

Midterm Update – JUCE VST3 Effector

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Project Website: https://github.com/SuomiKP31/JUCE_VST3_Mixer

Proposal Update

None. The project carries on smoothly and I am making progress. Refer to the project's readme document for details.

I also posted a video on Teams. Future deliverables will always be demonstrated by a short video.

Progress

The GUI Framework I need for the project is done following a Freecodecamp tutorial. Under the hood, I figured out how to process audio blocks, apply filters and effects to them.

The sole thing that is remaining to do is find some clue on DSP algorithms – these are not so complicated and can be found on various places. One of the resources I found is www.musicdsp.org.

IIR filters has been implemented, this is an elegant solution to frequency band filters, capable of cutting and shelving (which are just fancy ways to say “weaken certain frequency” and “enhancing certain frequency”).

Technical Challenges

Not so much for me as I have worked with JUCE before, but again, C++ is never easy. You have to work with C++ on Audio Programming since it requires you to process at least 44100 (Commonly used sample rate nowadays) FP32 operations per second. Python or Java are simply not fast enough for that.

I also forked a simple audio player plugin and fixed it (because it's super old) to use it as an audio source. JUCE also comes with a Plugin-Host as the playground for plugins. Technically, since VST3 is a universally supported format, all these plugins can also be used in other DAWs.