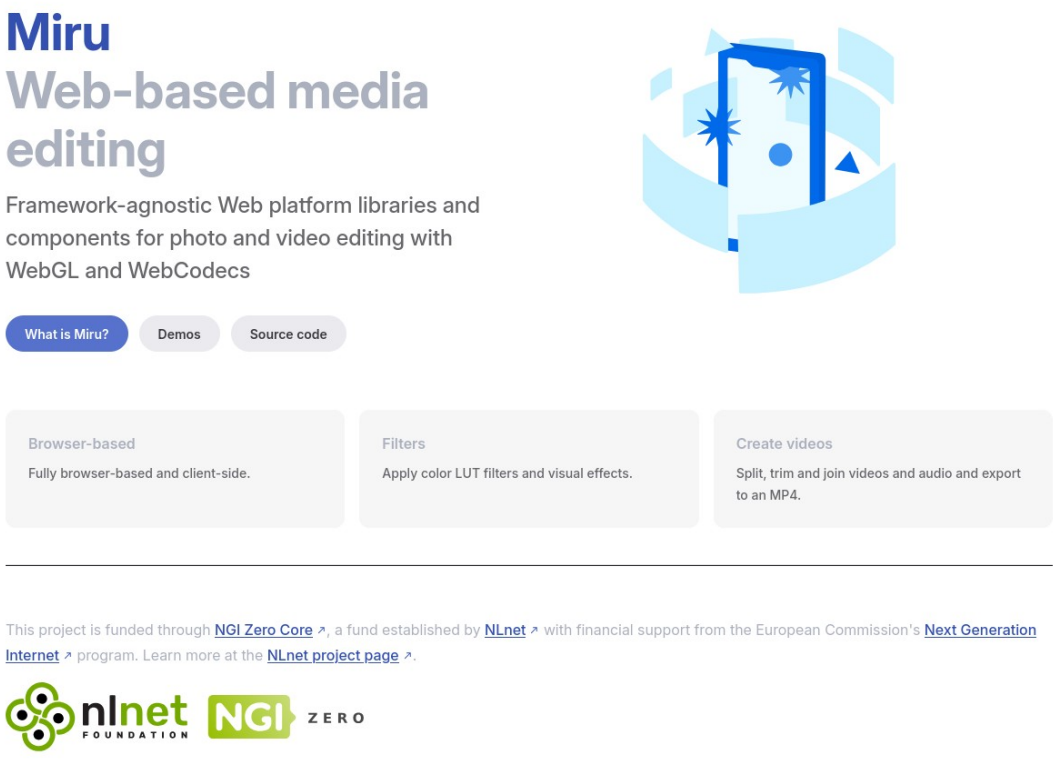
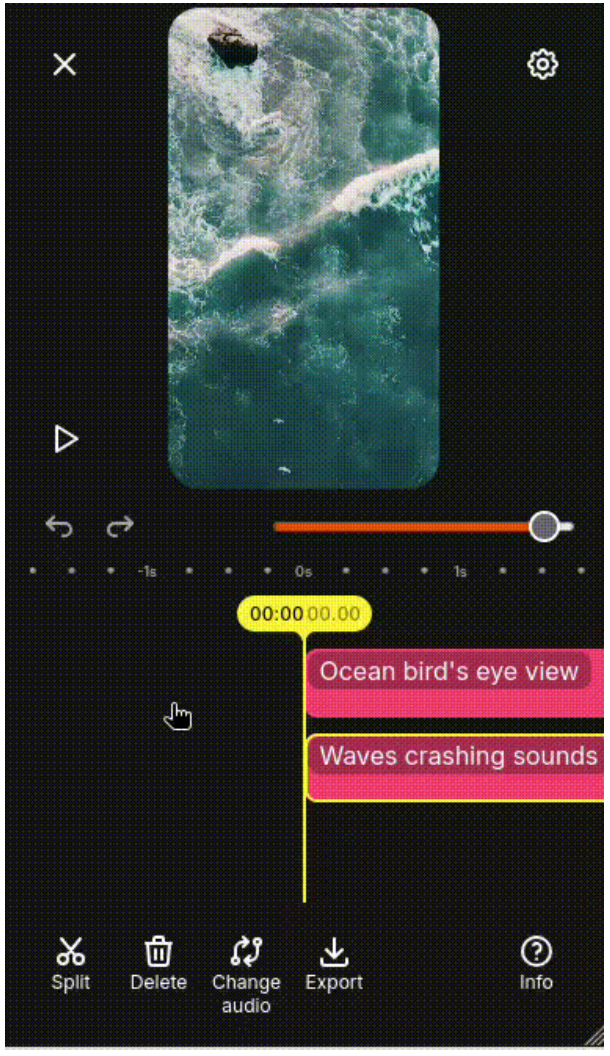
