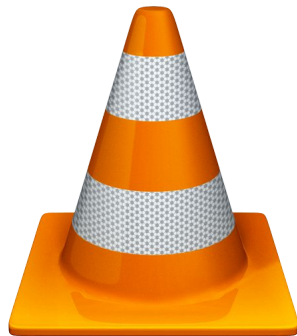


President of VideoLAN

- Work/Manage VLC, x264, FFMpeg, dav1d



dav1d



Dav1d goals

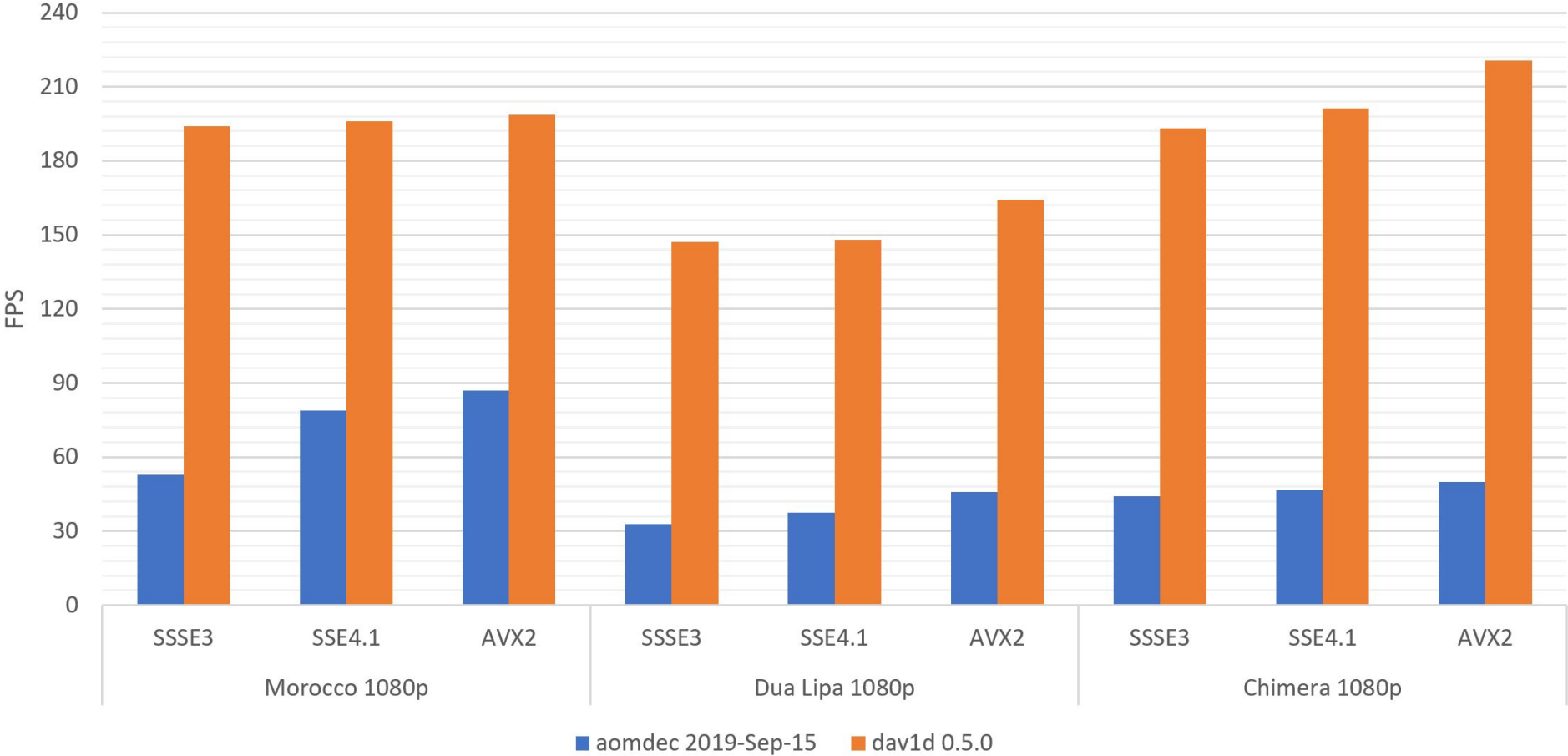
- “AV1 needs a good decoder”
- Fast decoder everywhere
- Very cross-platform
- Small binary size

