NUCODA & PHOENIX 2021.1

NEW FEATURES

NEW FEATURES IN THIS RELEASE

- NewTek NDI support
- RED debayer on the GPU
- Red Komodo RAW camera support
- EXR - Multi-part matte passthrough
- EXR - Automatic background checks for metadata updates
- EXR - Speed improvements
- 120fps Projects now supported

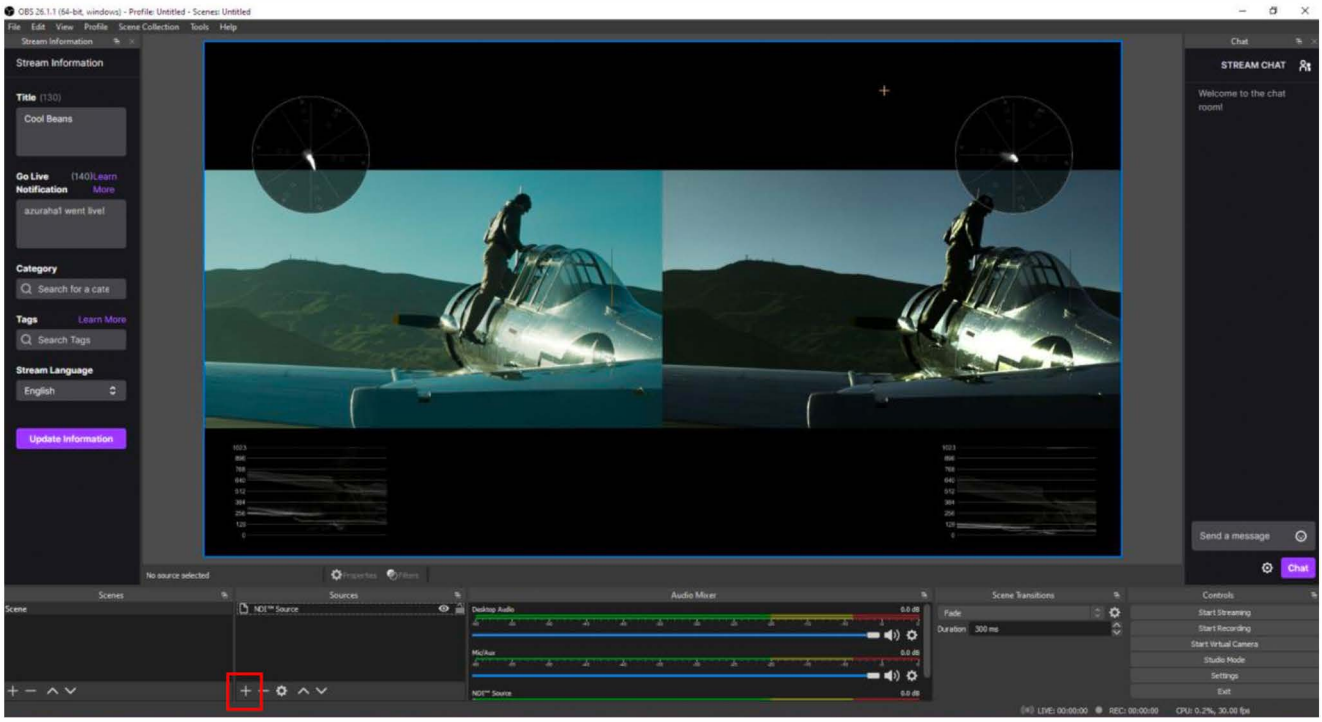
GENERAL IMPROVEMENTS AND THE START OF OUR GPU PIPELINE DEVELOPMENT

This release marks the beginning of our journey to completely rebuild our rendering pipelines.Over subsequent releases there will be significant changes to the underlying architecture of the software, and this will result in speed improvements across the board.

