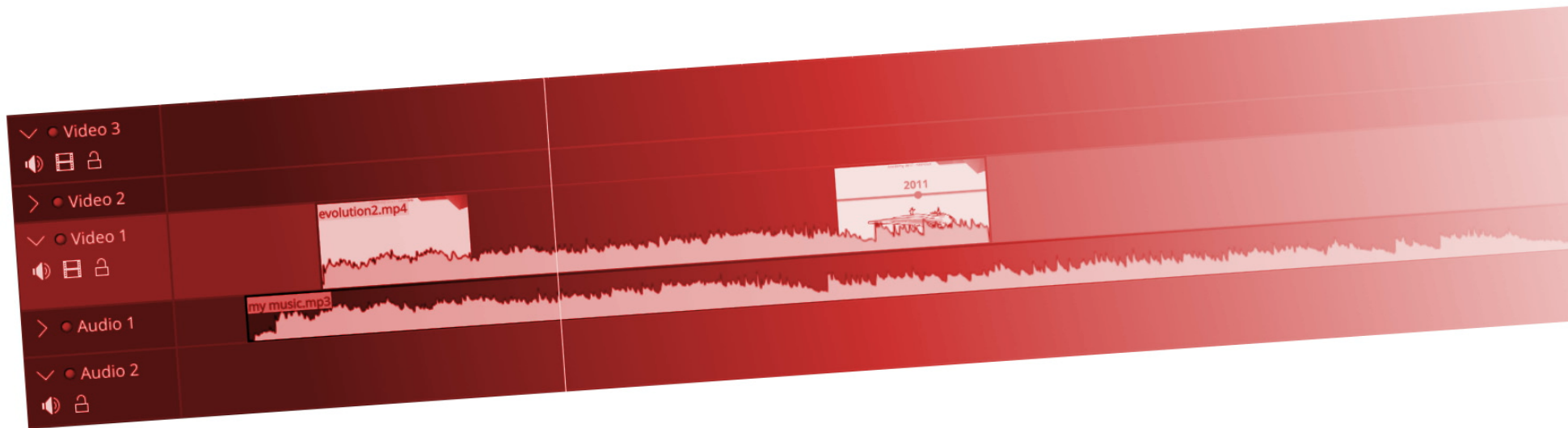


Rewriting the timeline



Kdenlive talk – Almeria 2017
Jean-Baptiste Mardelle

Akademy 2017 - Kdenlive



In this presentation, I will give some details on what lead us to rewrite large parts of Kdenlive's code this year, the current status and planned features

