

ShadowPlay

An exploration of light in outdoor spaces through sound

Dan Wilcox, 18 Nov 2022, Piksel Festival

Who?





Dan Wilcox

Artist

Engineer

Musician

Performer

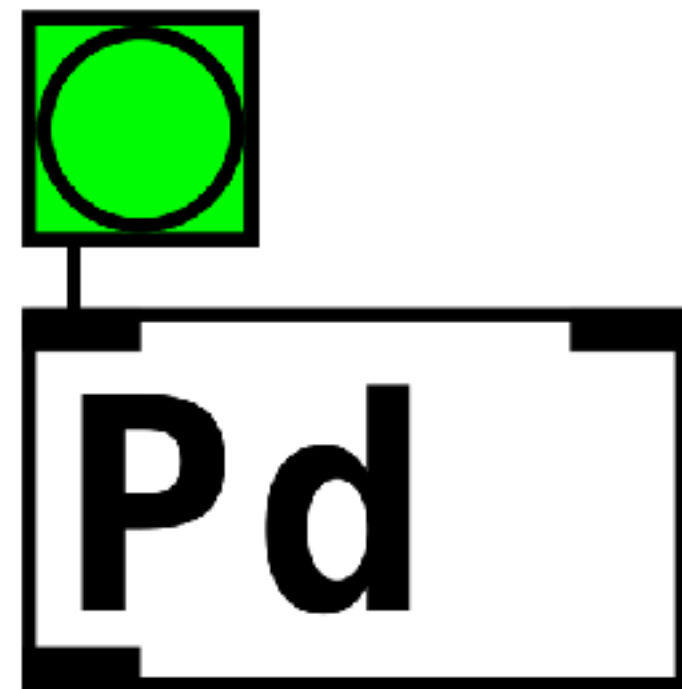
(Astronaut)

danomatika.com



Open Source Projects & Contributions

- **Projects:** PdParty, ShadowPlay, SpeedPitch, loaf, joyosc, rc-patches
- **Contributor:** Pure Data, libpd, OpenFrameworks
- **OpenFrameworks addons:** ofxPd, ofxLua, ofxMidi, ofxTensorFlow2, ofxGLEditor, ofxAppUtils



R+D
for
Humanity



In pursuit of the silly and useless



robotcowboy







2013



OnSite Festival, Taipei

2018



Kronenplatz, Karlsruhe DE



ZKM | Hertz-Lab

ZKM | Center for Art & Media Karlsruhe
ZKM | Zentrum für Kunst und Medien

ShadowPlay...

Concept

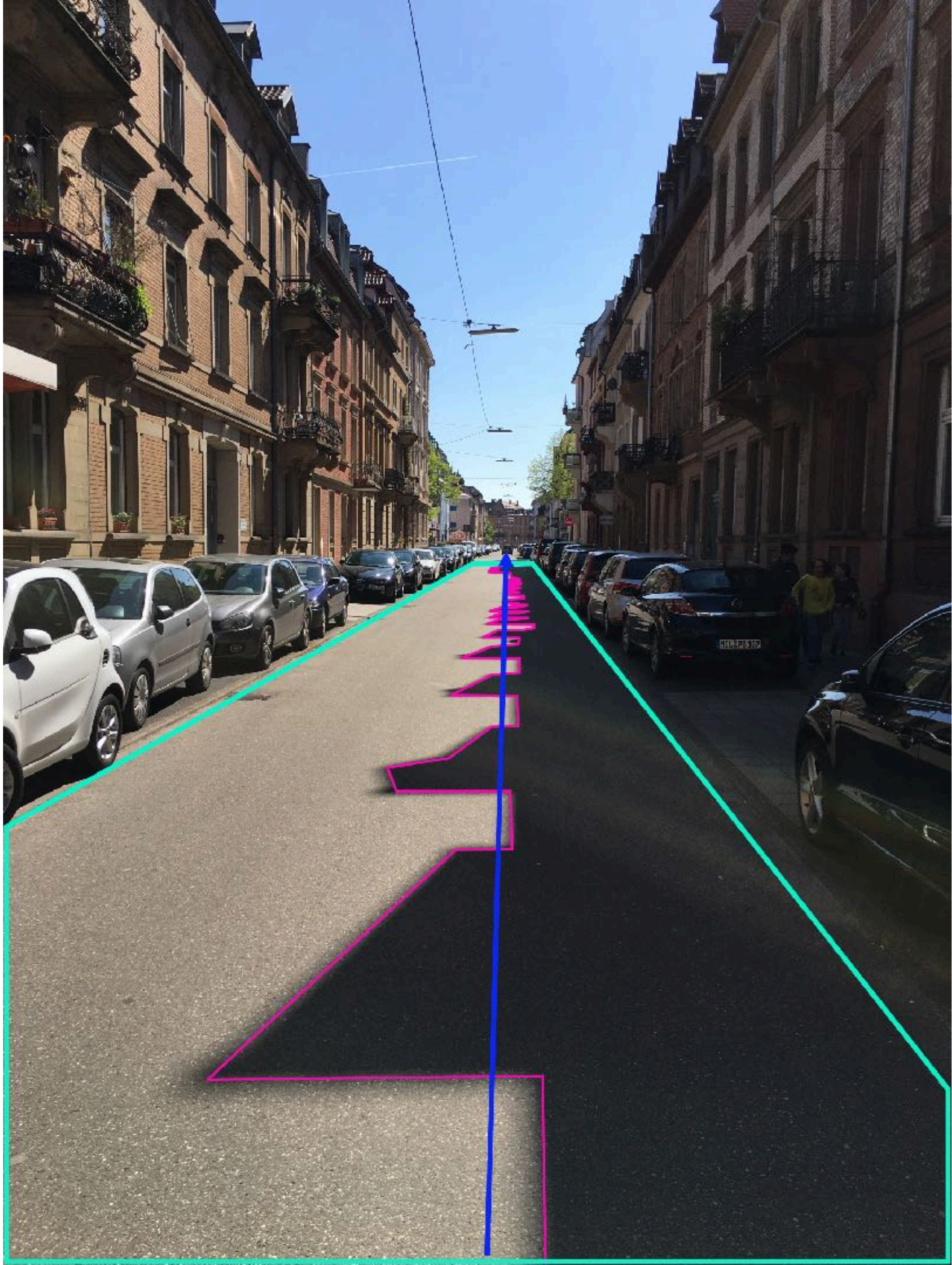
Körnerstraße
Weststadt
Karlsruhe
16:00

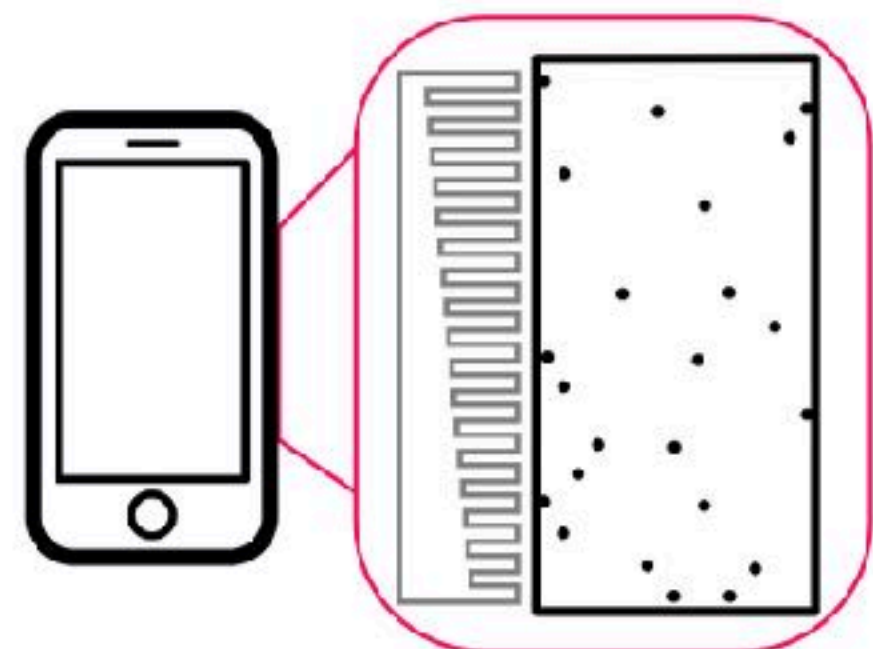
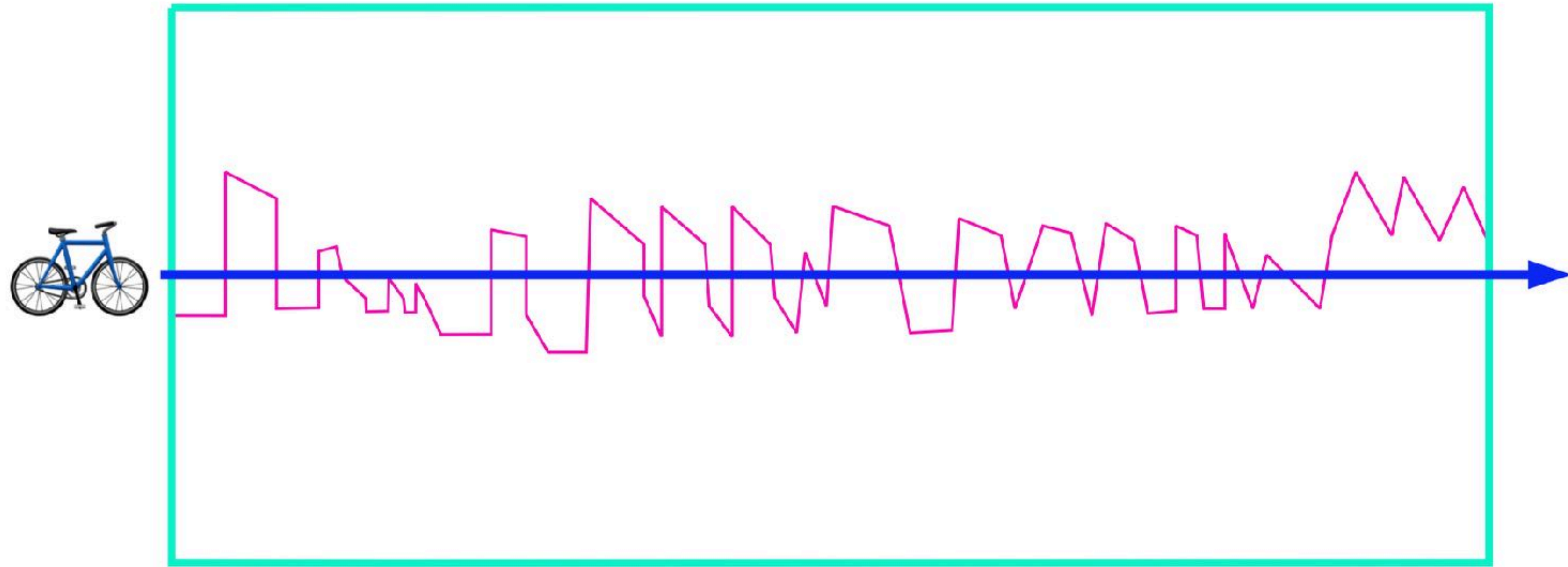