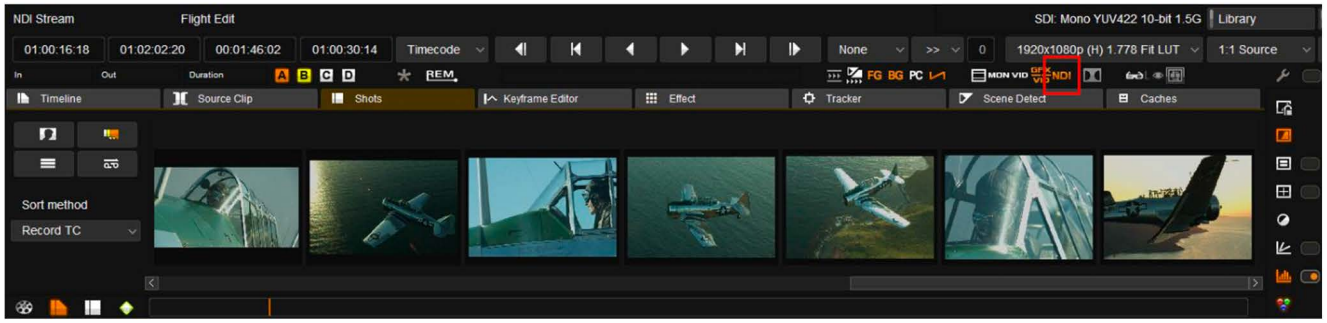
NEWTEK NDI SUPPORT

You can now stream your video output, including all GPU readback functionality using the NDI SDK. To enable NDI simply turn on the NDI button in the GUI. NDI allows video to be sent and received over IP and is compatible with a wide range of products and services such as OBS, Medialooks and many more. You can send your video to any device for remote viewing of a live grade or even connect to a workstation remotely using products like HP RGS and view back your session with high quality video over IP. If you have a Precision Panel you can use this in concert with the NDI output to control and monitor from workstations remotely (Please enquire with Digital Vision World support for access to the Precision remote control software). As mentioned, there are many ways to use the NDI feature and it really is up to you what software you choose however below is a setup guide with OBS to give you an idea of how to get started.

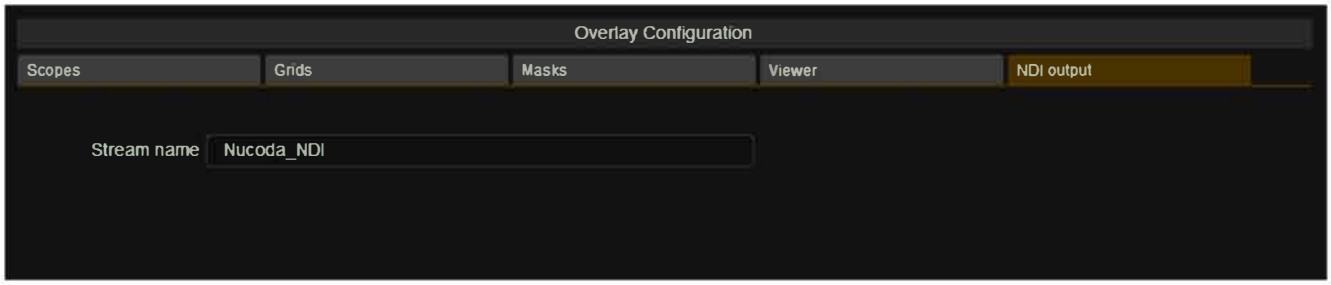
- Download the OBS software https://github.com/Palakis/obs-ndi/releases/download/4.9.0/obs-ndi-4.9.0-Windows-Installer.exe
- Install the OBS NDI plugin https://cdn-fastly.obsproject.com/downloads/OBS-Studio-26.1.1-Full-Installer-x64.exe
- Have a client account setup that can receive a stream (e.g. twitch, Youtube, Medialooks or your preferred application)
- Launch OBS
- Add an NDI Source (select the + sign in the sources box then select NDI Source from the drop down menu)



