

Cinelerra-GG (Version Infinity) Release Notes for 11/01/2018-11/30/2018 for the builds

1. **Ffmpeg upgrade to 4.1** with several new functional cinelerra plugins that work with cinelerra.
2. New **Sketcher plugin** added to be able to “pencil in” information and draw circles/lines. Intense testing was done by IgorBeghetto + a good set of suggestions that he made were implemented.

3. Usability Improvements:

For the autos, added double click Button 2 use to select keyframe position.

There is now a Proxy folder preview in the Resources window – same as what was in Media.

Multiple **contributions from Andrea Paz** to include:

- Testing of the LV2 lsp-plugins by Andrea Paz has resulted in adding “compressor” ones to the lv2_blacklist.txt file since they failed in Arch for sure.
- Valgrind runs helped to ensure very little memory loss and no illegal instructions for new code.
- Tested and verified updated ffmpeg plugins and retested a couple of old ones that now fail. As a result there are now an additional previously existing 8 plugins and 15 new plugins with 4.1 that appear to function. Added helpful, instructional comments to the plugin.opts for future use.

Updated “info” for the additional ffmpeg plugins and added vibrance and fftdnoiz to expanders.

Load window now has a middle Apply button on the bottom to facilitate multiple directory files.

The OK and Cancel X button were added to the Title plugin so easy to revert to original with the X.

Added alpha to the vframe draw_pixels in order to allow alpha for sketcher, etc.

The Delete key shortcut was added to only “Remove from Project” the selected Resources media.

Window layouts can be saved and reused (total of 4) which provides more flexibility.

The Resources asset popup includes a choice to select all used on the timeline or all not used.

4. Bugs/Issues fixed:

Reverted for autos to be able to double click for ganging without “tweaking” enabled.

OpenCV which allows for use of FindObj, Move, Gabor, Stylize, Flow, and Puzzle is relegated to remain at version 3. Attempts to upgrade to version 4 bring up license issues of non-free.

FFmpeg message about some stream times estimated has had the filename added for reference.

Dynamic Keyframes problem which causes undo to not work or possibly crash has been fixed.

Replaced cin logo from Sam (most likely accidentally checked in the wrong one originally).

An “edge” case with keyframes has been corrected by adding a lock around that code.

Minor keyframe read-in rework was done.

Shared effects under certain circumstances were being selected off by 1. Two bugs fixed.

Some changes to listbox to include 1 bug fix and minor additional capabilities.

CriKey plugin code tweaks.

Code in vframe.C was moved around a small amount for better readability.

Bad resize of the Load window when the “recently used” pulldown was used, but this is now fixed.

The Title plugin Color Picker code was updated to prevent sharing problems with the Sketcher.

PPM code had a vframe fix applied. Fixed blue_dot/blond_cv error. Hard edge edits were tweaked.

Increased retries from 100 to 1000 in ffmpeg encode_frame for flush.

Modified version number from Unify to Infinity and created allowance for previous XMLs.

Cinelerra-GG (Version Infinity) Release Notes 10/01/2018-10/31/2018 for the builds

1. Effort to make **Cinelerra-GG Unify a more complete package** with more individual contributors:

Trim Feature enhancements for drag handle playing and splitting compositor to show both sides - usage in 41.13 of Features5.pdf.

Search capability in the Load menu at the top underneath the directory name.

Added 22 **more usable ffmpeg plugins** such as Color/Tblend/Mandelbrot/Tile. Credit to Andrea Paz who tested hundreds and some more of these will be added later.

French translations mods from Olivier (along with credit) have been put in.

App **icon modernized** with credit to Creative Common (Sam).

Title plugin is no longer limited in number of characters dependent on system resources.

Dynamic Keyframes are now the new standard with very large numbers possible.

Expandable/Subtree capability now available in the Resources window which allows for categorizing specific plugins such as **Color Correction filters**, Motion, and LV2 Calf plugins.

To **standardize to GPL-only licensing**, replaced libfdk_aac with aac, changed related opts files and removed a few fonts of questionable license (credit to Olivier for persuing this effort). There is a workaround for users who do their own build to put back libfdk documented in Features5.pdf.

2. Usability Improvements:

Modified autos, such as fade, to allow for textbox input and tooltip-like value representation (this welcomed suggestion originated from Lukas).

Reload plugins index option added in Settings → Preferences, Interface tab, needed for testing and when additional plugins are added.

Info plugins.txt updated to include very short information for the recently added ffmpeg plugins.

When creating clips, if you number the clip a higher number, the next clip will use that number +1.

The plugin icon for cinfinity when the controls window is activated will be displayed in the window manager set of open windows. A default icon of the green GG was created for non-existent ones.

Histogram Bezier plugin makeover based on user feedback/testing and user suggestions:

- keyframe problem of modifying the previous instead of the current keyframe has been resolved
- control points and previous/next keyframes problem is fixed
- default threshold changed from 0.1 to 1.0 thinking that was in error
- interpolation type on pulldown menu now shows the right type with the graph
- Split Picture checkbox is now saved with the keyframe
- position of the point's handles is now recorded correctly
- the code was cleaned up and several small bugs that may not have been noticed by users fixed
- added a "Clear" button on the right hand side of the Value, R,G,B which resets the chosen one
- shortcut is available to delete a drag-point with right click in addition to the current Delete key
- speedup by reducing the lookup table space from 65k to a smaller number when possible
- the white background was too bright and hard to see the colors so used improved colors
- a separate yellow colored line was added to indicate the gradient

Improvements from the work of **Olaf Wolff multiple contributions** include :

- Neophythe theme update with new icons and different colored window place holders
- German additional translations or corrections provided
- recommended deleting old unused icons in the data directory to avoid confusion
- provided license wording for CC credits to use in the Settings → Preferences, About tab
- checked out inkscape changes and notified developer to correct the dpi setting
- generated valgrind output which illustrated code that was losing memory so developer could fix

3. Bugs/Issues Fixed:

Keyframe error while tweaking has been fixed.

Potential SEGV avoidance with keyframes when set to Null.

Corrected version spelling from “Unity” to “Unify”.

Perpetual Session settings saved bug fix.

Updated Cin.po so that the latest phrases are included.

A “checkpoint undo” has been added whenever a “perpetual session” save is done.
Ladspa scroll fix applied; lv2 listbox scroll fix applies.
The lv2_blacklist.txt file has had some additional problematic files added (credit Olivier).
Textboxes have been reworked.
Fix utf8 keycode versus wide key symbols which resulted in Cyrillic code inputting incorrectly.
The splash gui black letters switched to a lovely green to show status such as “Initializing Plugins”.
Audio click problem for some files has resulted in a code change to accommodate different cases.
The About icon was a little too big on Leap systems, so it was moved a little.
Changed composer to chroma only, no source alpha blend, affecting fade so that the OpenGL and the X11 software looks the same.
Blue banana slider fixes put in.
Plugin close deadlock detect has been corrected.
Error in clip folder for some old projects, is now putting the clip in the Clip folder instead of Media.
Cinelerra_presets error message if no specific user file is available is now ignored.
Change to transition effects occurring in clips within a cut area has been modified to not take effect.
If user wants the clip to include the transition, have to use nested EDLs unless matches exactly.
Background rendering when enabled in Settings → Preferences, Performance takes effect on Apply.
Editpanel modified so that “Click to Play” state is saved with the project.
Histogram has had the default threshold changed from 0.1 to 1.0.

Cinelerra-GG Release Notes for 09/01/2018 to 09/30/2018 for these builds

1. Removing descriptive version number of 5.1 and replacing with **Unify and GG** – just in places that an ordinary user will see. This does not affect build scripts, pathnames, or other representations that builders or developers can easily view. **New Splash Icon** by Sam and temporary App icon.
2. German translations and newest Neophyte theme are being maintained and updated by Olaf.
3. Local Build computer has had all of the distros updated to current releases.
4. Added **Export Project** to file pulldown for more easily moving files to another computer (see section 40.28 in Features5.pdf).
5. **Usability Improvements:**
 - Added line between In and Out pointers to better see defined area + you can drag either pointer AND a label by left mouse button clicking on the icon and left mouse button drag to another location.
 - Ffmpeg scan error now will include the filename in the terminal window error message.
 - Changed the way the camera works in the Compositor to be more intuitive for dragging the viewport, that is “move the camera with the mouse”.
 - Motion51, and the other 4 Motion plugins now have more visible lines since they are thicker and should display properly on almost all monitors. They are now stippled black and white.
 - Numeric keypad additional keys of Minus, Plus, Period/Dot, and Enter now also work in dialog boxes. Same as the numbers 0 through 9 added last month.
 - User bins/folders can be set up with relative paths by holding down Shift key when ready to drop.
 - For mp4 rendering, you can now choose **h264/5_mp3 Audio** instead of the default aac Audio.
 - Added option to easily check box on/off all XYZ of camera and projector (see Window → Overlays).
 - A Shift-LMB on the Overlays window checkbox will allow for creating a “hot” button with only that item checked and then reverting to the “cool” state of the previous selections (see 32 of Features5).
 - The **Patchbay has been modified concerning the Expander** in conjunction with allowing for “Show Titles” only to work. The expander icon toggle will now let you see a single asset and title.
6. **Bugs/Issues Fixed:**
 - OpenGL texture mod to prevent problems due to Vframe and pBuffer not divisible by 4.

Previous and next labels in Viewer were incorrectly taking effect on the main timeline instead.
Modify Folder window increased size to make room for language translations.
Rescale refresh_frame for X11 direct scaling.
The fullscreen mode for a 3 monitor system has now been corrected to respect the space for the compositor and viewer.
Fullscreen focus for the Compositor and Viewer has been slightly modified to fix problems where the use of the F to return to normal mode was occasionally not working.
Another focus change was added to alleviate the switch from fullscreen to normal size screen causing some kind of lockup where the 1 and 4 transport keys stopped working. However, this did NOT FIX the problem so still searching for reproducible scenario in order to fix it.
As usual, some program file cleanup.
Shortcuts.html changes made to include Timebar and new shortcuts.
Bug in h265 render format for gbrp is now fixed where the wrong colorspace was used.
Added Mat N.'s patches for mpeg2enc and mplexlo to get rid of many warning errors.
Fixed Viewer LMB+Ctrl which was inadvertently changing the time format on main track canvas.
Correct alpha calculation in overlaysample.
The Label comments popup is now honoring the ESC or X to not make the comment changes.
OpenGL tweaks to include: edge jitter/glitch fix , projector + zoom GL fix, and zoom slider fix.
FFmpeg plugins have been fixed so that when the selection is changed, the scroll position is not lost.
Increased window size of Preferences to accommodate 2 of the themes.