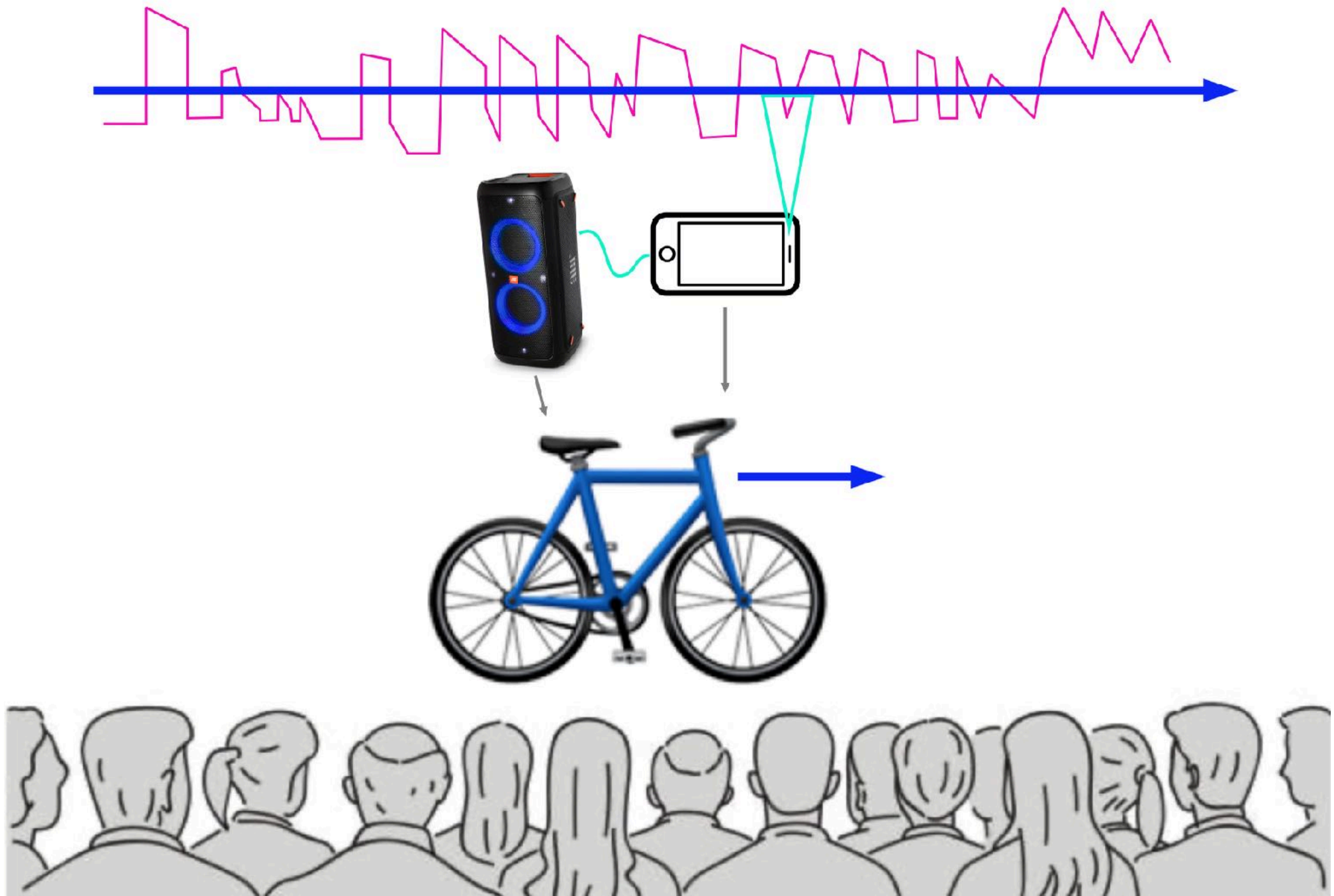
Körnerstraße
Weststadt
Karlsruhe
10:00

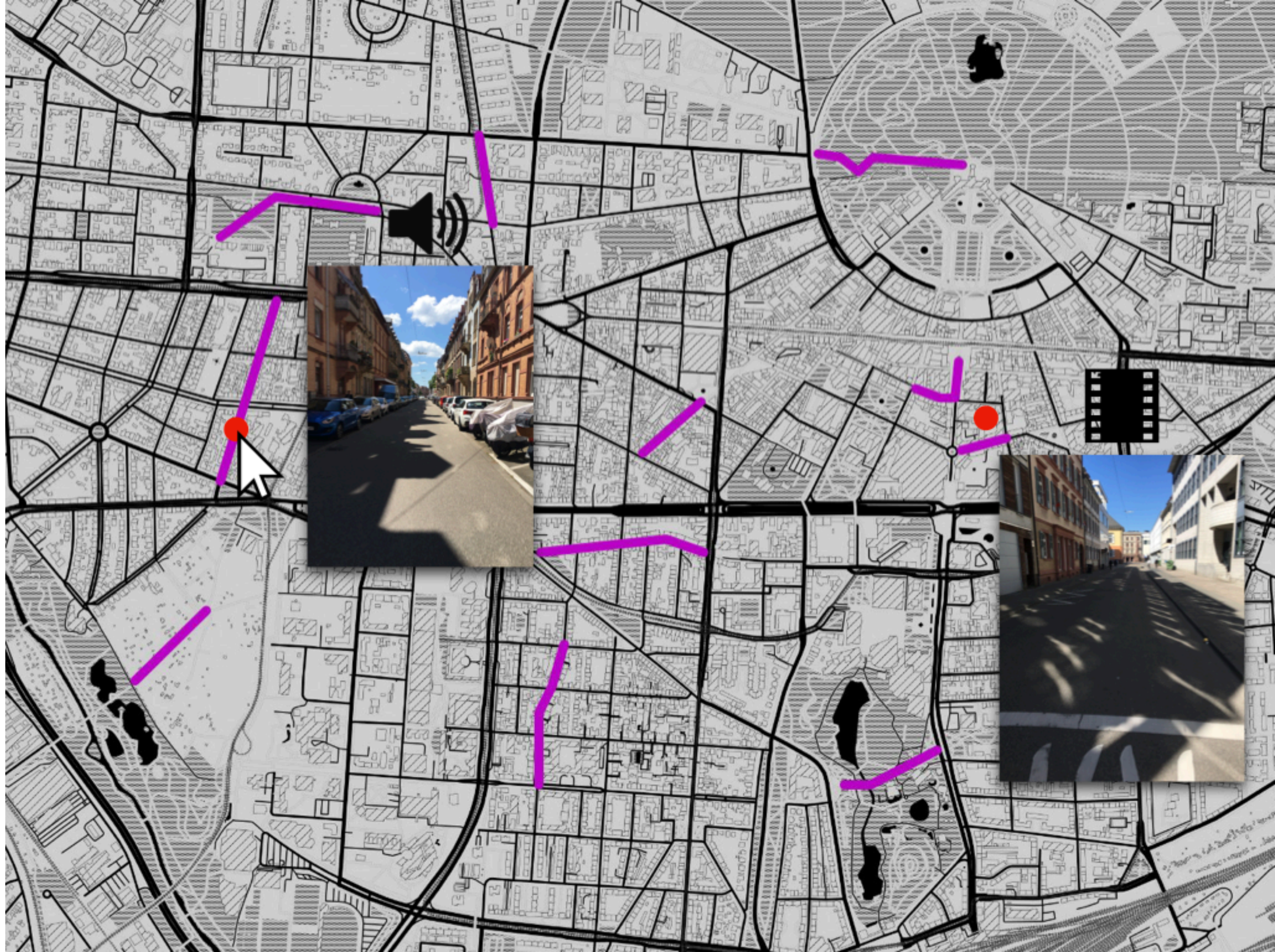


Possibilities...









