CapturejayHX release notes

- **Version 2.3.7 - 1.7.17.10600 – 09/01/2019**

- capturejayHX adds support for streaming and network playback of Secure Reliable Transport (SRT) feeds. SRT is a protocol designed for live video streaming over the public internet and provides reliable transmission similar to TCP, however, it does so at the application layer, using UDP protocol as an underlying transport layer. It supports packet recovery while maintaining low latency (default: 120 ms). SRT also supports encryption using AES.

- Added RTP streaming support

- Added RTP Pro-MPEG streaming support

- Added MJPEG encoder for UDP streaming

- Updated FFmpeg to version 4.0.2

- Added QuickSync H.264 video encoding and multichannel audio support (up to 16 channels) for WebRTC

- Improved playback of RTSP streams.

- Updated NDI to 3.5 version.

- Updated NVIDIA components to Video_Codec_SDK_8.1.24

- Lots of other improvements and fixes in the capture/playback engine.

- Added QuickSync H.264 video encoding and multichannel audio support (up to 16 channels) for WebRTC

- Improved playback of RTSP streams.

- Core FFmpeg components updated to release 3.4.2 version

- Updated NVIDIA components to Video_Codec_SDK_8.1.24

- Fixed correct frame order in UDP streams playback

- Fixed audio/video synchronization issue after temporary loss of an input signal

- Fixed RTSP/RTMP streams reconnect problem on network failure

- Lots of other improvements and fixes in the capture/playback engine.

- **Version 2.3.5 - 1.7.7.9727 – 11/01/2018**

- A realtime indication of disk space left has been added inside each of the recording windows, just under indication of audio/video codecs set.

- When recording mode was set to "Ask filename" and the user hit "cancel" inside the filename dialog box without entering any filename, it was not possible to start any subsequent recording without restarting the application. Fixed.

- Updated ffmpeg to latest stable version - (N-86979-gf4ebbda-Reino)

- Improved GPU H264 encoding quality and performance on WebRTC.

- The encoder adds support for Direct Stream Copy, DNxHR encoder and Cisco OpenH264 encoder.

- Lots of improvements and fixes in the capture/playback engine.

- **Version 2.3.4 - 1.7.1.9423 – 30/10/2017**

- When the SecureDongle based licence is in use and the rent period needs to be extended (no changes to the enabled plug-ins), changes applied to the SecureDongle will be validated within one minute, so there is no need to restart the application.

- WebRTC adds H.264 hardware encoding (NVEnc) and single encoding for all outcoming streams.

- Added YUY2->UYVY/HDYC conversion to handle input video from WebCams

- Improved CBR mode for Nablet UDP streaming

- Fixed audio buffer overflow during receiving of RTSP stream with network errors.

- Fixed freezing issue after reconnecting to network stream.

- Lots of improvements and fixes in the capture engine.

- capturejayHX application and setup packages are now digitally signed in order to verify the author's identity and ensure that the code has not been tampered or corrupted. This increases trustworthiness against various anti virus software.

- capturejayHX is now available as both 32 and native 64 bit application. Support for Smartkey dongle is dropped in the 64 bit version due to product obsolescence.

- Added capture to image sequence with DPX, PNG or JPG codecs. Added demo of Nablet UDP streaming and MPEG capture.

- The NewTek NDI has been updated to the newest SDK v2.0

- Fixed bug related to conversion and overlaying images with mask, and overlaying of ARGB32 images.

- Added protocol for remote control of Nevion video routers via NCB protocol, and Blackmagic Videohub via RS232 and TCP.

- capturejayHX virtual output device now adds support for Skype and other 3-party application, that will now able to capture the same capturejayHX ingested signal. Also, general support has been improved for already supported applications like Adobe FMLE, Vmix, and many others.

- New graphics on digital counters and better precision on VU-meters.

- Updated ffmpeg to latest stable version - N-83458-g53234b9 (09.02.2017)

- High CPU issue load if no video, audio or external audio was selected. Fixed.

- In special cases, buffer overflows and fps drops might occurr when capturing the to MPEG. Fixed.

- In order to avoid issues in case write permissions are not set into the application's installation folder, the installer now automatically sets modify permissions appropriately.

- The recording profile section now also saves settings related to input video device, video format, video input, encoding format, input URL, apart from already existing audio and video codecs and specific settings.

- The audio/video codec captions inside the recording preview windows now also show the current recording profile (if set).

- Fixed NVENC crash on certain systems.

- Lots of other improvements and fixes in the capture engine.

- **Version 2.3.1 - 1.6.1.8376 – 17/10/2016**

- Added new logic that improves the QuickSync encoding performance.

- Added support of BMD MJPEG decoder for MJPEG encoded live sources.