5.1 Release Notes for changes from 08/01/2018 to 08/31/2018 for these builds

1. **Bins / Folders** are now available in Resources window. See section 45 in Features5.pdf for usage.
2. **Neophyte theme**, courtesy by hard work of Olaf is selectable in Settings → Preferences. It is very colorful and a really good presentation. As always, “thanks”, and other themes welcome!
3. **German translation** massive improvement compliments also of Olaf (another good-guy).
4. **Usability Improvements:**
 - Changed **Preview Bar behavior** in the Compositor and Viewer so that if not turned on, any media added to the timeline that increases the length, does not “turn on” the Preview Bar (Olaf described the issue with sufficient detail for us to understand the confusion, especially for any new users). You can now use **numbers on the keypad** in dialog boxes without interference with transport keys.
 - Added a couple of extra pixels in Resources window display between icons for better readability.
 - An ffmpeg **ffv1 format** has been added as provided by Olaf – under mkv, matroska container.
 - Vicon changes** in the Resources window:
 - With the Preview / Draw Vicons enabled, if you single click one of the Media vicons, a “mouse over” capability is enabled, with another single click to disable. This is documented in section 12 of Features5.pdf. This new implementation is subject to possible future change.
 - Vicons looking like they were jumping when playing has been fixed.
 - A resize to show files that were not showing were not playing, but this is now working.
 - Hide vicons was not working correctly, but should be now.
 - Vicon drag and performance tweaks were added.
 - Vicons now remembers where they left off, and restart there instead of starting over.
5. **Bugs/Issues Fixed:**
 - One condition, when using the Ctrl-r shortcut for proxy, was inadvertently leaving the icon in the wrong state has been corrected (reported by Igor Beghetto).
 - Waf problem with LV2 for Arch has had a patch added.
 - A bad window reference to listbox has been fixed.
 - Labels and In/Out pointers in the Viewer were not being highlighted correctly and now is fixed; also

the Prev/Next label buttons were incorrectly showing in the main track canvas.
Sort by time has been removed in order to accommodate sort in bins/folders. Sort of filenames is now without the directory path – just the basename.
Added a awindow copy fix which solved clips initialization problems.
Unterminated clip comment workaround in old XMLs has been added.
Safe regions in the compositor were not being re-displayed after playing stopped.
Another “booby bird trap” error has been fixed.
Double click on proxy file which was video only with no audio was not going to the viewer – fixed.
OpenGL refresh_frame and rework done, mostly for the sake of overlays in the Compositor.
A Scalar Proxy race condition is fixed.

5.1 Release Notes for changes from 07/01/2018 to 07/31/2018 for these builds

- 1. FreeBSD unbundled** build script is now available. Yuri has ported Cinelerra-GG using this as a basis and has added the package to the freshports.org website. Yeah!!
- 2. Locked all XFT drawings.** Although this may slow character drawings down a little, this is at least a 6-year old bug in the X library that no developers want to fix so am providing a cin5 local fix. Also, set up a trap to catch any that might have been missed (only traps if compile –with-booby). This only fixes 2 out of 3 of the bugs found. A bug report was sent to freedesktop.org (107380). There was code added to window and other create object areas to lock/unlock to prevent issues.
- 3. Usability Improvements:**
 - Added a choice to “beep” when render is complete in order to notify you if busy with something else.
 - Ctrl-a and Ctrl-z to select or deselect all or any files in the Load menu.
 - When you quit out of cin5, if started from a terminal window, the “Session time” will be printed out.
 - Proxy switcher has been added and a Proxy “show” button to display when enabled/disabled and scalar/non-scalar. Icon provided by Sam, that is closer to the future design work specifications he is working on to come later as time permits (see his forum email of July 30 on “Proxy-buttons”).
 - Proxy for single images (such as png, jpeg, tiff, pcm) now works for both scalar and non-scalar.
 - Viewer clips with only either the In or Out pointer set will now clip to either the beginning or end.
 - Multiple single frame silence insertions are now collapsed into 1 in order to easily undo.
 - Updated shortcuts.html to add new shortcuts and a couple of missing ones.
 - Changed timeline cursor move while playing to now stop playing when moved.
 - Delete clip thumbnails added to Interface tab of Settings → Preferences to easily clean up all clips.
 - Timeline right mouse click, has 3 new options available:
 - Find in Resources - can be used to locate media in the Resources window.
 - User title... - has been added for users to change the title there for clarification.
 - Show edit – will display in a text box information and the start, stop, and length of the segment.
 - Two new “Display” options are available in the Resources window Media and Proxy folder:
 - Display packed icons and Display icon list – it will cycle through what is now a total of 4 options and there is a shortcut of the letter ‘v’.
- 4. Bugs/Issues Fixed:**
 - Libopus build fix; Arch dependencies for package build fix.
 - Batch Render column titles were not being translated.
 - Clear default message in status bar (found while loading mp3s).
 - Duplicate plugin icons for some strange case is showing on a user computer – changed folder lock to attempt to alleviate this issue but it turned out to be a different problem. A second change to lock mechanism for plugin loading to avoid potential duplicates. Left mods in because clearer anyway.

Memory leak in lv2 code has been fixed. Valgrind caught this.
UnNest clip bug where unnest after a proxy reversal was not working has been fixed.
Speed slider bar SEGV in Arch is now guarded against.
Lock in 1 place has been replaced by Condition instead.
If the LV2 gui enable was not set, the gui button was still ghosted and should not have been so fixed.
When format in the proxy was unset (just blank), a dummy proxy was created. This is corrected.
Rewrote some “locale” startup to fix issues that occurred in FreeBSD but are linux compatible.
Time code clear in Viewer when EDL is cleared upon using proxy.
Added ffmpeg default format as mp4 so that if user does not choose another, it will still work.
Race condition in Close Mixers when using Perpetual Session has been fixed.
A tweak/fix in Layer 3 of libzmpeg3.
Removed Alt-x and Alt-z shortcuts which were in error.

5.1 Release Notes for changes from 06/01/2018 to 06/30/2018 for these builds

1. **JPEG updated** to 2.3.0 because had not been updated for awhile (Andrew R recommendation) and **updated libx265** from 2.7 to 2.8.
LV2 hook updated to work for x42 plugins (BIG help through use of Avlinux iso of Glen’s). Now working are Calf, X42, Invada, Infamous, OpenAV, LSP, Guitarx with “glitzy” gui. Also working with the simplistic gui are C*, MDA (drobilla), Ladspa, DJ, and MIDI.
Unbundled builds for Arch, Debian, RPM – verified for arch, ubuntu 18, and leap 15.
Dcrow for raw camera output has been **updated** with credit to the author, Dave Coffin. Support for new cameras includes 10 Canon, 8 Fuji, 4 Nikon, 3 Olympus, 3 Pentax, 11 Panasonic, 4 Sony.
2. **Usability Improvements:**
Sam has provided a few more ffmpeg plugin icons (thanks!)
Faster buffer refresh rate for lv2 plugins to make them appear smoother.
Default transition setting and usage has been changed to work differently (Beghetto suggestion).
Added to load filter, MP4 next to mp4 and JPG to jpg and short message “Specify filter” (Sam).
In the Viewer when using overwrite or splice only one of the In/Out pointers is required, other goes to the end (Beghetto suggestion).
A beep sound was added to notify user when proxy step is complete since it can be slow (Sam).
Igor Ubuntu provided the following suggestions and improvements:
Shortcuts.html, as used from the Shell Cmds, has had many corrections added and cleaned up.
The html ShellCmds script has been modified to bring up a specific language version when that default language is set in the browser if a file with the translations is available. Now Russian is available and any other language translations are welcome. This is a nice suggested feature and hopefully can be expanded in the future to include shortcuts.html translations.
Updated ru.po translation file for Russian translations making it a lot easier for them to use!
3. **Bugs/Issues Fixed:**
Proxy with multiple cameras was not working correctly but now there is at least 1 way to be able to use proxied files with Open Mixers (Igor Beghetto first reported).
Build script mods have been added to include problems found while attempting work on FreeBSD (Yuri emails). Also fixes for option to not build LV2, add back 10-bit option and other cleanup.
Reverted to default Pixels in Render video wrench to be the first choice (usually yuv420p) instead of available highest quality because it is most common.
Fixed unproxied clip in viewer problem (Beghetto reported).
Reworked a format option to switch from 12 bit to 10 bit.

For Arch, added dependency of libdv in the build script (Andrea email).
Zoom plugin vframe height uninitialized fix (KharAzar).
Missing audio when use double click proxy to viewer is now fixed (Beghetto).
There is now an error message if user attempts to create a nested proxy clip.
Bug in Apply for Playback A/B has been fixed (Sam reported).
Batch render save jobs lock problem is no longer an issue.
Append to Project caused a crash due to earlier mods which has been corrected.
Nested EDL proxy fix.

5.1 Release Notes for changes from 05/01/2018 to 05/31/2018 for these builds

1. **Calf LV2 Audio plugins** (about 45 of them) have been hooked in using a simplified text gui or a glitzy supplied ui from the lv2 plugin programmer. Other LV2 plugins may or may not work also. **IMPORTANT** - the lv2 plugins are not included with Cinelerra but rather must be installed by the user on their own computer – besides Calf Studio Plugins, you may also have to install lilv and GTK. If installed the plugins will be displayed in the Resources Audio Effects window as long as Visibility has “lv2” checked. For the first time, you may have to remove \$HOME/Cinelerra_plugins to get the plugins loaded and there is a new Settings->Preferences flag to automatically start the lv2 gui along with the standard simplified ui. More information in Features5.pdf.
2. **Ubuntu 18** build has been added and ub17 will no longer be updated. **Leap/Suse 15** also has been added to eventually replace version 14. Other distros have been updated to include Debian, Mint 18, Arch, Fedora... Thanks to users who pointed out new versions and provided links to new ISOs.
3. **Usability Improvements:**
Additional ffmpeg icons supplied by Sam for the new 4.0 plugins were added in (thanks!)
Ffmpeg plugins now have a slider bar and pot dial for more easily changing numerical values for highlighted parameters. Non-numerics still require typing of the value and pressing Apply button (idea originated from a recommendation by WPFilmmaker to make these plugins more usable).
4. **Bugs/Issues Fixed:**
OpenCV lib path fix for Mint 17 and Ubuntu 14 32/64-bit.
Bug found after installing ubuntu 18 for audio waveform background.
Ladspa code has been cleaned up some.
Bluray media shell job has had the default buffer size of 2048 hard coded as default.
An automatic workaround for elision error problem on intel computers resolved with rpath.
An uninitialized defaults in using the Render Farm which caused a crash on Leap 15 is now fixed.

5.1 Release Notes for changes from 04/01/2018 to 04/30/2018 for these builds

0. REMINDER - Undo has a limitation of 250.
1. Ffmpeg has been updated to version 4.0 and there are 9 new working plugins (irclog notification).
2. OpenCV library has been upgraded. This is an optional feature for some and is already built into the 64-bit tars but not the pkgs. However, for pkgs you can grab the tarball for your distro, extract the plugins and add them in. See Features5.pdf 37.14.2 for detailed instructions.
Additional Stylize OpenCV plugin added as an option which takes the video and varies it in ways to make it cartoon-like, edge-preserve, pencil-sketch, detail-enhanced, or stylized. There is also a new PuzzleObj plugin.
FindObject OpenCV plugin has some useful enhancements and improvements; drag boxes, a third column for the replacement object, new checkboxes of reset, draw match, aspect, translate, rotate,

scale, replace dx/dy, draw replace border, 5 modes, and thicker lines.

OpenCV fixes include fixing Object blend amount in findobject; removing libipp which was not debuggable but could cause a Segv; and fixing the clean/make.

3. Libx265 has been upgraded to 2.7 (irclog notification).

4. Usability Improvements:

Shortcuts in the Compositor have been added which use F1-F12 keys instead of the mouse and the html documentation in Shell Scripts updated (Sam request). Added 'b' for load backup shortcut.

A Drag Widget checkbox has been created which replaces the drag box that was already in the Title plugin. This will make it easy to add drag boxes in the future for other things.

Load filter has been added for png, jpg, gif, tiff and webm added to mkv (webm is subset of mkv).

Reworked plugin Visibility table to only ffmpeg, ladspa, video, audio, and opencv.

The Ruler in the Compositor window now has a Deltas field for dx and dy.

New Project menu has had the addition of file path and project name added for future use.

5. Bugs/Issues fixed:

Memory leak in Set Format has been fixed; some uninitialized variables are now initialized.

Fixed undo bug when nested clips are involved (Sam reported).

Wheel usage for redraws on the timeline (and probably other areas) has been fixed (Sam email).

Audio/Video Transitions were missed when switched to saving all in english but now fixed (Olaf).

Plugin Autos in Show Overlays renamed to Plugin Keyframes to make it more intuitive.