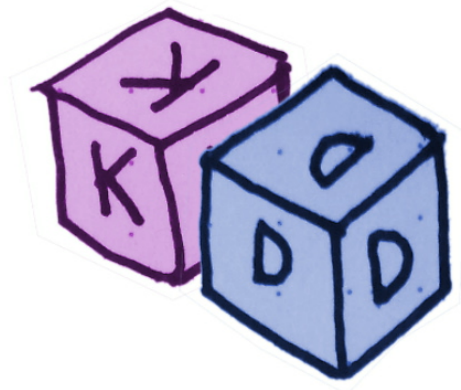
Kdenlive talk – Almeria 2017

2005



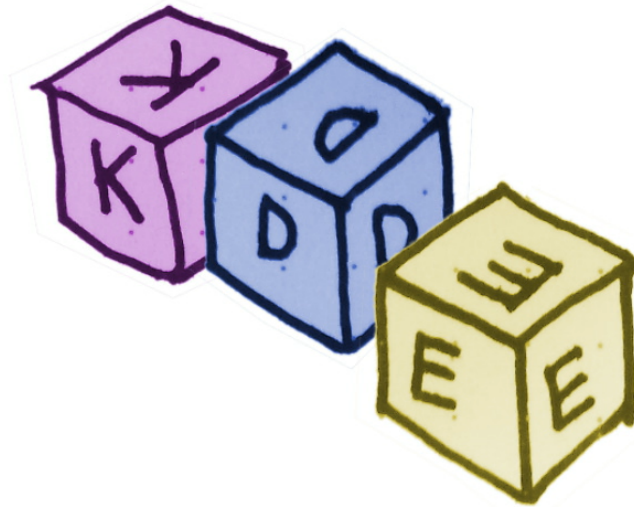
Kdenlive's KDE3 version released

2008



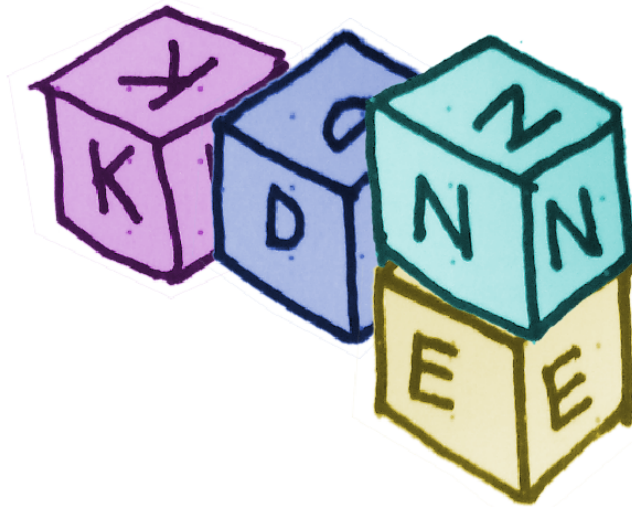
KDE4 port

2010



New contributors and features :
audio and video scopes, stopmotion

2011



First presence of Kdenlive in Randa meeting,
moving code to the KDE servers

2012



First refactoring attempt and fundraising

2013



Growing a lot, gaining many users,
gets hard to follow

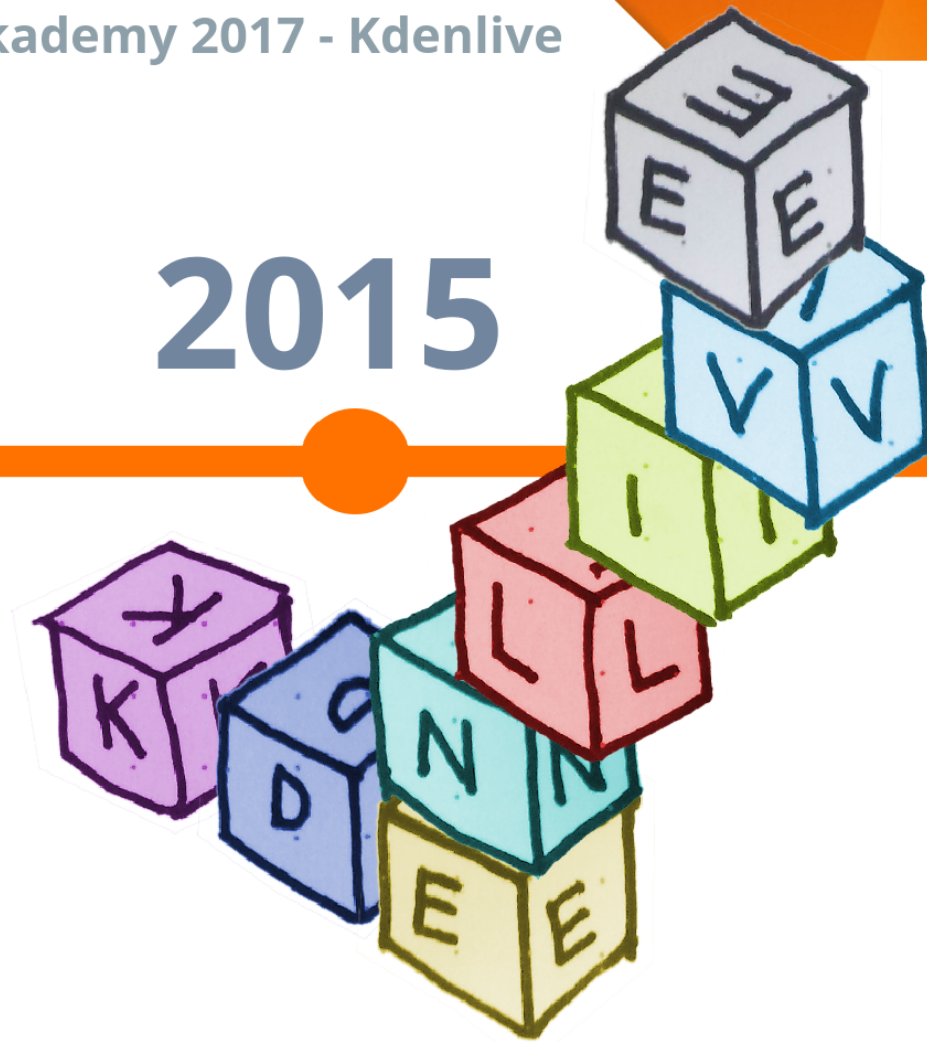
2014



Back to Randa meeting, further thoughts about a refactoring, starting KF5 port

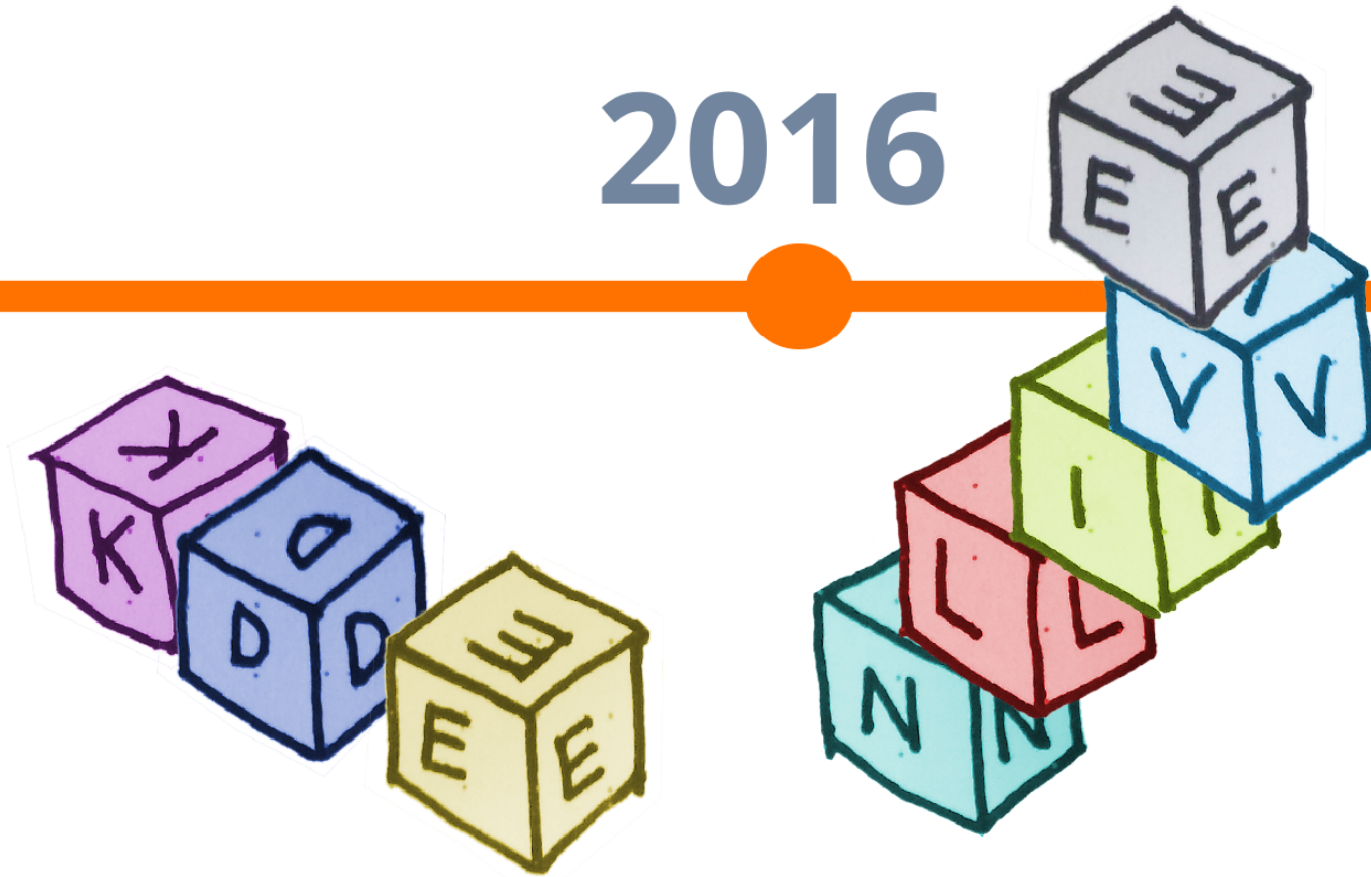
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2015



