



Call for Proposals: Developer to rewrite Audio Waveform code in Kdenlive

About Kdenlive

Kdenlive is a Free and Open-Source video editing application mainly written in C++ and based on MLT Framework, Qt and KDE Frameworks 6. It is distributed under the GNU General Public License Version 3 or any later version that is accepted by the KDE project. It is available on all major desktop platforms, reaching more than 100,000 users per release on Linux, Windows and macOS.

Kdenlive is part of KDE, an international technology community dedicated to developing Free and Open-Source Software. KDE products are used by millions of home and office workers, and are being deployed in schools around the world. KDE e.V. is the legal organization behind KDE, representing and supporting the community.

About the task

The current code used to generate the audio waveforms used in the timeline and in the clip-monitor is not very efficient (it takes quite a long time to generate a waveform) and not very precise (we only get one (1) sample per video frame).

The objective is to rewrite the code to generate and display the waveform using audiowaveform as a base: <https://github.com/bbc/audiowaveform>

The first step would be to test the validity of this plan by rewriting the Kdenlive code to display the waveform, based on audiowaveform's code.

This can be achieved by using waveform data created outside Kdenlive by the audiowaveform utility.

Then by checking if the drawing is fast enough and can correctly handle zooming.

Once this is done and works correctly, the code generating the audio waveform can be rewritten using audiowaveform's code.

Audiowaveform's maintainer is aware of our plan, and might provide some support but does not have enough free time to do the work himself.

Some more technical details are provided in this issue:

<https://invent.kde.org/multimedia/kdenlive/-/issues/1888>

The task will require to:

- If not already done, create a KDE account to be able to submit your work and interact with the team
- Write waveform code to display the waveform as an image using audiowaveform's code
- Write code to generate the audiowaveform data from a video or audio file, based on audiowaveform's code
- Write tests for your code
- Write a report about your work at the end of the project

Ideal qualifications and skills

- Experience in C++
- Knowledge about the basic concepts of video editing in general
- Generic knowledge of how audio is stored in a file
- English for communication with the Kdenlive team
- Experience working in public as part of an open community
- History of contributions to KDE a plus, but not a hard requirement

Administrative details

- Type: Independent Contractor Agreement
- Location: Remote
- Payment: 3,000€ in total, paid on completion of the task
- Estimated working time (not binding): two (2) weeks (40 hours per week)
- Type: project based / freelance
- Paid by "Werksvertrag" (self-employed)

How to apply

Please send your application by email to team@kdenlive.org with "Audiowaveform job task" in the subject line. Do not hesitate to contact us at the same address if you have any questions.