RELEASE NOTES FOR NUKE 7.0V9

Release Date

19 September 2013

Supported Operating Systems

- Mac OS X 10.6 "Snow Leopard" (64-bit) or above
- Windows XP Professional x64 Edition or above
- Linux RHEL 5.4 for Intel64 or AMD64

Requirements for NukeX GPU Acceleration

To take advantage of GPU acceleration, you need to have:

- A NukeX license.
- An NVIDIA GPU with compute capability 1.1 or above. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

NOTE: The compute capability is a property of the GPU hardware and can't be altered by a software update.

- Graphics drivers capable of running CUDA 4.0 or above:
  On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU:
  - Windows 275.36 (released June 2011) or later
  - Linux 270.41.19 (released May 2011) or later

  On Mac, the CUDA driver is separate from the NVIDIA graphics driver and will need to be installed, if you don't have it already. Graphics drivers can be downloaded from www.nvidia.com/drivers and the minimum requirements for CUDA 4.0 are as follows:
  - Mac OS X 256.02 (released June 2011) or later

New Features

- BUG ID 36378 - MergeMat: A new **also merge** dropdown has been added to the properties panel allowing you to merge additional channel sets.

Feature Enhancements

- BUG ID 34656 - DeepRead: You can now use custom file extensions for Deep **.exr** files in the same way as standard files.
  For example, adding an **odzReader.tcl** file to your **.nuke** directory containing the lines:
  ```
  load "exrReader.so"
  add_file_extension_alias "odz" "exr"
  ```
  Allows Nuke to read **.odz** files using the **.exr** reader.

Bug Fixes

- BUG ID 14637 - Setting the Reformat node **type** to **scale** caused proxy to behave incorrectly.
- BUG ID 21327 - Mac OS X and Windows only: Dragging R3D files from the OS file browser set the wrong **gamma space** curve.

NOTE: This issue is still occuring on Linux builds. See Other Known Issues for more information.

- BUG ID 21760 - RotoPaint: It was not possible to expression link the Transform tab **center x** and **y** values.
- BUG ID 26224 - The Ramp node's Viewer handles did not update as expected.
- BUG ID 30535 - The right-click **Edit** > **Generate** function could not create more than 4002 keyframes for animated controls.
- BUG ID 33016 - Dope Sheet: Changing the **Interpolation** type for Roto spline keys had no effect.
- BUG ID 33916 - Reading a different Alembic file into a Camera already reading an Alembic file caused Nuke to crash.
- BUG ID 34543 - Tracker: Copying and pasting nodes containing expression links did not update the links to point to the new nodes.
- BUG ID 35201 - Nuke Assist: Pasting in a tree of nodes failed when the first unsupported node was reached.
- BUG ID 35203 - Nuke could not read a particular customer **.hdr** file.
- BUG ID 35244 - Lens Distortion: Adjusting **Radial Distortion** did not update the **Card Parameters**.
- BUG ID 35329 - RotoPaint: Certain properties panel controls returned to their default values when switching between paint tools.
- BUG ID 35461 - Nuke Assist: Buttons inside gizmos were disabled.
- BUG ID 35500 - It was not possible to enable **interactive** mode for lights if the Camera connected to the ScanlineRender node was reading from a file.

- BUG ID 35989 - The output of a Merge node from inputs with identical bounding boxes increased the bounding box's size to 0 on the **Y** axis.
- BUG ID 36011 - RotoPaint: Merging empty RotoPaint nodes with other images, when the Merge node's **set bbox to** control was set to **union**, extended the bounding box to the format's origin (0,0).
- BUG ID 36039 - Particles: Changing the particle input from sprite to geometry, or vice versa, occasionally caused Nuke to crash.
- BUG ID 36209 - OCIO: The Viewer **gain** and **gamma** controls ignored the alpha channel when OCIO Viewer LUTs were used.
- BUG ID 36269 - Particles: Using **emit from** > **in order** with a high **emission rate** caused Nuke to crash.
- BUG ID 36278 - Project3D: Projecting onto the same geometry with PrmanRender and ScanlineRender did not produce similar results.
- BUG ID 36306 - Particles: ParticleEmitters with geometry connected to the particle input caused Nuke to crash if the orientation settings produced NaN (not a number) results.
- BUG ID 36337 - OCIO: Enabling **Preferences** > **Viewer** > **use GPU for Viewer when possible** and using OCIO Viewer LUTs caused the alpha channel to disappear.
- BUG ID 36461 - Attaching a HueCorrect node down-stream of an **.exr** containing NaN (not a number) pixels to a Viewer caused Nuke to crash.
- BUG ID 36810 - Linux and Windows only: The Viewer zoom shortcut **Windows Key** + middle mouse button did not work.
- BUG ID 37488 - Write: It was possible to select **file type** > **abc** in the standard Write node's properties panel, even though Nuke cannot write Alembic files without using a WriteGeo node.

Known Issues and Workarounds

This section covers known issues and gives workarounds for them.

Known Issues Specific to Nuke 7.0

- BUG ID 38018 - Alembic: Reading in heavy **.abc** files can cause Nuke to crash.
- BUG ID 37854 - Windows only: Nuke does not currently support QuickTime files larger than 2 GB.
- BUG ID 37775 - Frames in a transcoded sequence containing transitions occasionally appear to be black, not faded-in/out or cross-dissolved as expected. This is due to an issue with Nuke 7.0v7, when rendering from the command line.

  This rendering bug will be addressed in a future version of Nuke. In the meantime, if you are experiencing unexpected results with transcoded transitions from Hiero, you can do either of the following as a work-around:

  - Change the renderer path to Nuke 7.0v6:

    In **Preferences** > **Nuke/Export**, point the **Nuke Path** to Nuke 7.0v6 and enable **Use Specified Path for Hiero Renders**.

  - Render the **.nk** Script in the Nuke GUI:

    Enable **Keep Nuke Script** on your export preset, locate the **.nk** script, open it in Nuke and render it out from the GUI.
- BUG ID 37416 - RotoPaint: Expression linking the **rotate** control to other nodes has no effect when the control is adjusted.
- BUG ID 37179 - RotoPaint: The Root layer is not transformed as expected when driven by expressions applied to the RotoPaint controls.
- BUG ID 37060 - Particles: Connections between the **Particles** > **P_FogBox** toolset and ParticleExpression nodes are not saved when scripts are saved and reloaded.
- BUG ID 37031 - Windows only: Adding a Tracker node directly after an OFlow node and then adding and adjusting a tracking anchor occasionally causes Nuke to crash.
- BUG ID 37018 - Some readers and writers, such as **objreader** and **exrwriter**, don't accept certain characters (ÆØ or Å) in the filepath field.
- BUG ID 37011 - Mac OS X only: The QtUiTools library is missing from <install directory>/plugins/PySide.
- BUG ID 37684 - Dope Sheet: Deleting all keyframes from a roto shape resets all points to the format origin (0,0).
- BUG ID 36763 - Cloned Tracker nodes do not currently render from the command line.

- BUG ID 36741 - RotoPaint: Setting the **Project Settings** > **proxy mode** control to **format** and dragging points within a selection moves the points at the wrong scale.
- BUG ID 36605 - RotoPaint: Adjusting the **translate** controls using expression links from a Transform node with split views occasionally applies unwanted offsets.
- BUG ID 36249 - Setting a color curve expression in the ColorLookup node to use **x** (return current frame) occasionally causes Nuke to crash.
- BUG ID 35976 - Some CUDA code runs in render mode, even when the **--gpu** argument is omitted.

  You can disable all CUDA code by setting the FN_NUKE_DISABLE_CUDA environment variable to 1.
- BUG ID 35284 - Windows only: Exiting Nuke can be unacceptably slow, causing issues for render farms.

  Set the environment variable NUKE_USE_FAST_ALLOCATOR to 1 to work-around this issue.
- BUG ID 34357 - Adjusting **translate** or **rotate** values in Transform nodes upstream of Tracker nodes causes Nuke to become unresponsive.
- BUG ID 33254 - PlanarTracker's Roto node defaults to the **Select all** tool rather than **Bezier**. If you click on the Viewer, then change the tool and draw a shape, your shape is added to the **root** layer instead of **PlanarTrackerLayer1**. This means it's not considered for tracking, and tracking fails.

  The workaround is to:

  - make sure **PlanarTrackerLayer1** is selected in the Roto properties,
  - change to one of the shape tools before attempting to draw in Viewer, and
  - in the Roto properties, make sure a purple rectangle appears in the **PT** column to indicate that the shape is considered for tracking.
- BUG ID 33053 - ModelBuilder: Using the **Face Selection** tool in the 3D Viewer disables the Scale handles (**Ctrl/Cmd**+**Shift**).

  As a workaround, press **F** to fit the contents to the Viewer and then move the Viewer to a different angle before activating the Scale handles.

  As a workaround, click **Start in PLE** to run Nuke Assist as normal.
- BUG ID 32856 - PositionToPoints: Textures occasionally disappear during playback or when mousing over the Viewer.
- BUG ID 32832 - ParticleEmitter: Emitting from **faces** with **emit order** set to **uniformly** or **in order** causes **color from texture** to be ignored.
- BUG ID 32666 - FrameHold nodes have no effect on Deep nodes.
- BUG ID 32628 - DeepToPoints: Command line rendering appears to calculate renders even when render is set to **off**.

- BUG ID 32497 - The R3D parameter labels in Nuke aren't entirely consistent with REDCINE-X and Hiero.
- BUG ID 32472 - RotoPaint: Undoing transforms of shapes with modified points causes RotoPaint to become unresponsive.

  To work around this issue, deselect the shape by clicking away from it and then reselect it.
- BUG ID 32459 - RotoPaint: Undoing a point move that created a keyframe doesn't currently undo the keyframe creation.
- BUG ID 32457 - RotoPaint: In multi-view scripts, it is not currently possible to cut and paste a split shape.
- BUG ID 32353/32359 - Right-clicking on a point in the Viewer doesn't always update the available **Link to** > **Tracker linking dialog** or **Tracker** options.

  As a workaround, close and re-open the Roto/RotoPaint Properties panel to update the **Link to** menu.
- BUG ID 32340 - SplineWarp: **Ctrl/Cmd** drag-creating rectangles and ellipses doesn't display an overlay until pen-up.
- BUG ID 32219 - DepthToPosition: Reading depth information from the same layer as the **output** layer produces corrupt output.

  As a workaround, shuffle the depth information to an alternate layer.
- BUG ID 32118 - Card3D: When **motionblur** is enabled in the properties panel, FrameHold and TimeOffset nodes are ignored when connected to the **cam** or **axis** inputs.
- BUG ID 32083 - SplineWarp: Deleting all but one point on a curve resets its correspondence points to 0,0, which cannot be undone.
- BUG ID 32082 - SplineWarp: Correspondence points are too sensitive to when control points are removed.
- BUG ID 31431 - Linux only: The current version of the FFmpeg library used by Nuke reads the height of HD **.mov** files at 1088, rather than 1080.

  As a workaround, use a Reformat node to force the input to the correct format.
- BUG ID 31310 - TimeOffset: Checking **reverse input** doesn't affect cameras, lights, or axes.
- BUG ID 31238 - RAM cache: Any action that changes a frame's hash value, it's unique identifier, causes the cache to release. Actions such as adjusting the Viewer **Gamma**, **Gain**, or **channels** dropdown affect the frame hash.
- BUG ID 30903 - Windows only: Some scripts render significantly slower on Windows than on Linux.

  Set the environment variable NUKE_USE_FAST_ALLOCATOR to 1 to work-around this issue.

- BUG ID 30502 - Copying and pasting spline keys does not work as expected in the Dope Sheet.

NOTE: This known issue only applies to Roto and SplineWarp keys.

- BUG ID 30429 - SplineWarp: Transform links are not maintained when the source curve is moved to a new layer.
- BUG ID 30256 - Script Editor: Flagging a control as invisible using **setFlag()** is not honored when the node is copy/pasted in the Node Graph.
- BUG ID 30116 - Tracker: Adding tracking anchors with an OFlow node upstream of the Tracker causes Nuke to become unresponsive.
- BUG ID 29677 - Connecting a FrameHold node to an animated Camera and connecting both to a Scene node only displays the animated Camera in the Viewer. There should be two cameras: one static and one animated.
- BUG ID 29382 - Tracker: Tracking keyframes with different sized patterns doesn't work as expected.