Joining KDE Applications, first version to run on KF5,
UI review and start of Kdenlive's cafés

2016



Coding sprint in Lausanne, introducing PPAs,
Windows port, strengthening our community

2017



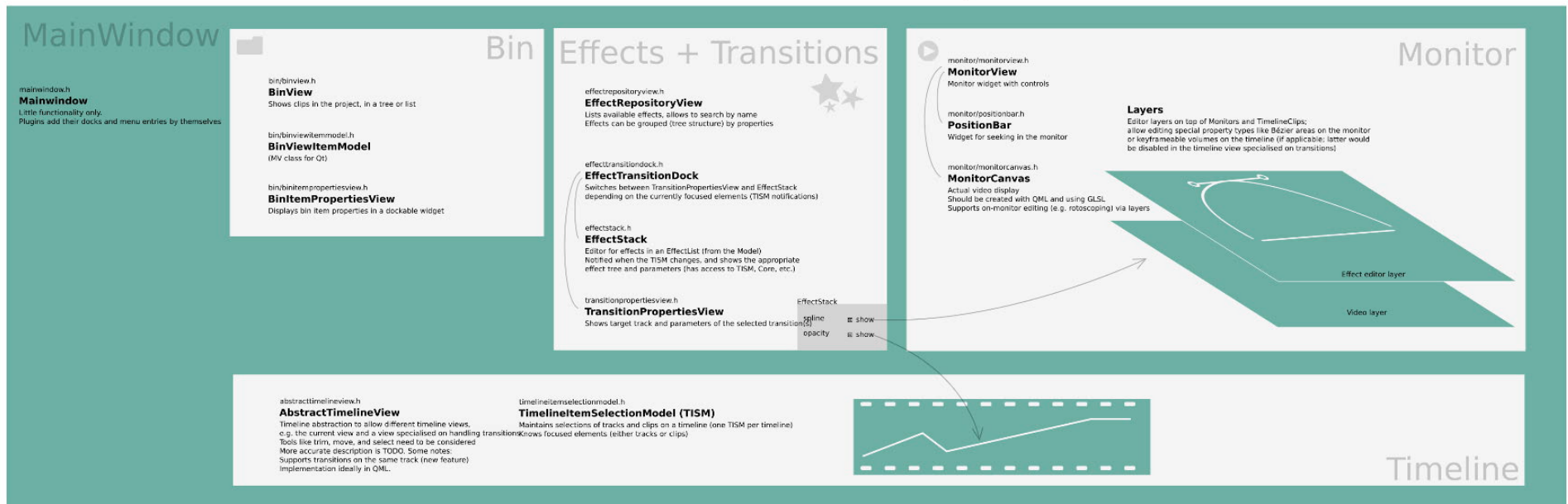
Refactoring and Qml port of timeline

In all those years, code was added without a lot of attention for architecture and it became impossible to add advanced features without breaking everything.

Several discussions and ideas were proposed during the last years, but it's only in 2017 that we really started to change the core timeline architecture.