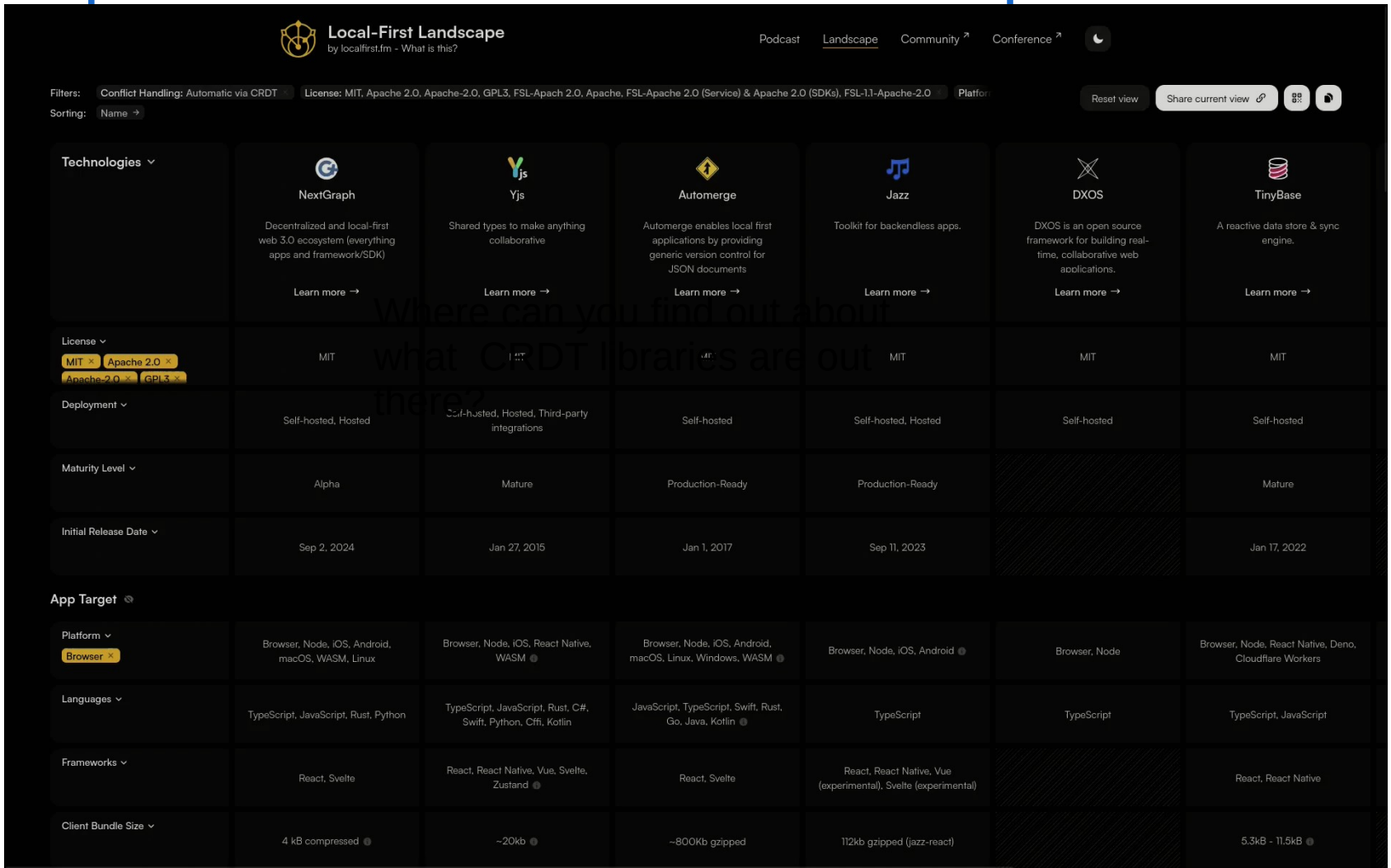
Miru: Building a collaborative video editor with offline support