SVG via Inkscape had 2 problems with showing and rendering the results but now fixed (Olaf note).

Fixed problem of Drag incorrectly consuming an event in the compositor window.

Problem of 250 undo limitation caused memory munge (found by preobraz).

Shmmni/shmmax had to be changed to not make the numbers smaller if already larger.

Title drop shadow smoothing fixed on fraction boundaries.

Wide characters in the Ruler in the compositor window have been corrected.

Auto play in Viewer for audio now replays when reaches the end. This occurred in at least Leap.

Small code rework and other very minor bugs have been fixed as encountered.

5.1 Release Notes for changes from 03/01/2018 to 03/31/2018 for these builds

1. **CAUTION** – undo compression code has been rewritten because it was not working. This **affects everything** so be sure to keep backups until you are comfortable.

2. Proxy files now have **associated Audio when in the Proxy folder**.

They also now will have an index built for better seeking results (Sam request).

3. Ffmpeg has been updated to 3.4.2; libvpx has been upgraded to 1.7.0 (email deim31).

4. **Perpetual Session** and a supplementary backup have been added (see Features5.pdf for more info).

5. **Speed** automation will now **update the track duration on the timebar** (Sam request).

6. Usability Improvements:

Change to the **Title effect overlay for better aesthetics** by removing the grey colored shadows surrounding letters caused by blending. Now blends with background color (email from Ashley).

Viewer has 4 additional options which selects the entire media piece instead of just between In/Out when you add the Shift key to overwrite, splice, copy and clip buttons or shortcuts (Sam email).

Open assets/clips in Viewer en masse.

Compositor refresh on forward selection as was already being done on backward selection (Andrew).

Locking tracks in the patchbay now includes a different colored track title background to better indicate that the track is locked and no changes will take affect (partial suggestion of Dorfman).

Paste Silence will now paste a single frame after the hairline cursor when nothing is selected (Sam).

Additional DeScratch plugin adapted from Fisick to remove vertical lines from film + Sam logo.
You can now Load files from the Resource window using the popup menu or the letter “o” (Olaf).
Smooth option added for Title plugin to add/remove shadow for use with Chroma Key (irclog note).
Users that have libxft font thread issues may have to reload plugins by deleting Cinelerra_plugins.
SVG with Inkscape has been rewritten to not use a shell command to accommodate other languages and blanks/shell characters (Olaf and irclog).
Updated the included copy of Features5.pdf with TOC hyperlinks included.

7. **Bugs/Issues fixed:**

Clear YUV vframe for initialization purposes.
Paste to timeline from Viewer Copy was not functional, but has been fixed (Igor email).
Small bug fixes – memory leak in proxy; index bug; static interface declaration fix.
Proxy issues resulted in cleanup of tracking and options with the addition of a proxy specific popup.
Fixed undo/redo deadlock; fixed stale pointer in cached image that caused a segv (Phyllis found).
Rework nested edls and mixers; fixed EDL copy that affected clips.
A 4 pixel border with KDE Plasma, creates anomaly on pulldowns but has now been fixed (Sam).
AgingTV plugin has had the missing parameters of Scratches, Pits, Grain, and Dust now accessible.
The "Info" for plugin short one line description is now working for languages other than english.
Setting BC_FONT_SCALE to larger than 1, causes some non-movable windows to have some options cut off and not usable, but now at least the plugin windows are larger (irclog note).
Automation Type is automatically switched to display the in use type.
Segv in SVG with Inkscape plugin due to file load window still hanging around is now fixed.

5.1 Release Notes for changes from 02/01/2018 to 02/28/2018 for these builds

1. **Repeat Play (Infinity Loop) in Viewer/Compositor/Timeline** with Ctrl+Shift+transport button (several requests in ML over time).
2. **Mouse action in Viewer/Compositor** can be toggled on/off via the arrow in the editpanel on the right hand side of the other buttons. Default is off, but you will want to turn it on at least temporarily to easily review your video before a final render. Note that some 3 button mice do not accommodate a middle click for reverse but you can find out by testing with the command `xev`.
left click=forward play; middle click=reverse play; middle wheel=single frame forward or back
3. The first few seconds of the **Audio can be played in the Resources** window by double clicking the icon as long as “draw vicons” to the right of the word “Visibility” is enabled. In addition, the Video icons have had the audio included in the loop playback (Sam email).
4. There are 7 third-party programs that have been updated; these include `exr`, `fft`, `ilm`, `x264`, `x265`, `tiff`, and `lame`. Impact on builds has had to be remedied for some distros using an older version of `nasm`. Plus 265 has had 10-bit incorporated into the code so a special 10-bit version is no longer needed.
5. New behavior is exhibited in the main menu pulldowns, the Preferences menu, and the Resources window which **now have persistence** until selection or move out of the window (Kent Dorfman).
6. **Nested Assets/Edls** have been added which automatically render and allow for precedence changes.
7. **Usability Improvements:**
 - Viewer window** improvements to include:
 - Viewer window not clearing when load new file or close source, etc, now working (Sam/Igor).
 - Omission of EDL for Viewer being reloaded is corrected (Igor).
 - An image of the audio waveform that is currently in the Viewer window is displayed. It is the first few samples similar to that shown in the thumbnail in the Resources window (Sam request).
 - Vwindow locks have been reworked.
 - Left mouse click in Viewer if at end of play, will start the play over from the beginning (Sam).

Glitch with the position indicator after pressing home or end in Viewer has been fixed (Sam).

Append to project capability added to Tracks pulldown to add another set of tracks (Glen).

Multiple asset info is now available in the Resources window to bring up all highlighted at once.

Shortcut for In/Out pointers is now also < and > besides the [and].

The shortcuts.html file has had 30 additional lines added to document some missed shortcuts.

File size in File → Load is displayed with 3 significant digits in bytes, K, M, G, T, P instead of just bytes. There are currently 4 options to choose from by clicking the left most button on top to the left of the “Up a directory” icon.

An additional option file, y4m, for use with yuv4mpegpipe has been added.

F_lut3d plugin is now enabled for usage with cube input files (irclog request).

Ffmpeg plugin default operation is slightly different. If the value is unspecified, it uses default. If you specify the default, the value becomes unspecified (nothing gets passed to ffmpeg).

Alternate shortcuts using comma and period have been added for ease of use with different keyboards (Sam noted problem).

Clips in the Resources window now have a png thumbnail for identification purposes.

8. **Bugs/Issues fixed:**

Snapshot/Grabshot no longer hang in empty Resources window (Igor).

Shader program memory leak has been fixed.

The 40 build color transfer function compiling has been streamlined to speed up compiles.

Undo glitch when In or Out pointer used on the timeline has been fixed (Glen/Igor).

Subtitle track problem not showing the script is corrected.

Memory leaks in Recording and other routines have been fixed.

General code cleanup always in progress – mostly to remove extraneous lines.

Scroll Resources window fixed on the second load/scroll (Sam email).

Update compositor Edit Mask info window to include another help line.

Translation for plugins that show in the Attach Effect screen have been re-enabled.

Mistake in drop target fixed and a freeze in the Viewer window for a clip fixed (Sam found).

Null attach effect SEGV problem is corrected (Sam noted).

Recover lost auto is now fixed + clip note fix for carriage return.

5.1 Release Notes for changes from 01/01/2018 to 01/31/2018 for these builds

1. **Plugin names saved in the EDL are now retained in the original english language.** Previously saved XML files will automatically be translated back and when saved again, will be saved in english (multiple requests – Andrey, Igor, Sam).
2. **Shell Script, RenderMux,** added to copy via ffmpeg all of the created render files. This required the addition of a new environment variable, CIN_RENDER, to contain render filename (Andrey).
3. **Quality value has been added to Audio for rendering.** Default works as before but now different codecs will handle a quality audio request in its own setup. For example, vorbis allows audio quality to vary between 0-10 which results in higher bitrate/larger filesize as # is increased (sullivan irclog).
4. **2 Pass option added for VP9/Webm** and other codecs allowing for 2 passes can use also. There are 2 pre-rolled options files under the webm format to easily set up 2 passes. These were based on the work of Frederic Roenitz’s 1280x720 webm option file. Had to add cin_pixs_fmt=gbrp specifically for libvpx-vp9 which was not choosing a good default color model. Who invented gbrp anyway??
5. **File Formats added** of raw video (yuv and rgb), raw audio pcm, and ppm / ppm sequence to rendering choices (ppm image data is stored in byte format, one byte per color component (r,g,b) in raw format). Addition was necessitated by the need to carefully analyze and compare what goes into

cinelerra with its output. Ppm was also added to the snapshot/grabshot as an output format.
6. Resources Media now has **audio waveform icons** to distinguish audio media (Sam email).

7. Usability Improvements:

Render Farm changes and fixes (thanks to Andrey for communicating issues for improvement):

Rework render farm strategy to allow for more multiple cpu usage.

Created methodology for using Render Farm in the creation of dvd/bd media.

Added multiple port addition or deletion by using a range or highlighting the ports.

Fixed bug in Render Farm nodes listbox gui.

Port number tumbler box was being incorrectly incremented by 1 when changing hostname.

Fileogg which allows for packaging render farm sections into a single file has been updated to get

it back in synch with current program code. Otherwise it would SEGV. Also, when the

rendered sections are mux-ed together, the original files are no longer deleted. Despite the fact that this requires twice as much disk space, it allows for “fixing” any issues between sections.

Batch Render menus have additional checkbox and fields of “labeled” and “farmed” added.

Show Progress for render farm in gui has been added.

Setting for watchdog timer has been added due to insufficient 15 second timer for smaller clients.

Moved location of Reset Rates over by the Nodes listbox that display the framerates.

Audio channel position rework. “A confusing channels_positions in SetFormat_window and in theme-related audio panning boxes in the track patchbay have been changed from -

OLD

2:Front Right 1:Front Left 3:Center
4: LFE 6: Rear Right 5: Rear Left

NEW

1: Front Left 3:Center 2:Front Right
5: Rear Left 4: LFE 6: Rear Right”

The ffmpeg file formats in render are now sorted alphabetically.

Piped files can now be set up and used in rendering. For usage, refer to Features5.pdf (irclog note).

Asset codec format, Pixels for video and Samples for audio (stsbqm irc), now show in Render menus.

8. Bugs/Issues fixed:

Fix segv for opengl background rendering (noted when working on Glen issues).

Align and merge track error has been fixed.

Rework drop_edit, plugin_position to align drop position on the tracks.

Bug fixed where the TZ-UTC time was being used instead of the correct localtime.

Try FFMpeg first/last was being incorrectly reset in some cases inwhen Settings → Preferences changed (bug reported by Igor in 8/2017).

Shell scripts editing menu had minor change of the menu where it was squeezed for space.

At least 3 deadlock possibilities in batch render with render farm have been fixed as related to a

Shift-G hangup in conjunction with Preferences (mail from Lukas).

Trace thread fix; grab event performance change for Title/Crikey plugins.

Default options file for mp4 switched from h265 to h264.

The 5.1 → 2 mapping was not working correctly but has now been fixed (abbrechen irclog).

Minor cleanup in various routines and an ffmpeg fix.

The audio meters in the patchbay had a bug that was introduced at some point in time with a merge, a buffer leak was fixed, and a memory leak was fixed.

Cleanup in “show error”; disable opengl with ffmpeg plugins because it isn't allowed.

Scale ratio now allows for opengl usage. Pcm probe fixes went in.

Faststart option file has been modified to ensure that yuv pixel format is used due to high profile.

Vwindow viewer is cleared when a new piece of media is loaded and if you click the left mouse

button it will automatically start and stop play (Sam mentioned).

