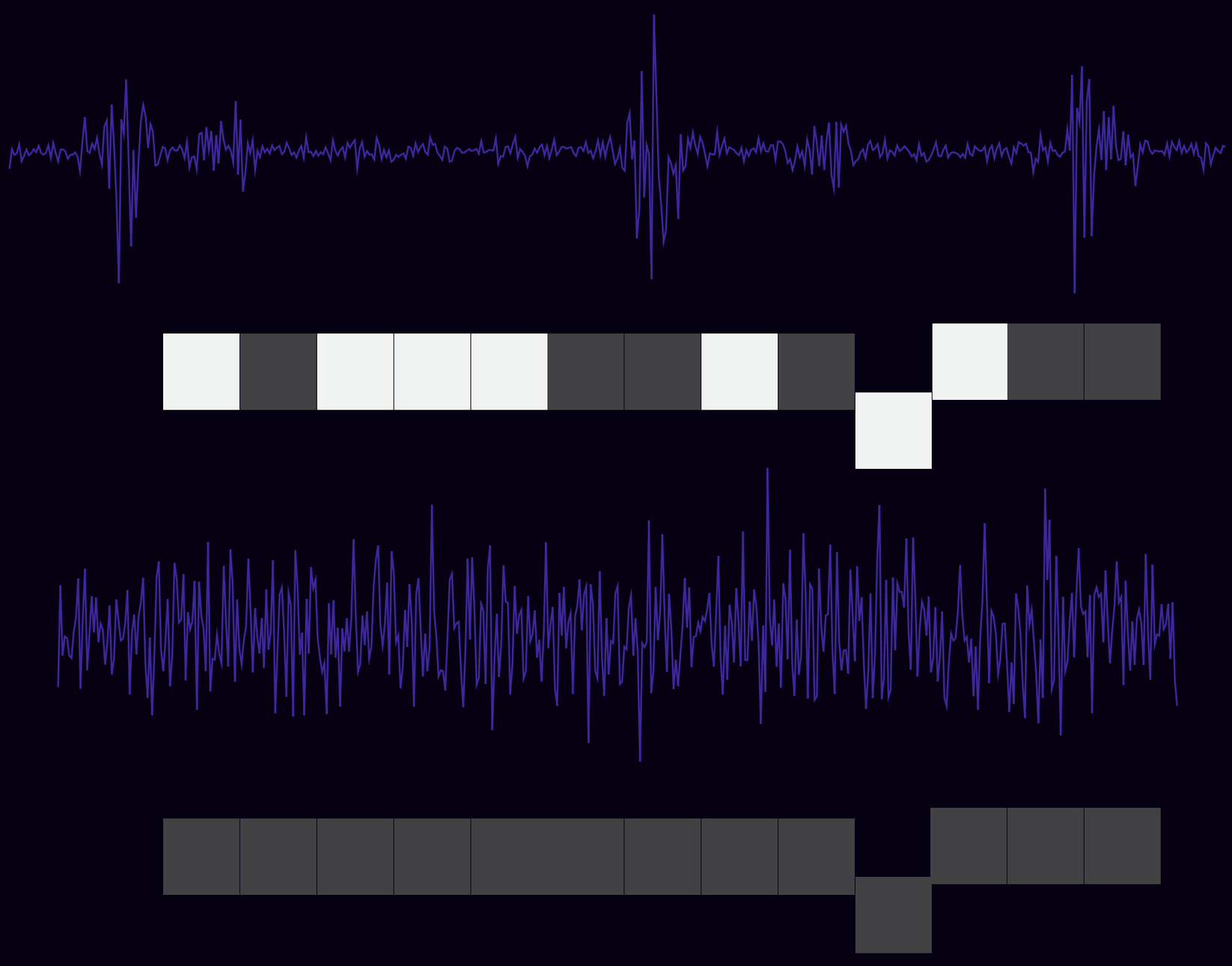
AKANGWAN

SOUNDSCAPE PAVILION

“AKANGWAN” is a soundscape pavilion that invites users to experience the harmony and layered memories of sound within the Mahanak area. The pavilion captures the essence of place through an immersive auditory journey—where familiar sounds may evoke a sense of nostalgia. These might include the laughter of children at a playground, the buzz of a sawmill, or the vibrant calls of vendors echoing through Bobae Market.

