

A Non-linear Video Editor built with WebAssembly

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Bytedance

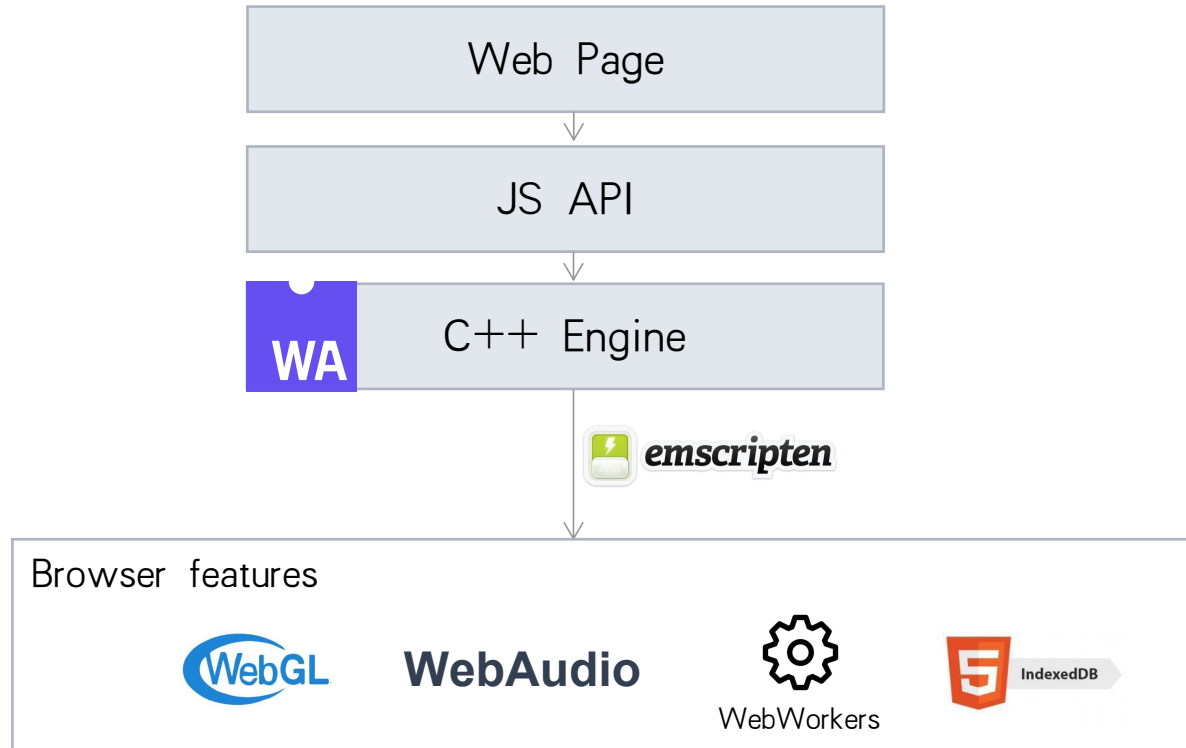
Agenda

- What is it?
- How it works.
- Needs

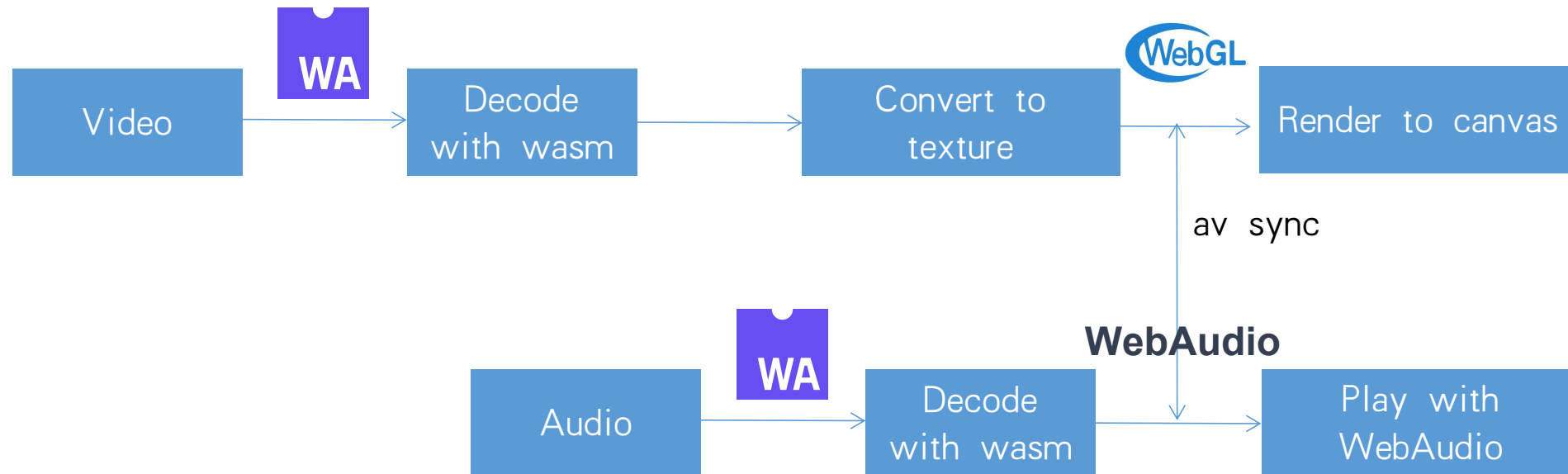
How it works

- Written in C++
- Compiled with Emscripten
- WebAssembly based multi-threaded web app

How it works



How it works



Need: Better decoding performance

- CPU consuming when decoding with WebAssembly
- Resolution limit: 480P
- WebCodecs? Sync mode?

Need: Better debugging

- Large wasm support and better performance
- Dynamic worker name
- "Stop the world"

Need: Better file accessing

- Emscripten FS: MEMFS
- MEMFS: memory consuming, volatile
- Large files cause OOM
- Multi-thread accessing performance