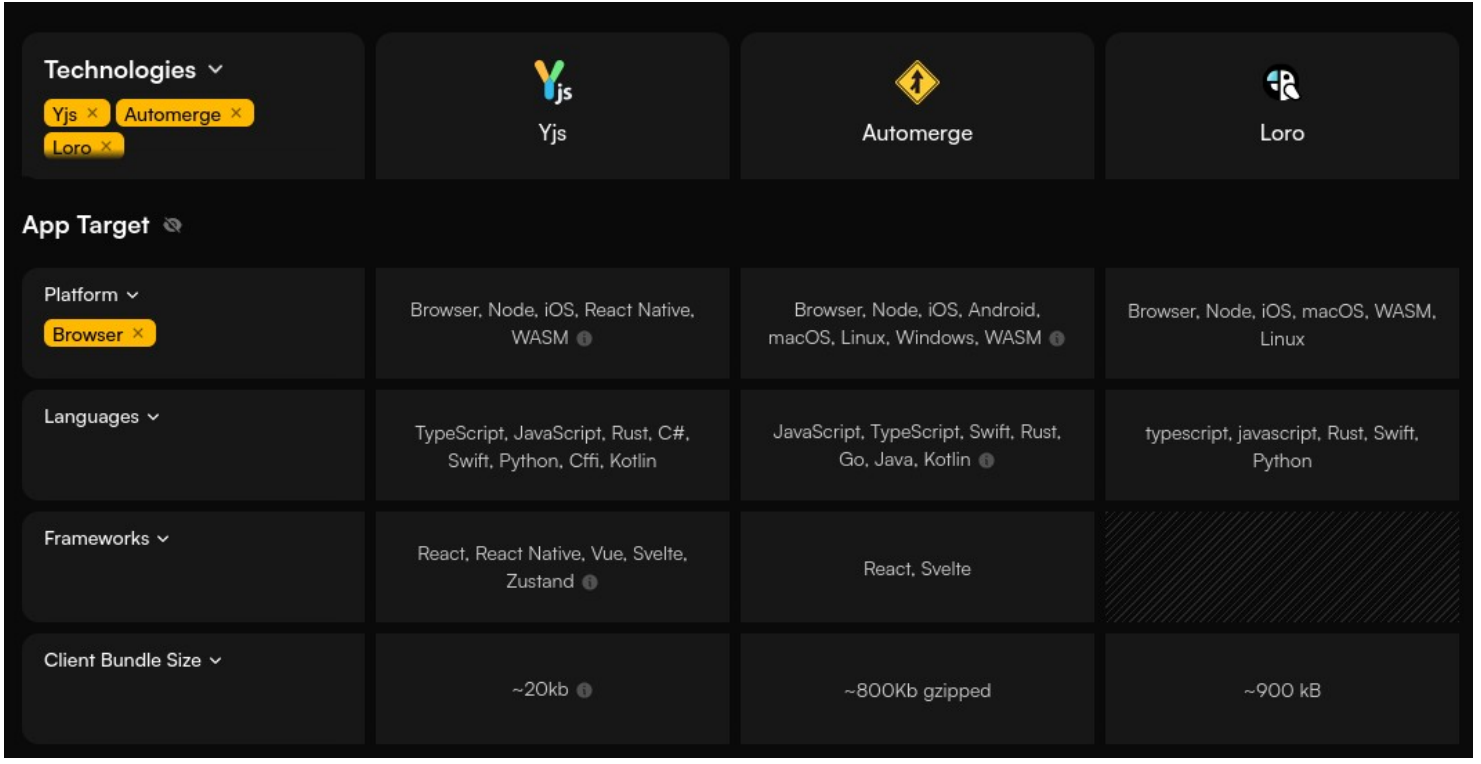


- https://miru.media/video-editor
- Pretty simple and easy to use
- Can add multiple video and audio clips, rearrange, trim, etc, export
- Compsiting is done with the videocontext library (for now) to a WebGL canvas
- Uses WebCodecs for exporting