  As a workaround, keyframe patterns should, where possible, be of comparable sizes.
- BUG ID 29083 - Using **Create Camera** in the 3D Viewer only sets position and rotation. The **focal length** of the new camera does not match that of the Viewer camera.
- BUG ID 28838 - Gizmos containing Roto/RotoPaint nodes should be recreated in Nuke 7, but bear in mind that they won't be backwards compatible with Nuke 6 once converted, unless you follow the instructions below:

  Nuke 6 scripts containing Roto display a conversion prompt when you open them in Nuke 7:
  - Click **Save As** to convert the script to the Nuke 7 Roto format, or
  - Click **Ignore** to load the Nuke 6 format into Nuke 7. You might select this option if:
    - You don't intend to make any changes, or
    - You want to overwrite the file with a Nuke 7 only Roto format when saving.

  If you want Nuke 7 scripts to load in Nuke 6, use the **convertToNuke6** or **convertDirectoryToNuke6** Python functions when running Nuke 7 in terminal only mode:

NOTE: The conversion functions cannot convert stereo-split curves as they are not supported by Nuke 6.

- To convert individual **.nk** scripts:
- convertToNuke6(fromScript, toScript, overwrite = False)
- To convert all **.nk** scripts in a given directory:
  `convertDirectoryToNuke6(fromDir, toDir, matchPattern =".*\.nk", overwrite = False)`

NOTE: The pattern is a regular expression.

An example single script conversion and rename to the same directory, from the command line (terminal):

```
$ <NukeInstallDir>/Nuke7.0v1 -t

>>> import nuke.rotopaint
>>> nuke.rotopaint.convertToNuke6("/tmp/myRoto7.nk", "/tmp/myRoto6.nk")
```

- BUG ID 27211 - Alembic: The state of the Viewer **Lock Frame** control is not always honored for **.abc** files.

  As a workaround, ensure that **ReadGeo** > **read on each frame** is enabled.
- BUG ID 26855 - Roto/RotoPaint/SplineWarp: The **undo** and **redo** buttons in the properties panel didn't work as expected and have been disabled.

  The workaround is to use the undo (**Ctrl/Cmd+Z**) and redo (**Ctrl/Cmd+Y**) hotkeys instead.

  As a workaround, use the **Edit** menu or **Ctrl/Cmd+Z** instead.
- BUG ID 19542 - Particles: Previously, ParticleEmitters checked if a given particle collided on the next frame, and if so, spawn at the current position (i.e. above the plane). In Nuke 7.0, the spawn only occurs at the actual collision point (i.e. on the plane).
- BUG ID 14460 - Roto: Unfurling the **format** and **mask** controls in the Properties panel can cause controls to be hidden by the curves list.

  As a workaround, resize the Properties panel to reveal the controls.
- Plug-ins installed using the Nuke Plug-in Installer may not work correctly as they were complied against an earlier version of Nuke.

Other Known Issues

AudioRead

- BUG ID 18924 - Changes to the **rate** control value are not honored when **ratesource** is toggled between **file** and **custom**.
- BUG ID 18666 - Changing the sample rate has no effect on playback in a Flipbook.

- BUG ID 18465 - The **time range** control doesn't limit the range when an **endtime** is specified.
- BUG ID 18451 - Flipbooking doesn't honor the time range knob.
- BUG ID 18217 - Redo keyframe generation doesn't replace the keys.
- BUG ID 18213 - Changing **Draw Style** in the Curve Editor or Dope Sheet doesn't redraw the curves correctly.

FrameCycler

- BUG ID 17199 - There aren't appropriate LUTs in 6.2v3 for flipbooking some colorspaces including rec709, Gamma 1.8, Gamma 2.2, Panalog, REDLog, ViperLog and REDSpace. As a workaround, you need to select **Burn in the LUT** in FrameCycler for an authentic color reproduction.
- BUG ID 15204 - There are currently some graphical glitches occurring when flipbooking certain images. The workaround is to change the cache precision in FrameCycler. To do this, bring up the settings menu in FrameCycler (press **S**), go to **Options** > **Cache** and change the **Cache precision** option to either **16 bit float** or **8 bit int + 16 bit float**.
- BUG ID 15046 - Flipbooking to FrameCycler with images greater than 4K in width, and with a non-1 pixel aspect ratio, skews the images (in FrameCycler). This is an issue with FrameCycler 2009, and we are awaiting a fix.
- We direct FrameCycler to write to the user's Nuke temp directory (NUKE_TEMP_DIR) for its user settings files. You can redirect this by modifying the FrameCycler/settings/Global_Settings.xml file that can be found within your Nuke installation.
- Flipbooking with FrameCycler 2009 may not work on some older Intel and AMD processors with certain graphics card configurations. You can set the FC_PATH environment variable to point to a previous version of FrameCycler (that is FrameCycler 2008 found in Nuke 6.0v7). For information on setting environment variables, please refer to the *Configuring Nuke* chapter in the Nuke *User Guide*.

  For example, you can point FC_PATH to the following locations (check the correct path to the installation on your machine):

  - **Mac**:

    /Applications/Nuke6.0v7-32/Nuke6.0v7.app/Contents/MacOS/FrameCyclerOSX/bin/FrameCycler

  - **Windows**:

    Program Files\Nuke6.0v7\FrameCycler\Windows\bin\FrameCycler.exe

- **Linux**:
  /usr/local/Nuke6.0v7-32/FrameCyclerCentOS4.4/bin/framecycler

Please contact support@thefoundry.co.uk if you need older versions of The Foundry software.

Linux Version

- BUG ID 21327 - Linux only: Dragging R3D files from the OS file browser sets the wrong **gamma space** curve.

Mac OS X Version

- BUG ID 22062 - Nuke doesn't currently give the option to restore the autosave of an unsaved script, except when Nuke is run from the command line.
- BUG ID 13638 - The following graphics cards are not currently supported for Mac:
  - ATI Radeon X1600
  - ATI Radeon X1900

  Users with these cards will be able to render from the command line, but in GUI sessions, the Node Graph will render incorrectly due to a requirement of OpenGL 2 drivers.
- BUG ID 12048 - Nuke crashes if you activate screen sharing when there is no screen plugged in.
- BUG ID 11776 - Node text appears aliased, unclear, or garbled at certain zoom levels.

Particles

- BUG ID 18268 - Enabling **color from texture** always renders a solid white alpha for the texture.
- BUG ID 17520 - Geometry representation textures are displayed even when **display** is set to **off**.
- BUG ID 17243 - Using sprites instead of geometry representations causes particles to render behind the 3D grid lines.

PlanarTracker

- BUG ID 19683 - After adjusting the planar surface using the **Correct Plane** Viewer button, you have to undo twice for the planar surface to return to its original position.
- BUG ID 19563 - PlanarTracker: Detected or tracked features are not offset by the origin of the input image's bounding box.

To avoid this, you can add a Crop node before PlanarTracker's associated Roto node.

- BUG ID 19240 - When Viewer **downrez** is greater than 1, the **clearTrackDataForward** button currently offsets bezier shapes to fit the root format.

  To return the shape to its original size and position, advance the sequence one frame.

PrmanRender

- BUG ID BUG ID 27648 - After a security update for Mac OS X, Nuke is unable to load the PrmanRender plug-in when in GUI mode.

  See http://support.apple.com/kb/HT5281 for more information.

  As a workaround, set the following environment variables:

```
export RMANTREE=/Applications/Pixar/RenderMan.app/
   Versions/RenderManProServer-15.1
export DYLD_LIBRARY_PATH=$RMANTREE/lib
```

  Then launch Nuke from the command line.

Python

- BUG ID 36594 - Viewer Processes cannot be unregistered using the **init.py** or **menu.py** files.
- BUG ID 8063 - Creating many new nodes with **nuke.createNode()** and the in-panel argument at default (True) may crash when too many node control panels are created too quickly. The workaround is to pass the in-panel argument as False or else use **nuke.nodes.NodeClass()** (where NodeClass is the type of node to create) to create the node and then connect it to the currently selected node manually.
- BUG ID 6455 - You should not call the Python command **nuke.restoreWindowLayout()** from the Script Editor as that can cause Nuke to crash. Instead, you can use the same command from your menu.py, restore layouts by selecting **Layout** > **Restore Layout**, or use a custom menu or toolbar item.
- Nuke sometimes reports errors in Groups and Gizmos, appearing similar to the following:

  groupName.NodeName.knobname: unexpected 'k' in '0.knobname'

  The problem is most likely that there is an expression that is using the input TCL command and doesn't validate that there is an input connected. An example expression:

  [input parent 0].translate.x

  The input command returns 0 when it can't find the requested input, which generates an expression of '**0.knobname**' that doesn't refer to anything. The fix is to restructure the expression to use the value TCL com-

mand and specify a default value to return in the case that the expression is invalid. It takes the form:

[value [input parent inputnumber].knob defaultValue]

Here is the modified example:

[value [input parent 0].translate.x 0]

The modified example will return 0 in the event that there is no input 0, and no longer result in an error message.

- There is a Python syntax conflict when assigning knob names on the fly with **nuke.nodes.<node>()** if the knob is called 'in'.

  For example, this will give a syntax error:

  nuke.nodes.Shuffle(in = 'depth')

  while this works because 'in' is a string here and not a keyword:

  sh = nuke.nodes.Shuffle()
  sh['in'].setValue('depth')

QuickTime ProRes 4444

- BUG ID 17360 - Some customers have experienced unexpected shifts in chroma values when using the ProRes 4444 **.mov** codec.

  A possible workaround is to modify the **GlobalSettings.csv** found in the following locations:

NOTE: Please be aware that this workaround is not reliable in every case.

Mac OS X

/Applications/Nuke7.0v6/Nuke7.0v6.app/Contents/Resources/

Windows

C:\Program Files\Nuke7.0v6\

Add the following lines to the bottom of the **.csv** file:

```
# Apple ProRes 4444
encode,ap4h,appl,any,any,512
decode,ap4h,appl,any,any,512
```

Render Codecs

There have been issues where rendering with certain codecs makes Nuke crash. Due to this, we recommend the following:

- If you're using the Sorensen Video codec, it's recommended you use the Sorensen Video 3 codec instead. If you're unable to switch to Sorensen Video 3, try using a format smaller than 2K for better performance.

- If you're experiencing crashes with Cineform HD, try updating your Cineform codec to version 5 or above. You may need to download the Neoplayer at http://estore.cineform.com/neoplayer.aspx.
- If you're using Avid Meridien, you should only write out in NTSC and PAL.

RotoPaint

- BUG ID 31552 - Point handles for paint strokes, whose lifetime doesn't extend to the current frame, disappear when drag-selected.

  As a workaround, select the shape in the **curves** list to re-display the points.
- BUG ID 30920 - Expression linking extra matrices in the **Transform** tab doesn't work as expected.

NOTE: This also applies to SplineWarp matrices.

- BUG ID 30551 - Several levels of smoothing applied to one shape are carried over to subsequent shapes for a single smooth operation.
- BUG ID 29170 - The cut, copy, and paste keyboard shortcuts don't work for entries in the **curves** list.
- BUG ID 11524 - Adding strokes/shapes in RotoPaint is slow when there is another RotoPaint after it.
- BUG ID 9238 - Painting on Mac OS X and Linux is slower when the paint cursor is near the edges of the screen.
- The foreground onion skin overlay updates as you paint. This will change so the overlay only updates with the new stroke on pen up.
- It is not currently possible to clone RotoPaint nodes.
- Interactivity of laying down strokes/shapes in the Viewer may be faster when motion blur is disabled on the layer you are working in.

Warpers

- BUG ID 32079 - SplineWarp: Moving correspondence points on curves with no keyframes cannot currently be undone.
- BUG ID 31322 - SplineWarp/GridWarp: Preview doesn't handle upstream transforms correctly.
- BUG ID 20000 - GridWarp: When using cropped input, moving control points causes the Viewer to display the cropped image and the black area between the crop box and the format when merged over a background.
- BUG ID 19995 - GridWarp: Locked source and destination grids still allow adding and removing grid lines.

