If there is no license available V-Ray crashes when rendering
- IPR crashes with Hair and Fur on render stop
- IPR crashes with V-RayExtraTex render element
- IPR crashes while painting with the V-RayFurStyler
- Issue with finalToon and orthographic cameras
- Noisy pixels not cleaned up by the progressive sampler
- Random crashes after progressive rendering is finished
- Render hangs when resuming with DR and distributed light cache
- Rendering hangs at transforming vertices when there is a V-RayVolumeGrid and many V-RayLightMtl materials with direct illumination enabled
- OSL preprocessor-only output is polluted with diagnostic messages
- Wrong viewport drawing of objects after rendering in 3ds Max 2017
- Scene renders brighter when there is glass at the windows

### V-Ray RT

- Crash during ActiveShade with a scene with instanced V-RayProxy
- Crash with time slider and motion blurred meshes
- Error when rendering RT DR with Max Frame buffer and Render Mask
- Matte for refl/refr of V-RayMtlWrapper has no effect
- Mismatched Vertical Tilt correction compared to production renderer
- Noisy results with progressive sampler when Sub-pixel mapping is enabled
- Skew modifier on Standard cameras is ignored
- Unhandled exception when editing part of specific material used as Override during ActiveShade session
- Using Array tool during ActiveShade rendering causes missing objects in 3ds Max 2017
- V-RayIntancer crashes when rendering out of process
- When setting through the VFB the camera focus distance it gets messed if the user clicks on a dome light

### V-Ray GPU

- Add warning when using too many textures per material with on-demand textures
- Artifacts with shadow catcher
- Bitmap aperture is not rendered with CUDA
- Broken shader with dirt as layer weight

- Can't use more than 1 triplanar texture for bump
- Crash with Distance texture
- Difference in transparency between RT CPU and GPU in specific scene
- Different shader result in scene with complex procedural texture tree
- Hair is rendered very slow with light cache
- OCL device select tool doesn't save changes on some computers
- On demand textures produce different result to Full Size with specific scene
- Only the initial image of ifl sequence is used when the Bitmap or VRayHDRI map is linked to Output map
- Refraction volume is shaded differently compared to CPU
- Specific GLSL shader files produce error with CUDA
- Moving lights in 3ds Max is causing GPU memory leak
- Negative values for distribution of VRayDirt produce unexpected results

## VFB

- Artifacts in Compare V-Ray Settings window from VFB History when resized
- Crash when lens effects Bloom mode is set to Render elements only
- Random crash when switching production renderer from V-Ray RT to V-Ray with open VFB
- Render region issues when set through MaxScript vrayVFBSetRegion function prior to rendering
- The width of History Settings window is not enough to display the whole Completed Renders Only checkbox label
- V-Ray RT settings are not saved in the history if set as production renderer
- Zooming the color corrections curve causes major lagging of the UI

## VRayClipper

- Mesh clipper doesn't handle motion blur
- More precise rendering with GI
- Moving a mesh clipper during IPR session doesn't work correctly

## VRayOrnatrixMod / VRayHairFarmMod

- Typo in dynamic\_tessellation parameter (was dynamic\_tessellation) in both UI and MaxScript

## VRayProxy

- Mesh preview memory leak after 3.50.01

## VRayStochasticFlakesMtl

- Shading produces blending artifact

## VRayToon

- Crashes when rendering with VRayScatter
- Produces artifacts when width map is set
- Removing objects from VRayToon exclude list sometimes removes wrong objects
- The Remove button of VRayToon exclude list becomes inactive when multiple toon effects are applied

## VRayVolumeGrid

- Crash when previewing or rendering a cache where the ID channel cannot be uncompressed
- Deleting a volume grid object and then rendering causes a crash
- Exporting a VRScene with volume grid object calculates light and particle pre-passes
- Broken Lighting and Specular render elements for reflective/refractive geometry
- Lights that were in the scene before creating a new volume grid object are added to its exclude list
- Ocean Rendering hangs at low altitude when the container is far away
- Slow creating and deleting of many lights from the scene