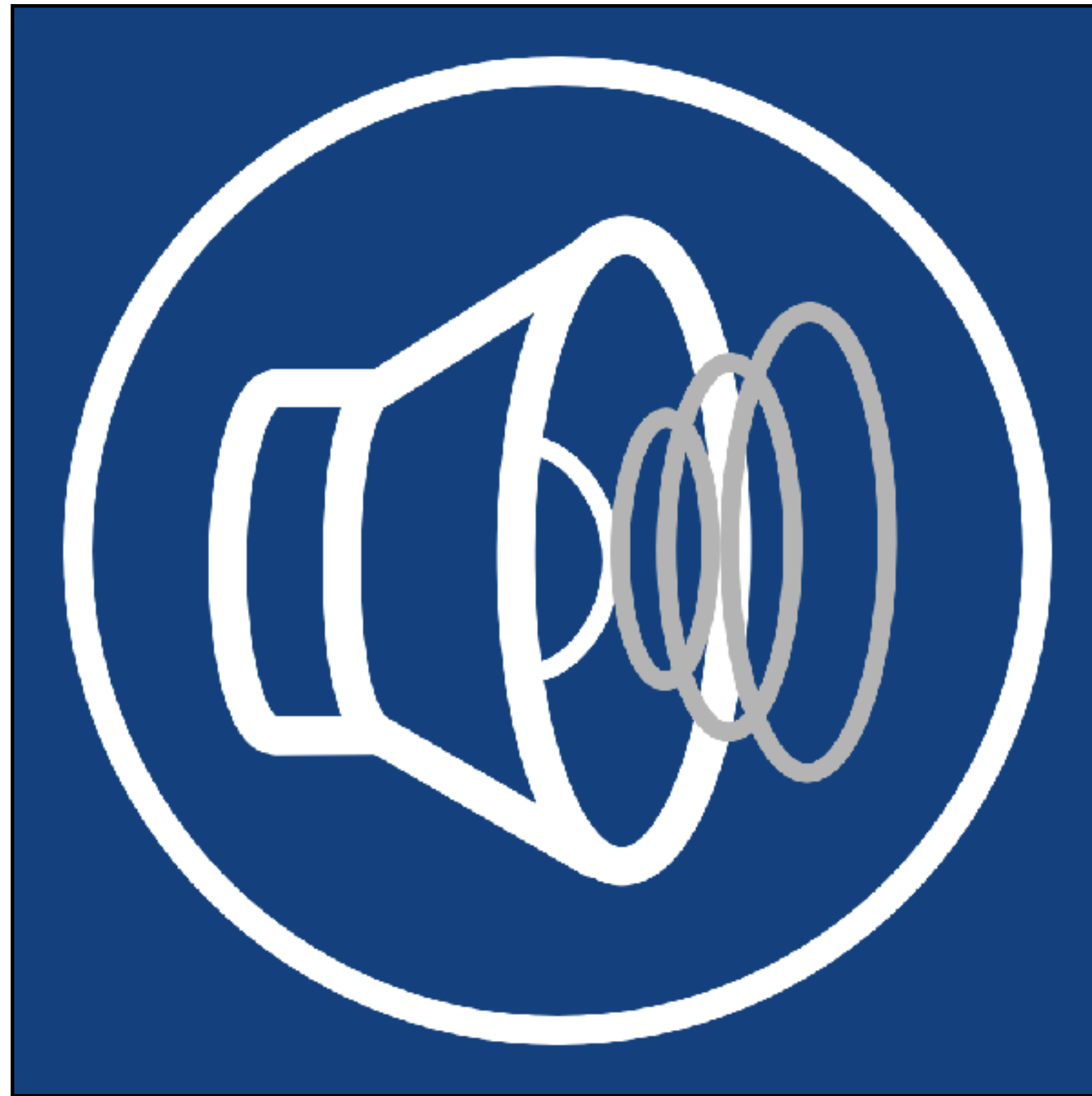


Video

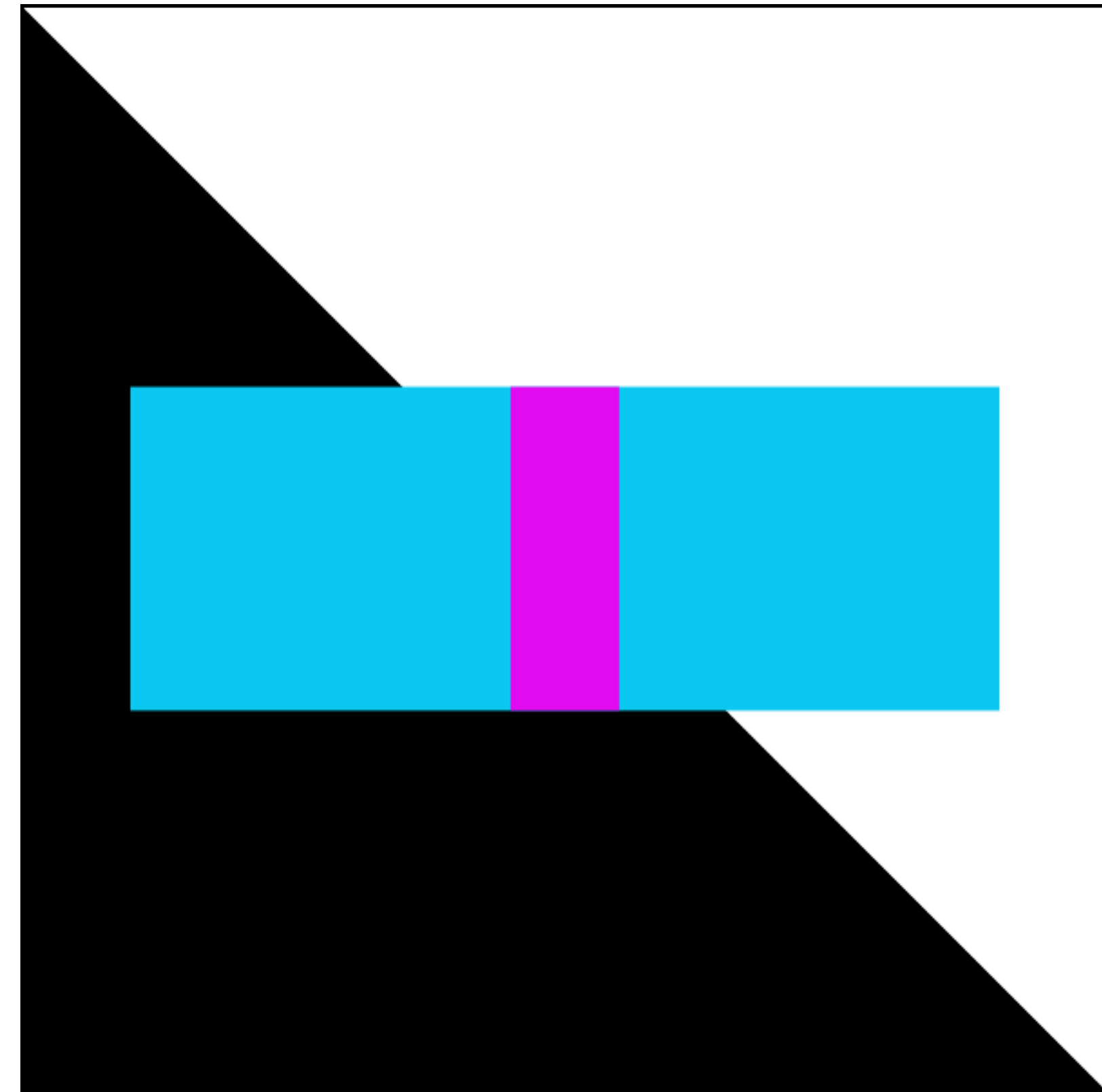
Implementation

Implementation

2021: Summer of (Silly) Apps



SpeedPitch

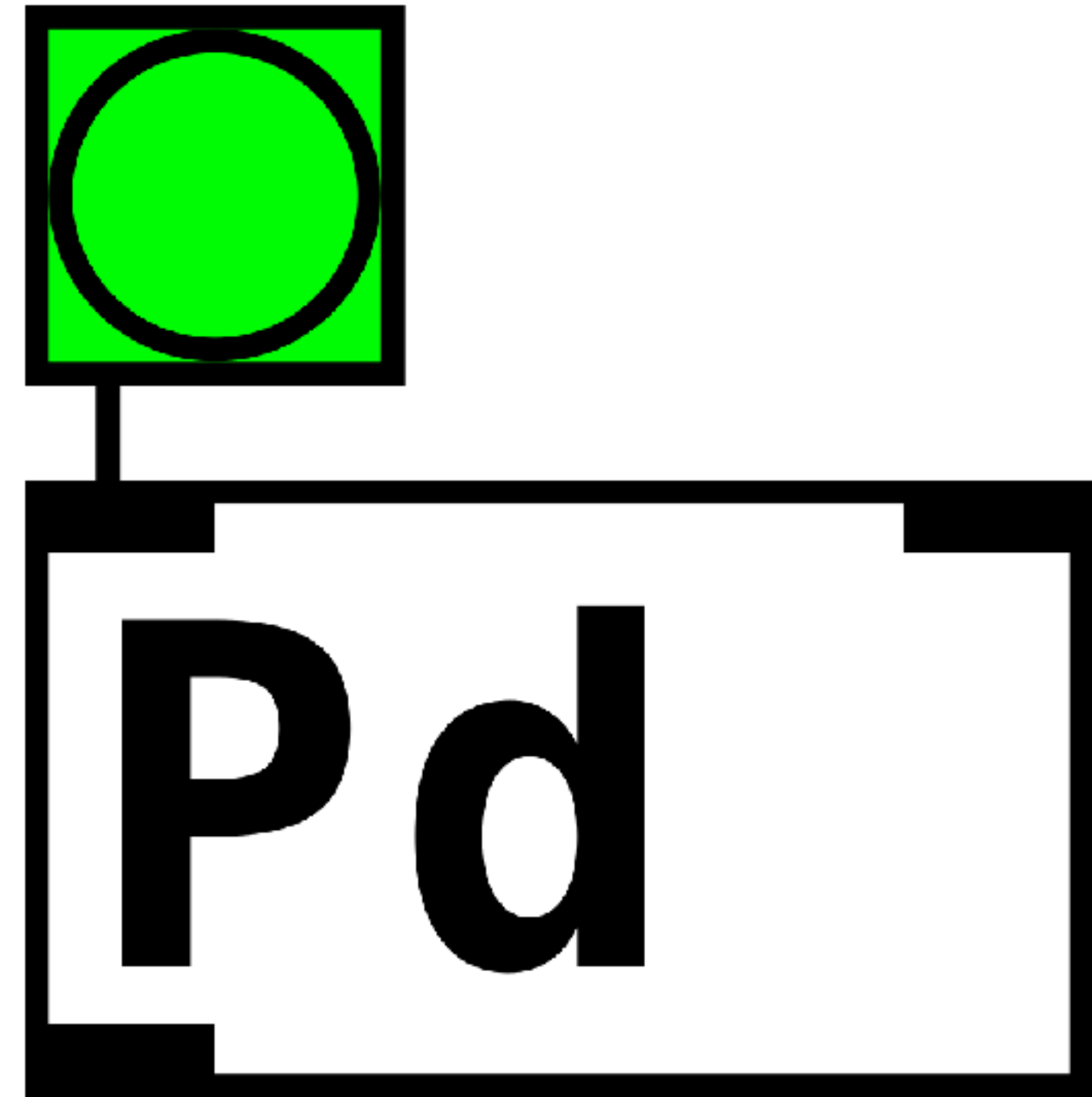


ShadowPlay

Implementation Software