- The FFmpeg was updated to revision N-81786-g2586668 (28.09.2016).

- The scheduler section might not display set times correctly and/or not run the selected schedules when using AM/PM time format. Fixed.

- The scheduler now allows to set the same time for the start / end of recordings. This trick allows, for example, to restart recording each day at the same date thus generating a new 24 hours file segment each new day.

- **Version 2.3.0 - 1.6.1.8021 – 29/08/2016**

- The specific codec settings (such as bitrate) can now be set individually for each recording channel and automatically saved into dedicated XML files so the same settings are retrieved at the next application start.

- When using some few codecs such as XDCAM and possibly others, trying to open the codec settings panel from the setup window for the 2nd consecutive time raised an access violation error. Fixed.

- Updated FFmpeg codecs to version N-81118-gfb91850 (July 2016).

- Several other minor fixes, improvements and optimization in the encoding engine.

- The capture engine has been re-engineered to expose a standardized approach for all kind of inputs (capture device, NDI, network stream, etc.) allowing seamless insertion of CG overlays and setting of the encoding video format indipendently from the actual input video size.

- Added native support for Magewell capture cards.

- capturejayHX can now be set to expose the input feed simultaneously to a NDI stream, to streaming output, WebRTC and of course to a virtual object.

- capturejayHX can now be set to capture from NDI, generic network stream (udp, rtsp, rtmp, MPEG-DASH http, etc.) and from generic virtual object exposed by any other WINJAY application.

- Added new dedicated drop down box inside the codecs settings panel, allowing to selectively set the encoding video format. For example you can set the encoding in some SD format while the capture card is set to capture an HD input.

- Fixed bug in MP4 encoding logic that could cause problems on interlaced video encoding.

- Fixed small bug in WMV/RTMP streaming logic.

- Newtek NDI (Network Device Interface) is an open standard developed by NewTek that allows transmitting video streams via LAN instead of SDI. The protocol aims to connect video applications in the production and post-production areas. capturejayHX now offers capturing from NDI streams and clearly, the NDI protocol allows as well to send video to and from any Winjay application, for example a CapturejayHX can capture the NDI stream generated from a moviejaySX on any other workstation in the LAN.

- WebRTC is a new technology that provides browsers and mobile applications with Real-Time Communications (RTC) and allows audio/video data to be transferred between desktop applications and browsers like Google Chrome and Mozilla Firefox without any plugins. WebRTC has a number of awesome features like adaptive bit rate, direct peer-to-peer data transfer and low latency. capturejayHX now offers capturing from WebRTC streams and clearly, the WebRTC protocol allows as well to send video to and from any Winjay application, for example a CapturejayHX can capture the WebRTC stream generated from a moviejaySX in any other location in the world via the internet.

- capturejayHX now includes a screen capture engine, that can be set from the setup window-> Video device settings. Thanks to this, it is possible, for example, to capture screen action to file or streaming.

- The encoder now adds AAC audio codecs for .FLV and MPEG-TS formats.

- Improved scaling algorithm for DVHD capture format.

- Added DVCPRO encoding algorithm optimisation. The performance has increased.

- The scrolling text panel that appears when you click on the customer logo from the main application window now also shows the dongle serial number. This information turns useful when updating the subscription package.

- **Version 2.2.7 - 1.5.4.5342 – 22/10/2015**

- NVIDIA NVEnc H.265 (HEVC) Encoder is now available on Nvidia's latest Maxwell GM20x GPUs (GTX980, 970, 960) and future Quadro/Tesla/GRID platforms based on GM20x GPUs.

- Added support for simultaneous playback/capture (such as moviejaySX and CapturejayHX) on the same Decklink card. May not work on older Decklink cards.

- Added support for Blackmagic's H.264 Pro Recorder

- Added support for 4K (including 50p, 59p, 60p) and 3D video formats.

- Added support for older DeckLink drivers.

- Updated FFmpeg codecs to version 2.5.8 (build 2015-07-31, Git revision 1bfb99).

- Format auto-detection for new Blackmagic devices (this might require updating your drivers to the latest version).

- Added UDP streams playback improvement.

- Software registration page now allows to register by licence code, register online and request as well as requesting an evaluation licence.

- The scrolling text panel that appears when you click on the customer logo from the main application window now shows more detailed informations about the software, such as the current version, enabled features, expire date for updates subscription.

- PC audio devices are now visible in the external audio devices list: this allows mixing your input streams with system audio.

- Various minor fixes and improvements.

Version 2.2.6 - 1.5.2.3832 – 23/01/2015

- On CapturejayHX recording module, recording profiles, it is now possible to set a default profile for each recording channel. Such profile is automatically loaded each time the application is started, so for example you can event perform recording on different channels with the same codecs but different encoding profiles.