5.1 Release Notes for changes from 12/01/2017 to 12/31/2017 for these builds

1. **HistEq** plugin added which provides Histogram Equalization (concept same as Gimp/Inkscape/Xv).
2. **Ffmpeg upgraded** from 3.3.4 to 3.4.1 to keep contemporary and get latest patches (Andrew notes).
3. **Libopus is now enabled** as part of the ffmpeg build so as to provide high quality audio that is freely available with no license restrictions, i.e. can be used in sold products and commercially (Frederic).
4. **Grabshot is a new option** in the Media folder - right click on empty space to see this menu item. Also note that snapshot has been moved from the edit popup to this asset popup because that is where it should have been in the first place (make sure Wolfgang Brunner knows about the change since he initially requested snapshot feature).
5. Many, **many more Cinfinity style icons from Sam** (credit Creative Commons):
Cinfinity2 – **square cinfinity icons** – you may prefer these because even though they are the same size, the relevant part goes to the corner so you see more of the picture.
Transition icons are now modernized too – Very Nice!
Additional ffmpeg plugin icons as a result of ffmpeg upgrade (about 14 more).
6. There is now an **ffmpeg format file type of youtube** for use by new or less experienced users so they can at least pick the default and not be overwhelmed. The default choice is totally based on Frederic's work-of-art vp9/webm option files. All 6 options were tested and uploaded/played and even though the default extension is now youtube instead of webm/mp4, youtube accepts it just fine.

7. Usability Improvements:

Color Range / Color Space / YUV related mods that have been applied:

The late November mods for YUV had a few bugs that were fixed early on (Pierre found).

OpenGL implementation rewritten to better handle color space and color range options.

BT2020 color space/range option added (Settings → Preferences Appearance tab) for UHD.

Changed ffmpeg default file color model for consistency purposes.

Some related make-shader rework has been done and frame parameters in cache file.

Timefront and YUV plugin color issues have been repaired.

Dot product OpenGL problem fixed – affecting Threshold, ChromaKey, and Difference Key.

Updated “info” for the newly added 14 ffmpeg plugins.

Additional ffmpeg option files for h264/h265 2-pass encoding are now available from the interactive Render so that can be used instead of Batch Render (although Batch Render has the big advantage of saving the entire setup for running it multiple times).

Default Settings → Performance Cache size increased from 16MB to 256MB (noticed while working on email of jEsuSdaA 8).

There are a few additional option files for ffmpeg as submitted/needed by users (Frederic/Andrew).

Relative path names, as well as the full path, will now work in the loading of file list sequences.

Added date/time/sort to Resources MediaProxy folders and time to File → Load (Frederic request).

8. Bugs/Issues fixed:

Bug in Mixer Viewer pulldown segv when no video loaded has been fixed (Andre noted).

ChromaKeyHSV and Color Balance were not working correctly with OpenGL but now fixed.

Difference Key and Lens plugins bugs have been fixed.

Added number of file descriptors and amount of memory used to the dmp file.

Picon data fixup to correct wrong png files. Fixed icon image lookup bug.

Histogram plugin bug fix put in.

General cleanup in several areas to include: rebuild index, vicon read-in, filebase, etc.
Many memory leaks in the code have been fixed.
Average frame rate is now in place so that lossless vpx will maintain current frame rate.
Asset update mtime for proxy folder in an attempt to ensure all icons show (Sam email).
Removed esoteric “not on table” error message that was written to terminal window.
Fixed bug in bcrecentlist.C (Yuri found).
The colormodel in Recording screencapture was yuv420 and was low resolution, so changed to rgb888. (Andrew discovered and reported this problem).
Some issues with mixer undo were fixed (Andre noted undo keyframe took the mixers down).

5.1 Release Notes for changes from 11/01/2017 to 11/30/2017 for these builds

1. **Mixer Viewer** for multiple media or multiple cameras has been added (Frederic request).
2. **Sam’s ladspa plugin icons** part 2, 3, 4 are now in and are complete (credit Creative Commons).
3. **Blade Cut and Hard Edges** new feature added. Simple to use! Hard to code!!
4. Many **new additional opts video/audio render files** of type vp8/9 for webm and mkv + theora and ffmpeg opus, libopus, flac,+ vorbis along with documentation **provided by Frederic** (Thanks!)
5. Upgraded all of the O/S distros on the build computers. This is being noted here in case users with a distro that has not been upgraded has an issue with the newer builds of Cinelerra.
6. **Usability Improvements:**
 - Wrote a small program that can easily change the background specific color for icons, and used to create theme-related coloring for the folder icons.
 - Changed Keyframe Reticle line (Always option) from green to blue for better audio visibility (Sam).
 - Reset button added to plugins chromakey, chromakeyhsv, and gradient (Sam suggestion).
 - Additional resolutions and a 3rd column description have been added for ease of use in the Settings->Format and File → New resolution choice (Frederic suggested/provided the information).
 - Factory preset for **rule_of_3rds** added for f_drawgrid plugin use in compositor with camera (Sam).
 - Hotkeys/buttons** (see shortcuts.html for hotkey designation):
 - Keyframe position hotkey for going to the next/previous keyframe (Igor suggestion).
 - Hotkey for deleting the set of In/Out pointers (Igor suggestion).
 - Shift + the Delete button in the Tool Info in Compositor will delete the entire mask (Igor note).
7. **Bugs/Issues fixed:**
 - The wrong clip icon was showing up due to picon strategy change (Sam discovered).
 - Added a way to get more information when running as a user in order to debug using ptrace_scope and also displaying memory size (need for video developer).
 - Keyframes not being displayed for mask in realtime on track now fixed (Igor found).
 - Problem with default mask keyframe at beginning of track now correctly being handled (Igor note).
 - Resources window not getting updated when cut or perform other operations that affect labels, etc.
 - Changes to how OpenGL closes window have been made.
 - Shmmni sysctl.d bump for more shared memory usage for debian-type distros (video developer).
 - Option to disable build of libsdl (Dominique with Gentoo build).
 - Undo cache reset bug which caused failure of correct undo’s and redo’s has been fixed.
 - Theme images access rework to provide some speedup.
 - Fix mask vframe setup and add unshared vframe constructor. Problem due to shared memory resource.
 - Rework of deglitch, stop playback, and optimization code.
 - Fixed memory leak in masks.

Some positioning rounding changes.

A bug fix in Alt-f usage for auto-fit has been fixed and slight rework in some default settings.

Opus webm usage caused SEGV when ffmpeg channels was greater than 2 and has been fixed.

When libopus is installed on the O/S, cinelerra has been modified to include this in ffmpeg. Note that the most used operating systems of debian-style, like ubuntu/mint/debian don't by default.

Rewrote ydiff to accommodate threads and remove need for GTK+ (since gtk not thread safe).

The next label select operation was not working right but has been corrected.

Single frame playback and plugin additions in some cases changed from yuv to rgb causing a slight, but confusing change in the compositor. This is now fixed (Pierre reported).

The above led to major changes to allow for color space and color range choices selection along with improved dialed in output.

RGBA_FLOATP color model transfers to non-alpha models caused a segv which is now corrected.

5.1 Release Notes for changes from 10/01/2017 to 10/31/2017 for these builds

1. **Alternative to keypad** for play/transport keys added for computers without a numpad. Refer to the shortcuts.html associated with the "shell cmds" button to see equivalences (Quinton).
2. **Snap/Cut editing** and **snap while dragging stickiness** (Quinton feature request).
3. **New icons for the folders, audio ffmpeg, and Ladspa** in the Resources window and some more changed icons from previous changes provided by Sam (credit Creative Commons).
4. **Added HV7 mods** in a continuing attempt to get all Cinelerra mods merged into 1 place:
Speedup for large format files, for example 4K, added which uses a direct access method. Because of this potential speedup for several files, X11 is now the default driver. Also, when X11 is picked, a checkbox is available to turn on/off direct rendering – "use direct X11 render if possible".
Option for including regular or large sized mouse while recording + a boundary box to easily frame the area for a screenshot.
Presets and Factory Presets are now combined with the Preset Keyframe Parameters allowing you to choose, apply, delete, save, edit your own Presets which are saved in .bcast5/Cinelerra_presets. Default factory presets have been added for Compressor, Lens, Spectrogram, Downsample, Scale, MotionHV, Reverb, Interpolate Video, Chroma key (HSV), Histogram, EQ parametric, ReframeRT, and Sphere Cam. A Presets button has been added to the plugin bar (as requested by Frederic).
Max color for the eyedropper, when checked, sets color to the max value within the chosen area.
Clock in left hand corner of main track canvas modified to be characters instead of line segments.
It is now possible to create different theme background colors for the clock in case of color conflicts.
Assets allow for multiple windows. For example, you can bring up in the Resources windows, multiple asset info windows on different media at the same time.
Textboxes have right mouse click popup for "cut, copy, paste" options.
Plugin changes:
Sphere camera new effect has been added.
MotionHV now uses cache; major changes to Reverb; and changed Timestretch plugin.
Interpolate Pixels changed to Interpolate Bayer using the Bayer algorithm for interpolation.
Some keyframe gui changes went in.
The "asynchronous" option (under "play every frame") in Settings → Preferences has been deleted because ineffective.
Deglitch for audio was added for some specific problem where there were little fragmented audio edits that didn't line up with the video.
5. Xen for automating builds for multiple distros has been configured into the Cin5 build systems.

6. A new **Search function** in the Resources window & Attach Effect option now available (Igor/Sam).
7. **Usability Improvements:**
 - Upgraded **Russian translation** courtesy of Igor.
 - Highlighting Inversion Color** setting in preferences added to allow for changing selection color. The default is still white of ffffff (requested by Quinton).
 - Set Input Focus when window entered** also a new setting in preferences to automatically focus.
 - The ffmpeg F_nlmeans plugin, commonly used to denoise VHS tapes, has had a thread count added so that more than 1 cpu can be utilized to speed it up some (Thomas email).
 - A Sort is now available in the folders area of the Resources window (more comfortable for Igor).
 - Snapshot** capability for a single frame to save as png, jpg or tif (Wolfgang requested).
 - Load files icons updated to include about 60 file types such as avi, png, m2ts, dvd, mkv, h265 and so on. Igor pointed out deficiency and provided another mod to greatly enhance the list.
 - Folder code changed to allow for multiple folder icons.
 - A new build option of `--with-git-ffmpeg=no` or `=a url` allows for building with current ffmpeg from its Git repository.
 - Tooltip for the Control button on plugins now read “Turn on”/”Turn off” correctly (Frederic noted).
 - A problem with a bad system font, necessitated the addition of BC_FONT_DEBUG variable to provide extra informational messages output to the terminal window so that a determination could be made as to any potential problems in the Titler.
 - Setting `BC_FONT_PATH=:` removes all font paths from inclusion for the Titler except for any then included in the font path.
 - Setformat and Preferences Theme improvements and new SVGs provided by Igor.
8. **Bugs/Issues fixed:**
 - Proxy editing** fixes have been applied to include the following:
 - Multiple file loads was hung up due to improper lock on the Progress bar (reported by Sam).
 - Allow for usage of more than 1 cpu to speed up proxies.
 - Changed Alt-p to Alt-r due to conflict with numpad key alternatives.
 - Better translations for “de” language (provided by Sam).
 - Fixed problems with the proxy files showing up incorrectly in the Media folder.
 - The “User” folder which is not currently being utilized has been temporarily deleted.
 - Junky keyframes showing up when drag edit have been commented out until have time to do a full and thorough investigation/implementation (Igor pointed out).
 - If the “subtitles” file was deleted, cinelerra could crash on next usage. There is now a guard against this happening (Ugin reported problem).
 - YUV interpolation for some plugins, like perspective, now has correct background offset subtraction.
 - Listbox drag fix is in that prevents disappearing folders when moving them has been fixed (Igor).
 - Scroll bar on Compositor not supposed to come up automatically on startup so fixed (Danny noted).
 - In Keyframe Parameters, the underline is no longer in the wrong place (Sam reported).
 - Removed ff_anoisesrc plugin since it crashes (Sam found).
 - When dragging an icon in the Resources window, the arrow was off the icon so fixed (Igor email).
 - Dragging an effect from the Resources window was causing a scroll. Now corrected (Sam email).
 - Memory leaks pointed out with the use of Valgrind, have been eliminated.
 - MSGQUAL which is used for contextual language translation has been improved for ease of use.
 - More language translatable words/phrases have been added.
 - Some format geometry choices have been deleted and some framerates have been added.
 - An XFT font/Xwindows lock issue was identified which can definitely hang your session if you operate multiple simultaneous playbacks, although not a problem in normal use. A patch is included in the thirdparty src directory for you to rebuild the library on your system if desired.
 - Plugin client fixed for legal 0 input. This fixes ff_Sine ffmpeg plugin. (Sam reported).