- BUG ID 19835 - SplineWarp/GridWarp: The Viewer LUT is incorrect in **morph** mode, when **mix** is set at an intermediate value.
- BUG ID 19755 - SplineWarp: Placing correspondence points at each end of an open spline causes rendering problems.
- BUG ID 19565 - GridWarp: The Viewer does not show the correct mix amount when in **morph** mode with **mix** set at an intermediate value.
- BUG ID 19386 - GridWarp: All keyframes are removed from the Dope Sheet after undoing, rather than just the latest, and the keyframes remain on the Timeline and in the Properties pane.
- BUG ID 19148 - SplineWarp: Rendering fails if a curve is reduced to a single point.
- BUG ID 19079 - SplineWarp: The **C** hotkey does not currently select the **Add Correspondence Point** tool.
- BUG ID 18712 - GridWarp: The timeline currently shows both source and destination keyframes, even if a grid is not visible in the Viewer.
- BUG ID 18709 - GridWarp: Rotating the transform jack with both grids selected, but in different positions, does not undo as expected.
- BUG ID 18342 - SplineWarp: The spline keyframe + button does not add keys to the Curve Editor or Dope Sheet.
- BUG ID 18304 - GridWarp: Existing control point keyframes are not cleared when you draw a new grid using the **Draw Boundary** Viewer button.
- BUG ID 18019 - GridWarp: You cannot select all grid points in the Curve Editor using **Ctrl/Cmd**+**A** shortcut.
- BUG ID 18012 - GridWarp: The grid can flicker between white and grey when zooming in and out of the Viewer, particularly when the grid is subdivided.
- BUG ID 17697 - GridWarp: In stereo mode, the right view is labelled as **default** when you split controls into separate views.

Miscellaneous Known Issues

- BUG ID 32569 - Mac only: Textured objects occasionally disappear during playback when using DisplaceGeo and PositionToPoints nodes.
- BUG ID 31803 - Using **Shift**+drag on a control's animation icon only copies the value for the current frame, not the entire expression.
- BUG ID 31714 - In the Viewer settings, enabling **3D** > **show_prim_bbox** does not display individual bounding boxes for polymesh primitives.
- BUG ID 30173 - Manipulating 3D handles in the 2D Viewer is unreliable.
- BUG ID 29048 - OCIO: Using the ocionuke library in terminal mode results in an error.

- BUG ID 28921 - Windows only: Changing the 3D selection mode does not update until you click in the Viewer.
- BUG ID 28291 - Nuke crashes on startup if the **disk cache** location set in the **Preferences** is no longer available.
- BUG ID 21663 - Read: After reading in a stereo/multiview **.exr** file and choosing not to add new views to the project, subsequent reads of any stereo/multiview **.exr** files won't give the option to add new views.
- BUG ID 20431 - CameraTracker: It's not possible to pick colors in the Viewer with the control panel open.
- BUG ID 20204 - Multitexturing: When **Preferences** > **Viewers** > **Multiframe** is enabled, increasing **downrez** in the Viewer toolbar can cause textures to flicker in the 3D Viewer.

  You can switch back to **Classic** mode or avoid using proxy in 3D to work-around this issue.
- BUG ID 19933 - ReadGeo: Geometry occasionally doesn't display as a solid until you click in the Viewer.
- BUG ID 19185 - Attaching an FBX ReadGeo to the Viewer occasionally causes a slight graphical glitch in the Properties pane.
- BUG ID 18649 - The transform jack is currently scaling incorrectly from the corner pivot point.
- BUG ID 12505 - Motion Vector output has been improved, but still doesn't work properly because some large polygons are clipped by the front camera plane.

  You can minimize this effect by increasing the geometry **tessellation max** parameter.
- BUG ID 12424 - Ultimatte: Overlays are not updating correctly or reverting when panning or zooming.
- BUG ID 11620 - In the 3D Viewer, there is currently a conflict between 3D geometry selection and points drawn with RotoPaint. This only occurs if you have two Viewers open, one in 2D mode and the other in 3D mode, and you have the panel for the RotoPaint visible.
- BUG ID 9521 - Currently, the Nuke Viewer cannot cache very large plate sequences in float. The limit per frame is 50MB. If your frames are larger than this, you may need to switch to proxy mode for the caching to work.
- BUG ID 5922 - At the moment, cloning does not work properly with all OFX nodes. This affects, but is not restricted to, any nodes that have an analysis pass.
- BUG ID 5690 - Windows run-time libraries are not packaged properly with Nuke.

  Nuke runs correctly from a network install on Windows without specifically installing the run-time libraries, though we still recommend that you do so as there will still be some minor problems without them. For details,

please see *Installation on Windows* in the *Installation and Licensing* chapter of the Nuke *User Guide*.

- BUG ID 5083 - Flipbooking the output of the Anaglyph node asks which view you want to render. This question is unnecessary as the result is an anaglyph image. Irrespective of what view you choose, the flipbook output is the same.
- File types in Windows and Mac OS X are associated with the standard version of Nuke by default, so if you save a script on NukeX using features that are only included in NukeX (such as CameraTracker or FurnaceCore) and then double-click on the script icon to open it, it will open in standard Nuke instead of NukeX.
- If you have trouble with FBX files, it may be because they were written with an older version of FBX. If they load very slowly, it is also possible that they are ASCII rather than binary. To get around these problems, you can use the FBX converter on the Autodesk web site. It converts between various different formats, including older FBX versions, ASCII, and binary, and is available on Windows, Mac OS X, and Linux.

  To download the FBX converter:

  1. Go to http://usa.autodesk.com/adsk/servlet/pc/item?siteID=123112&id=10775855 (or click here)

  2. Scroll down to **FBX Converter** and click on one of the links to start the download.
- CameraTracker: Canceling lens distortion initialization results in corrupt tracks.
- 3D Camera: If you want to navigate through the 3D point cloud created by the CameraTracker node when using **Create Scene**:
  - Select the Camera that was created in the 3D view when using the **Create Scene** button.
  - Press **F** to focus on the selected Camera. You can now navigate around the cloud. Do not try to focus (using **F**) on the point cloud. The resulting tumble camera movement is likely to be jumpy.
- PrmanRender: In the Nuke camera, the **window roll** control is not yet mapped to RenderMan.

Developer Notes

Here are the changes relevant to developers.

NOTE: See **Help** > **Documentation** from the Nuke menu bar for more information.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 28490 – Importing gizmos when **addOnCreate()** was set displayed a **Foundry license de-coupled** error.
- BUG ID 33005 – Evaluating **node.knobs()** in a Python **OnCreate** callback in a Transform node disabled the numeric pad nudge functions.
- BUG ID 34857 – The **nuke.Undo().cancel()** method did not work as expected.

RELEASE NOTES FOR NUKE 7.0v8

Release Date

11 June 2013

Supported Operating Systems

- Mac OS X 10.6 "Snow Leopard" (64-bit) or above
- Windows XP Professional x64 Edition or above
- Linux RHEL 5.4 for Intel64 or AMD64

Requirements for NukeX GPU Acceleration

To take advantage of GPU acceleration, you need to have:

- A NukeX license.
- An NVIDIA GPU with compute capability 1.1 or above. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

NOTE: The compute capability is a property of the GPU hardware and can't be altered by a software update.

- Graphics drivers capable of running CUDA 4.0 or above:
  On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU:
  - Windows 275.36 (released June 2011) or later
  - Linux 270.41.19 (released May 2011) or later

  On Mac, the CUDA driver is separate from the NVIDIA graphics driver and will need to be installed, if you don't have it already. Graphics drivers can be downloaded from www.nvidia.com/drivers and the minimum requirements for CUDA 4.0 are as follows:
  - Mac OS X 256.02 (released June 2011) or later

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 36190 – Tracker: Expanding tracking anchor search areas caused Nuke to crash.

Developer Notes

Here are the changes relevant to developers.

NOTE: See **Help** > **Documentation** from the Nuke menu bar for more information.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

There are no bug fixes in this release.

RELEASE NOTES FOR NUKE 7.0v7

Release Date

5 June 2013

Supported Operating Systems

- Mac OS X 10.6 "Snow Leopard" (64-bit) or above
- Windows XP Professional x64 Edition or above
- Linux RHEL 5.4 for Intel64 or AMD64

Requirements for NukeX GPU Acceleration

To take advantage of GPU acceleration, you need to have:

- A NukeX license.
- An NVIDIA GPU with compute capability 1.1 or above. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

NOTE: The compute capability is a property of the GPU hardware and can't be altered by a software update.

- Graphics drivers capable of running CUDA 4.0 or above:
  On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU:
  - Windows 275.36 (released June 2011) or later
  - Linux 270.41.19 (released May 2011) or later

  On Mac, the CUDA driver is separate from the NVIDIA graphics driver and will need to be installed, if you don't have it already. Graphics drivers can be downloaded from www.nvidia.com/drivers and the minimum requirements for CUDA 4.0 are as follows:
  - Mac OS X 256.02 (released June 2011) or later

New Features

There are no new features in this release.

Feature Enhancements

- BUG ID 35259 - A Modo equivalent **3D control type** has been added to **Preferences** > **Viewers** > **Interaction**.
- BUG ID 35548 - The examples in the documentation for the command line rendering **-F** frame range argument have been improved.
- BUG ID 35658 - Alembic: Load times and playback speeds have been improved for **.abc** files, particularly where the geometry is transform animated.

Bug Fixes

- BUG ID 16894 - Windows only: Enabling **PrmanRender** > **RIB** > **filter** did not work as expected.
- BUG ID 17104 - Particles: Attaching a Constant to the ParticleEmitter **particle** input did not display color in the 3D Viewer.
- BUG ID 21535 - Windows only: Playback did not reach 24 fps when **downrez** was set to **32**.
- BUG ID 23236 - The Ramp node's Viewer handles did not pivot until mouse up.
- BUG ID 25365 - Playback speed did not reach the full framerate when Viewer **Stereo Modes** was set to anything other than **Single**.
- BUG ID 31965 - Windows XP only: Rendering ZDefocus or Convolve nodes on the CPU caused Nuke to crash.
- BUG ID 32791/32794 - ParticleEmitter: Disconnecting a **particle** input when an emitter was connected to a Viewer caused Nuke to crash.
- BUG ID 33018 - ReConverge: The **use Ocula if available** check box has been removed. ReConverge no longer uses Ocula, even when available.
- BUG ID 33340 - ModelBuilder: Pressing **Enter** while adding geometry caused Nuke to crash.
- BUG ID 35024 - Hiero<>Nuke: Transcode scripts created in Hiero displayed the message **Reader did not set bounding box** when imported into Nuke.
- BUG ID 35197 - Windows only: Using **Ctrl**+**C** in Nuke when Hiero was open caused Nuke to become unresponsive.
- BUG ID 35297 - When the FN_NUKE_DISABLE_TMPLIC_NOTIFY_DIALOG environment variable was set, Nuke 7.0v6 launched straight into PLE mode if no license was available.
- BUG ID 35388 - OCIO Colorspace and OCIO Display used the knob index rather than the names of knob values, causing the wrong LUT to be used if the OCIO config file was changed manually.
- BUG ID 35496 - A Viewer was removed from a customer script due to an invalid viewerProcess.

- BUG ID 35552 – Some cross-referenced pages in the *Getting Started Guide* were incorrect.
- BUG ID 35554 – Copying **.mov** Read nodes using **Ctrl**+**C** during thumbnail rendering caused Nuke to crash.
- BUG ID 35581 – Disabling **Preferences** > **Viewers** > **use GPU for Viewer when possible** slowed the playback rate of Stereo Interlaced footage in the Viewer.

Bugs Fixes Omitted from Previous Release Notes

The following bugs were incorrectly omitted from previous Release Notes.

- BUG ID 22921 – Certain scripts contained inconsistencies in rendered output between ScanlineRender and PrmanRender.
- BUG ID 28094 – Alembic: Writing point clouds to **.abc** files did not write the point size correctly.
- BUG ID 32250 – RotoPaint: The color palette was hidden after each paint stroke in the Viewer.
- BUG ID 32506 – Windows only: Duplicating a tracker and expression linked transform linked to the inverse of the source tracker.
- BUG ID 32787 – Geometry with a midrange polygon count, followed by a Normals node, caused Nuke to crash if the **attrib name** field was changed to **Cf** or **Vel**.

Developer Notes

Here are the changes relevant to developers.

NOTE: See **Help** > **Documentation** from the Nuke menu bar for more information.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 23431 – Calling **changed()** on a RotoKnob cleared the selection highlight.
- BUG ID 35487 – Calling **Link_Knob.getLinkedKnob()** caused Nuke to crash when linked to **disable** knobs.

RELEASE NOTES FOR NUKE 7.0v6

Release Date

8 April 2013

Supported Operating Systems

- Mac OS X 10.6 "Snow Leopard" (64-bit) or above
- Windows XP Professional x64 Edition or above
- Linux RHEL 5.4 for Intel64 or AMD64

Requirements for NukeX GPU Acceleration

To take advantage of GPU acceleration, you need to have:

- A NukeX license.
- An NVIDIA GPU with compute capability 1.1 or above. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

NOTE: The compute capability is a property of the GPU hardware and can't be altered by a software update.