Launched last year

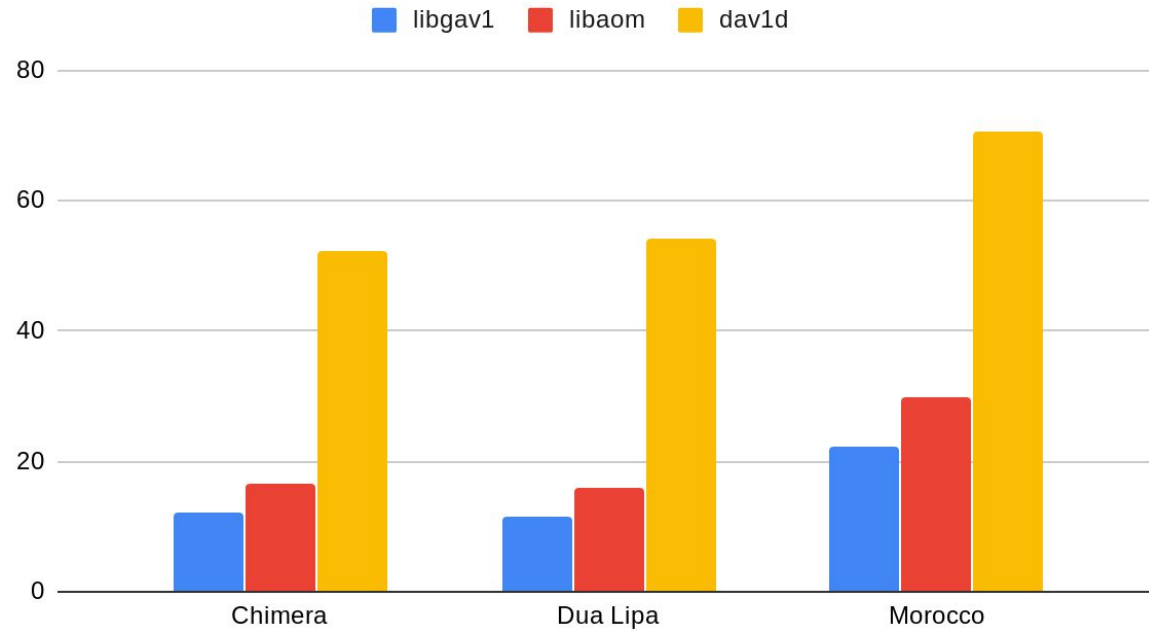
- Demuxed
- First release in december
- Last release: *today* **0.5.1**



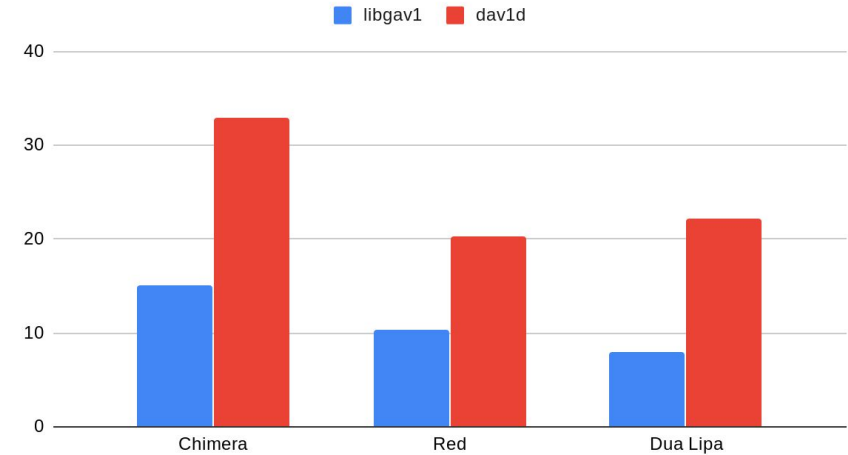
dav1d vs aomdec multi-thread performance