# Build 3.50.01

*Beta* release

**Date** – November 22, 2016

**Download** – [Build 3.50.01](#)

## New Features

### V-Ray

- Enable usage as an interactive production renderer (IPR)
- Enable the resuming of bucket renders from raw .vrmg files
- Enable the resuming of progressive renders
- Experimental implementation of adaptive lights
- Optimize GI rendering

### V-Ray RT

- Support for direct output to Oculus Rift and HTC Vive
- Object picking in VFB
- Enable Set focus distance in the VFB for the selected camera

### V-Ray GPU

- Aerial Perspective support
- Support for matte materials shadow catcher
- Support for the V-RayStochasticFlakesMtl material
- Initial implementation for on-demand mip-map texture in production rendering mode
- Less CPU memory usage when rendering scenes with many textures
- Less GPU memory usage when rendering scenes with many textures
- Implement support for Render mask
- Support for velocity render element
- Better handling of geometry and materials updates during ActiveShade
- Add Low GPU thread priority option
- Support for additive mode of the V-RayBlendMtl
- Support for transparency for the layers of the V-RayBlendMtl
- Add support for V-RayAtmosphere render element
- Fixed differences in lighting between V-Ray RT CPU and GPU
- Fixed differences in texture blending between V-Ray RT CPU and GPU
- Support for Irradiance Map from file
- Support for RenderID, ObjectID and MtlID render elements
- Implement ground projection of V-RayHDRI

### VFB

- Implement hardware acceleration support for lens effects

### V-RayMtl

- Implement Glossy Fresnel option

### V-RayALSurfaceMtl

- Include alSurface shader port for V-Ray in the installation

### V-RayProxy

- Support for user property tags in the proxy file name

### V-RayScannedMtl

- Add ability to capture and render the back lighting

### V-RayVolumeGrid

- Add a render preset for Maya Fluids vdb
- Support for Cap Mesh mode in V-Ray RT

## Modified Features

### V-Ray

- Add control for panoramic pole merging for stereoscopic rendering (V-Ray RT MaxScript properties .top\_merge\_angle .bottom\_merge\_angle)
- Dome light minor speed optimization

- Display warning when View navigation in ActiveShade is selected without looking through camera
- Increase the tooltip display times in the render settings
- Remove the interpolated reflections/refractions options
- Set the default value for the dynamic noise threshold for the progressive sampler to 80
- Use adequate precision for render elements (full/half precision) in OpenEXR files
- When using a dome light, matte objects have visible outlines unless GI environment is overridden with zero
- Bundle License Server with the installation instead of the vrlservice.exe

#### V-Ray / V-Ray RT

- The progressive sampler should finish the current pass when the given "Render time" is surpassed
- Draw the alpha channel during the undersampling phase of the progressive sampling

#### V-Ray RT

- Apply resolution changes without restarting the rendering
- Add Select object and Get object material right-click options in the VFB
- Add UI mode views switcher for V-Ray RT between Default and Advanced views
- Make V-Ray RT to take the render state of the Laubwerk trees options, not the viewport
- VFB output file paths are not exported in .vrscene file
- View navigation in ActiveShade VFB is too fast

#### V-Ray GPU

- Support for the directionality attribute of the VRayLight in Plane mode
- Ability to load precalculated Irradiance map GI cache files
- Changes on materials with baked texture to be updated quicker
- Faster rendering of materials with bump maps
- Faster rendering with Bitmap output curves
- Faster rendering of rounded edges texture
- Print the message about not having OCL devices env var as a info, not warning
- Print the OpenGL Driver version in the log
- Print warning when there is a render element that's not supported on the GPU
- Print warning when max sample level is set to 0
- Raise the number of rays per pixel when the number of active pixels is too low
- Solid reflective material getting alpha dropouts
- Support for UVW coordinates type in VRaySamplerInfo render element