Refactoring the code

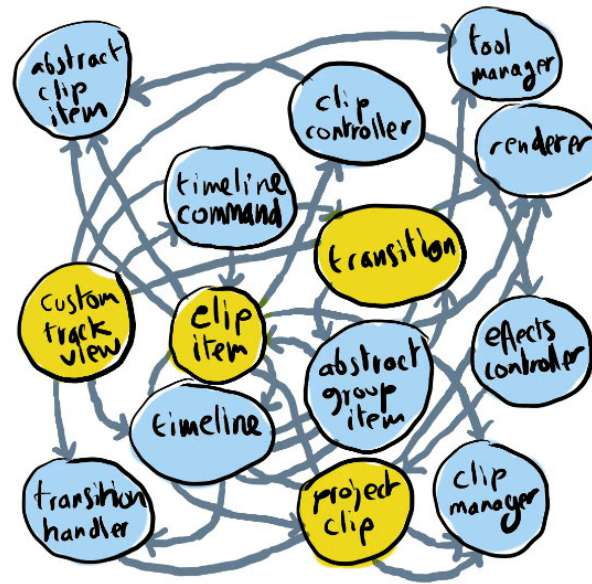
The refactoring 2014 : first attempt



Proposals elaborated during a Randa meeting

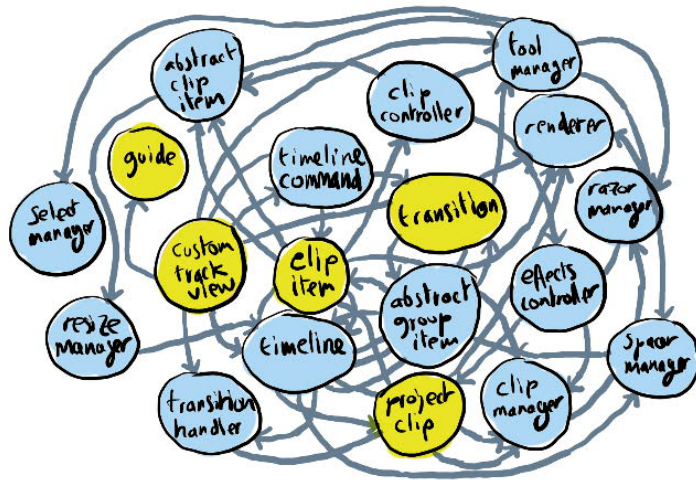
The refactoring

2017 : second attempt

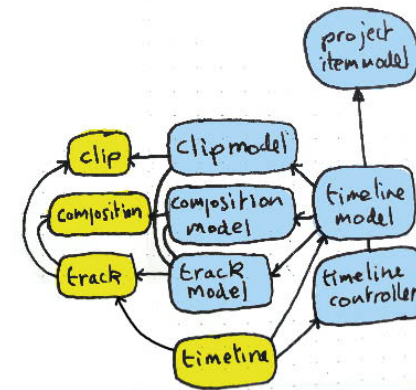


The problem: bad design,
no separation between UI and functions

January 2017



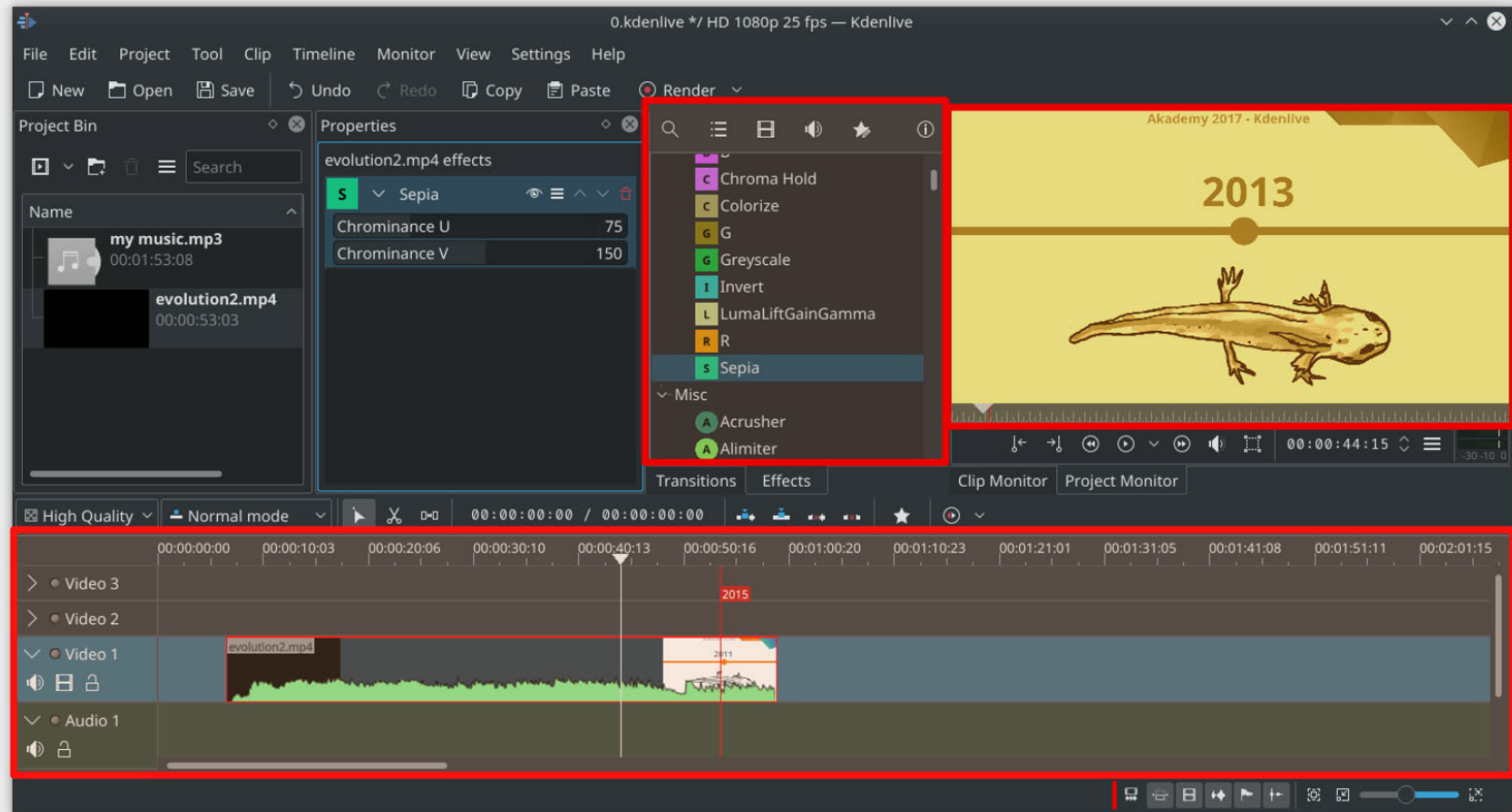
July 2017



timeline

Simplified view of what we did,
using a model/view approach

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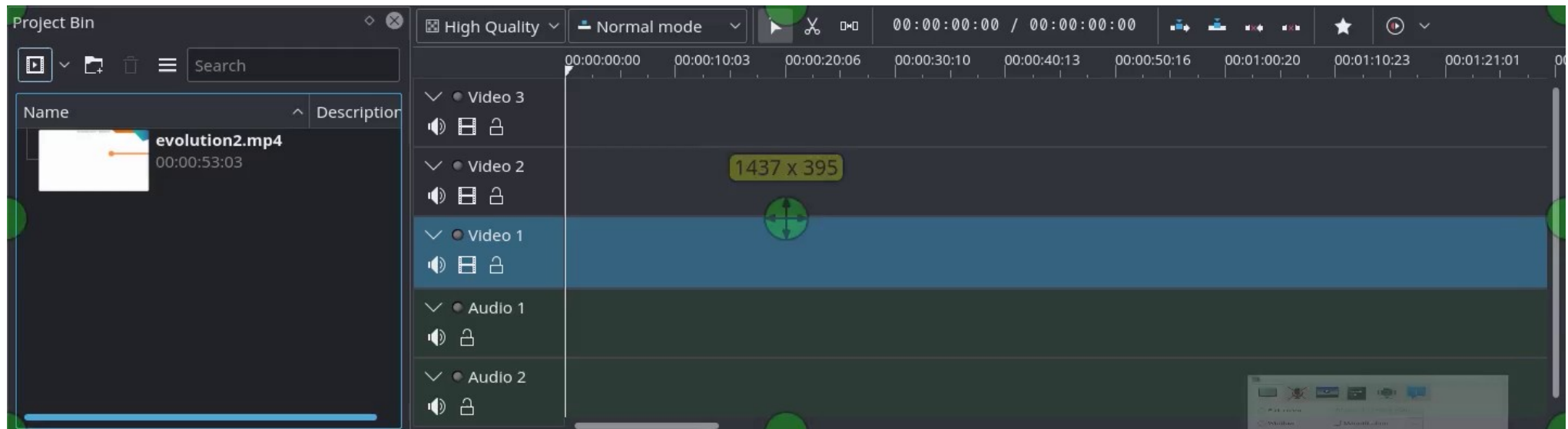