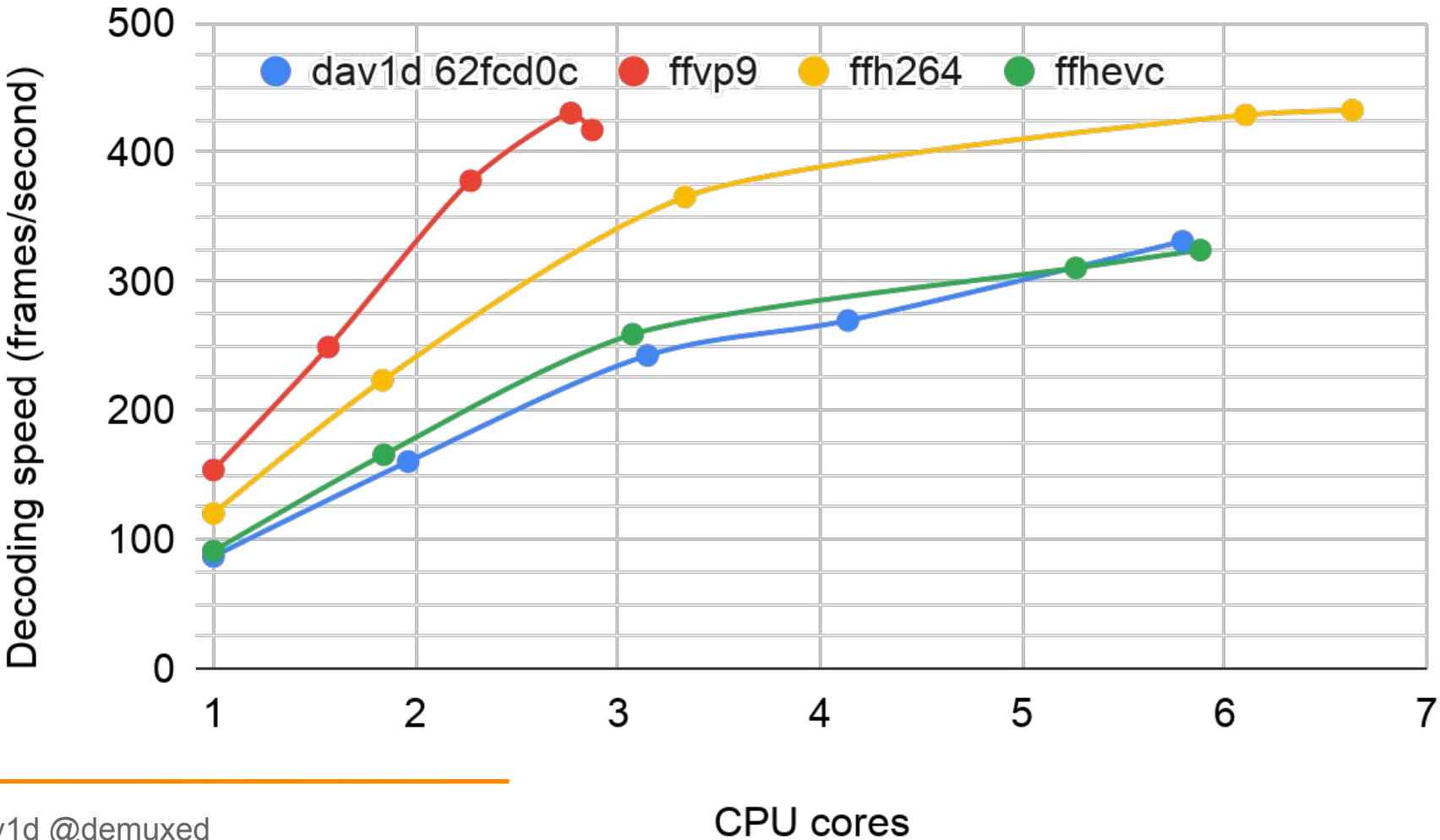
AV1 Decoding (ARMv8 Multi-Thread)