- On CapturejayHX Player, also the file export section has been completely reengineered based on the newest ingest/playout engine to replace the former one based on DirectShow codecs. It is then possibile to use the same FFMpeg codecs, and perform logo and date/time overlays using the same settings available on main recording module.

- On CapturejayHX Player, added a special jog slider to change the playback rate in real time both on forward or reverse.

- The operation log and automatic deleting of obsolete recordings might not work at all in specific cases. Fixed.

- Inside capturejay.ini, added specific settings to allow optimal management of not-standard date/time formats inside SQLite database. This feature fixes any possible recordings browsing issues inside the CapturejayHX Player.

- Various other minor fixes and improvements.

Version 2.2.5

- New lightweight, DirectShow-indipendant and completely redesigned ingest engine, engineered for a broadcast grade 24/7 efficiency, better integration with playout cards via native SDK, minimized latency and improved stability thanks to dedicated threads for video encoding.

- Thanks to the integrated industry-standard FFmpeg codecs any issues due to DirectShow codecs already installed (such as codec packs etc.) are completely avoided – once setup is completed, the application is ready to use without requiring any added end-user configuration. The new integrated codecs fully support encoding in the following formats:

  - Video:

  H.264/AVC, MPEG-1, MPEG-2, M-JPEG, MPEG-4, DV, DVCPRO HD, FLV H.263 (Flash Video), HuffYUV, Theora, Google VP8, Quicktime animation (RLE), Apple ProRes 422, VC-3 (aka DNxHD), JPEG2000, Windows Media Video 8 & 9, LossLess JPEG, CUDA H.264(*), Intel QuickSync H.264(*), NVidia NVEnc H.264(*) (*) GPU accellerated, encoding process doesn't involve additional CPU load.

  - Audio:

  PCM, MP2, ATSC A/52A (AC3), Vorbis, MP3, AAC, ALAC (Apple Lossless Audio Codec), IMA ADPCM, Microsoft ADPCM, FLAC, Windows Media Audio v1 & v2

  - File formats:

  MXF, MXF-D10, GXF, DV, FLV, VOB, ASF, WMV, MP4, MOV, XDCAM (MPEG Sony IMX), MKV, AVI, WebM, MPEG-2 (PS and TS)

  - Streaming formats:

  HTTP, RTMP, UDP, RTSP, RTMP (FMLE), Windows Media Streaming

- Full supports for the complete range of Blackmagic, Deltacast, Stream Labs, or any WDM compliant capture card.

- The new ingest engine supports back-to-back recording, without any frame loss between consecutive segments.

- Completely redesigned database engine, now based on SQLite, replaces the old Paradox to offer an optimal compatibility with the newest operating systems Windows8.1 and Windows10.

- The same executable now runs as demo version or can be activated as retail version with USB dongle (SecureDongle or Smartkey) or software (licence code or online activation based on hardware/software platform).

- Completely redesigned user interface, video preview windows can now be freely positioned and resized indipendentently from video capture resolution. Also, a dedicated feature allows to automatically show, position and size the desired number of recording windows.

- A special control window with increased size buttons allows to operate from a touch screen the main software features for the 1° recording channel.

- The recording presets now allows to associate a specific preset to one of the streaming buttons inside the touch screen windows to achieve instant recall of 2 streaming profiles.

- New Rec/Skip feature: a click on the recording button while recoding is active closes the file on recording and the capture proceeds to a new file, without any frame loss.

- New Virtual Objects feature: like the DirectShow virtual device, CapturejayHX now exposes audio/video input on virtual output objects which can be re-used from other applications. For example, from a CapturejayHX ingest you can capture the moviejaySX playout, or add a CapturejaHX input signal as playlist item inside a moviejaySX/HX playout, and so on.

- The capture from URL feature now supports all the following formats: HTTP, RTMP, UDP, RTSP, Windows Media Streaming with the above indicated audio/video codecs.

- A new feature allows to freely set the macro for generating the filename according to Windows username, channel, date/time.

- The date/time overlay now allows to freely define the date/time format and background Alpha trasparency. Also, the watermark logo overlay now offers setting of Alpha trasparency and size.

- The frame capture feature now supports image saving to the BMP, JPG, PNG, TGA, TIF formats.

- New windows lock feature, if activated avoids accidental change of position and size of recording previews and other windows.

- New keyboard shortcuts feature allows to associate main software features to a user set keystroke.

- Audio/video formats and volume controls have now immediate effects, without having to restart the software.

- Several user settings such as watermark logo or timestamp overlay have now immediate effect, so it is possible to verify the desired result in real time without having to restart the application.