Native Interface

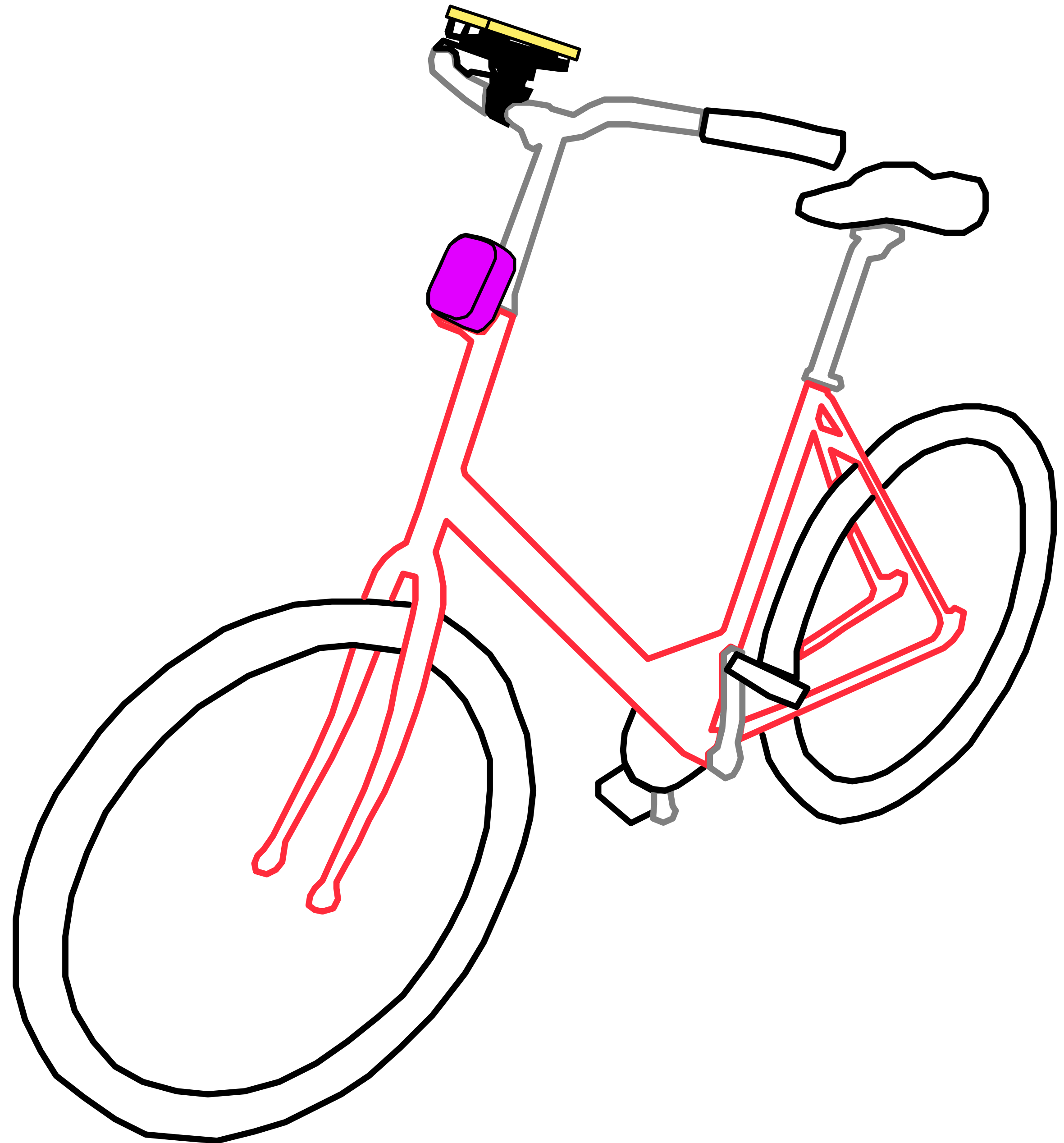


Audio Engine (libpd)
Scene Format

Implementation

Hardware

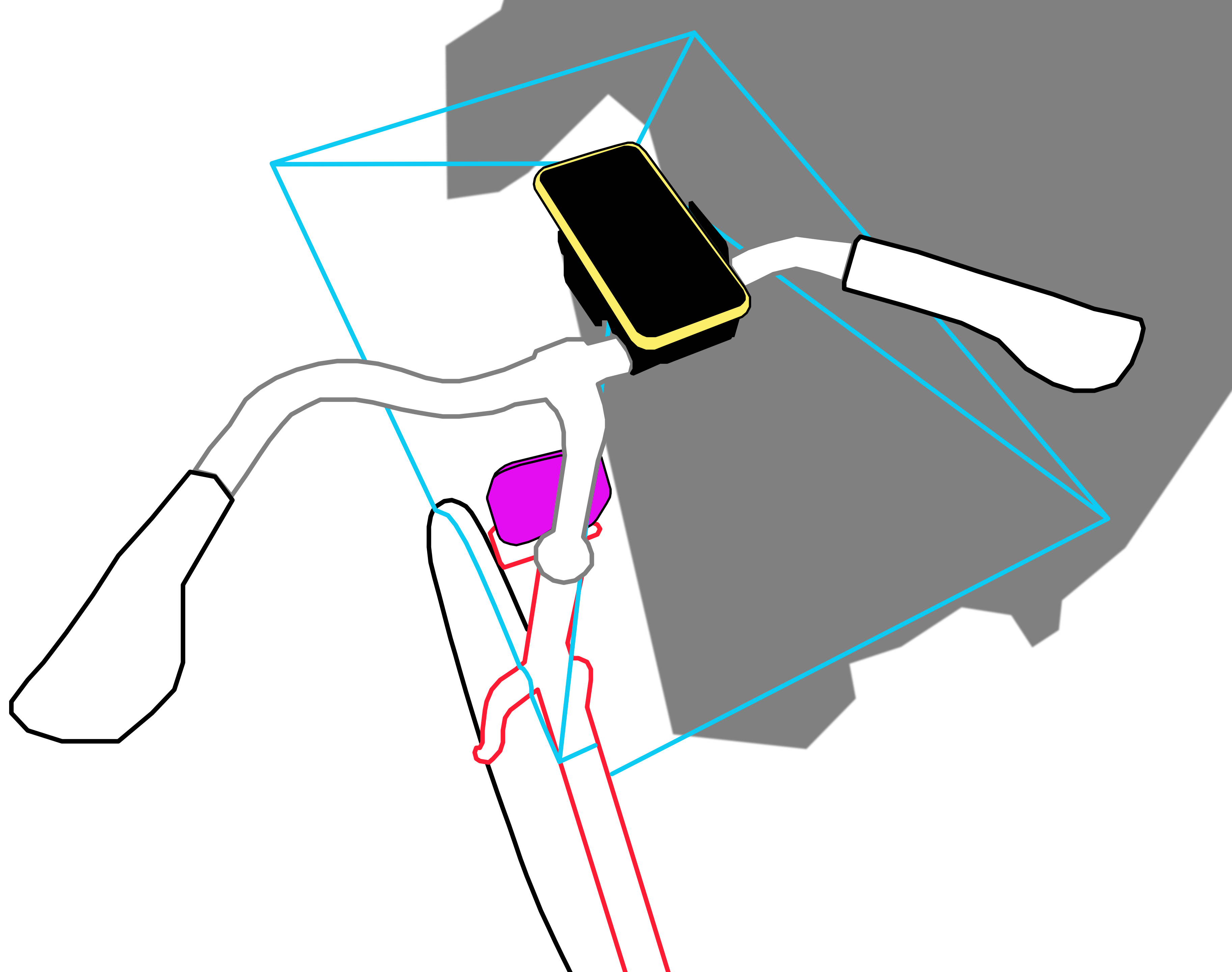
- Bicycle
- iOS Device
- Bluetooth Loudspeaker
- Smartphone mount