Bug in File → Scan → Find ChanSearch window resize with disappearing 'Text' fixed (Igor).
Settings → Preferences → Recording, Record driver choice related fixes are in (Igor reported crashes).
Changed Picon strategy for future ease of use and coherence.
Empty keyframe edit no longer crashes for plugins such as Aging TV.
Drag plugin tweaks have been added to attempt to alleviate KDE's problem with dropping the plugin onto the main track canvas. This was an old unresolved problem (Sam and Igor analyzed/tested).
Wide character support to fix several issues, such as Russian language ability to ignore case in the search feature, suggestion box issues, keypress for paste set to 0 and file name loading (Igor found).
Fixed SEGV occurring in the subtitle text boxes when triple click (Igor reported).

5.1 Release Notes for changes from 09/01/2017 to 09/30/2017 for these builds

1. **Proxy editing** has been added after porting, modifying, and enhancing from HV (Glen/Sam). Preliminary testing by Andrew/Igor/Sam/Frederic helped fix bugs and add more features.
2. There are now **102 new ffmpeg video plugin icons**, 2 new plugin icons, and some changed ones provided by Sam (credit Creative Common) - professional quality and newly modernized.
3. **OpenCV 3 (Computer Vision)** is now an optional build in order to use the following plugins:
 - 3.1 The **Find Object** plugin using OpenCV3 has been upgraded to work to find an object (nicat45)
 - 3.2 The **Move Object** plugin has been added to move an object and stabilize it.
 - 3.3 The **Flow Object** plugin retards image motion as shown with optical flow.
 - 3.4 The **Gabor Object** plugin creates fractalius-like image effect.
4. A new plugin, **Rumbler**, has been added that gives dream-like or earthquake-like qualities to video.
5. Rework of **Affine and generic Interpolation code** addition. This may have some effect on the filescene code, and the plugins: all motion, perspective, lens, radialblur, rotate and interpolatevideo.
6. Version **upgrade of ffmpeg** to 3.3.4.
7. **Usability Improvements:**

A preference new option has been added – **Always show next frame** in Settings → Preferences → Appearance tab that “displaces” forward movement by 1 from the default. This only affects “plays” in the forward direction (Frederic request).
Gang Speed and Fade Automation was limited on length of time due to mathematical formula so changed to direct integrals for floatautos. Now should be able to handle longer intervals (Fred).
A retry_limit was too low causing audio speed dropouts so a reset was added (Frederic reported).
Ladspa plugins were renamed as L_plugin so as to have them grouped together in Resources and because there were duplicate names such as Crossfade.
The Lens plugin now has a reset button and 3 types of Interpolation choices (Sam email).
Theme menubar has had the green Heroine Warrior logo removed for consistency (sort of Glen).
8. **Bugs/Issues fixed:**

Keypad 1&4 with Ctrl, when in/out pointers set was not honoring the in/out. Now working right.
Vrender delay/countdown which resulted in a snap effect has been corrected. It was noticeable as a snap effect when playing with in/out pointer set.
A couple of minor Perspective plugin program fixes that prevent errors.
Seek in ffmpeg loaded files has been changed to prevent incorrect positioning when go back to zero.
Another guard against bad ffmpeg audio files.
Ladspa plugin, Analogue Oscillator, freeze has been fixed caused by zero range pot sigfpe (Sam).
A couple of Ladspa bug fixes and minor cleanup was done.
After loading a plugin, the data block parameters were deleted while still in use. Now fixed.
The error list was not protected by the lock, resulting in a crash, is now fixed (Ugin reported).
Titlebars for Cyrillic characters, such as Russian, when switch language to/from english code has

been changed to use a different method. There should no longer be “frettings” (Igor/Vevgenich).

5.1 Release Notes for changes from 08/01/2017 to 08/31/2017 for these builds

1. **Updated version of H.265** library included.

2. Added **Specks and Burst to Video Transitions Shapewipe** and reworked Spiral.

3. **Usability Improvements:**

Using the **keypad 1-6 transport** now allows for either adding the audio, such as in the case of KP1 and KP4 by using shift-KP1/4, or deleting the audio for KP2,3,5,6 with the Shift. (Pierre noted a need for audio with KP1/4 in an email response).

Added “One Frame” option to **Render window** to Render Range choices. In addition, ghosting of illegal choices for render range will be in effect, more error messages will be generated such as “zero render range” when nothing is selected, and window has been widened (email from Andrew stating some problems + Igor’s response caused these fixes/improvements to be generated).

Modified Render window to have the red checkmark for Render Audio Tracks and Render Video Tracks checked if available for the chosen format. For example if have Music mp3, Video will not be checked.

Modified **CriKey plugin to allow for choosing multiple points** for chroma key instead of just 1 and also removed Search/Search All since no longer needed or already in Chromakey plugin.

Added showing of Hex color value in composer eyedropper.

Upgrade of C41 plugin with bug fixes for divide by zero and other problems (see Features5.pdf).

Added **Shell Cmds “shortcuts” html** for ease of use and to Features5.pdf.

Clipboard rework – this was fixed to solve a problem with Ctrl-C/Ctrl-V.

A CIN_XSYNCH export variable has been added to assist developers in debugging windows.

9. **Bugs/Issues fixed:**

Fixed bug that showed up in Titler and CriKey plugins where events were being grabbed across windows when they should not have been.

Added to the COPYING file about licenses, the cinfinity icons from Sam / creativecommons.

A memory leak when load filters/read frames in use has been diagnosed and alleviated.

Improper Reticle Keyframes refreshes have been fixed.

Some resizing in the Render and Preferences Tab area for language translations (Igor notes).

Default Theme missed translation has been fixed (Sam found).

Valgrind reports of errors has been addressed.

For the Copy/Paste file list, made the window resizable to accommodate long file names (Frederic).

Fixed bug in rewind single frame audio.

An infinite loop in the audio also driver is now gone.

Fix for lock state on grab windows.

A case where video up with plugin and show controls, and then load another, turns off controls is fixed (Phyllis found).

Background Rendering problems fixed (discovered/reported by Frederic):

- removed ffmpeg as an option as only meant for sequence type output
- using PNG under certain circumstances crashed due to undefined color model
- switch from non-Alpha to Alpha incorrectly changed the size
- the format filename was incorrectly having an extension added to the filename

A build dependency for xorg-server-utils has been removed from the Arch distro because Arch no longer uses it (IRC question).

Refresh frame code has been moved.

Some cases of the zoom in the Compositor window drifting has been fixed.

The New project option code has been cleaned up and New now kills/deletes previous project.

Developer code now prints out memory leakage and new program leaker.C can help find these leaks.

Using the leaker program, a lot of small leaks were fixed.

When using the keypad to play and then stop, in the main window the insertion point incorrectly “hopped” one additional frame backwards/forward has now been corrected (Frederic).

Window Manager problem tweaks to avoid potential errors (discovered via Alain/Debian Stretch).

Language translation for info.txt for short description of plugins bug fixed.

When quitting Cinelerra with the Titler, a SEGV occurred sometimes, but now fixed (Phyllis noted).

Fedora build required small change for the latest version.

Clear cache for undo/redo editing since it was causing a SEGV.

The Alt-# (used on a multi-program video) had a range check issue that is now corrected.

A SEGV in plugin_set has been fixed.

5.1 Release Notes for changes from 07/01/2017 to 07/31/2017 for these builds

1. **New plugin icons (picons) are now a choice** in Settings->Preferences → Appearance and will be saved across sessions. Credit: Creative Common By <https://creativecommons.org/licenses/by/3.0/> (Sam). This currently includes the Video and Audio icons, the transition icons, and a replacement for the single ffmpeg audio/video and ladspa icons. Cinfinitly will be the initial and fallback default so if you want to switch to the original or Akirad versions, change it in Settings/Preferences/Appearance.
2. **Caution:** There was a lot of **general code cleanup and rework** which was tested but could still have some issues so be sure to report problems.
3. Additional capability has been added to **Copy and Paste clips or a list of files** within and across multiple instances of Cinelerra. In the Resources/asset window, popups have some modifications to support new capability such as “Copy/Paste file list” for Media, “Copy” & “Delete” for Clips, and “Delete” & “Go to” for Labels.
4. The **Perspective plugin** has had implementation changes made for cubic edges, plus there are now 4 choices for methodology, with Cubic looking the smoothest. There is a zoom bar, red outline boundary box, along with additional view and translate capabilities. Also, the Reset button has been moved so that longer words in language translations are not cutoff (Sam feedback). See Features5.
5. A right click on a **plugin in the Resources window has a new Info choice** that will provide a short description of the plugin (currently all video and audio plugins & transitions are available. This uses contributed work from WPfilmmaker for the ffmpeg audio and video plugins he had outlined in Features5.pdf (Peter suggestion).
6. **LADSPA library upgrade to v0.4.17** which contains bug fixes (thanks to plugin.org.uk).
7. Added **Leap 42.3** to the build machine so will be building a package for that also (Terje noted).
8. **Usability Improvements:**
 - In the Resources Window, the “right click” for Info now will replace the previous “Asset Info” window if one is already up. This applies to Media and Clips (Peter suggestion).
 - FF tooltip has been reworded to make the meaning clearer for users (Frederic suggested).
 - The Shell Cmds button also has a default “Setting Shell Commands” for easy access to usage (Frederic recommended clarification).
 - The “Rendering took” time in the lower left corner of the main track canvas is now left up until certain status changes or until a File → Load (Frederic pointed out the need for this).
 - Removed Reel Name, Reel Number, Time Code Start from Asset Info in Resources & Preferences.

A few environment variables were set up for easier usage, such as CIN_BROWSER. See Features5. OpenEXR is now configurable in the “configure” script; use with or without EXR.

A “status update” has been added to the statusbar message area for the load status.

Stretchable scrollbars have been added.

More Russian translations available (credit to Igor for contribution).

Picon directory strategy has been modified to accommodate new cinfinity and other picons. In doing so, it is now possible to create your own picon directory in the same path as picon_cinfinity, etc.

with your own versions of icons and this can be selected in Settings->Preferences->Appearance.

The Settings → Preferences Interface tab was too long in the Y direction such that users with a small laptop screen could not make changes and then click OK to have them take effect. So that tab was split into 2 tabs of Interface and Appearance with other minor rearrangements.

9. **Bugs/Issues fixed:**

Background Rendering toggle on/off not taking effect has been fixed (Sam reported).

CriKey new plugin was crashing when used via the right click Show, but now OK (WP noted).

Gradient plugin dials are no longer disappearing when switch from/to radial/linear (Sam reported).

In Rendering/Video Wrench, prevent button 2 Tumbler updates when disabled (Sam discovered).

Affine routine has been reworked (used by Perspective, Motion51, and a few other operations).

Right Click in the Resources Window, now brings up the additional option of “Display Icons” which had mistakenly been commented out (Peter noted).