#### VRayMtl

- Make the GGX BRDF the default one and turn on glossy Fresnel by default
- Move the reflect on back side option in the reflection section of the Basic rollout
- The anisotropy controls should be disabled when the BRDF is set to Phong

#### VRayProxy

- Allow for the viewport preview to be overridden by another .vrmesh or Alembic file
- Add rendering support for Mudbox exported .vrmeshes with Level-of-Detail
- Interpolate geometry data for heterogeneous Alembic files with velocity channel
- Optimized the preview read and update for animated proxies

#### VFB

- MaxScript commands to show/hide history and color corrections panels of the VFB
- Contrast curve should be applied in sRGB color space
- Change the default values of the Lens Effects
- Improve history images saving speed
- Move the history image compare buttons from the main toolbar to history toolbar
- The button for showing the messages log should bring the messages window to the front
- White balance should be applied before exposure

#### VRayClipper

- Optimize plane clipper with empty exclude lists

#### VRayDenoiser

- A warning should be printed when the VFB is disabled
- Check the sampler settings before starting a render and warn if incompatible

#### VRayHDRI

- Add a MaxScript parameter for axial rotation

#### VRayOSLMtl / VRayOSLTex

- Enable support for multiple include paths in OSL
- Speed up the texture sampling in OSL

#### VRayScannedMtl

- Add ability to render licensed materials (library licenses)
- Add support for Nitrous viewport preview

#### VRayStereoscopic

- Add new fragment merge mode, where fragments are merged by render ID and z-depth

#### VRayTriplanarTex

- The blend and scale parameters should be animatable

#### VRayToon

- Add an option to exclude an object in the V-Ray object properties

#### VRayVolumeGrid

- High-DPI support for the render curves and gradients
- Improve the motion blur for atmospherics
- Improve the velocity voxel preview
- Optimize rendering with emissive lights, Ray-Traced self-illumination and complex geometry
- Respect the maxRenderThreads setting in V-Ray during rendering
- Support V-Ray's per-object motion blur duration override
- When several points on diagram are selected, right click on one of them should affect all points

#### vdnoise.exe

- Add abort on OpenCL errors
- The noise level channel can also be named "VRayNoiseLevel"

#### V-Ray Toolbar

- Creating VRayFur from the toolbar button should select the newly created fur object

#### V-Ray scene converter

- Added an option to convert only selected objects

#### .vrscene exporter

- Renderer settings of V-Ray RT as production renderer are not exported

## Bug Fixes

#### V-Ray

- Crash on loading scene after rendering with time stamp
- Remove the "(notUsed)" from the imageSampler\_renderMask MaxScript properties
- Unwanted GI caustics with refractive materials with affect shadows enabled
- Tiled texture cache set message is flooding the log when using Slate Material editor

#### V-Ray RT

- Composite texture with Output map on reflect and diffuse gives a different than production render result
- Crash with Particle Flow and motion blur when sliding the time during ActiveShade session
- Crash when there are materials with very long names and special characters
- Effect ID of VRayMtl is not exported
- Excessive progressive sampling AA filter memory consumption with ActiveShade rendering and render region
- Exclude lists of VRayDirt don't work with HairFarm
- Exporter doesn't resolve light cache file paths

- Exporter is missing some of the V-RayMtl and V-RayFastSSS2Mtl features
- Isolating geometry in a scene with duplicating nodes names and handles produces WndProc error with out of process rendering
- Invalid geometric normal warnings with V-RayLight and stereo cube camera
- Static geometry of V-RayDisplacementMod is not exported
- There is no motion blur on V-RayFur when applied to a geometry with a modifier
- Motion blur samples are not applied to animated V-RayPhysicalCameras unless they are set locally
- Not all supported image filters are exported
- Not exported opacity texture correctly if names are the same with other textures
- Not updating the IFL sequences properly during time slider change
- V-Ray trace sets are not exported