- Graphics drivers capable of running CUDA 4.0 or above:
  On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU:
  - Windows 275.36 (released June 2011) or later
  - Linux 270.41.19 (released May 2011) or later

  On Mac, the CUDA driver is separate from the NVIDIA graphics driver and will need to be installed, if you don't have it already. Graphics drivers can be downloaded from www.nvidia.com/drivers and the minimum requirements for CUDA 4.0 are as follows:
  - Mac OS X 256.02 (released June 2011) or later

New Features

Nuke 7.0v6 includes a new feature, Nuke Assist. Licensed as part of a NukeX maintenance package, Nuke Assist is intended for use as a workstation for artists performing painting, rotoscoping, and tracking. Two complimentary licenses are included with every NukeX license.

To launch Nuke Assist, do one of the following:

- Double-click the Nuke Assist icon on the Desktop.
- Double-click the Nuke Assist icon (or list item) from the install directory. For example, on Mac: /Applications/Nuke7.0v6/
- Using a command prompt, navigate to the Nuke application directory and enter:
  `./Nuke7.0v6 --nukeassist`

NOTE: On Mac OS X, you shouldn't move the Nuke Assist bundle from its original installation folder, as this prevents it from working correctly.

You can load projects created in Nuke and NukeX and work as normal, within the constraints of Nuke Assist. The Viewer renders the output of the node tree whether the components are supported or not. Any unsupported nodes and plug-ins in the Node Graph are outlined in red and their controls are grayed out. The following nodes are supported by Nuke Assist:

Image			
Checkerboard	ColorBars	ColorWheel	Constant
Read	Viewer		
Draw			
Radial	Ramp	Rectangle	Roto
RotoPaint			
Time			
FrameBlend	FrameHold	FrameRange	TimeEcho
TimeOffset			
Channel			
Add	Copy	ChannelMerge	Remove
Shuffle	ShuffleCopy		
Color			
Invert	OCIO CDLTransform	OCIO Colorspace	OCIO Display
OCIO FileTransform	OCIO LogConvert		
Keyer			
Keyer			
Merge			
AddMix	Dissolve	KeyMix	Merge
Premult	Switch	Unpremult	

Transform			
Crop	CornerPin	PlanarTracker	Reformat
Tracker	Transform	TransformMasked	
Views			
JoinViews	OneView	ShuffleView	Split and Join
Stereo Anaglyph	Stereo MixViews	Stereo ReConverge	Stereo SideBySide
Metadata			
AddTimeCode	CompareMetadata	CopyMetadata	ModifyMetadata
ViewMetadata			
Other			
Backdrop	Dot	Group	Input
Output	PostageStamp	StickyNote	

As well as limiting the nodes available, Nuke Assist does not support:

- Rendering output using Write nodes.
- Editing unsupported node or plug-in controls, including those within gizmos, groups, and precomps.
- Adding unsupported nodes or plug-ins using Python.

Feature Enhancements

- Nuke now reads R3D file metadata and converts the **gamma space** setting to **Linear** automatically.
  Click **Load Settings** in the properties panel to apply the **gamma space** specified in the file.
- Nuke's performance when handling Alembic (**.abc**) files has been improved.
- BUG ID 8253 - Nuke now supports ARRIRAW files, which use the **.ari** file extension. Nuke uses the same ARRIRAW SDK version as Hiero to maintain consistency.

NOTE: Bug 8253 was incorrectly omitted from the 7.0v1 Release Notes.

- BUG ID 34828 - CameraTracker: The **Create Points** button has been reverted to the Nuke 6.3 name, **Create Scene**, and now creates a Camera, PointCloud, and Scene with a single click.
- BUG ID 32554 - R3D file reader: Re-ordered the gamma and colorspace menu options to make them easier to find.

Bug Fixes

- BUG ID 10028 - Deleting and undoing cloned nodes caused corruption in saved scripts.
- BUG ID 19788 - Windows only: Writing frames occasionally displayed a **Can't rename .tmp to final, Permission denied** error.
- BUG ID 24413 - Nuke crashed when opening a script that had an undefined knob in a Write node.
- BUG ID 24785 - OCIOLookTransform was missing from the **Other** > **All plugins** menu.

  You can also access OCIOLookTransform by pressing **X** on the Node Graph, making sure **TCL** is selected in the dialog that opens, typing **OCIOLookTransform**, and clicking **OK**.
- BUG ID 29966 - RotoPaint: There was no visual representation at the playhead of keyframes set on the **stereo offset** control.
- BUG ID 30008 - Alembic: Particle lifetime settings were not respected when a particle system was written to the **.abc** format.
- BUG ID 30791 - Light nodes did not display an error when an Alembic file was specified in the **File** control.
- BUG ID 32891 - SplineWarp: The second correspondence point added between curves was always placed incorrectly.
- BUG ID 33922 - Linux only: Manually unzipping the installer file created a **Documentation/Python** directory with restrictive permissions.

  This directory now has drwxr-xr-x permissions.
- BUG ID 34363 - DeepToPoints didn't handle bounding boxes correctly.
- BUG ID 34385 - When rendering particles to Alembic (**.abc**) files, particle colors were only written on the first frame because Alembic doesn't support time-sampled colors. This sometimes gave particles the wrong color.

  Nuke now finds the frame with the most particles and writes the colors from that frame instead.
- BUG ID 34436 - Nuke's exit codes have now been documented in the end of the *Previews and Rendering* chapter of the *Nuke User Guide*. You can also find them here:

  0 = success

  1 = render error

  100 = license failure
- BUG ID 34734 - The Precomp node's label was missing, causing the node to be called **1** instead of **Precomp1**.
- BUG ID 34878 - CameraTracker: No warning was displayed when attempting to track and solve from a single frame.
- BUG ID 35009 - Nuke crashed when opening the Roto properties panel in a customer script that included a disabled SplineWarp node.

Developer Notes

Here are the changes relevant to developers.

NOTE: See **Help** > **Documentation** from the Nuke menu bar for more information.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 33060 – Alembic: The **setImportedItems()** method did not retain the current selection when new items were imported.

RELEASE NOTES FOR NUKE 7.0V5

Release Date

07 March 2013

Supported Operating Systems

- Mac OS X 10.6 "Snow Leopard" (64-bit) and 10.7 "Lion" (64-bit)
- Windows XP Professional x64 Edition or Windows 7 Home Premium x64
- Linux RHEL 5.4 for Intel64 or AMD64

NOTE: Mac OS X 10.8 "Mountain Lion" and Windows 8 are currently not supported as operating systems for Nuke.

Requirements for NukeX GPU Acceleration

To take advantage of GPU acceleration, you need to have:

- A NukeX license.
- An NVIDIA GPU with compute capability 1.1 or above. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

NOTE: The compute capability is a property of the GPU hardware and can't be altered by a software update.

- Graphics drivers capable of running CUDA 4.0 or above:
  On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU:
  - Windows 275.36 (released June 2011) or later
  - Linux 270.41.19 (released May 2011) or later

  On Mac, the CUDA driver is separate from the NVIDIA graphics driver and will need to be installed, if you don't have it already. Graphics drivers can be downloaded from www.nvidia.com/drivers and the minimum requirements for CUDA 4.0 are as follows:
  - Mac OS X 256.02 (released June 2011) or later

New Features

There are no new features in this release. For a list of features new to Nuke 7, see Release Notes for Nuke 7.0v1.

Feature Enhancements

- The DPX reader now supports infra red (IR) passes produced using FilmLight's Northlight film scanner.

Bug Fixes

- BUG ID 21971 - Processing a Convolve node took longer when **channels** was set to **all** rather than **rgba**, even if there were no other channels in the input.
- BUG ID 23025 - Certain customer scripts that included RotoPaint were slower in Nuke 6.3 than 6.2.
- BUG ID 25066 - Using a Switch node with F_Kronos while scrubbing the timeline caused a segmentation fault.
- BUG ID 25446 - Roto: When **motionblur** was enabled, setting **opacity** to 1 didn't always produce a fully opaque shape.
- BUG ID 25907 - The **output** control on Roto nodes did not default to **alpha**. RotoPaint nodes remain unchanged, defaulting to **rgba**.

NOTE: Bugs 23025, 25066, 25446, and 25907 above were incorrectly omitted from the 7.0v1 Release Notes.

- BUG ID 26508 - PointCloudGenerator: Right-clicking in the groups list on the **Groups** tab produced unnecessary animation menu items.
- BUG ID 31205 - LensDistortion: The results produced by **Analyze Sequence** differed slightly between Nuke 6.3v8 and Nuke 7, due to LensDistortion being updated to use the same tracking as CameraTracker and PlanarTracker.
- BUG ID 33710 - ZDefocus didn't always work if **use input channels** was checked.
- BUG ID 33820 - When using a customer Python script, Nuke 7.0 returned an additional error in the error console, causing issues with command line renders when error trapping.
- BUG ID 33968 - Using several Kronos and Denoise nodes caused Nuke to spawn a large very number of threads, which sometimes resulted in a crash.
- BUG ID 34027 - Roto shapes imported into Nuke 7.0 from other applications were offset after the Nuke script was saved and reopened.
- BUG ID 34176 - LensDistortion: When drawing a line with **Drawing Mode On** enabled, points were offset from the cursor.
- BUG ID 34206 - RotoPaint: Modifying keys in the Dope Sheet disconnected some keys from their curves in the Curve Editor.
- BUG ID 34217 - RotoPaint: B-spline point positions sometimes got reset to 0,0 after undoing an action.

- BUG ID 34286 - Roto: Moving keys in the Curve Editor and then undoing an action added more keys.

Developer Notes

Here are the changes relevant to developers.

NOTE: See **Help** > **Documentation** from the Nuke menu bar for more information.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 32266 - The SceneView knob shouldn't have required certain flags to be set for imported and selected items to be saved.
- BUG ID 33675 - Rendering a customer script with low available cache memory caused Nuke to crash, when MemoryHolders were unregistered after they had become invalid.

NOTE: Any code that uses MemoryHolders should call the **unregisterMemory()** function.

Do not call **registerMemory()** or **unregisterMemory()** from intermediate class constructors or destructors—**registerMemory()** and **unregisterMemory()** must be called from the most derived class.

Alternatively, **registerMemory()** may be called after construction and **unregisterMemory()** may be called before destruction.

RELEASE NOTES FOR NUKE 7.0v4

Release Date

22 January 2013

Supported Operating Systems

- Mac OS X 10.6 "Snow Leopard" (64-bit) and 10.7 "Lion" (64-bit)
- Windows XP Professional x64 Edition or Windows 7 Home Premium x64
- Linux RHEL 5.4 for Intel64 or AMD64

NOTE: Mac OS X 10.8 "Mountain Lion" and Windows 8 are currently not supported as operating systems for Nuke.

Requirements for NukeX GPU Acceleration

To take advantage of GPU acceleration, you need to have:

- A NukeX license.
- An NVIDIA GPU with compute capability 1.1 or above. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

NOTE: The compute capability is a property of the GPU hardware and can't be altered by a software update.

- Graphics drivers capable of running CUDA 4.0 or above:

  On Windows and Linux, these are the normal graphics drivers for your NVIDIA GPU:

  - Windows 275.36 (released June 2011) or later
  - Linux 270.41.19 (released May 2011) or later

  On Mac, the CUDA driver is separate from the NVIDIA graphics driver and will need to be installed, if you don't have it already. Graphics drivers can be downloaded from www.nvidia.com/drivers and the minimum requirements for CUDA 4.0 are as follows:

  - Mac OS X 256.02 (released June 2011) or later

New Features

There are no new features in this release. For a list of features new to Nuke 7, see Release Notes for Nuke 7.0v1.

Feature Enhancements

- New icons have been added to the documentation for points of interest in the text, such as notes and tips.
- BUG ID 30602 - The **Preferences** > **Suppress bad channels** checkbox has been removed from the **Preferences** dialog.

  Nuke now automatically discards any channels that are not referenced in the script when it is saved.

NOTE: This bug fix was incorrectly omitted from the 7.0v1 Release Notes.

Bug Fixes

- BUG ID 33586 - Particles: ParticleEmitters with 2D sprites connected to the **particle** input did not render in the 2D Viewer.
- BUG ID 33615 - Linux only: On some systems, disabling **use GPU if available** in the ZDefocus and Convolve Properties panel caused Nuke to crash when a Viewer node was connected.

Developer Notes

Here are the changes relevant to developers.