A “race” condition in the Compositor for clipping has been alleviated (Sam reported).

Clips shown in the Resources window no longer wipe out some information. Also, the default comments have been modified so that now you will see the name of the window clip came from, the date and timestamp and length on 1 line and the EDL it came from if available (Peter reported).

Background rendering Shift-G lock up/freeze is no longer a problem. (Sam reported).

Audio waveform disappears after clipping on the main timeline has been fixed (noted by Sam).

Missing “\” in bld_prepare.sh has been added back in (Frederic provided feedback).

At least one instance of an empty title/comment of “Hello World” for a clip has been replaced with information (Peter noted). Could not find any more reproducible cases.

The Resources window “rebuild index” for certain non-ffmpeg files is now getting done right.

An embedded “CR – carriage return” in a file name or pasted in, is now being handled.

A SEGV situation in mwindow has been fixed; bug was undetected for a long time.

Label edit deadlock is no longer a problem (Frederic reported after #2 above changes).

Info detail in Resource window SEGV has been fixed (Phyllis found).

Problem with seek-less stream when using ffmpeg required a mod to ffmpeg (Doug reported).

At least 1 occurrence of mistaken clips/unwanted comments when in “resources only” mode fixed.

A problem with Chinese characters in the Titler led to discovery of a bug whereby different algorithms were being used for the text in 2 different places. This has been fixed and rework of the text drawing was done (WP reported).

Compressor audio plugin no longer crashes when attempting to set the Point field (Phyllis found).

Error message in status bar only flashed on the screen and not long enough to read is correct now.

Video Transitions were not correct when using OpenGL – it flashed black and was not smooth.

Added ShapeWipe transition choice of Spiral.

Updated Features5.pdf was included in this release.

5.1 Release Notes for changes from 06/01/2017 to 06/30/2017 for these builds

1. Raw Image camera file (CR2) fixes:

Non-operational checkboxes for “Interpolate/White balance CR2 images are now functional. This had caused too dark images (reported by Andrew Randrianasulu).

Reworked ddraw.c to be “multi-threaded” to take advantage of multiple cpu-s computers; this has made use of this program faster for loading/rendering raw images BUT uses more memory.

Misplaced Lock was causing SEGV, but the lock was moved to prevent problems.

Fixed SEGV caused by raw tiff-pipe files incorrectly handled by TiffLib.

2. FFMPEG library upgraded to 3.3.2 (previously was 3.3).

3. “Faststart” option added in MP4 container for rendering with user-specific parameters to generate a small output file of reasonable quality. The previous option file for the MOV container has been renamed (contribution of the parameters provided by deim31 in an email).

4. CriKey plugin added which is sort of equivalent to the bucket fill of Gimp. The CriKey icon is a kangaroo. CriKey does edgedetect, chroma key, and interpolation. Will be documented soon.

5. An X,Y coordinate has been added to the Eyedropper in the Compositor window so that you will know where the point you picked is to easily find it when you zoom in.

6. Bugs/Issues fixed:

Utilities for mpeg have had to be renamed as zmpeg to avoid conflict.

Zoom Slider in the compositor window now correctly handles window resizing.

Error handler bug fixed when non-existent directory used as destination for render output.

X11 device rework/cleanup.

Improved probe for libmjpeg to reject unknown color models. They will then be handled by ffmpeg.

Sound file fixes for unknown format – sets default asset.

Added flush to prevent race which caused Xwindow errors.

Vframe copy constructor was not correctly copying planar color model vframes. Now fixed.

Upgraded vframe write_png to handle all color models.

Audio configuration now real-time tracks media configuration during playback.

If “activate” fails, function is disabled in playback and scan for ffmpeg.

Fixes to prevent SEGV in ffmpeg audio has been added.

Edgedetect plugin has been reworked to avoid unnecessary steps + cleanup.

Text Tumbler Tweak, the tumbler used to change the numerical values was not initialized right away.

A workaround for the incorrect reporting of “fps” for frames per second while rendering using ffmpeg has been applied (reported by Frederic Roenitz).

5.1 Release Notes for changes from 05/01/2017 to 05/30/2017 for these builds

1. Many of the distros on the “build machine” have been **upgraded to latest versions for the distro.**

2. Mp4/ffmpeg **format “movflags+=faststart”** file is now available which puts the meta-data in the beginning of the file to save time and errors in loading the Mov type file. (Request of deim31).

3. **Builds for Mint 17.3** have been put back as part of the builds due to usage.

4. For help in building slackware version from the Git repository, **a SlackBuild was checked in.**

5. More **Title plugin improvements:** (mostly as requested by WP)

The text character limit of 1023 has been increased to 3071 (counted as 8-bit characters). This affects any “message” buffers.

Number of characters used and buffer size remaining now are output/updated above the text input.

A horizontal scroll bar was added to the title plugin for ease of use. Both the horizontal and the

vertical scroll bars only appear when there are more lines or characters than can be seen.

6. **Updated ddraw** – Dave Coffin’s open-source computer program, which reads many raw-image formats typically produced by the almost 700 high-end digital cameras Dave listed on his website, has been merged with existing mods. Coffin added many more newer cameras in his 5/10/2016 source release, such as the Canon Powershot SX60 (newly available in August, 2014). Because ddraw could conflict with the standard TIFF format, you **have to use Probe Order to enable CR2** and you have to make sure ffmpeg does not probe it first!!
7. Added **new Probe Order preference** under Settings → Preferences → Performance which can be seen in that window under the Performance tab. Default action is that the “probe order” will be the same as it has been and only users with very specific requirements – such as “raw camera” - will want to change the order. See Features5.pdf for usage. (Report of generic bug via Lucas Rachunek).
8. **Moved Tips of the Day to a file** for easy editing by anyone. **Msg.txt updated** to highlight the more relevant recent release note items in Setting → Preferences → About.
9. Zoom capability in the compositor window feature allows for **zooming in at any level via slider** for the magnifying glass, adjust camera and adjust projector – shows on the left of screen below icons.
10. **Bugs/Issues fixed:**
 - Circular buffer for audio now being flushed when less than a whole frame (Kent Dorfman reported).
 - Graphical Equalizer plugin lock problem of reading at the same time as being deleted, is now fixed. (Andrew Randrianasulu reported).
 - Plugins piano, synthesizer, bezier histogram, and compressor plugins potentially had the same bug as the equalizer plugins so problem eliminated there too (discovered while fixing Equalizer).
 - Using the Delete option while doing a drag-edit, or several other functions (about 32 total), was SEGV-ing so a fix was put in to suppress operations of keyboard accelerators at that time.
 - Gif type files were not being correctly handled by ffmpeg, but that is now fixed.
 - Discovered bug with uninitialized variables and a serious Lock issue while working with CR2 (raw image files) produced by several cameras. Ffmpeg does not handle these types, but ddraw does.
 - Replaced the “textbox position array” that was not always correct, with the “current instance position”.
 - Quit command keyin while running playback is now being handled so no longer segv’s.
 - Reworked filelist. / Versioninfo updated.
 - Fixed SEGV bug in mjpeg caused by undefined rows.
 - Plugin client code bug found (used for skipping ffmpeg plugins that do not work).
 - Weird bug in rgb601 found via code inspection has now been repaired.
 - Title plugin mask-width and text-width problem for long lines followed by short ones is fixed.
 - Moved “build ffmpeg marker indexes” from Settings → Preferences from Performance to Interface.
 - Minor correction referring to Language (language, region, encoding).
11. Latest version, 375.66, Nvidia driver is working correctly with 5.1 OpenGL (tested on Fedora).

5.1 Release Notes for changes from 04/01/2017 to 04/29/2017 for these builds

1. 14 **Third-party libraries have been upgraded** to latest, which includes ffmpeg version 3.3 and x264/x265 version 2.4. These upgrades are done to keep up to date and relevant with the world.
2. **Upgrade to interface ffmpeg level 3** – this is a big change to the code and even though it was tested as well as possible, if you encounter any rendering operations that are not quite right, please report.
3. **Blue Banana plugin improvements** (originated from Monty, tested by Igor) & fixups include:
 - “End Mask” is now operational with the addition of the Alpha output channel.
 - A new operator, Combine Selection, provides 2 selection modification modes – intersection, referring to “inclusion” (unchecked), and union referring to “combine” (checked).
 - Size of thread local storage has been doubled to accommodate computers with more memory.

Commit configuration change was made because the program was on a timer instead of committing only if there was an actual commit pending.

Alpha slider graphical line, which had been previously added to allow for changing the alpha value when using a color model that includes alpha, has been fixed with respect to Alpha channel.

4. Added **Shift-G as a hotkey for Background Rendering** as a toggle on/off (AVLinux/Glen request).
5. **Option file for ogg** now available with ffmpeg using libtheora for video and libvorbis for audio.
6. Operational change for 1st time users or no existing bcast5 – **ffmpeg probes early is now default.**
7. In Resources window, the **Info pulldown->Details now shows the media file format.**
8. A build for **ubuntu 17** was tested and has been included this month (instead of ubuntu 15).
9. **Bugs/Issues fixed:**

Background Rendering was not working as discovered through testing by Glen and is now fixed.

Alignment issue when zooming in video/audio has been reworked after problem pointed out by Glen and a fix was put in. This is ONLY when using ffmpeg.

In the Titler, the font selection highlight has been changed to cover space of the 2 demo characters.

If have multiple Viewers up and you drop media onto one, it would only drop on the 1st one. Now that is fixed along with other minor issues when have more than one Viewer.

Fixed problem that showed up in Info on media in Resources window where “resize track” had been changed but not saved.

Noticed when using mpeg as opposed to ffmpeg, that if the Format settings weren't matching between the session file and the Index for the asset, the asset would get clobbered. Now if Format does not match, then a rebuild index will be performed. Other asset related corrections went in.

Several plugins, which used the colorpicker, when detached from the track would inadvertently leave the colorpicker window up so that has been fixed (for example, Chroma key).

A SEGV has been fixed when no hrs./mins./secs. were supplied in some cases.

In any of the Render windows, the “View” after clicking on the Video/Audio wrench, will be automatically preloaded with the current option values.

Replacements became available for faac and faad libraries so were deleted.

(The next 3 issues were found/fixed thanks to testing/information provided by “James Kool”.)

Aspect Ratio when not 1 to 1 in scaling, has been fixed by correcting the position of the numerator and denominator.

Seek on media that has no/or hardly any key frames had a problem leading to gray-colored output.

This has been addressed by adding keyint/min_keyint in the options files for h264/h265.

When the Settings → Format width and height are modified for the session, the track sizes will be set to at least the output size whenever the format is updated. Also, all edits on the track will be set to the largest format if smaller.

10. **Open Problem:**

Nvidia driver, version 378.09 has broken Opengl but the older version 375.39 works.

5.1 Release Notes for changes from 03/01/2017 to 03/31/2017 for these builds

1. **Title plugin improvements/fixups** to include color picker history/picking/showing, font picker.

Color Picker Changes:

Now there are a set of 16 last used colors saved so you can choose them more easily.

The hex value of the color shows up in a textbox and you can key one in, followed by Enter.

You can select a specific color you want from the screen as a choice by using the eyedropper – move the reticle cursor around the screen to find the desired color.

Tool Tips were added for these also.

Font Changes:

Added environment variable, BC_FONT_PATH, to make it easier to include more fonts (see pdf file for usage). Also, included a “fixed” font that can be the default and can keyin to font box. Changed usage from fonts.dir to fonts.scale and ttmkfdir to mkfontscale to fix bugs and eliminate duplicates.

Find font faster now working correctly via keying in beginning characters; it is case sensitive.

Changed size of the font box to show more characters in the name. Also, box not as long.

Code now compensates for less-than-ideal font files that contain a blank in the name and glyph x-escapement that is either negative or way too big.

