SAV1

Simple AV1 (Video Decoder)

Elijah Cirioli • Charles Hayden • Daniel Wolnick

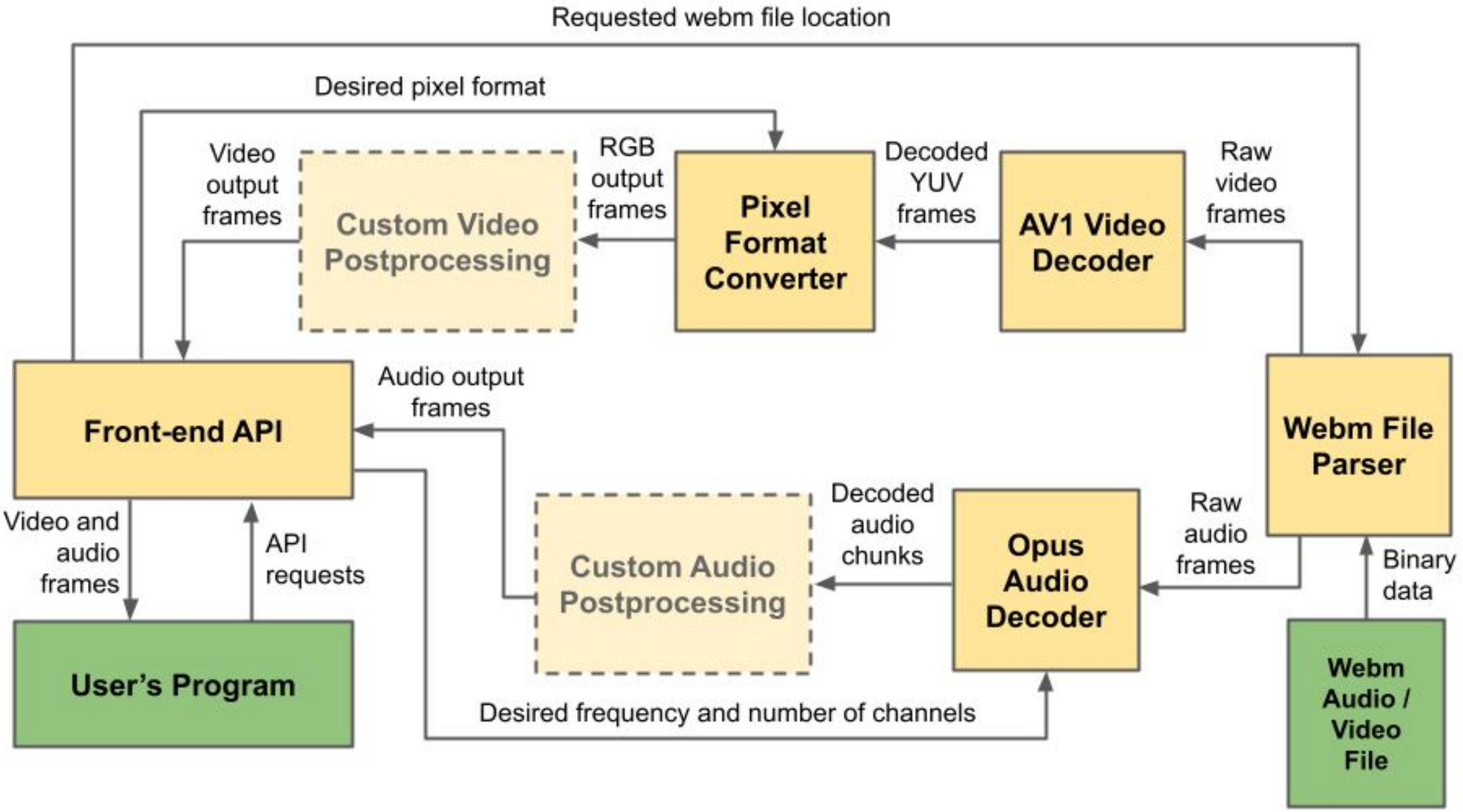
Group Introductions

- Daniel Wolnick (greywolnick@gmail.com)
  - Audio decoding, API design and error handling lead
- Elijah Cirioli (eli.cirioli@gmail.com)
  - Parallelism, file parsing, seeking, and color conversion lead
- Charles Hayden (charlie.c.hayden@gmail.com)
  - Video decoding, build tooling, documentation, and video player lead

What is SAV1?

SAV1 is a lightweight, easy-to-use C library for decoding video and audio. It allows desktop developers to utilize video in their applications with minimal effort. It specifically supports the webm file container format using the open AV1 and opus video and audio codecs.