Mixed application, using QWidgets and Qml.
Qml parts are highlighted in red

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With Qml, editing a few lines changes the layout without having to recompile

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Demo of the new timeline in action

Cool but can we use it before 2020 ?



A nightly build AppImage CI should be ready by september, official release planned in december

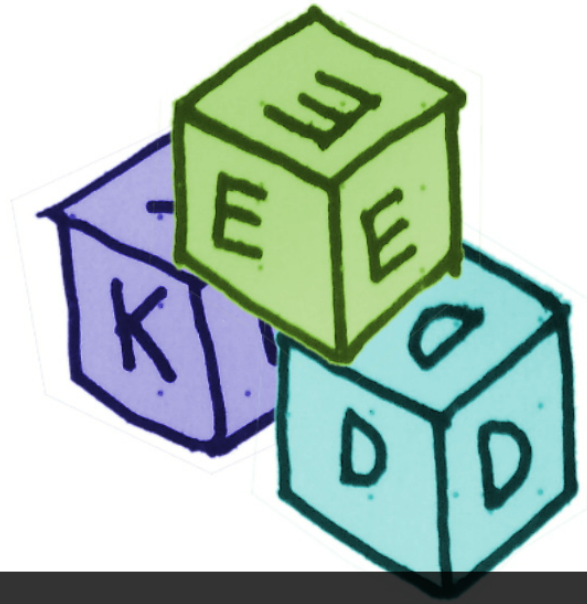
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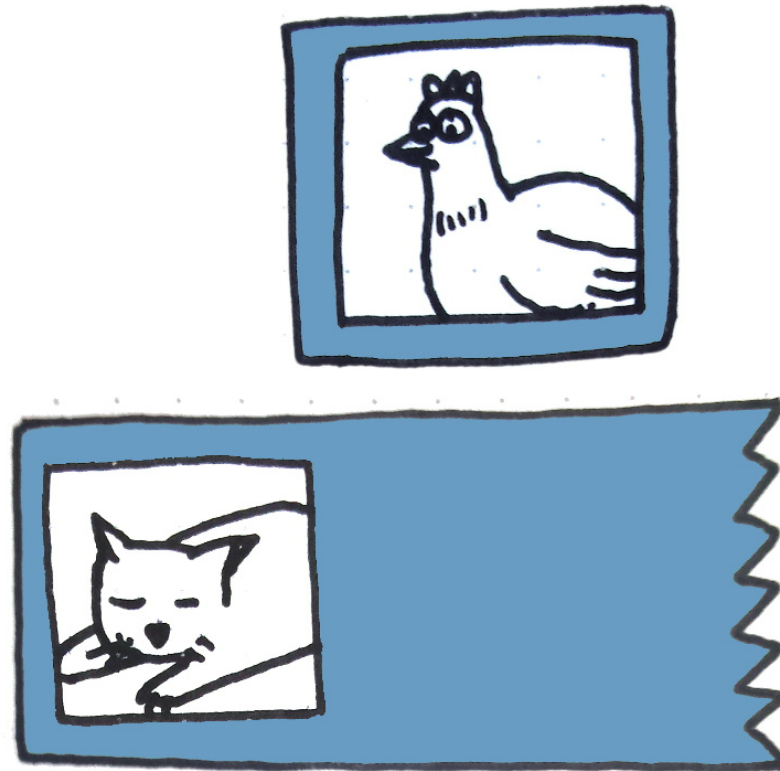
What's next ?