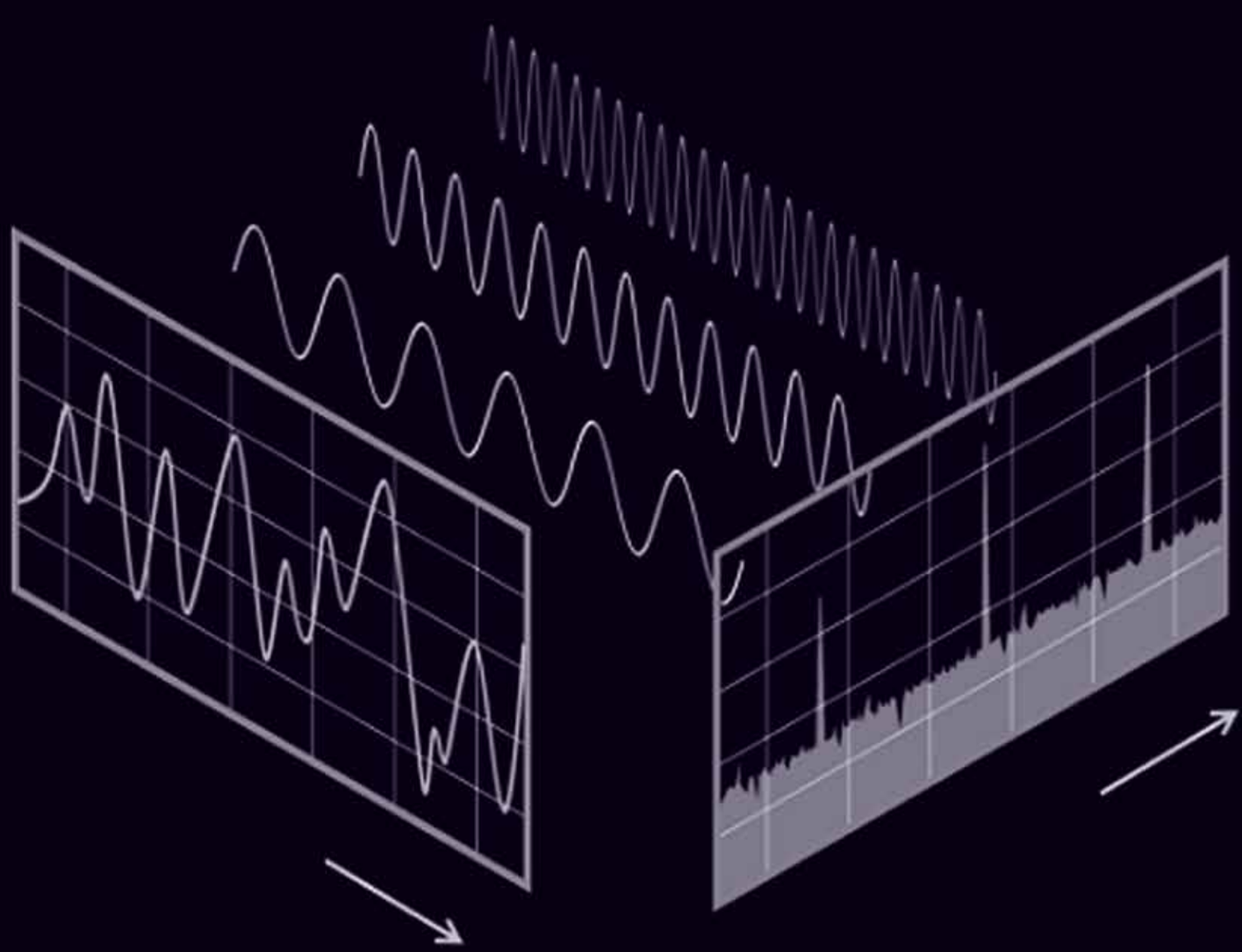
Rhythm Of Sound...<



Every sound has a unique signature, defined by tone, pitch, tempo, and rhythm. To explore this, I divided sound into 16 segments, each representing a note in the rhythm. This analysis inspired me to apply the concept to architecture, using the idea of rhythm to shape the relationship between positive and negative space.