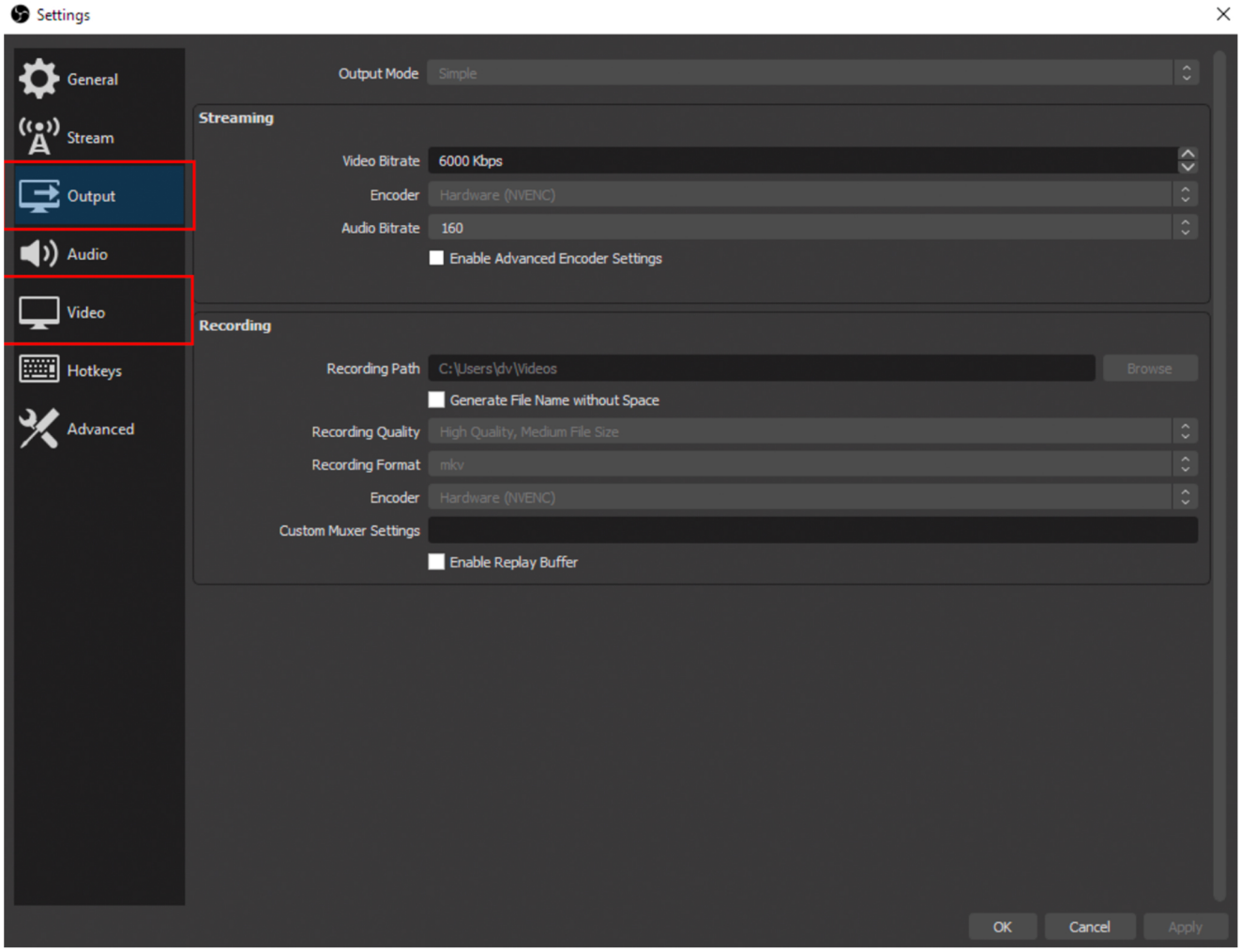
- Select 'Settings' > 'Stream' > <Client>
- Connect to your client account
- Select Start streaming
- Launch Nucoda and open your project and timeline, enable 'NDI' and playback
  NOTE: GFX/VID needs to be enabled to see overlays as you would expect from a video output



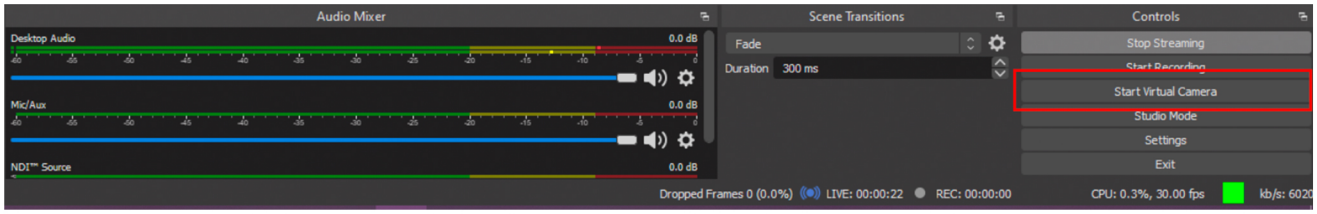
- NOTE: You can set the name of your NDI stream in the '...Settings' window inside each project



- You will see the output on OBS and it will automatically start streaming to your client account which you can view from any device
- To stop streaming select 'Stop Streaming' in OBS
- Also be aware you can adjust stream settings in OBS such as bit rate and resolution.