What changes for the user in the next months

Stability

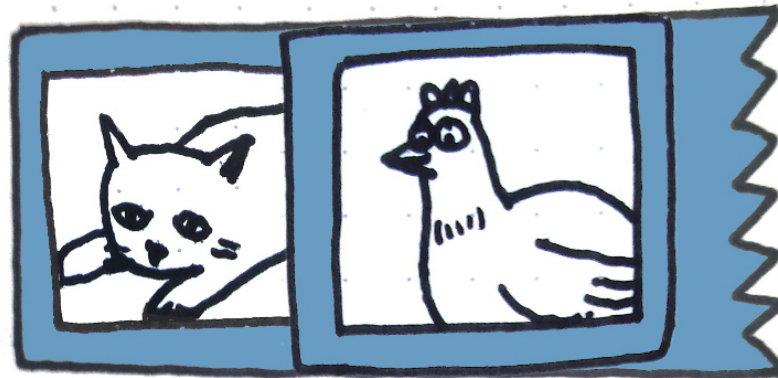


Stability is what users want. The changes allowed us to add testing to the code



Advanced editing

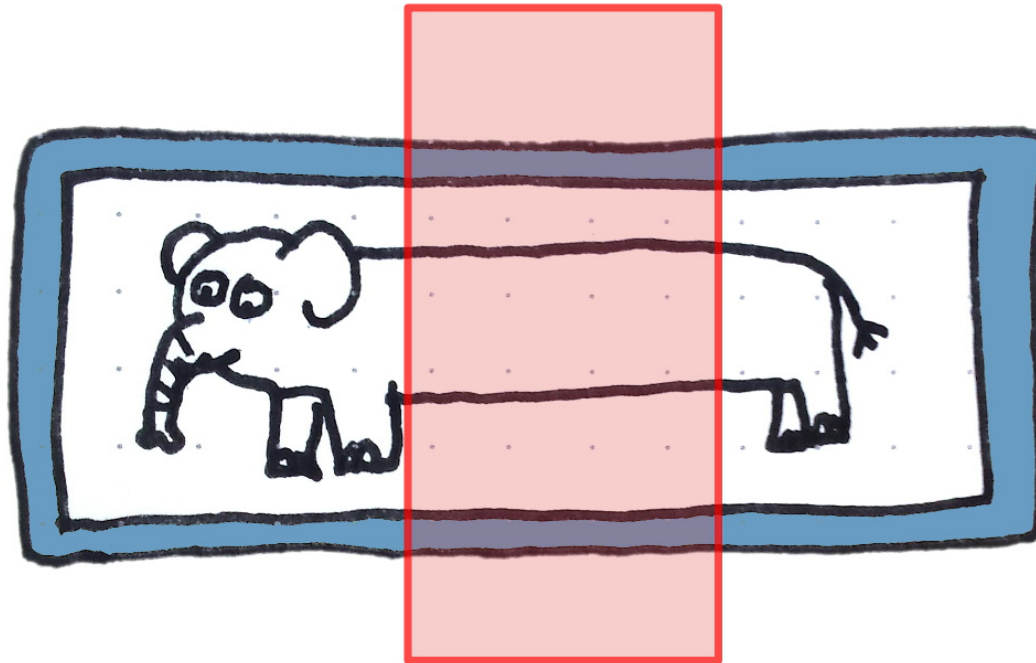
Features we will work on:



Advanced editing

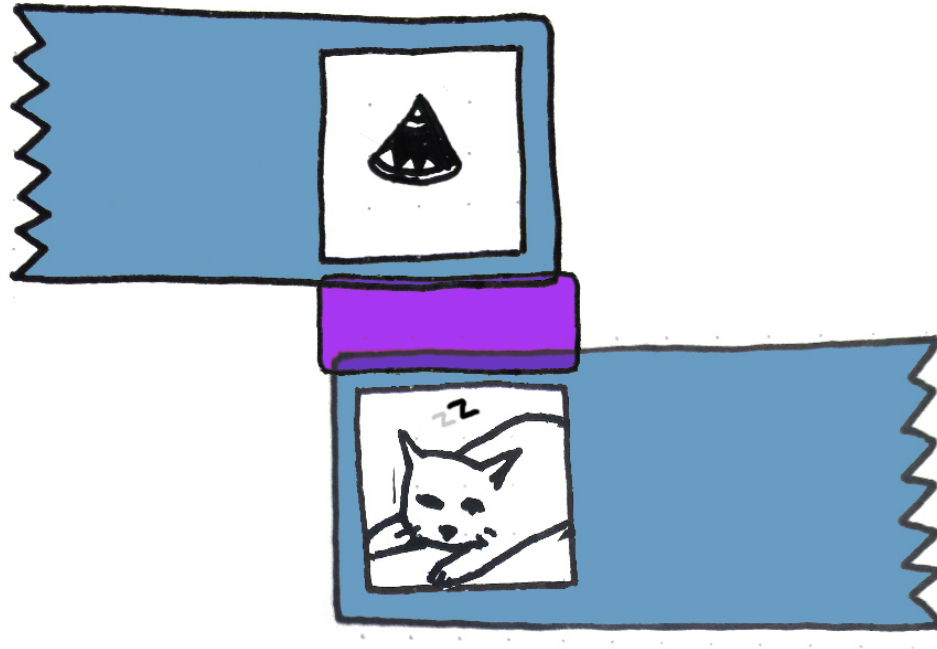
Advanced trimming options, like
lift, insert, overwrite

Advanced editing



Will make you work faster

Transitions workflow



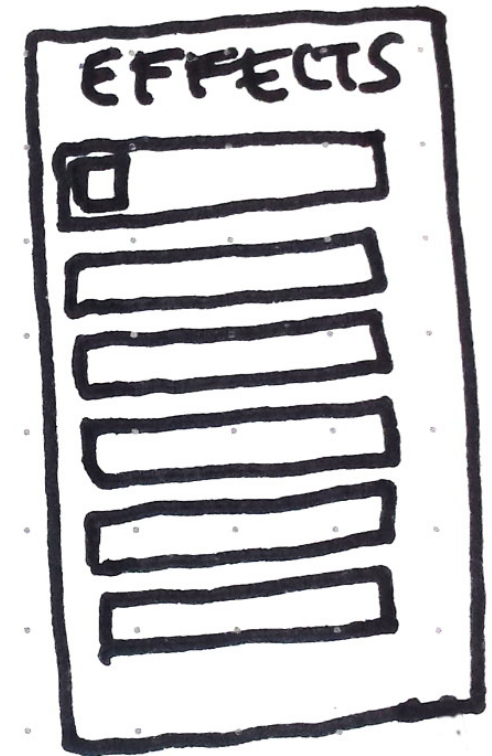
Simplified transitions workflow

Transitions workflow



Overlapping clips will automatically make a transition of the overlap length

Effect workflow



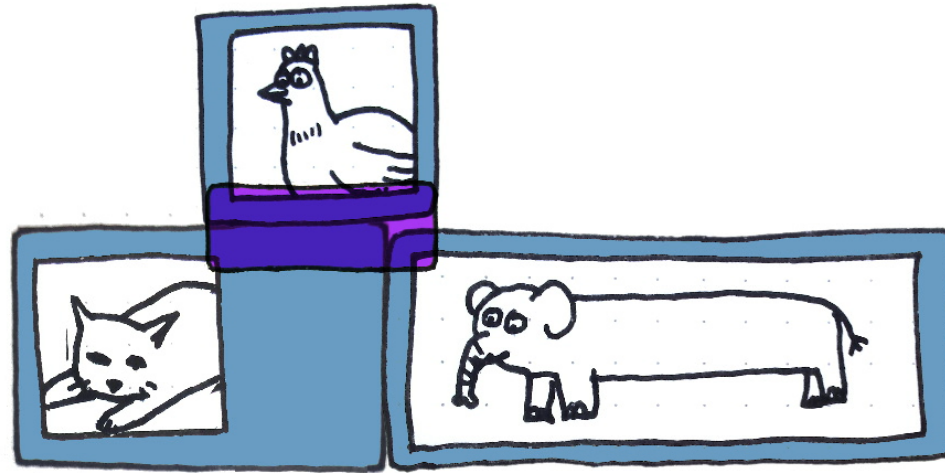
Effects workflow: instead of having to parse a long list of effect to adjust a clip

Effect workflow



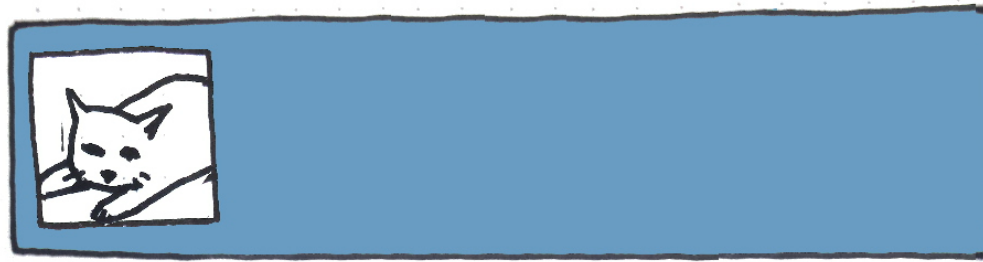
We will have a built in dialog for every clip that directly allows to adjust most common options

Sequence nesting



Sequence nesting will allow you to compact a sequence of clips

Sequence nesting



In one item that you can move, add effects. And you keep the option to edit the original sequence