Brightness

Hardware

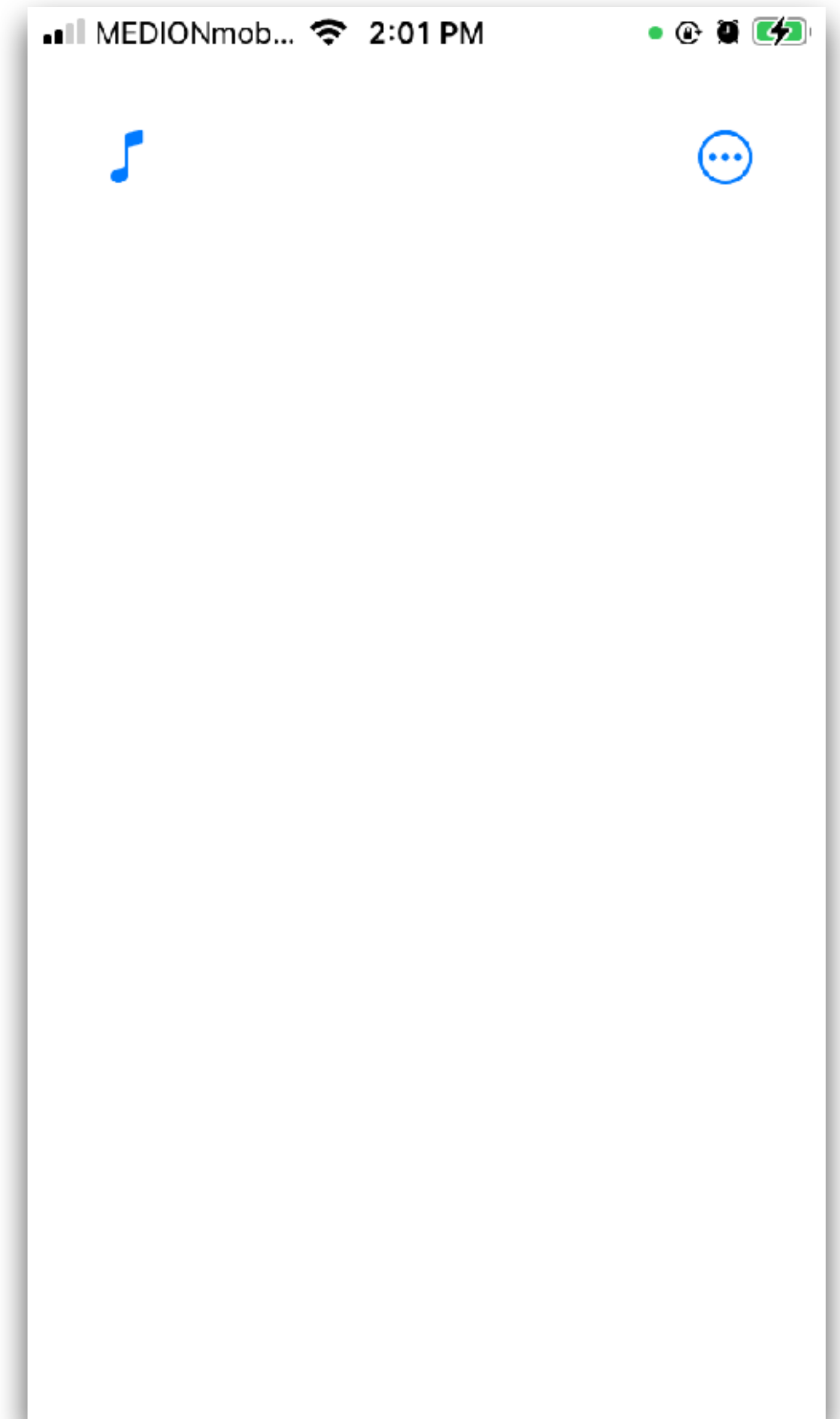
- Camera as simple light sensor
- Per-frame EXIF brightness level



Brightness

Main Interface

- Minimal: show averaged brightness only
- Focus on interplay between light & shadow
- Normal camera view "too busy"
- Differentiate from Camera app



Brightness

Calibration Calibration Calibration!

- Normalize from EXIF brightness min/max?
Too wide...
- Normalize to current conditions: the range bar
- Usage: start calibration and point phone at light & shadows
- Future: auto-calibration



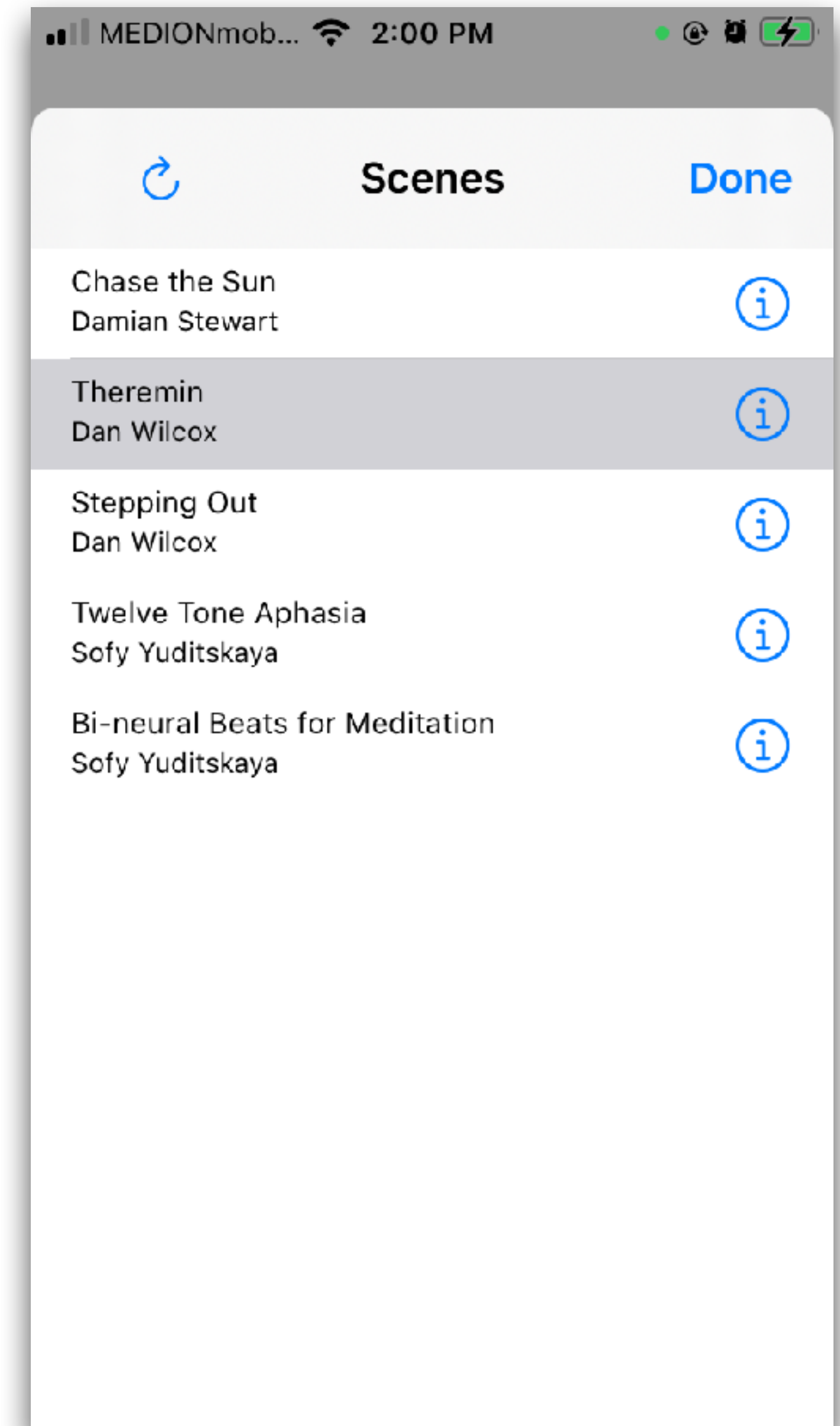
Sound Scene Selection

- Curated selection of sound scenes
- A scene contains usage & attribution info
- Contributions by:

Sofy Yuditskaya (New York, USA)
<https://www.yuditskaya.com>

Damian Stewart (Vienna, AT)
<http://damianstewart.com>

You?



