

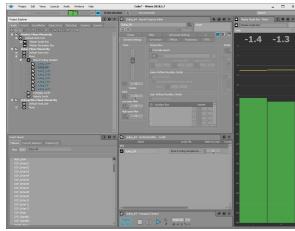
Porting Wwise to the web



June 28, 2019



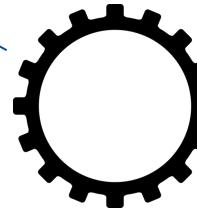
What is Wwise?



Authoring Tool



Sound Banks



Game + Sound Engine



Why is Wwise important?





Attempt #1: Just make it play a sound!

Hurdles:

- Architecture that is neither x86 nor ARM
- SSE emulation did not work
- Atomics: some compiler intrinsics were not supported
- pthreads implementation is a leaky abstraction



Resize canvas Lock/hide mouse pointer Fullscreen

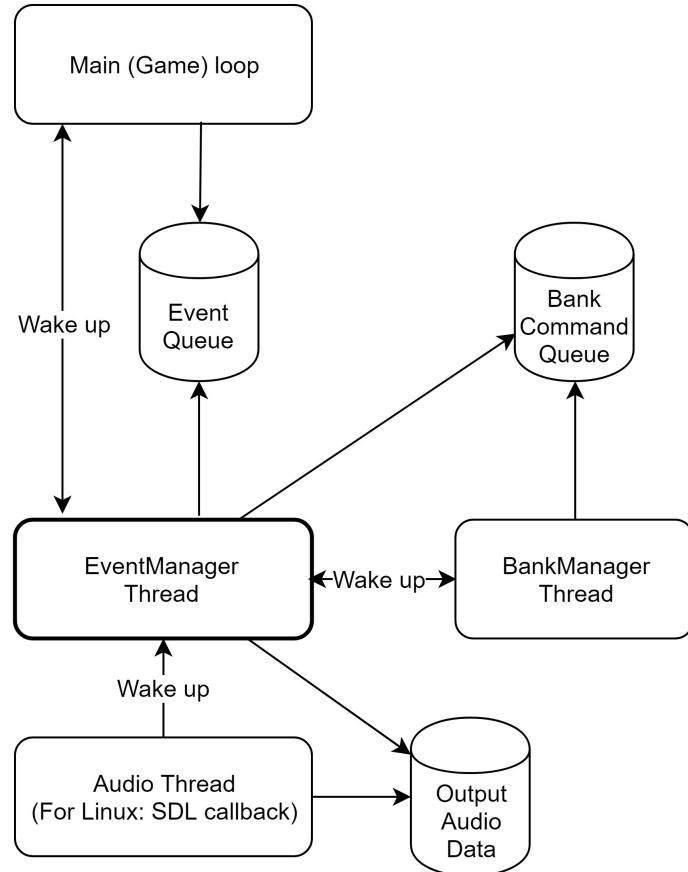
Positioning Demos Menu

- Position Demo
- Multi-Position Demo
- Spatial Audio - Portals**
- Spatial Audio - Portals and Geometry
- Spatial Audio - Geometry
- 3d Bus - Clustering/3D Submix
- 3d Bus - 3D Portal and Standard Room
- 3d Bus - 2X 3D Portals

(Press F1/START For Help...)



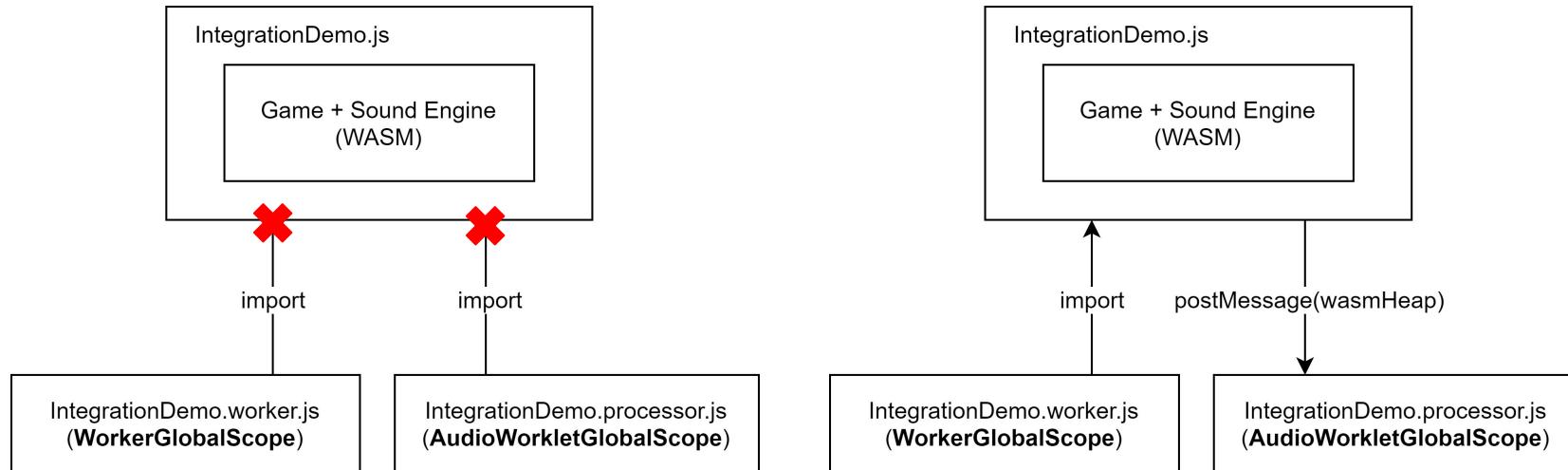
Attempt #1: Deadlock galore



- Threads don't actually start before `main()` returns
- Only the main thread can initialize SDL2
- SDL2 Audio is implemented using `ScriptProcessorNode...`
`AudioThread==Main thread!`



Attempt #2: Enter AudioWorklet





In retrospect

The good:

- AudioWorklet: a major improvement
- Didn't have actual audio issues, just needed to learn the APIs

The bad:

- Threading is difficult to get right
- Debugging “experience”
- Too far from the hardware

The ugly:

- SharedArrayBuffer's future seems uncertain
- Slow adoption by browsers other than Chrome
- What about mobile browsers?

Thank you!