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Community & Communication



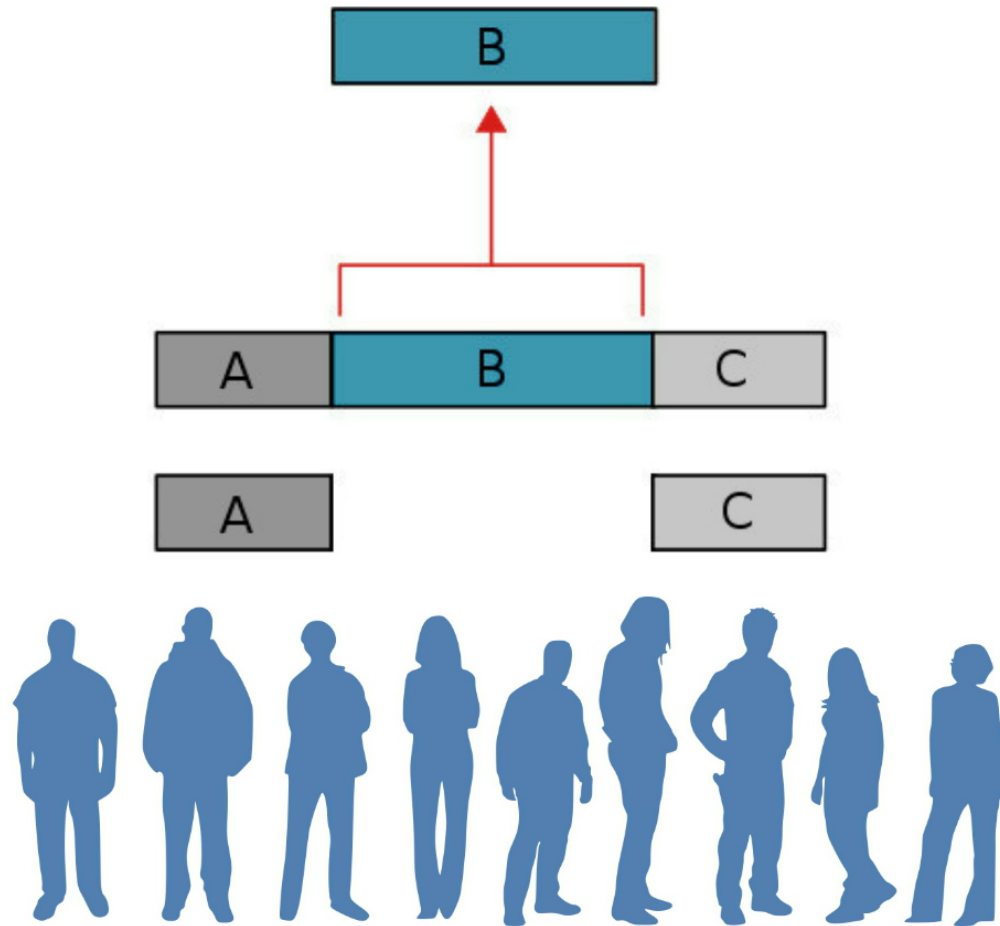
Community is a core part of Kdenlive



Community & Communication



We have monthly IRC cafés announced
on our website



Kdenlive is made by people:
coders, professional video editors

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Need help?



User Manual



Forum



Wiki



Mailing List



Toolbox

Latest News

Kdenlive 17.04.3 released

Jul 13, 2017 | [News, Releases](#) | 15 Comments

The last point release of the 17.04 cycle is out with crash and compilation fixes and minor interface improvements: Fix crash on importing multistream clip. Commit. Fixes bug #381584 Fix crash when creating proxies - real issue not yet fixed. Commit. See bug...

[READ MORE](#)



Kdenlive Café #19 and #20

Jul 11, 2017 | [Café, Café Logs](#) | 2 Comments

Do you want to stay tuned on the timeline refactoring development? Do you want to suggest some improvement to Kdenlive the Free Video Editor? Are you just curious about

Kdenlive - refactoring preview and news

Jun 20, 2017 | [News](#) | 20 Comments

We are very happy to announce the first AppImage of the next generation Kdenlive. We have been working since the first days of 2017 to cleanup and improve the architecture of Kdenlive's code to make it more robust and clean. This also marked a move to QML for...

[READ MORE](#)



Designers

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Timeline preview rendering is an outstanding feature of Kdenlive. It officially debuted in version 16.08. Preview rendering allows you to render parts or your complete timeline in the background, so you can smoothly play it back. This is especially useful when you work with complex track compositions or use effects that are computationally intensive. Instead of stuttering playback, you now get smooth playback. This way, you can check that your timing of keyframes and effect is working out nicely. And you don't need to leave Kdenlive, as you would need when rendering your timeline to an traditional video file.

Full-FPS Preview of Effect-Heavy Timeline Stuff



Raw source footage: a good example for Kdenlive's new timeline preview rendering is this: say, you have some FullHD source footage. Raw, your system easily plays this clip back at its original frame rate of 25fps. This isn't even a job for proxy clips on a decent system.

But you may have already suspected: this raw footage is in dire need of some serious processing before it can be shown to any audience...



Now let's get effects-heavy. For production, we need to de-fish this footage (action cams, you know). After defishing, we need some sharpening. And then, we also have to decompress the tonal curve (Protune, yknow). Wait, there's more: saturation needs to be corrected too (again, Protune).

With these innocent four effects applied, look at the playback rate that's shown in the bottom right corner of the monitor: dismal six frames per second! It crawls.

Unfortunately, proxy clips don't help in this situation: proxy clips are low-res and low-quality variants of the source clips, without any effects applied. So our effects will slow down also proxy clips considerably.

You need timeline preview rendering.



Documentation writers

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Kdenlive is a community and you can be part of it. Don't hesitate to join us in a café to make a first contact.

Thanks!

Join us!