## V-Ray GPU

- Auto update bitmaps is broken with in-process rendering
- Crash when reading from large, 8k+ textures
- Crash when switching Noise coordinates to Vertex color channel while rendering
- Crashes on scenes containing textures with elliptical filtering
- Crash with motion blur and Material IDs set
- Different texture output with Color Map and tweaked Output Amount
- Different bump compared to CPU with Mask map
- Difference in shading V-RayDirt in V-RayTriplanarTex
- Different indexes of Ornatix hairs on each frame
- Flicker when rendering animation with Backburner/Deadline with lights with include/exclude lists
- GGX BRDF produce noise in Object ID render element in CUDA
- IES lights with invalid paths to files sometimes are rendered wrong
- Incorrect sun position when using V-RaySun/Sky with specific procedural color correction textures
- Mapped masks of Composite map don't work
- Material shader tree does not reflect the materials changes in ActiveShade in all cases
- Out of process V-Ray RT rendering crashes on frame change in a scene with duplicating nodes names
- Random by Render ID mode of V-RayTriplanarTex is not applied in bump
- Render elements does not respect the transparency of materials
- Render server crashes when rendering animation with lights with include/exclude lists
- Undersampling artifacts occur on the bottom and right edges of the region during ActiveShade session
- Using excessive host mem when there are a lot of textures in the scene
- V-RayColor2Bump in base material of V-RayBumpMtl deactivates V-RayEdgesTex
- V-RayLight type Disc produces different lighting when textured
- V-RayZDepth clamp zdepth option has no effect
- Wrong blending between texture and color in Falloff texture
- Wrong lighting with max ray intensity set to 1

## V-RaySamplerInfo

- Crash when rendering an object with changing topology and V-RaySamplerInfo render element with Forward/Backward occlusion type

## DR

- "Failed to delete server scene file" DR warning appears but the file has been deleted successfully

## V-RayGLSLMtl / V-RayGLSLTex / V-RayOSLMtl / V-RayOSLTex

- GLSL and OSL plugins crash Max when the error message contains %

## V-RayGLSLMtl / V-RayGLSLTex

- GLSL crashes when compiling embedded shaders
- The BRDFGGX plugin and the GGX mode of BRDFV-RayMtl produce different results

## V-RayOSLMtl / V-RayOSLTex

- 3D noises appear as stripes
- Incorrect rendering of V-Ray OSL shaders when part of a V-RayBlend material
- Preprocessor-only output is polluted with diagnostic messages

## V-RayOrnatixMod / V-RayHairFarmMod

- Hair tessellation segments are not calculated correctly for orthographic views

## Hair & Fur

- Invalid geometric normal (000) for "HairVrShadeable" warning with Hair and Fur

## V-RayLight

- Light portals appear noisier than rectangular lights due to undersampling

#### MultiMatteElement

- Opacity is not working with MultiMatteElement

#### VRayFastSSS2

- Render to texture crashes with VRayFastSSS2 material

#### VRayDisplacementMod

- Rendering an animation with 2D displacement with VRayHDRi map with values greater than 1.0 causes the object to disappear on the second frame

#### VFB

- Artifacts appear on the render channels drop-down control after show/hide history
- color correction controls disappear and lens effects settings are misplaced if scrolled down and resized
- Enabled color corrections cause major UI slow downs in ActiveShade mode
- Incorrectly resized when loaded a scene and the side panels have been open
- Raw output image file extension is not persistent
- Render channels drop-down box progressively diminishing its height

#### VRayBlendMtl

- Appears invisible in the viewport set to realistic preview

#### VRayBump2Normal

- Bump map slot is not updated when plugging/unplugging a map in Slate Material Editor