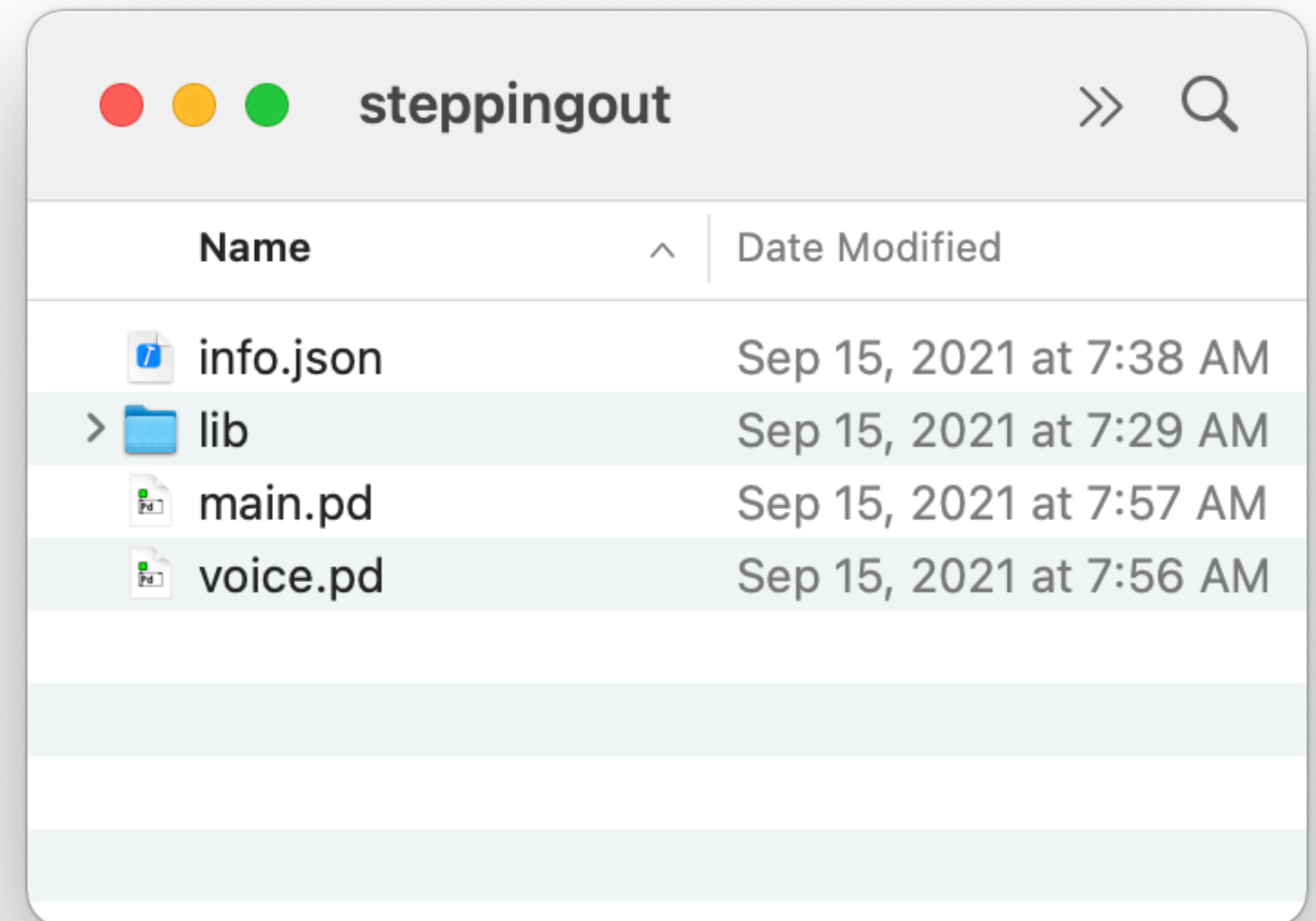
Sound

Scene Layout

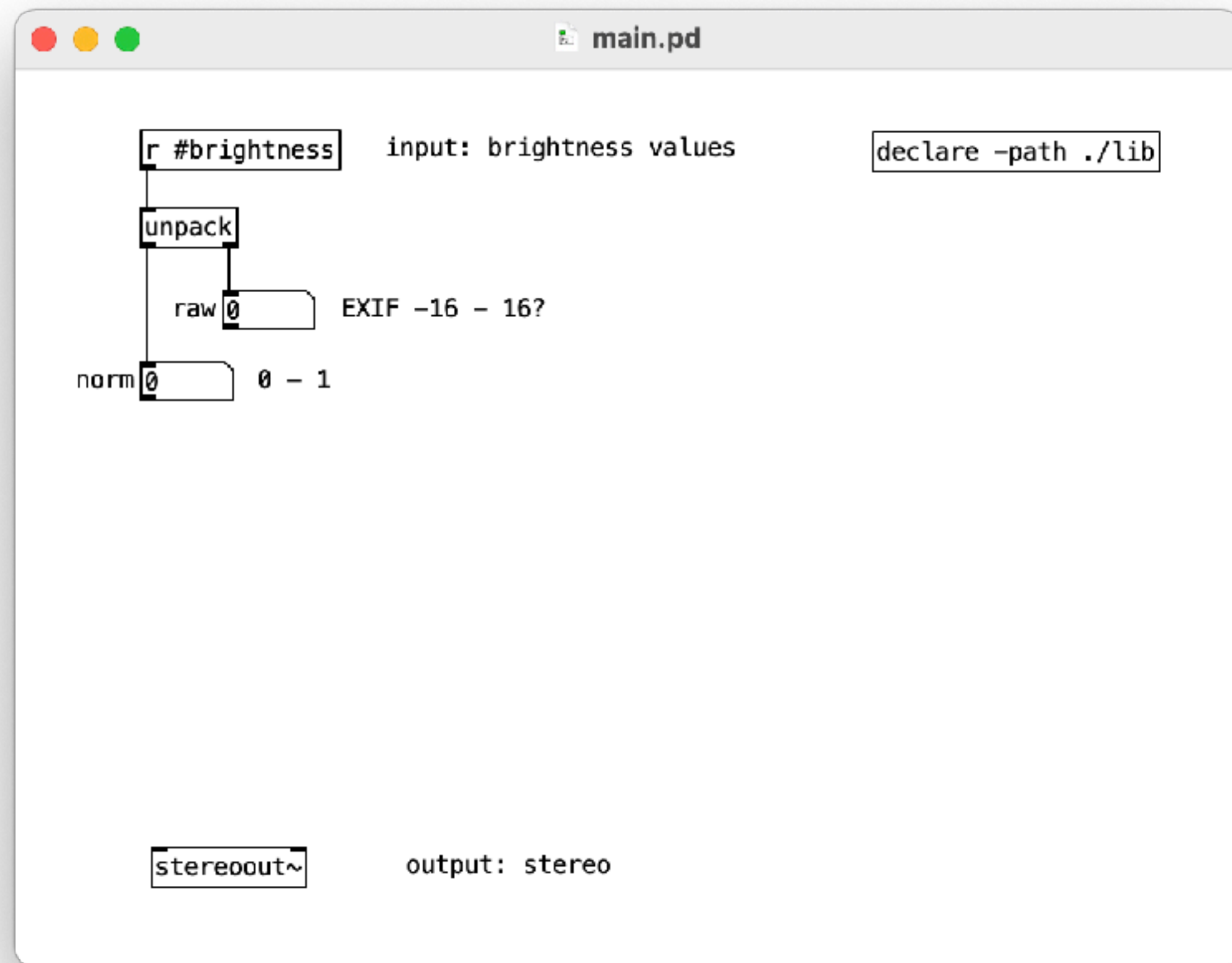
RjDj-style folder with:

- main.pd Pure Data patch
- info.json metadata (optional)
- cover.png thumbnail image (optional)
- additional abstractions and resources

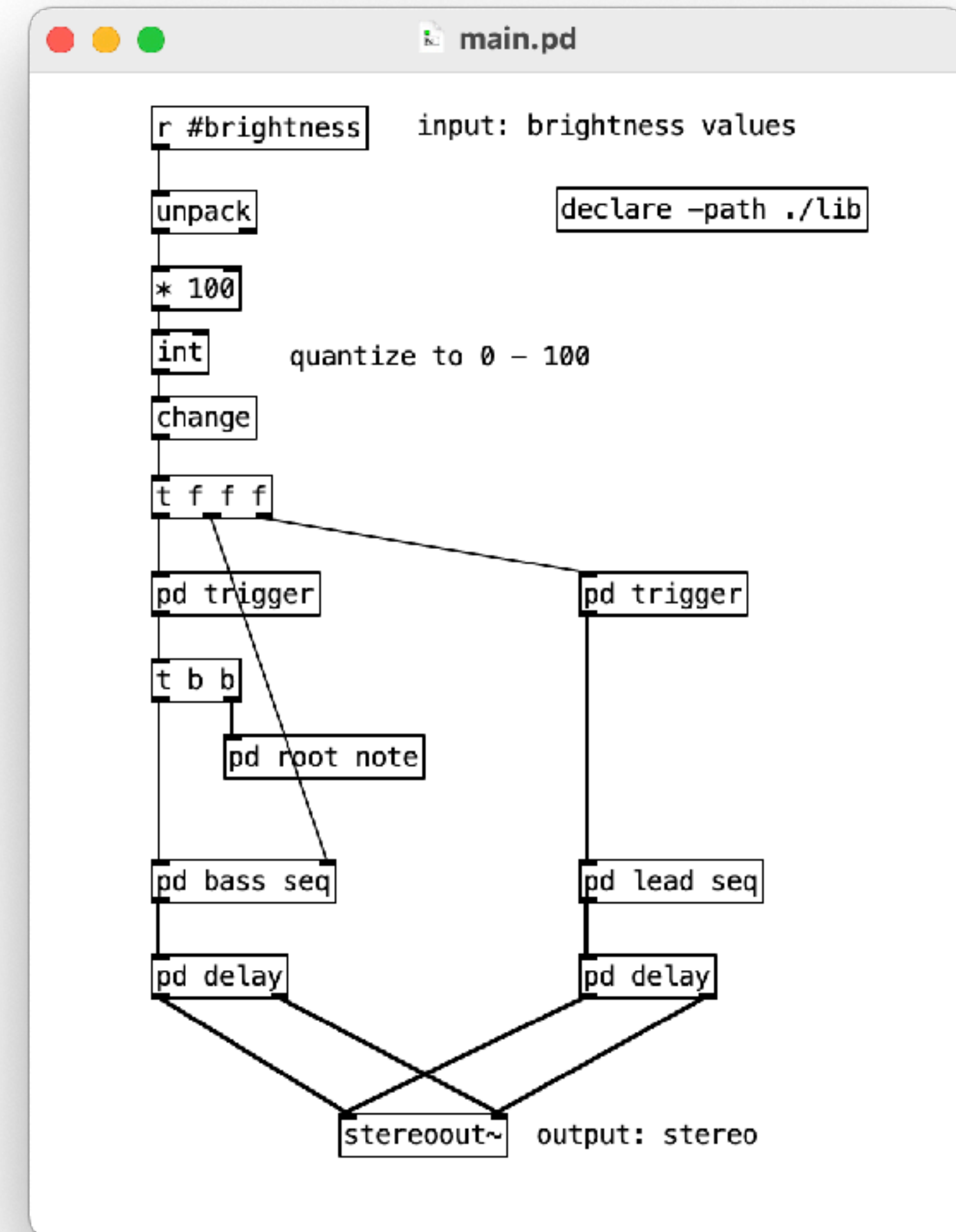
Download composer pack for
templates & patching info