AV1 Decoding (ARMv7 Multi-Thread)

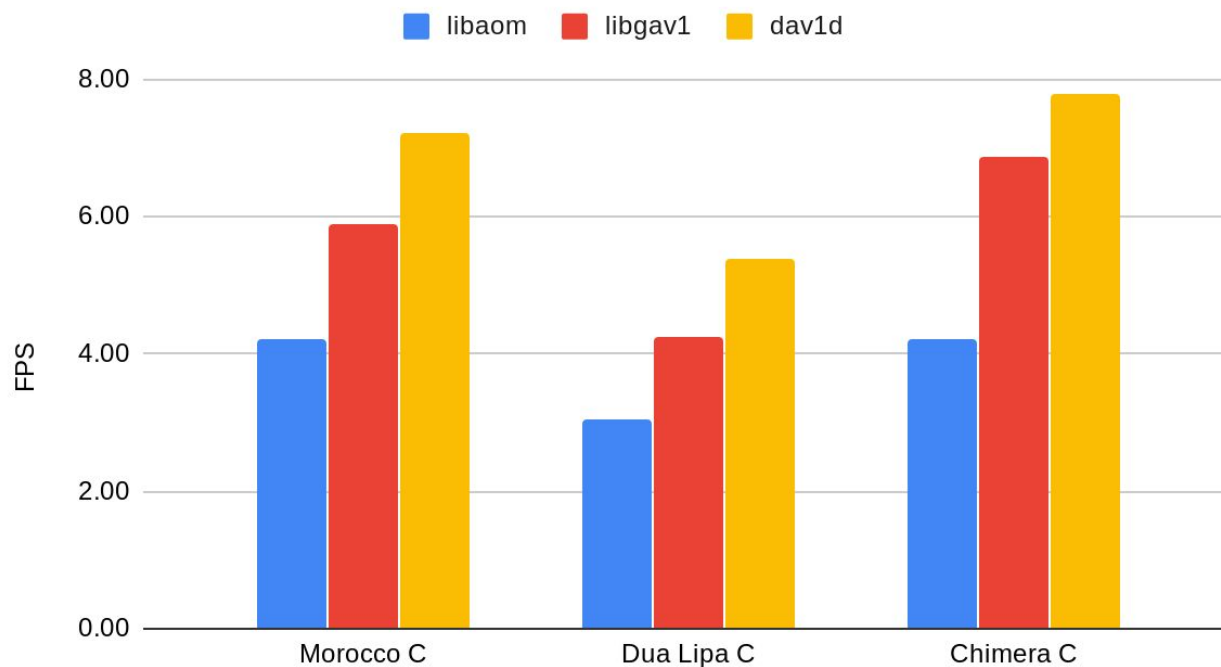


Complexity of AV1



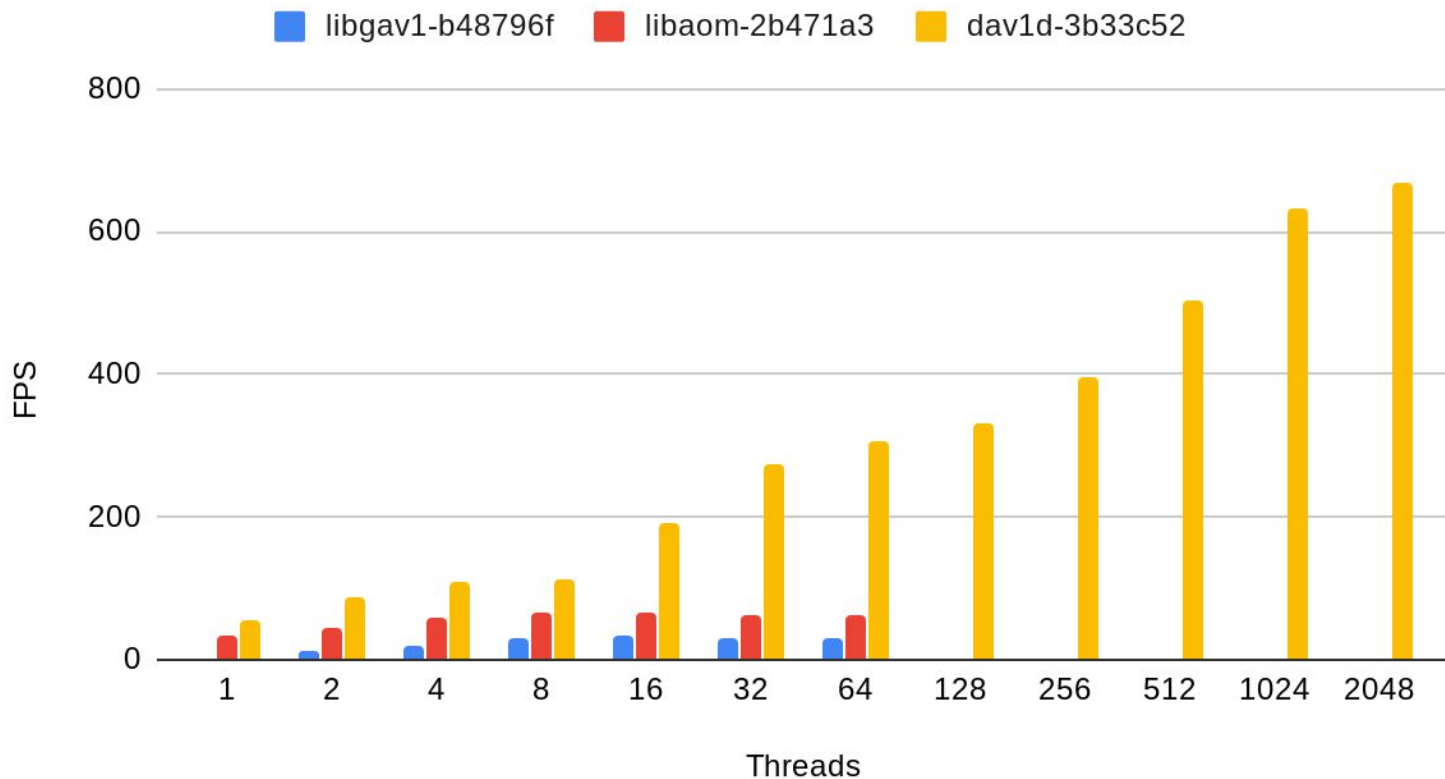
1. C version is faster

AV1 Decode Performance (Single Threaded ARMv8 64-bit)



2. Threading is better

Thread Scaling on x86_64 (2019-Oct-24)