High Level System Diagram



Open Source Contributions

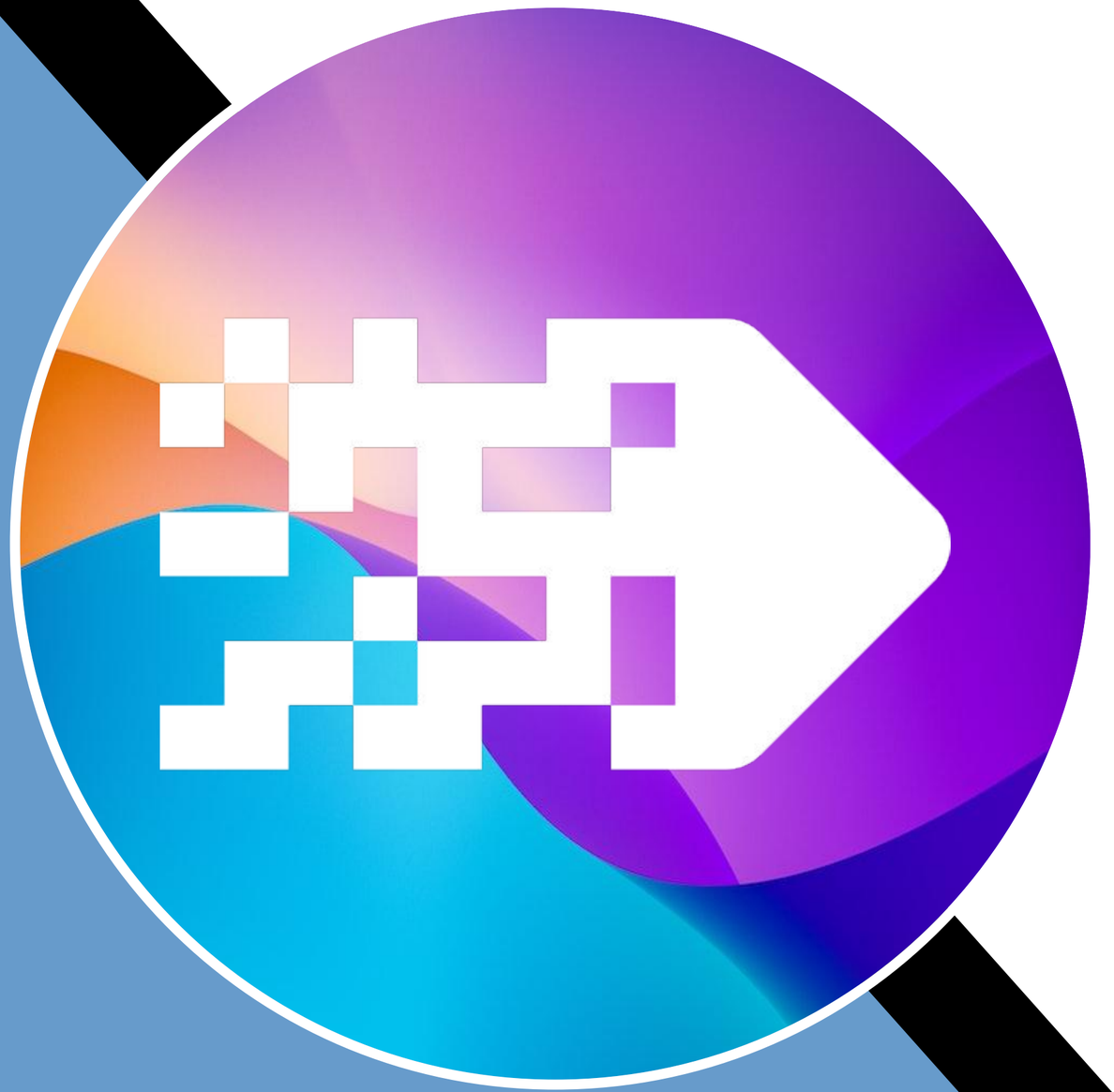
- Improved documentation for dav1d functions
- Fixed multiple bugs in threading library
- Spurred libyuv update in vcpkg package manager
- Added seeking API to FileReader component in libwebm, part of Chromium (the backend for Google Chrome)

Changes Since Alpha

- Faster seeking (tradeoff for precision, keyframes)
- Tooling to build project as library
- Documentation build system and content
- Many more error cases handled
- Video player improvements

Changes Since Beta

- Finish documentation
- Standardize error messages and documentation language
- Streamline and improve doxygen theme usability
- Create a simple and an involved example program
- Seeking modes
- Playback speed settings
- Iterative playback mode



Thank you

From the SAV1 foundation