Sound Scene Patches



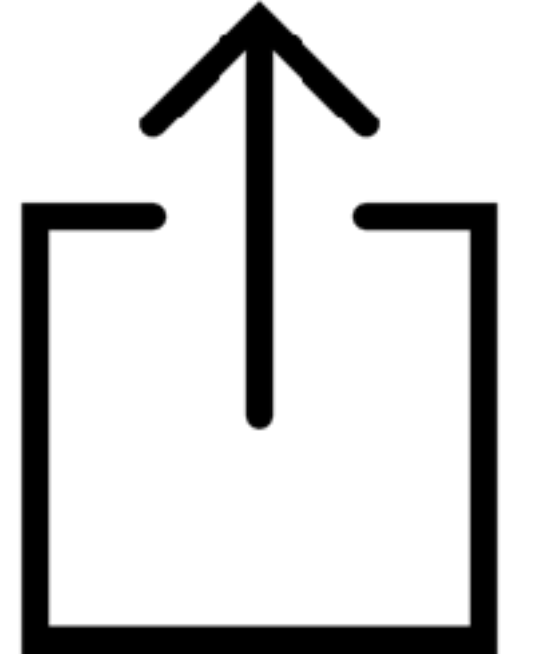
Composer Pack Template



Stepping Out

Sound

Scene Creation



Making your own scene:

1. Create new folder using scene template and edit patch
2. Transfer to iDevice using AirDrop, the Files app, or iTunes/Finder file sharing
3. Place in ShadowPlay Documents folder
4. Open/refresh scene selection and choose new scene
5. Experiment and enjoy!

Recording

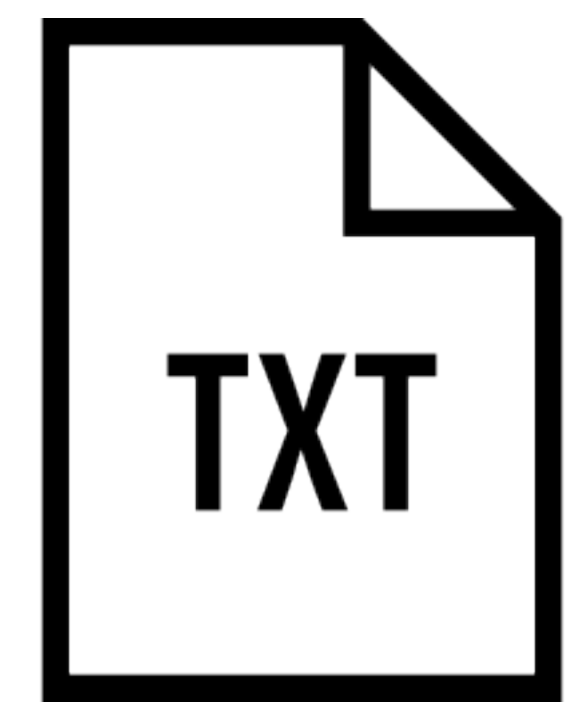
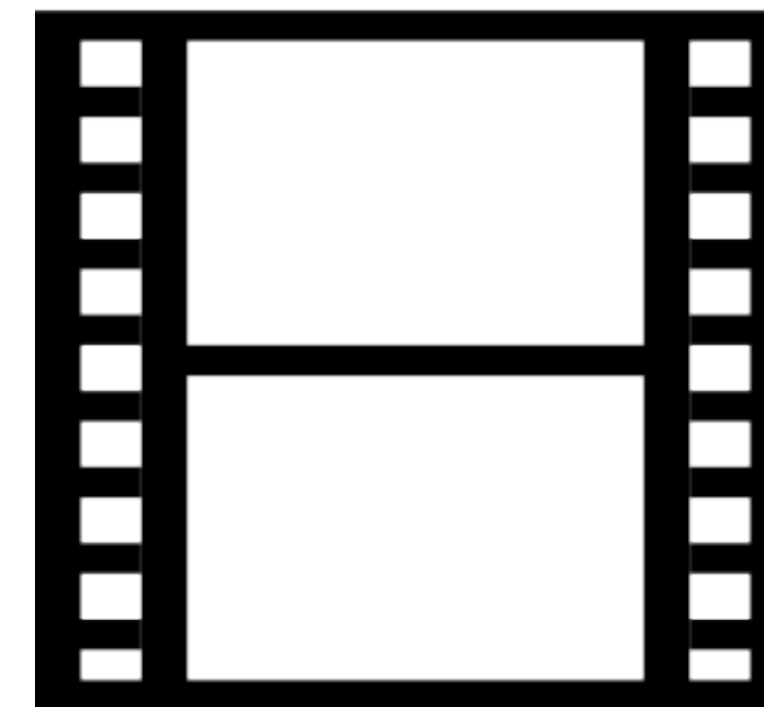
Video + brightness

Enable recording in Advanced settings

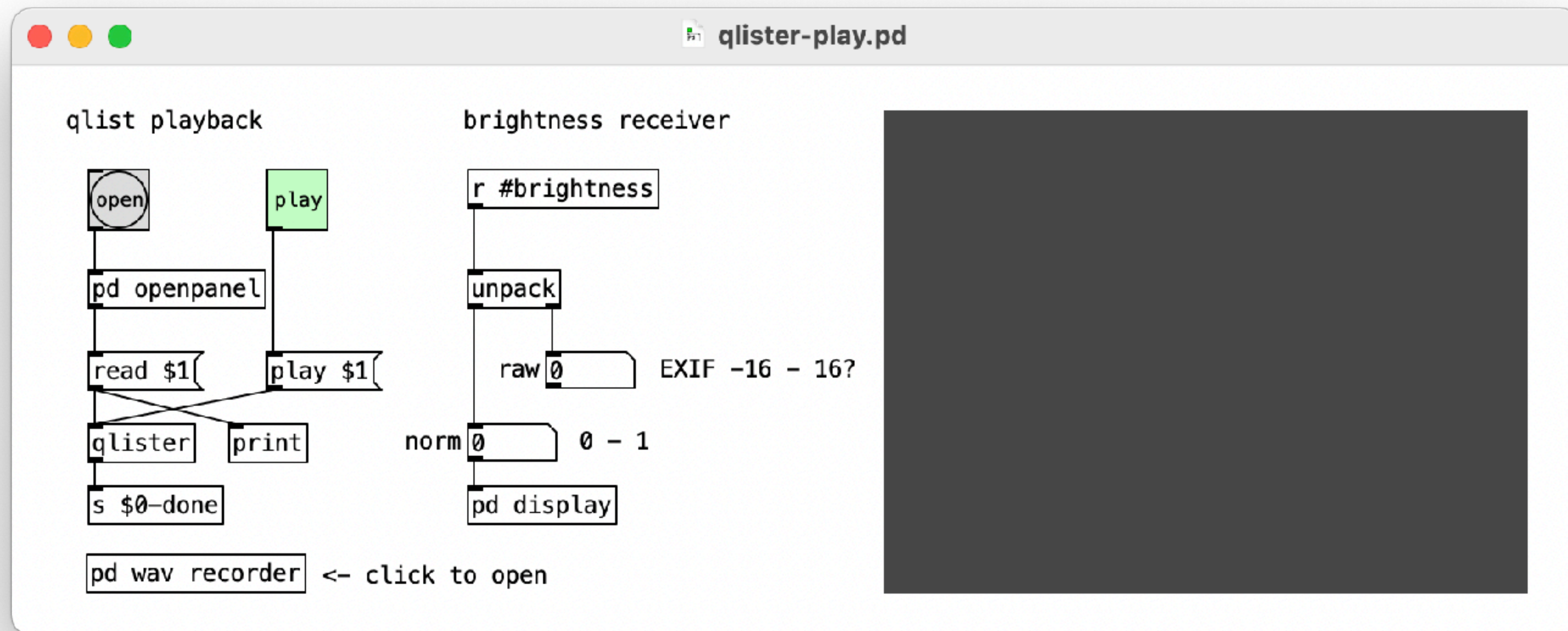
Records timestamped files to ShadowPlay Documents folder:

- H264 mp4 video
- Pure Data qlist text file

Vertical video, oh my! Faux pas?