NOTE: See **Help** > **Documentation** > **C++ Plug-in Development** > **NDK Developers Guide** > **Appendix C** from the Nuke menu bar for more information.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

There are no bug fixes in this release.

RELEASE NOTES FOR NUKE 7.0v3

Release Date

16 January 2013

Supported Operating Systems

- Mac OS X 10.6 "Snow Leopard" (64-bit) and 10.7 "Lion" (64-bit)
- Windows XP Professional x64 Edition or Windows 7 Home Premium x64
- Linux RHEL 5.4 for Intel64 or AMD64

Note *Mac OS X 10.8 "Mountain Lion" and Windows 8 are currently not supported as operating systems for Nuke.*

Requirements for NukeX GPU Acceleration

To take advantage of GPU acceleration, you need to have:

- A NukeX license.
- An NVIDIA GPU with compute capability 1.1 or above. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

Note *The compute capability is a property of the GPU hardware and can't be altered by a software update.*

- Graphics drivers capable of running CUDA 4.0 or above:

  On Windows and Linux, these are the normal graphics drivers for your NVIDIA GPU:

  - Windows 275.36 (released June 2011) or later
  - Linux 270.41.19 (released May 2011) or later

  On Mac, the CUDA driver is separate from the NVIDIA graphics driver and will need to be installed, if you don't have it already. Graphics drivers can be downloaded from www.nvidia.com/drivers and the minimum requirements for CUDA 4.0 are as follows:

  - Mac OS X 256.02 (released June 2011) or later

New Features

- BUG ID 32355 - Nuke has been updated to use OCIO version 1.0.7.
- For a list of features new to Nuke 7, see Release Notes for Nuke 7.0v1.

- BUG ID 33101 - A new environment variable has been added to disable the license expiration dialog. To enable the new variable set FN_NUKE_DISABLE_TMPLIC_NOTIFY_DIALOG to 1.
  However, you still get a warning if no license is found, for example if you only have a Nuke license but you try to run NukeX.

Feature Enhancements

- BUG ID 30576 - A new dropdown has been added to the Licensing dialog allowing you to use either FLEXlm or RLM license servers.
- BUG ID 32240 - ModelBuilder: The **Bake scene selection** button has been split into a **Selected geometry** dropdown and **Bake** button.

Bug Fixes

- BUG ID 11951 - It was not clear in the documentation that the $NUKE_PATH environment variable is processed in reverse order when loading Python scripts.
- BUG ID 21068 - RotoPaint: Creating a RotoPaint node after loading a customer plug-in at startup then saving the layout and restarting, caused Nuke to crash.
- BUG ID 21212/23709 - Windows only: QuickTime filepaths containing expressions or relative paths (such as ../myClip.mov) caused Nuke to become unresponsive.
- BUG ID 28094 - Alembic: The **PointCloudGenerator** > **Point Size** control was not written to **.abc** files correctly.
- BUG ID 29341 - ModelBuilder: Pressing **Enter** when adding a shape canceled the action.
- BUG ID 29997 - The tooltips on some of the Light node's controls were incorrect.
- BUG ID 30334 - When exporting some QuickTime files, a frame from the sequence was occasionally held for two frames.
- BUG ID 31455 - Updating to RenderMan 17 and connecting a PrmanRender node to the Viewer caused Nuke to crash.
- BUG ID 31511 - Tracker: Holding **Shift** to create new tracking anchors did not display the **+** cursor correctly.
- BUG ID 31817 - ModelBuilder: It was not possible to change the opacity of the highlight when in **Face selection** mode.
- BUG ID 32118 - Card3D: FrameHold and TimeOffset were ignored when **motionblur** was enabled.
- BUG ID 32132 - FrameHold was using the geometry cache incorrectly, causing problems with 3D preview rendering and motion vector calculation in some situations.

- BUG ID 32134 - Tracker: Adding multiple tracking anchors and then translating the last anchor moved all anchors simultaneously.
- BUG ID 32250 - RotoPaint: After selecting a color from the color picker and painting a stroke, the color picker was hidden.
- BUG ID 32471 - TimeOffset nodes occasionally updated the Viewer when disabled in the Node Graph.
- BUG ID 32506 - Tracker: Duplicating a track and an expression linked transform didn't work as expected.
- BUG ID 32558 - Tracker: The default track range was always +/-1 frame when using the forward or backward auto-tracking method.
- BUG ID 32600 - Tracker: Using keyframe tracking on patterns of different sizes did not interpolate the offset correctly.
- BUG ID 32682 - OCIO: The **iff** configuration was not included in the **Project Settings** > **OCIO** > **OCIO config** dropdown.
- BUG ID 32787 - Increasing the polygon count of a 3D object and setting a connected Normals node to **action** > **build** and **attrib name** > **Cf** or **vel** caused Nuke to crash.
- BUG ID 33076 - The ZDefocus and Convolve nodes didn't work in the Nuke Personal Learning Edition (PLE).
- BUG ID 33147 - The Nuke User Guide referred to the preferences6.nk file rather than preferences7.nk file.
- BUG ID 33152 - Windows only: Right-clicking multiple selections in the RotoPaint **curves** list deselected everything other than the item under the mouse pointer.
- BUG ID 33261 - Mac OS X only: with a license that expires in less than 30 days, double-clicking on an existing .nk script to open it caused Nuke to crash on launch.
- BUG ID 33264 - The **Preferences** > **Path Remaps** matrix did not handle back slashes correctly.
- BUG ID 33434 - When saving a Nuke script, roto shape points were sometimes offset from their original positions.

Developer Notes

Here are the changes relevant to developers.

NOTE: See **Help** > **Documentation** > **C++ Plug-in Development** > **NDK Developers Guide** > **Appendix C** from the Nuke menu bar for more information.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 33074 – A certain series of customer Python commands caused Nuke to crash.

RELEASE NOTES FOR NUKE 7.0v2

Release Date

13 December 2012

Supported Operating Systems

- Mac OS X 10.6 "Snow Leopard" (64-bit) and 10.7 "Lion" (64-bit)
- Windows XP Professional x64 Edition or Windows 7 Home Premium x64
- Linux RHEL 5.4 for Intel64 or AMD64

Note *Mac OS X 10.8 "Mountain Lion" is currently not supported as an operating system for Nuke.*

Requirements for NukeX GPU Acceleration

To take advantage of GPU acceleration, you need to have:

- A NukeX license.
- An NVIDIA GPU with compute capability 1.1 or above. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

Note *The compute capability is a property of the GPU hardware and can't be altered by a software update.*

- Graphics drivers capable of running CUDA 4.0 or above:

  On Windows and Linux, these are the normal graphics drivers for your NVIDIA GPU:

  - Windows 275.36 (released June 2011) or later
  - Linux 270.41.19 (released May 2011) or later

  On Mac, the CUDA driver is separate from the NVIDIA graphics driver and will need to be installed, if you don't have it already. Graphics drivers can be downloaded from www.nvidia.com/drivers and the minimum requirements for CUDA 4.0 are as follows:

  - Mac OS X 256.02 (released June 2011) or later

New Features

There are no new features in this release. For a list of features new to Nuke 7, see Release Notes for Nuke 7.0v1.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 26564 - GPU Acceleration: The Properties panel **Local GPU** text was misleading when Nuke was not launched as NukeX.
- BUG ID 32512 - Kronos: Frames past the ends of the input sequence were always held, even when the Read node was set to **bounce**, **loop**, or **black**.
- BUG ID 32744 - GPU-accelerated nodes, such as Denoise or Kronos, caused Nuke to become unresponsive in certain cases if there was another GPU-accelerated node further up the node tree.
- BUG ID 32788 - ZDefocus: Setting **filter type** to **bladed** offset the input image by -0.5 pixels on the xy axes.
- BUG ID 32823 - Convolve: Processing on some GPUs with large **filter** images connected caused Nuke to become unresponsive.

Developer Notes

Here are the changes relevant to developers.

NOTE: See **Help** > **Documentation** > **C++ Plug-in Development** > **NDK Developers Guide** > **Appendix C** from the Nuke menu bar for more information.

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RELEASE NOTES FOR NUKE 7.0V1

Release Date

29 November 2012

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  - Windows 275.36 (released June 2011)
  - Linux 270.41.19 (released May 2011)
  - Mac 256.02 (released June 2011)

New Features

Alembic support

Nuke can now read and write Alembic (.abc) files (geometry, point clouds, cameras, and axes). See the Nuke *User Guide*, page 433, for more information.

DepthToPoints

The new DepthToPoints node, a gizmo containing DepthToPosition and PositionToPoints nodes, uses an image with a depth pass and a camera to produce a 3D point cloud. See the Nuke *User Guide*, page 433, and the Nuke *Reference Guide*, page 353, for more information.
DepthToPoints can be found in the **3D** > **Geometry** menu.

DepthToPosition

A new DepthToPosition node has been implemented. DepthToPosition takes a depth pass and a camera and produces a 2D world position pass. See the Nuke *User Guide*, page 362, and the Nuke *Reference Guide*, page 354, for more information.
DepthToPosition can be found in the **3D** menu.

ModelBuilder

The ModelBuilder node (NukeX only) provides an easy way to create simple 3D models and add them to your image sequences in realistic positions. It uses a tracked camera and an input image for visual reference. You can also use other 3D geometry and point clouds as a reference if you already have these for your scene. See the Nuke *User Guide*, page 674, and the Nuke *Reference Guide*, page 378, for more information.
ModelBuilder can be found in the **3D** > **Geometry** menu.

RAM caching

Nuke's new playback caching feature retains frames in RAM memory rather than relying on the operating system's disk buffering system. Cached frames are highlighted with a green bar under the Viewer.

Relight

Relight is a new tool for lighting 2D footage based on position and normal passes. You can attach individual light nodes directly to the Relight node or use a Scene node to add multiple lights. See the Nuke *User Guide*, page 416, and the Nuke *Reference Guide*, page 417, for more information.
Relight can be found in the **3D** > **Lights** menu.

TimeClip

The TimeClip node lets you move the clip forwards or backwards in time or reverse the order of frames in the clip. In addition to this basic functionality, you can fade from and to black, slip a clip in the Dope Sheet by dragging its head and tail to a new location, and includes the Read node's hold, loop, and bounce **frame range** modes. See the Nuke *User Guide*, page 334, and the Nuke *Reference Guide*, page 103, for more information. TimeClip can be found in the **Time** menu.

Tracker

Nuke's 2D Tracker now includes a new Keyframe Tracking mode in addition to the Auto-tracking mode. You can track any number of features in a sequence, easily view a particular track or tracks using the **Tracks** list, and average the results of all tracks together. Other new features include:

- All tracking tools are now included in the Viewer toolbar, with associated hotkeys.
- Dynamic Viewer updates while tracking features, including a keyframe zoom window.
- Automatic export of tracks to CornerPin2D nodes.
- Automatic export of transform data to Transform nodes.
- Improvements to high frequency jitter removal.
- The ability to track more accurately through changes in brightness.
- Improved track error diagnostic and correction tools.
- **Snap to markers** assists Tracker by recognizing blobs or corner patterns in the sequence. You can enable **Settings** > **snap to markers** to assist you when placing anchors.

  Whether you select **blobs** or **corners**, a guide displays in the Viewer as you drag the anchor, highlighting likely patterns.

See the Nuke *User Guide*, page 220, and the Nuke *Reference Guide*, page 301, for more information.
Tracker can be found in the **Transform** menu.

Viewer improvements

- Nuke's Viewer tools now include an icon  to disable all updates to the UI (except the Viewer) during playback. For example, when enabled, the Curve Editor, Dope Sheet, and RotoPaint controls are not updated frame by frame.
- Nuke Viewers now have guides, such as title safe, and mask overlays to help visualize different formats in the Viewer without reformatting. See the Nuke *Getting Started Guide*, page 101, for more information.

Visual Studio Upgrade

Visual Studio on Windows has been updated from VS2005 to VS2010.

ZDefocus

ZDefocus is an upgrade to the ZBlur node, which now includes GPU acceleration, as well as an improved algorithm and some new features. Additionally, considerable effort has been put into improving its handling of edges and occluded areas compared to the previous ZBlur node. See the Nuke *User Guide*, page 292, and the Nuke *Reference Guide*, page 204, for more information.
ZDefocus can be found in the **Filter** menu.

Feature Enhancements

3D Viewer enhancements

- In the 3D Viewer, you can now create a Camera using the current view by navigating to **Camera or Light look through** > **create camera**.
- Nuke's 3D Viewer now includes scale handles, similar to the rotate handles. To activate the scale handles, press **Ctrl/Cmd**+**Shift** and drag the handles in the Viewer.