- You can also stream directly to Zoom when in a Zoom meeting by selecting 'Start Virtual Camera'



- Inside Zoom you can start the camera and select 'OBS Virtual Camera'

Useful links

https://obsproject.com/
https://obsproject.com/forum/resources/obs-ndi-newtek-ndi%E2%84%A2-integration-into-obs-studio.528/
https://www.ndi.tv/tools/
https://medialooks.com/products/sdi-to-ndi-converter

RED SDK UPDATE AND GPU DEBAYERING SPEED IMPROVEMENTS

In this version we have optimized the GPU speed improvements for RED RAW. As expected, this drastically improves playback and render times for this format. Expect render speeds to be 3 to 5x that of previous builds when using a single GPU and then around double the performance of a single GPU when using two GPU's.

- RED Komodo camera support
- Expanded RAW settings (image below)
- Speed improvements (3 to 5x performance improvement)
- Multi-GPU support (we expect each additional GPU to roughly double performance but configurations with more than two GPU's still need to be fully qualified)

Qualified Video Drivers:
RTX Range: 461.40
Quadro Range: 462.59

NOTE: For higher resolution debayering GPU's with more memory are preferred.
There is now the option to choose your decoder type, so you have the choice to debayer on the GPU, GPU and CPU or CPU only.

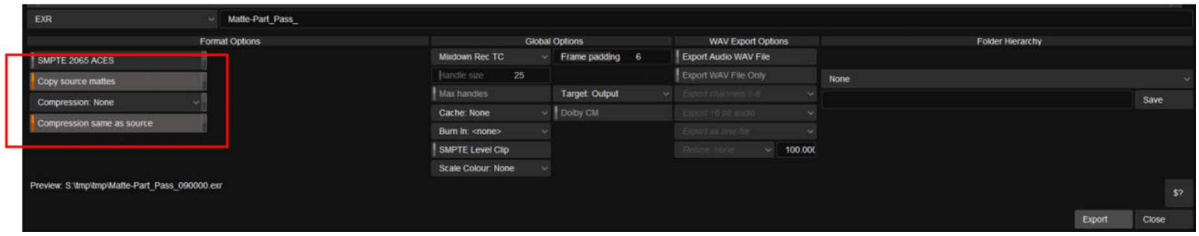
Known Issue: Metadata options for RED files will not be available if bringing across old projects into the latest version. It is recommended to re-import RED files into this version to access the new capabilities. However if you need to bring forward projects from previous versions containing RED files the last settings selected in the metadata will be fixed and source files will still work.

EXR UPDATES

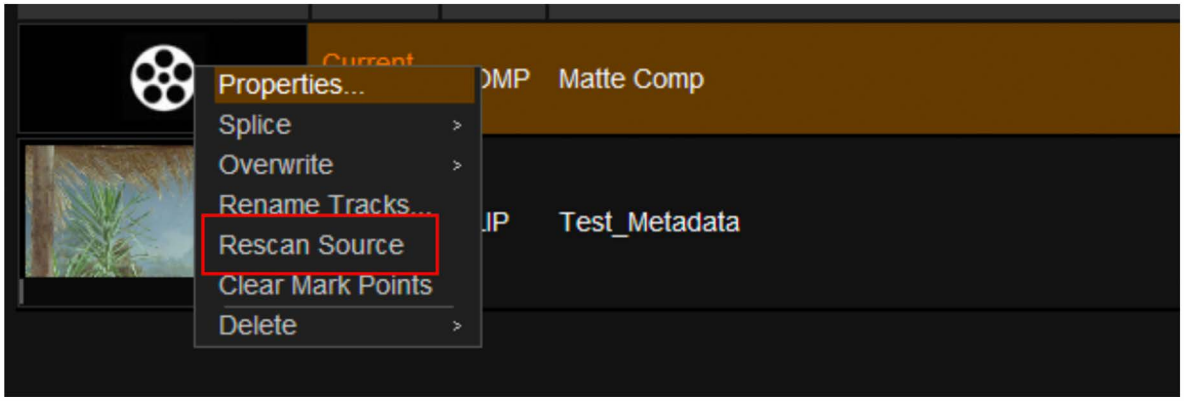
(Automatic metadata background checks, multi-part matte passthrough, performance improvements)

Multi-part matte passthrough – It is now possible to passthrough matte sources on export when using multi-part matte exr source files.