Recording Playback



Play back qlist using qlister-play.pd patch included with composer pack

Open Source GitHub Repository



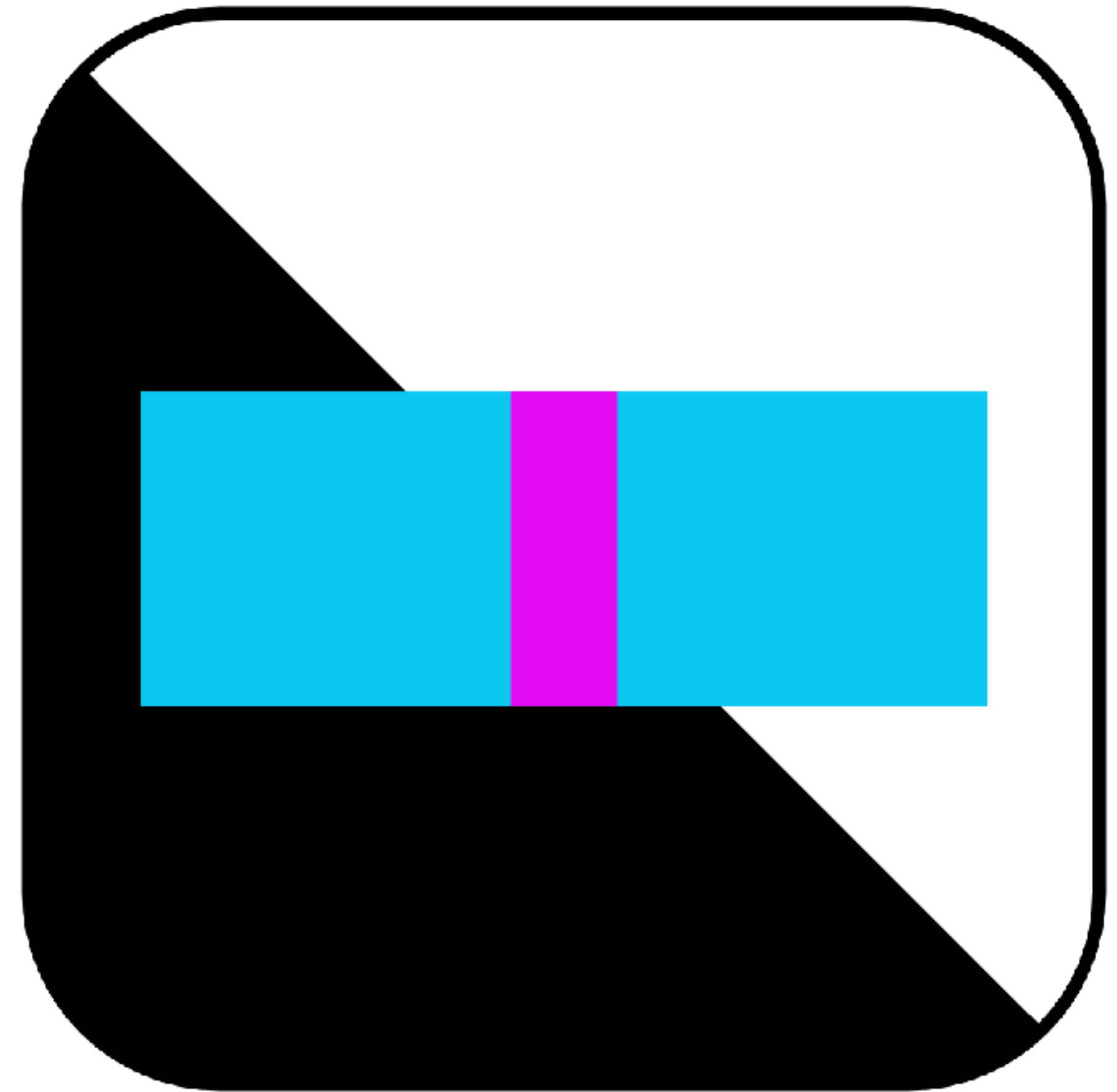
<https://github.com/danomatika/ShadowPlay>

iOS App Store

Free Download



Search for "ShadowPlay"



Demo

Season of Media Arts 2021

Seasons of Media Arts 2021

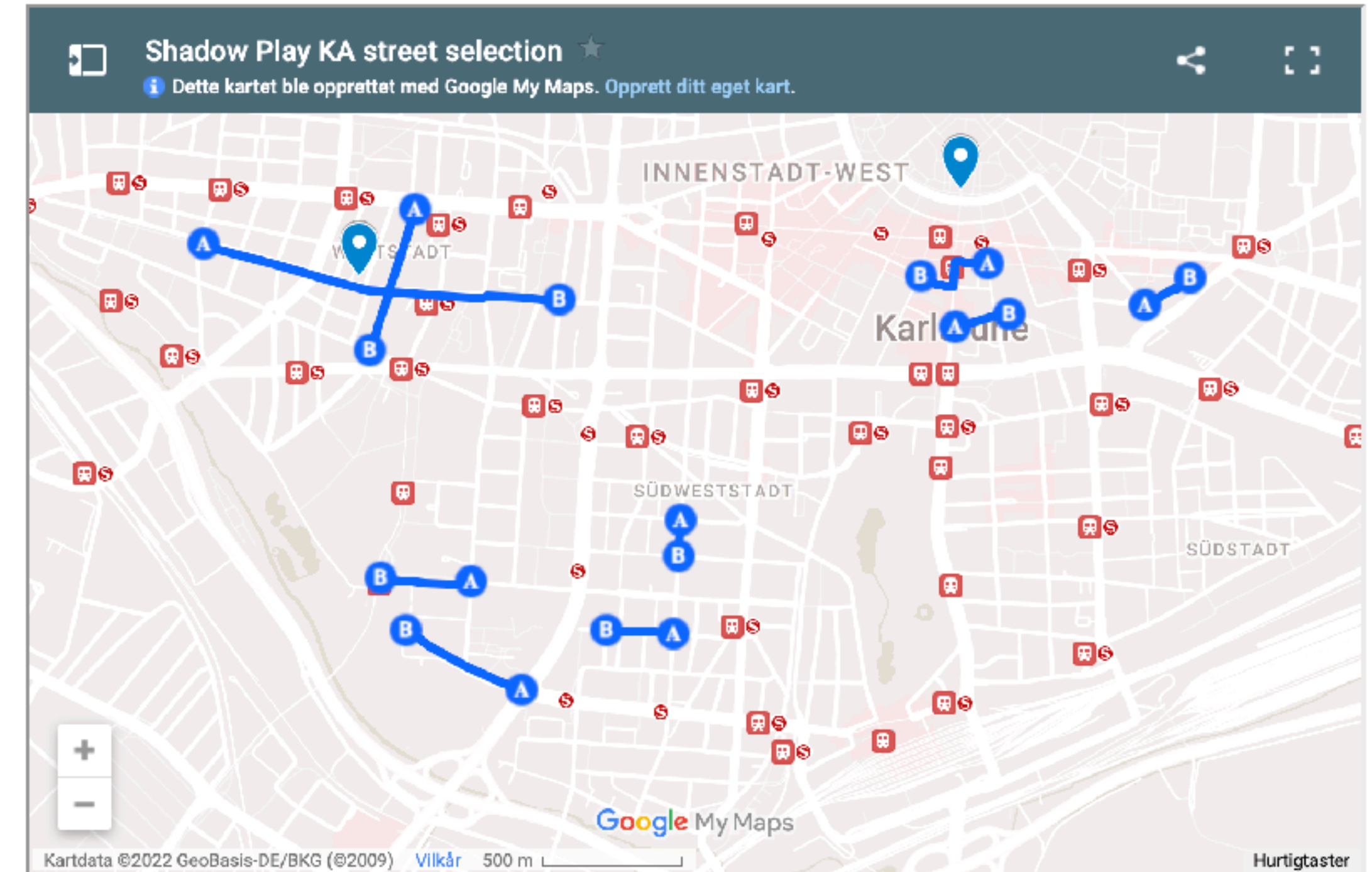
Sep-Oct 2021, Karlsruhe DE

Presentation formats:

- self-guided
- guided bike tours by ZKM staff

Map with marked streets & signs with project info

QR code to project page & download link



Seasons of Media Arts 2021

Sep-Oct 2021, Karlsruhe DE

- App Store metrics: 100+ installs...
- Are apps the right format?
- Guide the experience vs. giving people the tools?
- Lazy artist...
- Are visitor numbers a good metric?





KARLSRUHE
UNESCO CITY OF MEDIA ARTS

Supported through the UNESCO City of Media Arts Karlsruhe as well as through the City of Karlsruhe.
Unterstützt durch die UNESCO City of Media Arts Karlsruhe sowie durch die Stadt Karlsruhe.

ShadowPlay

Thanks!

Project info: <http://danomatika.com/projects/shadowplay>

App info: <http://danomatika.com/code/shadowplay>

GitHub repo: <https://github.com/danomatika/ShadowPlay>

Dan Wilcox 2022
danomatika.com