Stroker, for “pen strokes” inside characters, is a new choice. This had been commented out, but now has been slightly modified. This code originated from **Akirad/Andraz Tori and they get full credit for many very nice features now included in this branch.**

With non-perfect results, the Bold and Italic checkboxes will be ghosted out if not available for font.

2. A build for **32-bit Debian** is now included as an additional standard build.
3. The Russian **ru.po** file has been meticulously updated by Igor Ubuntu and is much appreciated!
4. Because there can be **ambiguous translations** for an english word/abbreviation, a methodology has been developed to differentiate within a program routine via C_ and D_ instead of just _ .
5. When switching languages, the plugins did not always get new translations, but now should.
6. The tooltip policy of only showing once within a sub-window has been changed to show every time.
7. Additional Quicktime **options files** for v308 and v410, plus 16mmto264 are now available
8. **Bugs/Issues fixed:**

If you delete a Track in the main window with the title plugin up, it no longer crashes.

A leftover thread causing problems if click on certain menu item, if already up, has been fixed.

Fade/curve not copying correctly in the backward direction (to the left) is now working right.

Titler plugin has been changed to add some number to prevent roundoff error. This bug exists in every plugin that uses interpolation and will eventually have to be fixed.

Focus policy checks in preferences was not staying in effect from session to session. Now does.

A bug in the Title plugin font selection which led to incorrect fonts being selected has been fixed.

Re-fixed the 2/28 release incorrect code for the Resource Window asset edit.

Update vicons modified to correct errors.

Resize Tracks was SEGV-ing under unusual circumstances so that was fixed.

Menu popup was missing a delete and this caused problems but is now working correctly.

The Attach Effect printed out extraneous error messages when left up between sessions.

5.1 Release Notes for changes from 02/01/2017 to 02/28/2017 for these builds

1. **Title plugin new features** have been added – Drag with 9 different handles, Background video, individual character attributes of Color, Size, Font, Underline, Bold, Italic, Caps, Blink, Alpha, Nudge, Sup(erscript,subscript), and PNG inclusion. Right click in textbox to see options.
2. In Settings → Preferences->Interface there are 2 new buttons “**Click to activate text focus**” and “Click to deactivate text focus”. These are handy for distros which may not have focus policies.
3. The **color picker** has been enhanced to include YUV – you will see this in Titler and Keyframes.
4. **Bluray creation changes** include accommodation for non-root “loop udfs” mounts & umounts with /etc/fstab change and added 2 additional options files to handle DV/AVC 720 Pal/Ntsc.
5. **Bugs/Issues fixed:**
 - The tab “Sample zoom” disappearing after re-sizing the main window is now fixed.
 - Refresh widget and highlighting had minor issues that were hardly ever noticed, but now fixed.
 - Bitrate for BD Create menu was being ignored due to muxrate parameter and now corrected.

To avoid minor error message of “No such file or directory” related to theme png file non-existence, a place holder png has been added. Code is being retained in case the need for common shared icon data becomes desirable in the future.

Batch/BD/DVD Render popups which contain “Warn if jobs mismatched” now re-sizes correctly.

A Lock bug caused a SEGV when a lot of plugins were added to the canvas track, so fixed.

Quality parameter for h265 is non-functional in ffmpeg, so to avoid confusion, no longer visible plus the default will be -1 instead of 0 because 0 is a legal value for Quality in h264.

Most of the Motion plugins have had a code line moved up to ensure edge case does not crash.

AgingTV plugin crashed because had no associated “presets”. Added dummy ones.

Align edit for audio tracks was not being correctly aligned in some cases, but now is fixed.

The “Load Jobs” in batch-type renders was not always refreshing so fixed that.

Motion51 has had the drawn vector lines modified so that they seem to disappear/change less.

Resource window asset filename change had a bug in it that the change was not taking effect.

The “show” control on the plugins is now coming up immediately without having to click twice.

A “window event” in a stale window led to some hard-to-find erratic behavior – now fixed.

Looping bad LADSPA_PATH setting has been changed to go on instead.

5.1 Release Notes for changes from 01/01/2017 to 01/31/2017 for these builds

1. **Textbox now allows for insertion of non-standard characters**, such as accent grave or any unicode character. This change will come in handy for the Title plugin textbox so you can add a bullet more easily, or to change a Track name to contain an umlat character (W P Titler email).
2. **Motion51** added which is a different method for motion stabilization that might be easier to use and understand and may be faster to run. The usage and parameters are documented in Features5.pdf.
3. **Smooth Lines** program code included which can be used to create near-perfect circles and curves.
4. **Alpha modification graphical line added to Blue Banana** to allow for changing the alpha value when using color model in “Set Format” that includes alpha; for example, RGBA or YUVA.
5. **Bluray creation changes** incorporated to include (Terje reported):
Numerous changes to bdwrite, bdcreate.C, and ffmpeg to get another bluray player working.
1440X1080,... output formats were switched from 4:3 to 16:9 as a result of standards shown online.
Default bitrate for video switched from 8 Mbps to 10 Mbps based on standards and experience.
Audio default bitrate set at 192K to match best standards and most frequent usage value.
Cin_bitrate, cin_quality parameters added for lossless.opts file to affect the default values.
Visually_lossless options file added which generates bluray media that is close to what you can see.
Presentation graphics-type subtitles can be written via bdwrite (but cinelerra does not have yet).
6. **A change in Interlace mode** rendering needed for bluray **may side-affect other rendering**.
7. **Bugs/Issues fixed:**
Batch Render mismatched Path in edl due to full versus relative path name fixed (Igor reported and sent session files leading to a fix with W P confirmation of bug).
New Project window was being cut off so tweaked mods provided by Igor to fix this in all of the various themes (W P reported and Igor provided fixes).
Title plugin error when scrolling with wheel in the fonts (W P reported in email).
Dropped mod that affected Quality while rendering with libx264 due to junk parameters has been fixed. Bitrate was still working just fine so mod got missed (Glen email and Igor confirmed).
For mp4 File Format rendering, the h265 Quality parameter does not exist due to an ffmpeg restriction. In order to provide equivalent options without affecting h264, added 4 new option files - h265.mp4, hi, lo, medium. Bitrate works the same as h264 though.

Options in the Video Preset “edit box” non-existence due to erasure no longer cause problems.
OpenGL affine bug fix caused by incorrect usage of pBuffer instead of pBuffer_bit.
EchoCancel plugin bug that also affected Motion51 located and fixed.
Raw DV codec missing audio component so was added.
Missing cursor and location issue in textbox has been fixed (reported by W P in Title plugin).
Additional focus/cursor textbox modifications made to fix problem found in testing Batch Render.
New Project missing edl caused a crash on edge case (Phyllis discovered while testing).
Moved Render and New under file pulldown to not block edge of window (reported by W P).
Some more Russian translations added in (Igor provided).
Audio waveform getting cut off when big increases in the height of track in the timeline is fixed.
For ffmpeg, rgb8/rgb16 intermediate frame buffer were used to transmit non-conforming colormodels. This caused problems with the colorspace (bt601/bt709) and was replaced with yuv16 when the src and dst frames are both yuv.

5.1 Release Notes for changes from 12/01/2016 to 12/31/2016 for these builds

1. Distros updated on personal local computer which is used to build these Cinelerra-GG binaries – latest version of Leap/Mint/Centos/Arch/Debian/Fedora with only latest updates on others.
Previous versions of newly installed Distros will no longer have new builds. It is impossible to maintain them all, but requests for specifics will be considered.
2. **Build scripts changes** to streamline builds and encompass necessary inclusions for different O/S's.
3. **Lossless rendering** has been added as an option for h264/yuv420p input media. This produces files that are HUGE and may be more than 10 times bigger, so must be used with great caution. Part of this change should result in more direct transcode, without further manipulation by ffmpeg which it might have been doing due to incomplete knowledge of the input media. This could produce better results in some cases.
4. New profiles provided to include “lossless” for m2ts and **“ks.pro” for ProRes**. The existing ProRes is Anatoliy's, but ks.pro is Kostya's and supports more profiles to include 444 encoding.
5. **Change ffmpeg buffer strategy** because it was not completely working and handling all parameters.
6. **Changes for BD Render bluray creation** to include (Terje suggestions / improvements):
Four more choices in Create BD window for 1440x1080 HDV format used by digital camcorders.
Submenus added for the possible format choices because there are now 17 possibilities.
Decision on which bluray format to use automatically comes up based on the user's input.
Timezone used to make the default setting if format unknown – 1920/29.97i US or 1920/25i EU.
Batch job save capability feature added to facilitate re-running a job and to be able to make changes.
The setting for “Work path” is now saved across sessions. Also applicable to DVD creation.
Changed the default “Configure Video Compression in use, “Bluray.mts”, profile to high.
Added another Video Compression choice of bluray-lo with profile of baseline to replace original.
Lossless choice added but bluray media generated incomprehensible on TV bluray player.
Interlacing added to bdwrite to work correctly – previously all being processed as Progressive.
Non-standard bluray format choices, along with a warning, added as Progressive since worked.
Ability to change the Title in Create BD for entire directory name instead of using bd_datetime.
Warning message added for BD because need to be root for udfs file structure so can loop mount.
7. Additional **Russian translations provided** by Igor were incorporated with 2143 total translations in.
8. Added minor feature in File → Load files to **load only .mp4 or only .mkv** and deleted the options for .heroine and .vob,.ifo since little, if ever, used. (W P email suggestion on mp4/mkv).
9. Sort in File → Load files... improperly preserving previous field sort has been fixed. By clicking a filebox column header, you change the sort selection. When the contents is sorted and 2 key fields

match, the original order is preserved. This means if you first sort on size and then on extension, you will see all the **files sorted by extension and within each extension** it will be sorted by size. Previously it would just sort the one field.

10. **Bugs/Issues fixed:**

Transfer Geometry for YUV had the Y offset shifted under certain circumstances.

Improved ffmpeg filter parameters in the opts file so that all of the various parameters are handled.

Incorrect ffmpeg parameters in the opts file would lead to a crash, but now will return error instead.

(Above 3 issues discovered as a result of investigating luma range confusion/user complaint).

Track/Title names/tags being ignored – mistake of deleted line put back (reported in Chris email).

New Project Dialog box has been added back (Terje reported / Igor comment of choice preference).

Vflip ffmpeg plugin fixed (reported in Sam email as a SEGV). Also, fixed F_ciescope/F_datascope.

Locking BC_Trace serious problem exhibited at least when deleting the Recording window on a laptop (Phyllis reported SEGV).

Recording use of Remote Control problem causing user to have to physically shutdown computer (Inconvenient error discovered by GG).

A lot of .mts files were mistakenly being treated as mpeg instead of x264 so video or audio would not load. Deleted code allowing this so ffmpeg can load correctly (Ed email and Igor reaffirmation).

Race condition if rendering a frame at exact same time as executing Close in at least 1 place fixed.

If render to mkv, if invalid parameters are passed to ffmpeg, it no longer crashes (W P reported).

Color model names better defined for use in the debugger (Programmer helpful information).

Patch in x.264 applied to remove booby trap that should no longer be necessary.