#### VRayClipper

- Artifacts with animated object
- Exclude list is not considered for generating VRayEdgesTex round corners
- Generates artifacts on excluded objects with VRayFastSSS2/VRaySkinMtl
- Generates darker result when clipping VRayFastSSS2/VRaySkinMtl in Raytraced mode

#### VRayDenoiser

- Falling back to CPU with very wide images

#### VRayDisplacementMod

- Crash in View-dependent mode in orthographic views
- Crash with object-based VRayFastSSS2
- Setting 2D displacement resolution to 1 crashes 3ds Max
- Subdivision displacement in View-dependent mode is not calculated correctly for orthographic views

#### VRayFur

- VRayFur does not generate proper defocusAmount render element with motion blur

#### VRayHDRi

- Displaying parameters in the Compact Material Editor reinitializes ActiveShade rendering
- Elliptical filtering is very slow with displacement

#### VRayLight

- Crash when changing type in creation mode

#### VRayNormalMap

- Faceted results on subdivided meshes

#### VRayOrnatrixMod

- Hair does not render when loaded through an XRef object
- Hairs get occluded when light, camera and hairs are linked to an animated object

#### VRayProxy

- Automatically create proxies loads vmeshes very slow
- Incorrect normals geometry with mirrored transformation
- Loading a specific Alembic file with particles crashes 3ds Max
- NaN pixels with in the V-RayRawShadow and V-RayRawLighting render elements
- Slow down when loading Alembic files with many meshes in 3ds Max 2017
- Visibility lists are incorrectly refreshed

#### VRaySamplerInfo

- Multi-sampled motion blur produces artifacts on animated proxies

#### VRaySkinMtl

- Doesn't work with the Vexus material from John Martini

#### VRaySky

- Deleted V-RaySun still appears in the V-RaySky
- Find V-RaySun from an XRef'd scene when using V-RaySky

#### VRayStochasticFlakesMtl

- Does not appear in the Material Editor when V-Ray RT/GPU is selected as render engine

#### VRayToon

- Black color in Width map produces artifacts in the RGB and render elements

#### VRayTriplanarTex

- Crash when connected to bump slot through V-RayNormalMap
- Invalid bump normals warnings when source texture returns zero UVW coordinates
- Normal maps are not rotated properly
- Wrong tiling when plugged into bump map slot

#### VRayVolumeGrid

- 3ds Max crashes when playing animation with Time Bend Controls mode set to Loop
- Artifacts with Grid-based Self-Illumination
- Bucket artifacts with a moving grid using Phoenix Light Cache together with motion blur
- Different render result when rendering on CPUs with different number of cores
- Each time a render diagram is expanded or collapsed, it is fitted again
- Emissive lights are calculated in V-Ray RT even when the Fire channel does not exist
- Geometry behind simulator occludes render elements
- It is possible to open the right click menu when moving a point in the diagrams or gradients
- Interface lag when looking at a missing frame from a very long cache sequence
- Motion blur for volumetrics does not take into account Interval center
- Per-axis zoom in the shading diagrams does not respect the cursor position
- Rendering with motion blur and duration=0 will preprocess forever
- Scene saved with the old curves in Simple Smoke mode always has Inactive transparency diagram
- Scrubbing the timeline with animated Direct Cache index leads to 3ds Max crash
- The Fire Color and Intensity curves should act as a whole when fitted
- V-Ray RT won't render smoke shaded by Smoke channel
- Volumetric Geometry mode creates holes in Alpha at geometry intersection when Jittering is enabled
- When editing diagram handle coordinates, Smooth Bezier handles stop working properly
- Wrong velocity scaling with imported volumetric simulation from Houdini

#### V-Ray Light Lister

- Rows are overlapping

#### ply2vrmesh.exe

- Node transformation is applied only to the vertex channel but not to the normals channel

#### vdnoise.exe

- Crash with 8K OpenEXR files

#### V-Ray Installer

- Help button opens the system browser rather than default browser