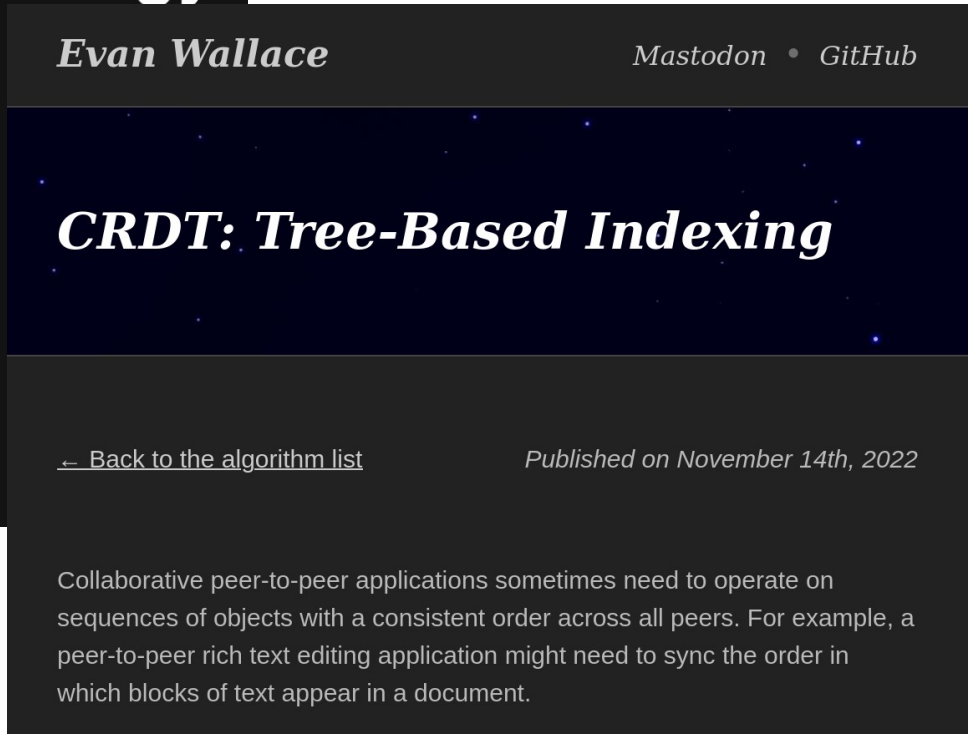
https://www.localfirst.fm/landscape



- Yjs: most popular, great ecosystem, small bundle size
- Automerge: comparable features to yjs, ~1MB wasm build, smaller ecosystem
- Loro: newer, has support for move operations, ~1MB wasm build