CameraTracker

The existing workflow, **Create Scene**, has been split into **Create Camera** and **Create Points**, allowing you to control how you use CameraTracker more easily. See the Nuke *User Guide*, page 633, and the Nuke *Reference Guide*, page 326, for more information.

Convolve

Convolve now uses Fourier transforms to allow rapid convolutions of large plates. For even faster convolutions, you can now choose to process on the GPU. See the Nuke *User Guide*, page 289, and the Nuke *Reference Guide*, page 180, for more information.

DeepMerge

BUG ID 23020 – A new **operation** > **holdout** option has been added to DeepMerge nodes which outputs full deep data using the **A** input as the holdout over **B**. See the Nuke *User Guide*, page 451, and the Nuke *Reference Guide*, page 503, for more information.

Denoise

The Denoise node, used to remove noise or grain from a shot, now includes GPU acceleration. See the Nuke *User Guide*, page 596, and the Nuke *Reference Guide*, page 184, for more information.

DepthGenerator

DepthGenerator has been improved to calculate cleaner, more accurate depth passes. The workflow has changed so that you can first analyze the shot to calculate the optimum frame separation. There are also new output options to convert depth to a position and normals pass for use with PositionToPoints or Relight as well as the option to create a displaced Card to match the Z-depth. See the Nuke *User Guide*, page 653, and the Nuke *Reference Guide*, page 349, for more information.

Displacement

Each Displacement node now has its own settings for tessellation rather than one global setting in the ScanlineRender node. See the Nuke *User Guide*, page 398, for more information.

FBX 2012

Nuke now supports FBX 2012 which adds support for version 7.2 **.fbx** files as well as being back-compatible with all previous versions.

FrameHold

FrameHold now supports geometry, cameras, lights and so on in the 3D Viewer. See the Nuke *User Guide*, page 338, and the Nuke *Reference Guide*, page 89, for more information.

Kronos

Previously F_Kronos, now features an improved algorithm and GPU acceleration. See the Nuke *User Guide*, page 606, and the Nuke *Reference Guide*, page 90, for more information.

MotionBlur

Previously known as F_MotionBlur, MotionBlur uses Kronos interpolation technology and features an improved algorithm and GPU acceleration. See the Nuke *User Guide*, page 613, and the Nuke *Reference Guide*, page 199, for more information.
MotionBlur can be found in the **Filter** menu.

OpenEXR 2.0

Nuke can now read and write OpenEXR 2.0 images using DeepRead and DeepWrite nodes.

Particles

- ParticleEmitter now gives you greater control over the way particles are spawned:
  - **Emit from selection** - emission is restricted to only selected elements of the upstream geometry (as indicated by a GeoSelect node).
  - **Emit from bbox** - emission occurs from within the volume defined by the bounding box of an object. This can reduce the need for using the pre-roll option when creating volumetric particle simulations (BUG ID 21104).
  - **Emit in randomized directions** - a dropdown containing particle randomization options has been added. This control defaults to **No random direction**, simulating emission in Nuke 6.3v8.
  - **Transfer velocity** and **Transfer window** - options to transfer any velocity that the initial emitter has to the particles. The **Transfer window** controls the time, in frames, to look forward and backward to determine the transferred velocity (BUG ID 22329).
  - Particles can now be emitted from point clouds using any normals information present.
- BUG ID 22494 - The ParticleTurbulence node now includes **offset** modulation controls.
- BUG ID 31595 - Particles: The randomness controls in Nuke's particle system have been improved to produce random spread at high frame ranges.

  As a result, scripts created in Nuke 6.3 will no longer produce the same results when loaded in Nuke 7.

See the Nuke *User Guide*, page 699, and the Nuke *Reference Guide*, page 493, for more information.

PointCloudGenerator

The PointCloudGenerator has been rewritten to calculate cleaner, more accurate point clouds. The workflow has changed so that you analyze a shot to set keyframes, calculating the accuracy for each keyframe. You can then select the most accurate frames to create a point cloud. Additionally, you can:

- Assign points to groups so that different parts of the scene can be labelled and visualized.

- Bake out groups as a separate point cloud or mesh for use outside the PointCloudGenerator.
- BUG ID 16149 – PointCloudGenerator: Clicking **Analyze Sequence** now displays a warning if keyframes have already been calculated.

See the Nuke *User Guide*, page 663, and the Nuke *Reference Guide*, page 392, for more information.

PositionToPoints (ImageTo3D)

PositionToPoints has been improved, including the ability to use geometry modifiers to alter the point cloud and being able to choose the points and normals channels to use from one input, rather than having to pipe in two inputs. See the Nuke *User Guide*, page 364, and the Nuke *Reference Guide*, page 397, for more information.

Primatte

Primatte has been upgraded to version 5, bringing with it numerous improvements and new features, including:

- Improved Auto Compute
- Smart Background Color Select, producing a better initial key
- Hybrid Render for creating a better key with foreground objects containing a similar color to the background color
- Adjusted Lighting for smoothing out the background screen color for better key color selection
- Several new output modes, most notably adjusted lighting outputs for using with other keyers

See the Nuke *User Guide*, page 91, and the Nuke *Reference Guide*, page 223, for more information.

PrmanRender

The **Shader** tab in PrmanRender's Properties now includes new **motion vector** options for storing **distance** and **velocity** in the motion channels.

Nuke 7 supports PRMan 15.2 and 16.4, and though other versions may work, using a version of PRMan other than these may produce unexpected behavior.

See the Nuke *User Guide*, page 720, and the Nuke *Reference Guide*, page 399, for more information.

R3D

Nuke has been updated to take advantage of the latest R3D SDK 4.3, which includes the following new features:

- REDcolor3 decode colorspace
- REDgamma3 gamma curve
- HDRx blending for RED Epic camera footage

Roto/RotoPaint

Nuke's Roto and RotoPaint nodes have been completely overhauled, improving performance and the tools available.

- You can now split Roto controls and shapes in multi-view projects, allowing you to make edits to shapes on a per-view basis.
- The new **stereo offset** control allows you to move the selected stroke/shape on the x and y axes. This is an extra transform that is applied after all other transforms. Typically, you would position the stroke/shape correctly in the hero view, then split **stereo offset**, and drag the stroke/shape to its correct location in any other views.
- BUG ID 10332 – RotoPaint now uses a new format which has reduced script sizes significantly, when compared to previous versions of Nuke.
- BUG ID 11045 – Right-click copy/paste functions in the Viewer now display the number of curves or points selected. See the Nuke *User Guide* for more information.
- BUG ID 15854 – The right-click **copy** menu for points has been split into copy actions for curves and points, including the options to copy animation or single point values.
- BUG ID 18830 – The right-click menu in the **curves** list **Life** column now includes a **frame range** option, which displays a standard **Set frame range** popup.
- BUG ID 19248 – Playback in the Viewer has been improved when RotoPaint Properties panels are open.
- BUG ID 19313 – You can now paste copied splines into the Viewer after selecting a Roto/RotoPaint node in the Node Graph. If no nodes are selected, the spline is pasted to the last node that was selected.
- BUG ID 22197 – Roto: All Roto nodes now default to **output** > **alpha**.

Note *This enhancement does not affect RotoPaint, which defaults to **rgba**.*

See the Nuke *User Guide*, pages 164, and the Nuke *Reference Guide*, pages 53 and 63, for more information.

Roto conversion between Nuke 6 and Nuke 7

Nuke 6 scripts containing Roto display a conversion prompt when you open them in Nuke 7:

- Click **Save As** to convert the script to the Nuke 7 Roto format, or
- Click **Ignore** to load the Nuke 6 format into Nuke 7. You might select this option if:
  - You don't intend to make any changes, or
  - You want to overwrite the file with a Nuke 7 only Roto format when saving.

If you want Nuke 7 scripts to load in Nuke 6, use the **convertToNuke6** or **convertDirectoryToNuke6** Python functions when running Nuke 7 in terminal only mode:

Note *The conversion functions cannot convert stereo-split curves as they are not supported by Nuke 6.*

- To convert individual **.nk** scripts:
  ```
  convertToNuke6(fromScript, toScript, overwrite = False)
  ```
- To convert all **.nk** scripts in a given directory:
  ```
  convertDirectoryToNuke6(fromDir, toDir, matchPattern
  =".*\.nk", overwrite = False)
  ```

Note *The pattern is a regular expression.*

An example single script conversion and rename to the same directory, from the command line (terminal):

```
$ <NukeInstallDir>/Nuke7.0v1 -t

>>> import nuke.rotopaint
>>> nuke.rotopaint.convertToNuke6("/tmp/myRoto7.nk", "/tmp/
     myRoto6.nk")
```

ScanlineRender

In previous versions when using Project3D in occlusion mode it was necessary to also enable **raycasting** in the ScanlineRender node. This is no longer necessary and the option has been removed. The ScanlineRender node also has a new option for **stochastic samples** on the **MultiSample** tab. You can use this option to speed up or preview 3D motion blur at the expense of a noisier image. Additionally, new shadow and motion vector modes have been added, and performance improved:

- Some 3D nodes, such as Light, now include **clipped alpha** and **full alpha** shadow modes that feed into ScanlineRender.
- A new option has been added to the **Shader** tab, **motion vector** > **distance**, used to calculate "curved" motion blur by storing the distance

between samples in the motion vector channels. Additionally, **motion vector** > **accurate** has been renamed **velocity**.

- BUG ID 19650 - Optimization work on the ScanlineRender node has significantly improved render times in certain situations.

See the Nuke *User Guide*, page 351 and 444, and the Nuke *Reference Guide*, page 417, for more information.

SplineWarp

- Roto conversion between Nuke 6 and Nuke 7 requires some preparation. See Roto conversion between Nuke 6 and Nuke 7 for more information.

Note *Although the script converting shapes from Nuke 7 to Nuke 6 modifies the roto work correctly to the Nuke 6 format, unsupported Nuke 7 SplineWarp settings are not converted.*

- **Cookie-cutter** and **transform linked** toggles have been added to the curves list:
  - **Cookie-cutter** is primarily designed to overlay a morph of two images on top of a sequence by creating a "traveling mask" between closed cookie-cutter shapes.
  - **Transform linked** uses expressions to link properties panel **Transform** keyframes between shapes in the curves list.
- BUG ID 15854 - The right-click **copy** menu for points has been split into copy actions for curves and points, including the options to copy animation or single point values.
- BUG ID 18370 - You can now create source and destination splines independently of each other, which can then be linked manually.
- BUG ID 18382 - You can now marquee coincident points, after selecting both the A and B curves in the **curves** list, and drag both points together. A Viewer overlay on the points indicates that they are coincident.
- BUG ID 18498 - You can now copy and paste a single point from a source curve to a destination curve, and vice-versa.
- BUG ID 18596/25183 - The **bbox** dropdown has been replaced by a **crop to format** checkbox.

  Disabling this control means that the input image is not cropped. For example, scaling down produces warped pixels from outside the Viewer image, rather than black.
- BUG ID 19315 - You can now attach a Tracker to source and destination splines independently.
- BUG ID 20930 - SplineWarp now supports warping by layer or by pair. The **layer warp** affects all shapes within that layer, and the **pair warp** affects joined shapes.
- BUG ID 23809 - Pins are now labelled with the name from the **curves** list.

- BUG ID 24385 - New **Preferences** have been added on the **Viewers** tab to stipple joined splines.

See the Nuke *User Guide*, page 261, and the Nuke *Reference Guide*, page 293, for more information.

TimeOffset

TimeOffset now supports 3D node input. See the Nuke *User Guide*, page 334, and the Nuke *Reference Guide*, page 105, for more information.

VectorGenerator

Previously F_VectorGenerator, now features an improved algorithm and GPU acceleration. See the Nuke *User Guide*, page 603, and the Nuke *Reference Guide*, page 107, for more information.

Miscellaneous

- A new command line argument, **-remap**, has been added to take advantage of the new **Path Remaps** in the **Preferences** dialog, designed for cross-platform compatibility.