To export with embedded mattes simply select the 'Copy Mattes' option and for performance optimization select 'Compression same as source'. It is most efficient to have an output format selected that is the same resolution as the source file as this feature is designed to rebuild the source but with graded material.



Automatic metadata updates – There is now a preference to automatically run background checks for metadata updates. If changes are found, the source EXR metadata is updated without requiring a re-cache. There is now also an option to force the scan per composition, this can be done by right clicking on the composition and selecting
'Rescan Source', this option is also available to be done per clip.



To set automatic scans on composition launch set "backgroundMetatadataScan" to "true" inside the EXR section of the clip.prefs

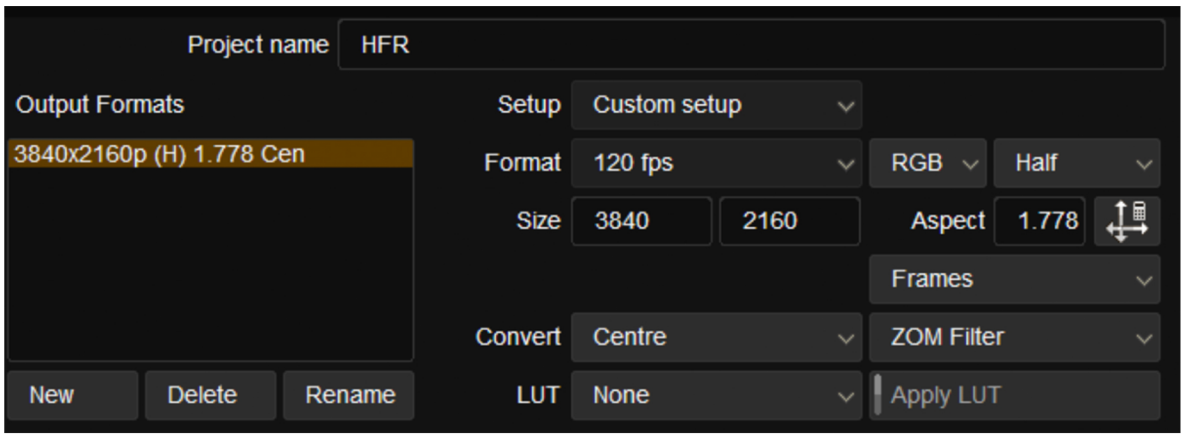
```
OpenEXR
{
        extension "exr"
        colourSpace ""
        backgroundMetadataScan true
}
```

Metadata updates on export – Project and composition names are now added to EXR metadata when exporting EXR files from the application.

Performance updates – We have also updated the ILM libraries to improve the performance of EXR files in general. Allowing for better support for the many compression types available inside the application as well as improved support for files coming from various VFX applications.

120FPS FRAME RATE SUPPORT

It is now possible to select 120 fps as a frame rate in the project setup menu.



FIXED IN THIS RELEASE

- Bug DVSUP-303 -Some EXR files with different data window to display window crash when importing
- Bug DVSUP-353 -Matte paint strokes area changes when Proxies are enabled
- Bug DVSUP-373 -Unrecognized file extension error when exporting sequences using CLI
- Bug DVSUP-376-Media not conforming when importing an AAF
- Bug DVSUP-412-Multiple crashes on exit
- Bug DVSUP-427 -Not fully utilizing threads on EXR export
- Bug DVSUP-428-Crash from uninitialized function pointer
- Bug DVSUP-471-Crash when scanning directories with .DS files
- Bug DVSU P-472-Crash playing back certain PIZ files
- Bug DVSUP-502 -Regression-Matte parts not applied when part name is blank
- Improvement DVSUP-426 -Add project and composition name to EXR metadata on export
- New Feature DVSUP-9-NewTek NDI support
- New Feature DVSUP-239-Multi-part matte export for EXR files
- New Feature DVSUP-259 -Add 120fps as project frame rate
- New Feature DVSUP-369-RED debayer on the GPU
- New Feature DVSUP-382-EXR metadata background check
- New Feature DVSUP-450 -Support for RED Komodo RAW files