5.1 Release Notes for changes from 11/01/2016 to 11/30/2016 for these builds

1. **Merged in HV6 improvements** from that annual update by the original author. This covers:
 - Background Rendering* now has the capability of providing an “end” point and a “range” besides the already available “begin” point. It was pointed out that this was a needed and nice addition.
 - Reframe plugin*, for audio and video. differences added to change from Scale to Input/Output.
 - Good speedup in Motion Stabilization* plugin added as Motion_HV. Name change due to deletion of features that some users still want such as “Track translation”, “Add (loaded) offset from track”, and Translation/Rotation “block size” adjustments.
 - Added some small stuff, for example print statements, that don't affect what the user sees.
 - Not added - subtitle plugin changes because already had alternative and it proved to be unstable.
 - The requirement of providing time in format of 01.05.06.388 is tedious in version 6.??
 - Not added - other HV6 changes that were already available in this version, such as updates of ffmpeg, h264, and overlay frame changes. Quicktime changes not added because 5.1 uses ffmpeg.
 - Also, did not delete the picons in the Resources window or include deletions done in awindowgui.
2. **Performance enhancement** gained through a **rewrite of tracking locks** – most noticeable in large media files when using motion stabilization; however improves performance just about everywhere. Code change: Trace data was moved out of Signals file into Trace file and Thread data was moved out of Thread Tracing into Trace file.
3. **Webm, Xvid, flv, and f4v** Codecs/Formats added as requested (some of the more popular ones).
4. **MotionCV has been added as an alternative** for Motion Stabilization plugin with minor changes:
 - Fixed “Track translation” bug; cleaned up code constructs;
 - Changed output which has been multiple/1,000s of files on /tmp to single file of the user's choice;
 - Warning added if Settings → Preferences → Playback A, Video out NOT set to “play every frame”;
 - If not playing every frame, when it has to recalculate, it will save the new data in Tracking file;
 - Initial values increased to gain good output but will take more clock time so may want to adjust;

Window size and positioning changed to accommodate language translations.

Default Calculation set to "Save coords to tracking file" and changed its option list order.

5. **Project SMP cpus** count added to Settings → Preferences->Performance which gives the user the ability to restrict the number of cpus utilized in the plugins for higher cpu-count computers.

6. **Bugs/Issues fixed:**

Subtitles were being dropped if a frame got missed so fixed this.

Minor fix to OGG program code discovered by web sample .ogv file.

Pluginb bug fixed which caused a SEGV crash in Render Farm.

Order in the asset pulldown/Resources window was changed to make "info" show up as 1st choice.

Removed extra blank character in the code for plugins that was leftover from the "old days".

Code changed to allow user to add ffmpeg and ladspa picons; before could only add standard icons.

Window size and positioning for Motion (5.1 version) and MotionHV increased for translations.

5.1 Release Notes for changes from 10/02/2016 to 10/30/2016 for these builds

1. **Ffmpeg upgraded** to 3.1.4 vendor version.

2. **X265 upgraded** to 2.1 vendor version.

3. **More strings made into symbolic names modification from Einar branch** was added, with minor changes. This was an excellent idea with full credit to Einar so more words can become translatable.

4. **Cin.po and other languages po files updated** with almost 300 new strings and 3 deleted strings.

More Russian applied as provided by Igor and it is now looking nicely correct and almost complete.

5. **OGG handling** updated to handle additional legitimate formats such as those files without the usual expected keyframes for seeking. (Note, technically "recordmydesktop" does create legal ogg files.)

6. **Bugs/Issues fixed** as reported by several users, Igor, and programmer-discovered:

Minor mods to Overlay /Alpha BlendingModes as needed.

Widen a couple of windows to make room for language translations.

Video4Linux2 replaced Video4Linux awhile back, so removed V4L along with old drivers Buz/Lml.

YUYV color model errors corrected.

Tip of the Day previous tip was not working so fixed that.

Echo plugin offset=0 is an illegal choice because divide by 0, so eliminated that.

Quit from Cinelerra slightly reworked because sometimes not quitting some windows.

Fixed empty folder showing up in Resources window because of XML name conflict.

Roundoff was added in thousandth position for the zoombar values, but may need further tweaking.

Editing refresh for partial frames modified if edit width > 1.5% of the pixels of the timeline.

MPEG packet buffering rework to alleviate TOC problems.

Fixes for XFT text rendering when gc function is not copy.

5.1 Release Notes for changes from 09/01/2016 to 10/01/2016 for these builds

1. **Button operation choice** added of "Popups activate on button up" (default) or "Popups activate on button down" via Settings → Preferences → Interface Flags checkbox.

2. **SVG via Inkscape plugin** has had numerous problems fixed.

3. **Scroll bars and picture location in the Compositor** window were incorrect and have been fixed.

4. **Color-coded keyframe curves and operational details with "Color Balls"** enhancements (see Window → Show Overlays) allowing for personal preference setup on colors (Igor's 2015 email).

5. **Overlay Modes/alpha blending/PorterDuff addition** of 8 new blending variations. Also, overlay mode popup menu converted to submenu setup as changes to current popup no longer fit. To see,

click on the right arrow in track's patchbay which expands to show a down arrow to click on with tool tip "Overlay modes".

6. **Features5.pdf manual updated** as part of the installed software base. Left click on the little yellow box (>_._) in upper right hand corner of main window to bring it up.
7. **Bugs/Issues fixed:**
 - Fix resize window jitters and Xv minor rewrite fixes particularly noticeable in the zoombar.
 - Bug fix for "frame size" specification not divisible by 4 in a single case.
 - Labels not being correctly asynchronously updated has been fixed.
 - Vwindow code fix that affected Resource media being dragged to timeline when no Viewer window.
 - Fixed overlay YUV problem introduced on a rework from Monty's original code addition.
 - Put back dropped build parts such as large file support fix for 32-bit (as discovered by Andrew).
 - Improved dump capture to make debugging user problems more descriptive.
 - Masking interpolation was being handled incorrectly for mode and now is correct.
 - Keyframe alignment fixed – align cursor to frame side setting affects auto keyframe creation. Fixed bug where unaligned keyframe is selection target, but new aligned keyframe created instead.
 - The Settings pulldown menu resizing operation left some buttons cut off and is now better.
 - Russian translation has had some more key translated phrases added by Igor_Ubuntu.
 - Compiler warning cleanups for various distros (all distros were upgraded prior to builds).
 - Some submenus were not working properly for popup submenu items and has now been fixed.
8. **SVGs for all of the background themes has been lengthened from 750 to 880** with credit to Igor for all of that tedious work).

5.1 Release Notes for changes from 08/01/2016 to 08/31/2016 for these builds

1. **TDB** – Traveling Data Base additional features to include add escalate keys and entity alloc cache.
2. **Ffmpeg** 3.1.2 update from 3.1 vendor version.
3. **X265** upgraded to 2.0, includes multiprocessor bug fix (no longer have to carry my mod).
4. **Issues/bugs** as reported by Igor_Ubuntu in the past month below:
 - Bug fix for Tab or Shift-Tab not working at all while cursor is over a track to toggle arming status.
 - Goto image set not found in Bright Theme was fixed.
 - Reverse Edits and Shuffle Edits fix for the case of the selection at the beginning.
 - Multi-pane mode fixes to update the Y or X newly split pane correctly.
 - Multi-pane mode bottom left pane drag bar was shadowed by the canvas so now fixed.
 - Fix selection length when double-click left mouse & insertion strategy is replace project /concatenate.
 - Right click on Track Canvas behavior change to avoid unintentional activation of Attach Effect.
5. **Correction for Mute attribute patchbay inconsistency** with other attributes using click-shift.
6. **Italian translation** updated for only some phrases ("borrowed" from CVO updates!).
7. **Arch Linux build** change to accommodate cflags+ instead of cflags.
8. **Additional plugin, yuv411**, that performs interpolation and inpainting for DV source improved chroma upsampling results (courtesy Eric Olson website as pointed out by Igor_Ubuntu). It also has an additional setting called offset which shifts the chroma planes to the right by one or two pixels (set to 0 for DV source downloaded from a camcorder and set to 1 for a DV file encoded by ffmpeg). Works with the YUV-8 Bit or YUVA-8 Bit color models in Cinelerra but not with any of the RGB color models. Improved upsampling of the chroma planes helps with the 4:1:1 to 4:2:0 color space conversion needed to create DVD compliant mpeg2 video streams. You will not get any improvements if the project is being rendered back to DV format.

5.1 Release Notes for changes from 07/01/2016 to 07/30/2016 for these builds

1. **Russian translation** from Igor_Ubuntu in ru.po with complete and correct verbage.
2. **SEGV fixes** – Arm first track in patchbay; Quit with render menu active.
3. **Chroma bug yuv420p interlace colormodel fix** for DVDs via additional option “dvd yuv420.”
4. **Upgrade ffmpeg** from 3.0 to 3.1.1.
5. **Ffmpeg fixes** - index marker fix; add ffmpeg image 2 formats for 48bit TIFF.
6. **Remove faac libmp4v2 from build** since it is no longer necessary and was causing build errors.
7. **Layout changes** and improvements to accommodate longer word translations for other languages.
8. **Filescene for simple animation** fixes.
9. **Subtitle upgrades** for filename requirement and add some error messages.
10. **Textbox fixes/upgrades** – certain highlighting/pasting length problems.
11. **Xlat changes** – loadmode, add nodups and dups options, change csv to list, string.
12. **Add config.rpath to ladspa** for build to avoid errors.
13. **Add djbbft** - extremely fast library for floating-point convolution on general-purpose computers..
14. **Miscellaneous fixes**; Quit deadlock fix; avoid overloaded casting pun from tripping the compiler; “friend class” change.

5.1 Release Notes for changes from 06/06/2016 to 06/30/2016 for these builds

1. **DVD/BD creation rework** – incorporated user feedback changes such as eliminating non-legit DVD type choices; dialed in correct set of choices for BD (blu-ray); added ScaleRatio plugin for major assistance in scaling/cropping/filled/edges; renamed and added in new 10 bit and hevc formats; put in warning message for “changed” EDL.
2. Added **packaging** for several distros and minor changes as discovered.
3. **Fixed unlock** that created issues for certain Intel chips using TSX - Transactional Synchronization Extensions – this bug was in code carried over from original HV with the 4.6.1 mods.
4. Set up “**booby trap**” to print out message if an attempt to unlock an item that is already unlocked.
5. **Changed popup menu behavior** so that right click on viewer/compositor windows does not goto fullscreen automatically and lead to what looks like “black screen of death” (refer to email problem reported “A strange display behavior” on June 11th by Terje Hanssen. This change was not specific to this strange behavior so will affect other windows as well.
6. **Arch Linux** addition required changes for configure params, different specific compiler issues, and some new compiler warnings were generated so had to be fixed. Refer to email “Cinelerra 5.1 Arch Linux Binaries?” from Gatitofelix on June 18th.
7. A few “**make**” **file improvements** related to autoconf autogen/automake not affecting cinelerra code. One of these change resulted from the email of June 16th “Cinelerra 5.1 packages and repositories” from Lukas Rachunek.
8. **Resize fix** for when redraw a certain window.
9. Add **more colorspace** between ffmpeg and cinelerra.
10. Cut and paste to handle **double characters** such as accent grave and umlats repaired. This fix was a result of the multiple emails by Peter Turner and the responses in the June 25th-30th time frame.
11. Fixed a SEGV that occurred when a “Gui” was not actually in a list box window. Discovered this when it was popped during a “prt sc” (**print screen**) **key press** resulted in a SEGV crash.
12. Info **crash button fix** June25th email from Igor “CVO - Crash - Asset_Info – Interlace”. This fix is a non-specific fix and will generically fix any of these type errors that may be encountered elsewhere.
13. **Tan_smooth and Tan_linear** added in Blue Dot theme. Refer to Igor email dated June 25th “Add missing images to Blue Dot theme”.

14. If you hold down zoom and **zoom in super-fast**, it starts redrawing but when it zooms in as far as it goes, there is a deadlock in the mwindow. Fixed this bug.
15. **Bug in clipboard** due to defective logic discovered by code inspection. Very unlikely a user would experience this bug where the buffer size is wrong and stuff is skipped over.
16. **Mask rendering** was a little broken so fixed this – some previous change side affected masking so was not working quite right.
17. **Nested edits** SEGV'ed when tried to insert pasted edit under certain conditions.