  The **-remap** flag takes a comma-separated list of paths as an argument, arranged in pairs where the first path of each pair maps to the second path of each pair. For example, using:

  ```
  nuke -t -remap "/mnt/netqa/, \\netqa\netqa\"
  ```

  Converts any paths starting with **/mnt/netqa/** (Mac OS X friendly) to start with **\\netqa\netqa** (Windows friendly).
- KeyMix has been added to the *Reference Guide*. See the Nuke *Reference Guide*, page 243, for more information.
- BUG ID 3914 - **Project Settings** > **Views** now includes a dropdown to select which view in a stereo project is the "Hero" view. See the Nuke *User Guide*, page 410, for more information.
- BUG ID 10143 - ReadGeo nodes now have a **frame range** control, negating the need for other 3D nodes, such as Card and Sphere, to have the same control.
- BUG ID 12185 - Information in the Nuke documentation regarding node concatenation has been improved. See "How Your Nodes Concatenate" in the Nuke *User Guide,* page 245, for more information.
- BUG ID 13071/24972 - The FFmpeg and FreeType libraries have been updated to the latest versions. See the Developer Notes for more information.
- BUG ID 14027 - When reading and writing **.exr** files, Nuke's Read and Write nodes now include a **do not attach prefix** option to omit certain information in the metadata:

  - **Read** - when enabled, the **exr** prefix is omitted from the metadata.
  - **Write** - when enabled, the **nuke** prefix is omitted from the metadata.
- BUG ID 14217 - A new command line argument, **--safe**, has been added. Running Nuke in this mode stops the following loading at startup:
  - Any scripts or plug-ins in **~/.nuke**
  - Any scripts or plug-ins in $NUKE_PATH or %NUKE_PATH%
  - Any OFX plug-in (including FurnaceCore)
- BUG ID 16730 - Dope Sheet: Copy/pasting in the DopeSheet now pastes keys on the selected parameter starting at the current playhead location.
- BUG ID 17497 - You can now save the current pan/zoom level and jump to nodes, including Backdrop nodes, using the **Quick Save** and **Bookmark** functions.
  - To save the current pan/zoom level, navigate to **Edit** > **Bookmark** > **Quick Save1**.
  - To bookmark the current node, open the node's Properties panel and enable **Node** > **bookmark**. Jump to a bookmark by navigating to **Edit** > **Jump to Bookmark**.

Note *The **bookmark** control is enabled by default for Backdrop nodes.*

- BUG ID 19243 - Roto, RotoPaint, and SplineWarp points are now drawn in a specified color, red by default, when they are expression linked. You can change the color in the **Preferences** dialog **Viewers** tab under **Splines** > **general** > **Expression color**.
- BUG ID 20208 - PlanarTracker: Creating a **CornerPin2d (relative)** now links to the PlanarTracker using the **CornerPin2D** > **to** knobs, rather than the Roto node's **extra matrix**. This is consistent with the other modes and the Properties panel export, and enables the use of motion blur.
- BUG ID 22587 - DeepColorCorrect now includes a **channels** dropdown.
- BUG ID 24764 - The Nuke NDK documentation in **Help** > **Documents** > **C++ Plug-in Development** has been updated.
- BUG ID 26482 - Windows only: Instruction on how to install Nuke silently to a custom directory has been added to the *Getting Started Guide*.

Bug Fixes

- BUG ID 1985 - GridWarp: Intermittent render artifacts appeared while warping in the Viewer.
- BUG ID 2642 - CurveTool: The **ROI** bounds reset to the format size after clicking **Go!** or connecting a Viewer in the Node Graph.
- BUG ID 4725 - It was not possible to copy animation data to GridWarp, SplineWarp, or Roto/RotoPaint controls.

- BUG ID 6216 - Using the **Fit** hotkey (F) in the Viewer with a ReadGeo node selected, or its Properties panel open, did not resize the Viewer correctly.
- BUG ID 6362 - Dot nodes in Groups with 3D or Deep nodes became disconnected during copy/paste operations in the Node Graph.
- BUG ID 7369 - Rendering multiple QuickTimes simultaneously was causing Nuke to crash.
- BUG ID 7743 - CurveTool: The **ROI** bounds reset to the format size when the preceding node in the Node Graph was disconnected.
- BUG ID 7856 - Opening the Properties panels for certain nodes was causing a customer script to slow down considerably.
- BUG ID 8430 - RotoPaint: It was not possible to split controls in multi-view projects.
- BUG ID 8532 - File Browser: The Preview window attempted to process a view of gizmos and **.obj** files.
- BUG ID 8604 - Transform handles appeared in the 3D Viewer when **selectable** was disabled in the Properties panel of 3D nodes.
- BUG ID 9400 - Read nodes occasionally displayed **no plugin named aviReader** when FFmpeg failed to read a file.
- BUG ID 9672 - Nuke could not read **.m4v** files by default.
- BUG ID 9821 - Switching the Viewer **channels** dropdown to **depth** was causing Nuke to crash when CameraTracker or DepthGenerator nodes were present in a customer script.
- BUG ID 9934 - RotoPaint: Duplicate and paste operations did not shift selection to the new point or shape.
- BUG ID 9937 - Using **File** > **Clear** or calling **nuke.scriptClear()** in the Script Editor and then creating nodes did not read the default formats file correctly.
- BUG ID 10266 - The EdgeDetect node's controls were ordered incorrectly and the tooltips were vague.
- BUG ID 10460 - The Glow node did not affect the alpha channel when the **channels** control was set to **rgba**.
- BUG ID 10586 - A customer script containing multiple RotoPaint nodes was experiencing severe slowdown.
- BUG ID 10647 - Setting **Timeline range** > **Input** in Viewer 2D mode and then switching to 3D did not persist the frame range.
- BUG ID 10986 - Two new metadata keys have been added for **.exr** files:
  - **exr/tiled** - set to **True** in the metadata if the **.exr** is tiled.
  - **exr/compression** - displays the compression type, either by name or as an integer. Refer to the Nuke *User Guide*, Appendix B for more information.

- BUG ID 11045 - RotoPaint: The right-click menu **copy** > **single point link** option was not disabled when multiple points were selected.
- BUG ID 11466 - RotoPaint: The Viewer was slow to update when drawing strokes in a script containing 300+ strokes.
- BUG ID 11615 - Nuke's Particle system, DisplaceGeo, PositionToPoints, and DeepToPoints nodes did not display progress bars and could not be cancelled once initiated.
- BUG ID 11622 - Rendering PositionToPoints through ScanlineRender was unaffected by lights in the scene.
- BUG ID 12577 - RotoPaint: Running certain customer Nuke scripts from the command line produced the following error, and caused the scripts to become corrupt after saving and loading:

  AnimTree: Read Error, unknown token "Node:", expecting NumOfChildren:
- BUG ID 13110 - PositionToPoints point clouds were not affected by 3D geometry modifiers such as Trilinear, LogGeo, and DisplaceGeo.

Note *DisplaceGeo nodes must be used in conjunction with a UVProject node to affect the point cloud.*

- BUG ID 13150 - Roto/RotoPaint: The **format** control was misleading. When a new input was connected, **root.format** was displayed suggesting that it was in use.
- BUG ID 13864 - RotoPaint: With multiple RotoPaint nodes open, selecting points in one node disabled editing points in the others.
- BUG ID 14027 - The ModifyMetadata node was adding unnecessary namespace information when written out.
- BUG ID 15069 - Nuke attempted to check out a nukex_r licence when **-nukex** was specified during a command line only render.
- BUG ID 15164 - RotoPaint: The initial drag of the **Transform** > **scale** slider split the control into **w** and **h** controls.
- BUG ID 15267 - Editing the Read filepath in scripts containing both ScanlineRender and PositionToPoints nodes caused Nuke to crash.
- BUG ID 15399 - ScanlineRender included non-visible geometry when calculating shadow casting.
- BUG ID 15423 - PrmanRender: UVproject node output was not rendered correctly.
- BUG ID 15440 - ProjectionSolver: Locators added when the Viewer was set at a lower resolution to the source were not visible.
- BUG ID 15721 - Tracker did not handle footage containing high frequency jitter as well as expected.
- BUG ID 16120 - Nuke was retrieving incorrect frame ranges for QuickTimes when using FFmpeg.

- BUG ID 16350 - Read: Setting **frame** > **start at** and then changing the file location using the browser, resulted in an incorrect frame range.
- BUG ID 16849 - Adding keyframes in EXPTool nodes caused unexpected behavior in the Curve Editor.
- BUG ID 17059 - Roto/RotoPaint: Deleting strokes from a node containing multiple strokes was slow to recalculate.
- BUG ID 17083 - RotoPaint: Deleting an entry in the Properties panel curve list also removed the entry directly above.
- BUG ID 17107 - RotoPaint: Changing the color of a Checkerboard linked to a RotoPaint node caused Nuke to crash.
- BUG ID 17269 - Dope Sheet: New RotoPaint keyframes only appeared when mousing over the Dope Sheet.
- BUG ID 17436 - DeepRecolor didn't normalize correctly when the alpha from a flat image didn't match up with deep opacity.
- BUG ID 17550 - The 3D Viewer did not always honor the **display** setting for geometry when you clicked on the Node Graph.
- BUG ID 17599 - RotoPaint: Moving keyframes in the Dope Sheet caused Nuke to become unresponsive.
- BUG ID 17774 - WriteGeo: The filepath in terminal output was incorrect from WriteGeo nodes.
- BUG ID 17990 - ModifyMetaData nodes crashed when trying to add string values from a Python **pickle.dump()** method.
- BUG ID 18015 - The filepaths to launch Nuke from the terminal were inconsistent in the documentation.
- BUG ID 18030 - PrmanRender: Importing **.obj** or **.fbx** files with no texture coordinates caused Nuke to crash.
- BUG ID 18044 - Emitting from **edges** or **faces** using the **uniformly** or **in order** options, still emitted particles from **points**.
- BUG ID 18115 - PlanarTracker: Enabling **Tracking** > **Preview Features** did not reliably display features in the Viewer.
- BUG ID 18132 - ReadGeo: Editing the Read path caused the node's controls to reset to the default values.
- BUG ID 18203 - GridWarp: When **persistent preview** was active, the Viewer always showed **rgb** when **channels** was set to different sets.
- BUG ID 18257 - SplineWarp: Clicking on pins in the Viewer did not select them in the Properties **curves** list.
- BUG ID 18270 - SplineWarp: Expression linking Tracker transform values to control points produced incorrect translations.
- BUG ID 18271 - Windows only: The Error Console occasionally hung or crashed with certain node errors and had to be forcibly closed.

- BUG ID 18338 - LensDistortion: Entering **RadialDistortion 1** or **RadialDistortion 2** values outside the -0.3 to 0.3 and -0.1 to 0.1 range, respectively, caused Nuke to become unresponsive.
- BUG ID 18405 - SplineWarp: Smoothing or cusping a source curve also affected the destination curve if both were set to **visible**.
- BUG ID 18443 - Navigating to **File** > **Close** did not launch a new Nuke session after closing.
- BUG ID 18497 - SplineWarp: Right-clicking on a single control point in multiple selections only affected the single point.
- BUG ID 18542 - Linux only: Entering a value of **1e94** or higher in a Properties panel control caused Nuke to crash.
- BUG ID 18790 - It was not possible to read in geometry sequences using the **R** shortcut from the Node Graph. For example, **myGeo.###.obj** only read the first geometry object.
- BUG ID 19203 - SplineWarp: Hiding a shape in the curve list did not hide the associated correspondence curves.
- BUG ID 19205 - SplineWarp: Hiding a pin in the curve list did not hide that pin in the Viewer.
- BUG ID 19217 - Roto/RotoPaint: It was not possible to set a clone source for shapes in the curve list.
- BUG ID 19316 - Roto/RotoPaint: Nudging points using the numeric keypad did not nudge the transform bounding box accordingly.
- BUG ID 19354 - Particles: Motion vectors ignored the alpha channel.
- BUG ID 19423 - RotoPaint: The Properties panel was slow to open with 500+ paint strokes in the Viewer.
- BUG ID 19855 - RotoPaint: The bounding box did not adjust appropriately when **dynamic_size** was enabled.
- BUG ID 19977 - ParticleBounce: Internal bounce occasionally leaked particles outside the limiting primitive when two ParticleBounce nodes were used simultaneously in a Particle system.
- BUG ID 20143 - Memory use was increasing consistently when rendering frames through ScanlineRender.
- BUG ID 20161 - Curve Editor: Scripts with high frame ranges, such as 916925-917038, were slow to open in the Curve Editor.
- BUG ID 20243 - In stereo projects, right-clicking a node's controls in the Properties panel and selecting **Split all knobs** was not reversible using **Set knobs to default**.
- BUG ID 20271 - Nodes containing text overlays did not display the text if they were registered as a Viewer Process in the Script Editor or **menu.py** file.
- BUG ID 20288 - Particle systems were re-evaluating from the first frame if the **particle** input was changed.