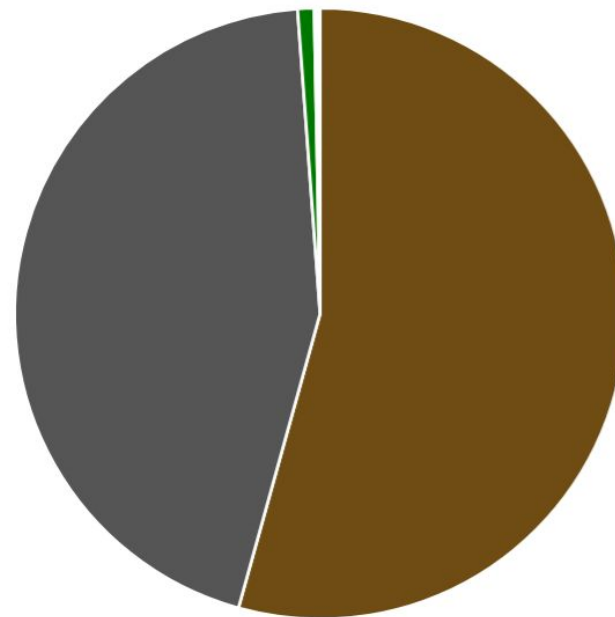


3. low-level

- C (no C++ overhead)
- Hand-written asm
- No intrinsics

Programming languages used in this repository

● Assembly	54.31 %
● C	44.51 %
● Meson	0.87 %
● C++	0.16 %
● Objective-C	0.15 %



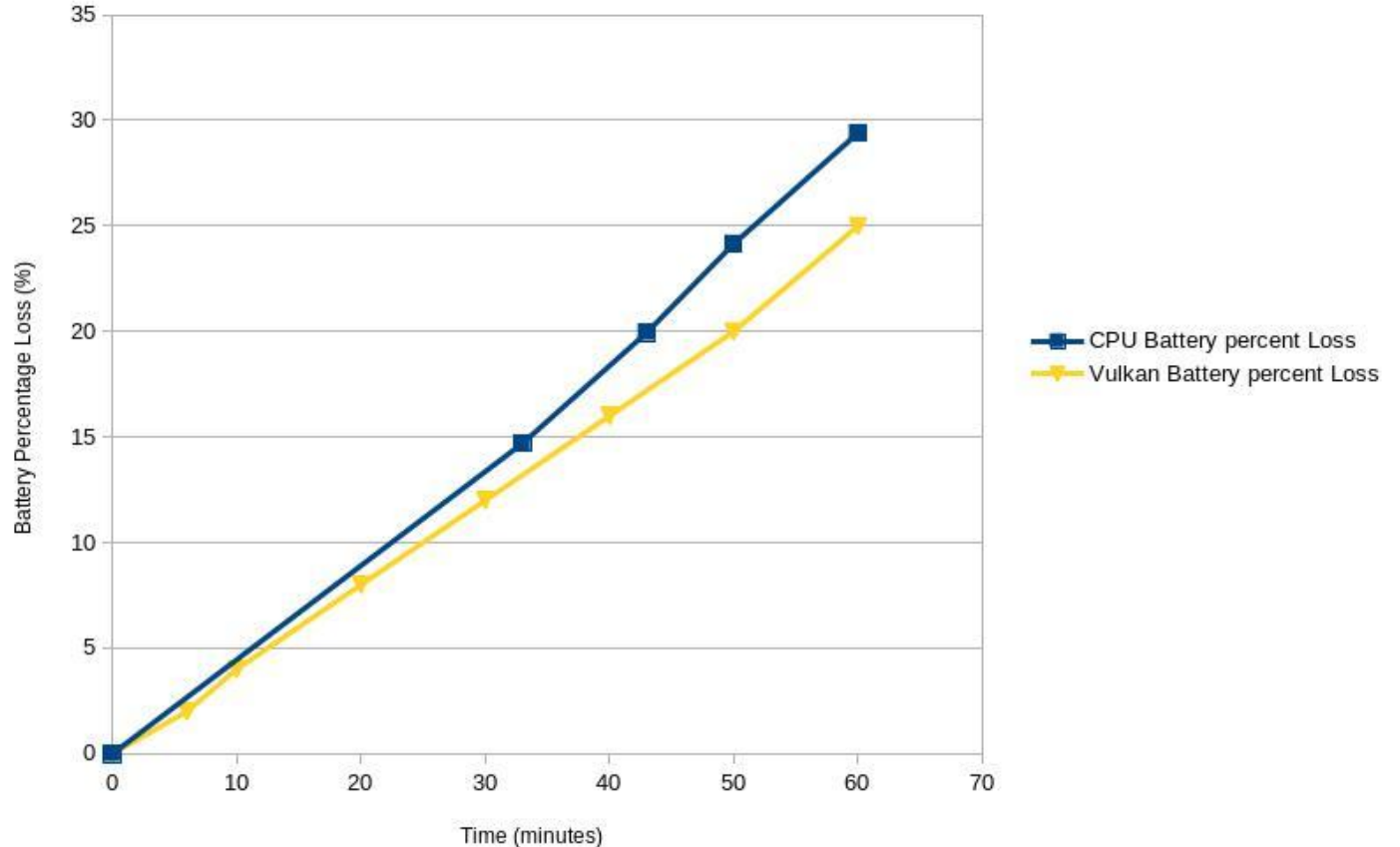
GSoC GPU

Vulkan shaders

CDEF, SGR, Wiener

Android VLC - dav1d Full CPU Vs Vulkan

Android VLC 3.3.0-dev (20191021) - 4K av1 local playback, Huawei P20





Thanks!

dav1d