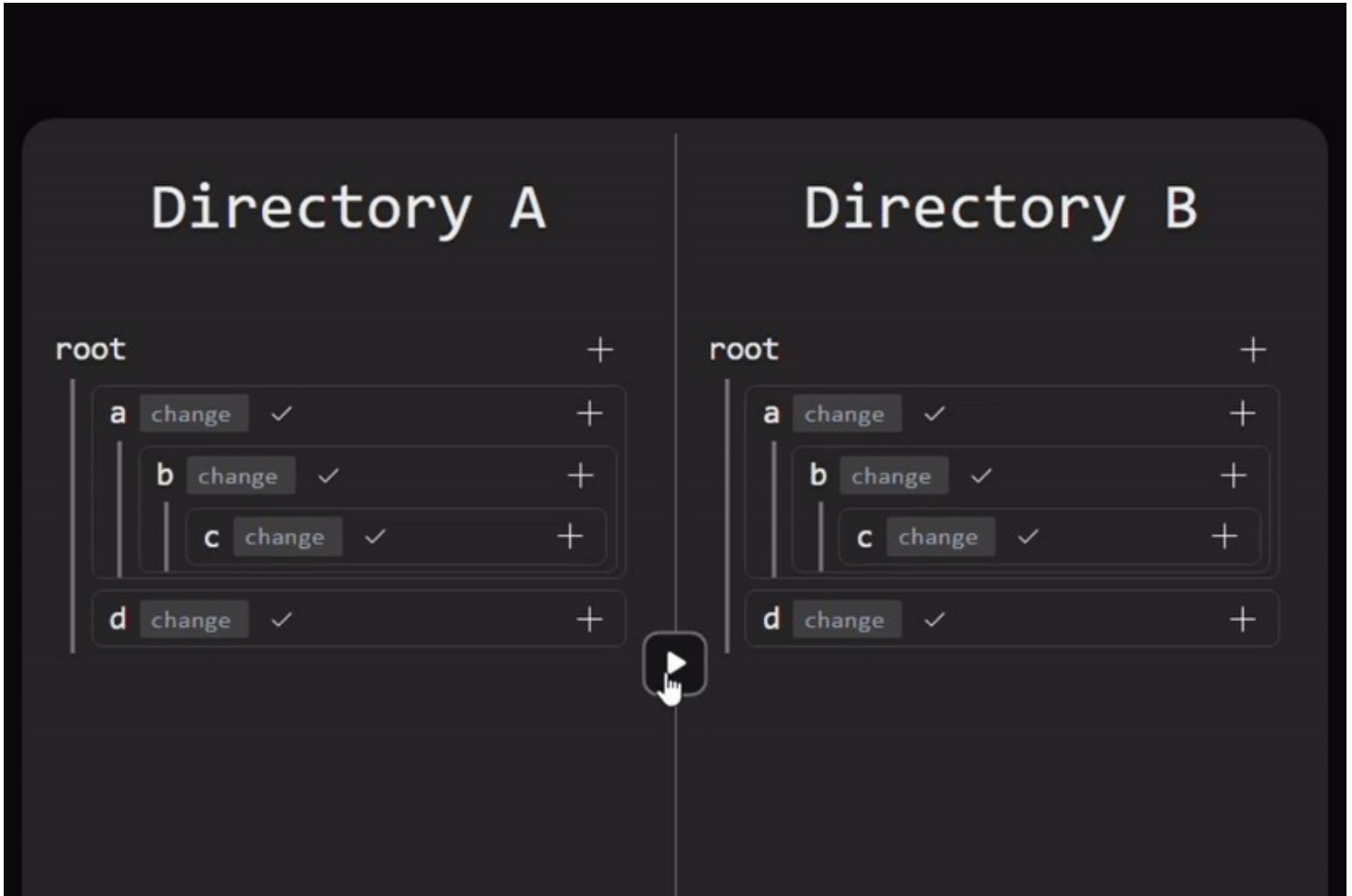


https://www.figma.com/blog/how-figmas-multiplayer-technology-works/



https://www.madebyevan.com/algos/crdt-tree-based-indexing/

https://github.com/ProjectWR/yjs-orderedtree

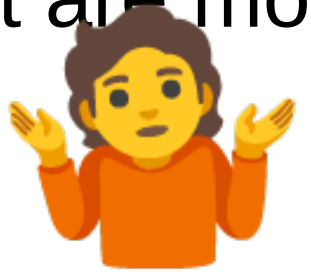


Interleaving issues

- What is expected when one user splits a clip, and the other changes the duration of the original clip?
- What if the clip’s media asset is swapped out?
- Undoing the split or deleting the orignal while another user edits the two new clips?

And what about

- Transitions
- Subtitles
- Keyframe animations
- Linked (not grouped) clips that are moved together



In other more advanced editors with ripple editing, changing one clip can affect other clips across multiple tracks

Thank you!

https://github.com/miru-media/miru

https://codeberg.org/miru-media/miru