- BUG ID 20407- Changing the file name in a ReadGeo node did not update in the Viewer.
- BUG ID 20422 - LensDistortion: The **Analyze Grid** function was not computed when running Nuke in terminal (-t) mode. The correct syntax is: `./Nuke7.0v1 -t --nukex -i`
- BUG ID 20548 - Mac OS X Lion only: Running Nuke from the terminal displayed a warning relating to Time Machine exclusion.
- BUG ID 20579 - ProjectionSolver: Attempting to undo **add locator** set the locator's position to 0,0, rather than removing it.
- BUG ID 20582 - ProjectionSolver: After adding animation to a control, right-clicking in the Properties panel and then selecting **No animation on all knobs** removed all existing locators and added a new one at 0,0.
- BUG ID 20613 - The file browser occasionally reported incorrect file sizes when **sequences** and **split sequences** were enabled.
- BUG ID 20637/29613/29616 - Viewer performance was degraded when the Curve Editor/Dope Sheet was open.
- BUG ID 21237 - PrmanRender: The Viewer did not update when **dof** was enabled.
- BUG ID 21335 - Using a MergeMat node after a Project3D node overrode the disabled **crop** checkbox in the Project3D node.
- BUG ID 21438 - RotoPaint: Enabling **motion blur** for a shape and then fading the shape out using the **opacity** control, did not set the shape's alpha value to 0.
- BUG ID 21494 - The **Project Settings** > **Root** > **lock all connections** option caused the Node Graph to be unreadable when zoomed-out.
- BUG ID 21708 - RotoPaint: Cutting a shape using **Ctrl/Cmd**+**X** was not undoable.
- BUG ID 21943 - Rendering a certain customer script from the command line caused Nuke to crash.
- BUG ID 22113 - ScanlineRender and PrmanRender motion blur sampling was inaccurate at low sample rates.
- BUG ID 22890 - The Viewer timeline showed a misleading frame range when an offset was applied in the Read node.
- BUG ID 23181 - Nuke's exrReader did not handle case correctly when custom layer names were sorted alphabetically after the view name.
- BUG ID 23305 - Estimating anamorphic lens parameters was producing unusually large **Squeeze** and **Distortion** values.
- BUG ID 23393 - Enabling **antialiasing** in ScanlineRender nodes was rendering dots and lines in the Viewer.
- BUG ID 23506 - SplineWarp: Undo did not work as expected, and the curve list didn't update correctly when deleting a spline using the Viewer right-click menu.

- BUG ID 23597 - RotoPaint: Selecting multiple brush stokes in the curve list and editing the **lifetime type** control, deselected all the strokes.
- BUG ID 23670 - ScanlineRender: A customer script produced jagged or ripped geometry when rendered.
- BUG ID 23675 - Expressions based on metadata were not written when running Nuke from the command line using the **-X Write** arguments.
- BUG ID 23710 - A customer **.exr** sequence rendered with black lines in the Viewer.
- BUG ID 23897 - ParticleEmitter: Simulations were always starting from frame 0 if no ParticleEmitter nodes were present in the script.
- BUG ID 24092 - Attempting to group (Ctrl/Cmd+G) a Write node during rendering caused Nuke to crash.
- BUG ID 24183 - WriteGeo: Converting **.obj** files to **.fbx** files did not preserve normals data.
- BUG ID 24262 - RotoPaint: Moving the **Brush Tool** over the Viewer caused severe lag.
- BUG ID 24415 - A custom Camera node attached to Project3D node caused Nuke to crash when certain Properties panel controls were not defined.
- BUG ID 24450 - Tracker: Linking a Roto shape to a track using the right-click **Link to** > **Tracker1** > **translate as offset** option did not undo cleanly. Each vertex had to be undone individually.
- BUG ID 24492 - RotoPaint: It was possible to create duplicate shape names in the curve list by copying and pasting between RotoPaint nodes.
- BUG ID 24573 - Mac OS X only: ReadGeo nodes reading in **.obj** files with no UV information flashed when mousing between the Viewer and the Node Graph.
- BUG ID 24617 - Disabling a LensDistortion node was turning off the Node Graph grid overlay.
- BUG ID 24641 - RotoPaint: Locked shapes in the curve list could be moved in the Viewer using **Ctrl/Cmd**+**A** and then dragging the shapes.
- BUG ID 24756 - PointCloudGenerator: Reloading a saved script recalculated the point cloud unnecessarily.
- BUG ID 24835 - File Browser: Split sequences were listed in reverse order.
- BUG ID 24837 - A NoOp node in a customer script caused Nuke to crash.
- BUG ID 24879 - OCIOCDLTransform: Changing the values in the cccid dialog did not update the **saturation** knob value.
- BUG ID 24932 - Specifying an invalid OCIO config file caused Nuke to crash on exit.

- BUG ID 24988 - RotoPaint: Copy/pasting a layer name from one RotoPaint node to another changed the layer name.
- BUG ID 25027 - Linux only: Reading in a customer **.tif** file caused the Read node and terminal to display 'ERROR: Read4: Sorry, can not handle RGB image with Color channels=-636'.
- BUG ID 25187 - Connecting a Viewer to a Defocus node, downstream of a 3D setup, caused Nuke to crash.
- BUG ID 25371 - Mac OS X and Windows only: An excessive number of NukeQuickTimeHelper-32 processes were started.
- BUG ID 25472 - Passing a 4K image through a FrameHold node produced clipped output.
- BUG ID 25730 - Basic Array_knobs did not write out as useful userknobs.
- BUG ID 25908 - Face selection did not work as expected on concave geometry.
- BUG ID 26339 - Reconcile3D: Enabling **calculate output live** did not produce consistent results.
- BUG ID 26520 - A customer script, containing LensDistortion and writing out **.exr** files with **autocrop** enabled, was causing Nuke to crash when run from the command line.
- BUG ID 26618 - Node renames were only applied to the left view in multi-view expression links.
- BUG ID 26698 - Roto: Opening the Properties panel did not switch to the **Select All** tool.
- BUG ID 26825 - Writing an **.exr** file that only had image data outside of the image window and **autocrop** enabled caused Nuke to crash.
- BUG ID 27289 - ParticleExpression: Reversing the **if** logic in an expression produced an unexpected result.
- BUG ID 27381 - Switching between Framecycler and custom flipbooks with ROI checked caused Nuke to crash.
- BUG ID 27628 - OCIO: OCIODisplay didn't update the Viewer correctly when switching the **layer** control between **all** and custom layers.
- BUG ID 27949 - Disabling a DeepFromImage node upstream of a DeepMerge node in a customer script caused Nuke to crash.
- BUG ID 28231 - ScanlineRender: Heavy geometry, such as a card with high level subdivision, was causing performance issues farther down the node tree.
- BUG ID 28348 - Enabling and disabling a ReadGeo node in a simple 3D system upstream of a VectorBlur node was causing Nuke to crash.
- BUG ID 28757 - Adding RotoPaint shapes to the Curve Editor and attempting to move points caused Nuke to crash.

- BUG ID 29167 - SplineWarp: It was difficult to scale multiple selections using the corner of the Transform box.
- BUG ID 29255 - SplineWarp: Moving individual points on a curve was occasionally problematic.
- BUG ID 29442 - SplineWarp: Transforming shapes using the controls in the **Transform** tab while the Viewer was rendering caused Nuke to crash.
- BUG ID 29446 - Setting the OCIO environment variable did not update the Viewer LUT list as expected.
- BUG ID 29513 - OCIO ColorSpace: Setting an **in** or **out** colorspace was reverted to the default when the playhead was moved to another frame.
- BUG ID 29670 - Rendering a customer script containing a depth channel to **.exr** format was causing Nuke to crash.
- BUG ID 29748 - The *Getting Started Guide* contained inaccuracies regarding node specific **cache locally** controls.
- BUG ID 30151 - Enabling **Occlusion testing** in the Viewer caused Nuke to become unresponsive.
- BUG ID 30438 - Certain user interface checkboxes did not appear to change state when clicked.
- BUG ID 30529 - Nuke could not read **.mp4** files by default.
- BUG ID BUG ID 30584 - Tracker: When **Preferences** > **aggressive caching** was enabled and **postage stamp** was in **static frame** mode, panning or zooming the Viewer occasionally caused Nuke to crash.
- BUG ID 30563 - Denoise: Setting **Profile** > **Automatic** and enabling **Use GPU if available** occasionally caused Nuke to crash with some GPU configurations.
- BUG ID 30774 - DeepExpression: Identical expressions did not produce comparable results in the Expression and DeepExpression nodes.
- BUG ID 31389 - Windows only: The AJA Kona 3G Monitor Out card could not be initialized.
- BUG ID 31555 - Color sampling in the Viewer when using a non-default LUT for 8-bit conversion of images containing a NaN (not a number), caused Nuke to become unresponsive.
- BUG ID 31559 - Deep: Color channel blending was incorrect for overlapping deep samples generated from within Nuke.
- BUG ID 32006 - There was a logic error in **ocionuke.cdl**, causing an "UnboundLocalError" message.

Developer Notes

Here are the changes relevant to developers.

NOTE: See **Help > Documentation > C++ Plug-in Development > NDK Developers Guide > Appendix C** from the Nuke menu bar for more information.

New Features

- BUG ID 10314 - You can now return coordinate information from a camera using the **getGLCameraMatrix()** method.
- BUG ID 20931 - You can now query whether a frame is cached or not using the **frameCached()** method. For example:

```
v=nuke.activeViewer().node()
isCached=v.frameCached(int frame)
print isCached
```

Which returns (True) or (False).

Feature Enhancements

- Most OS X third party libraries have been rebuilt against the 10.6 (Snow Leopard) SDK, as Nuke 7 does not support 10.5 (Leopard). The full list of library versions is as follows:

Library	Version
Alembic	1.0.5
Boost	1.46.0
DirectX	Jun10 (Windows only)
FBX	2012
FFmpeg	(git 2012-02-07)
FreeType	2.4.4
GLEW	1.5.8
Intel MKL	Windows: 10.0.2.019 Mac OS X: 10.2.5.088 Linux: 10.1.1.019
Libpng	1.4.8
Libtiff	3.9.4
OpenColorIO	1.0.0
OpenEXR	1.6.1 (cvs 2008-03-03)
OpenEXR Deep Ops	2.0.0

Library	Version
Primatte	5
PySide	1.0.9
Python	2.6.5
Qt	4.7.2
Truelight	3.0.4965
zlib	1.2.5

- BUG ID 11972 - RotoPaint: A new method, **getSelected()**, has been added to return the currently selected strokes and shapes.
- BUG ID 13026 - RotoPaint: You can now copy shapes to a new layer using Python.
- BUG ID 23866 - Using **node.setName()** to change a node's name broke any expressions referencing the node.

  A new function, **updateExpressions**, has been added to the **setName()** function to fix this issue.

Bug Fixes

C++ specific bugs

- BUG ID 23330 - Using C++ **Op_knob()** in NDK plug-ins produced errors when used with internal knobs.

Python specific bugs

- BUG ID 8061 - The **Pulldown_Knob.setValues()** method did not include any way of sorting entries.
- BUG ID 11615 - The nodes listed below were calculating the image on the main thread causing a block:
  - DeepToPoints
  - DisplaceGeo
  - Particle*
  - PositionToPoints

  These calculations still take place on the main thread, but before **validate()** in such a way that it can call progress functions and pump the event queue.
- BUG ID 13546 - The **setVisible()** call was not applied at group level when creating gizmos.
- BUG ID 14458 - Adding incorrect knob values, such as names containing incorrect case, to another node was causing Nuke to crash.

- BUG ID 20359/20479 – It was not possible to re-add a custom knob to a node once it was removed.
- BUG ID 22516 – It was possible to copy to the clipboard in command line mode using **nuke.nodeCopy()**. This should only be possible in GUI mode.
- BUG ID 23842 – The **filenameFilter** example in the *Nuke Python Developers Guide* contained inaccuracies.
- BUG ID 23866 – Using **node.setName()** to change a node's name broke any expressions referencing the node.
- BUG ID 25165 – Nuke was not releasing memory when custom QWidget panels were closed.
- BUG ID 26471 – Closing Nuke with a QDialog open caused a segmentation fault.
- BUG ID 27935 – The **nuke.OutputContext.setFrame()** method threw a **ValueError** exception when a negative float value was passed as an argument.
- BUG ID 29696 – The **max_usage** argument was incorrectly defined in the Script Editor help.
- BUG ID 32112 – Nuke's Python contained naming inconsistencies between **PyCustom_Knob** and its class name, **PythonCustomKnob**.