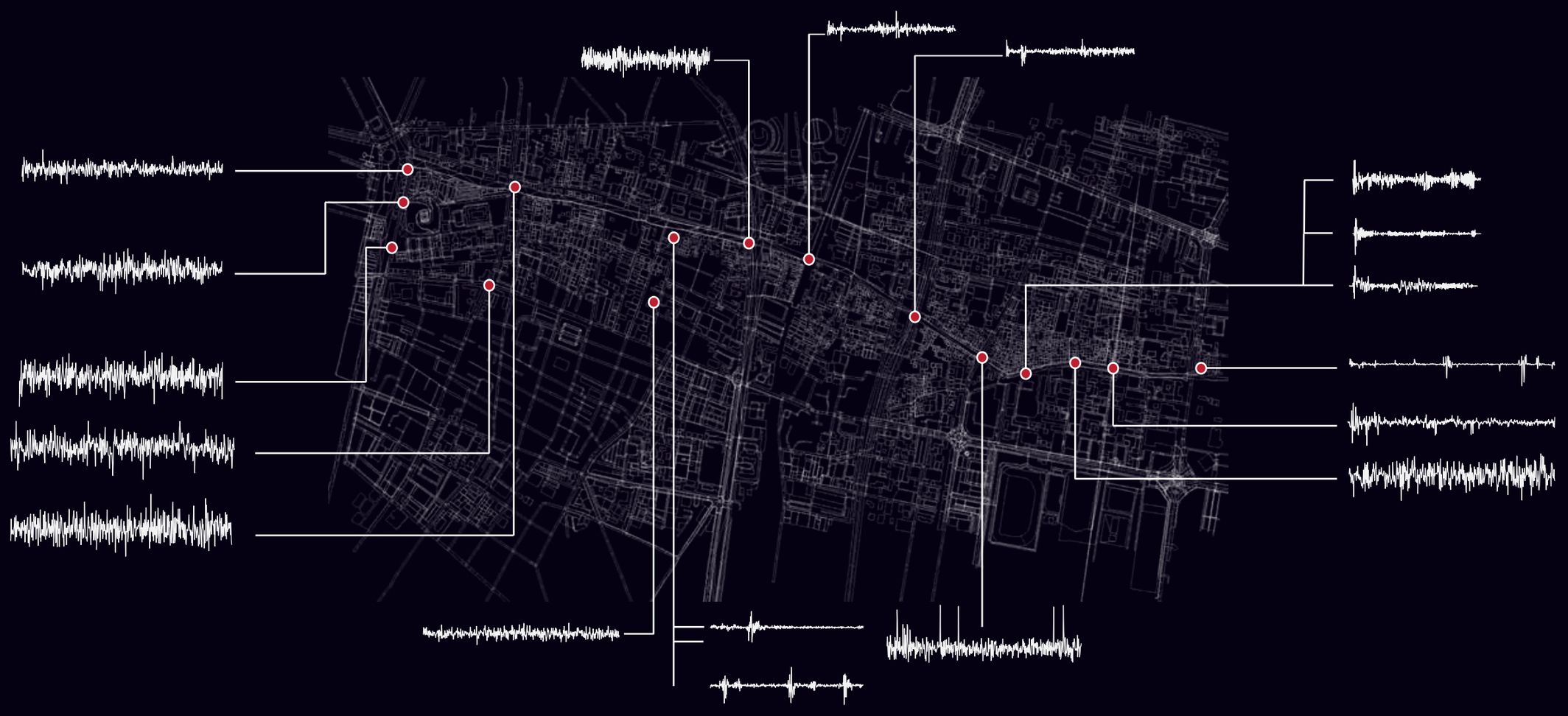
This experiment works best while listening to the recording, as noise, sound quality, and lost details can affect accuracy when converting WAV files into sound waves.

Fast Fourier Transform...<



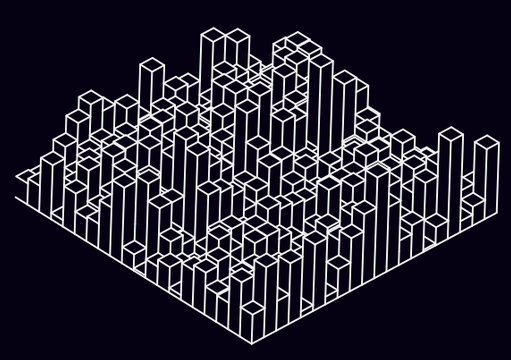
Sound recording files are knwo as Fast Fourier Transform (FFT), it is a mathematical algorithm that converts a sound recording from the time domain into the frequency domain, revealing the amplitude of different frequency components over time. This transformation allows sound to be visualized as a spectrum of frequencies, which can then be mapped into geometric parameters such as height, width, or curvature.

Sound Mapping...<

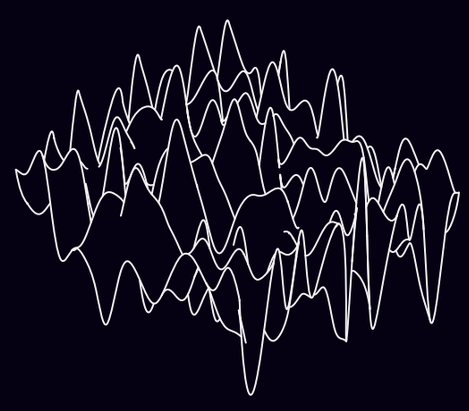


Sound Converting...<

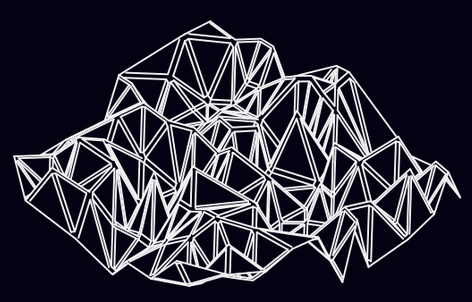
- Sound wave from .WAV file.



- Convert Sound waves
  into bit frequency.



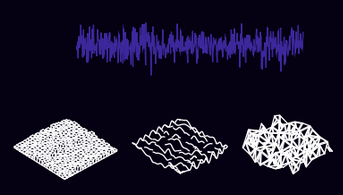
- Convert Sound waves
  into 3D Sine Surface.



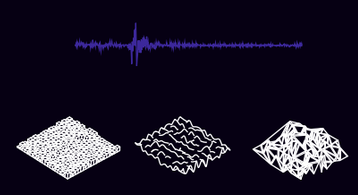
- Convert Sound waves
  into Triangular Surface.

Sound Catalog...<

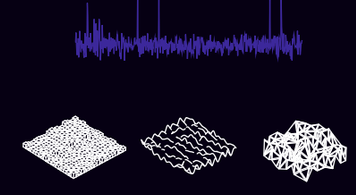
Water Drain



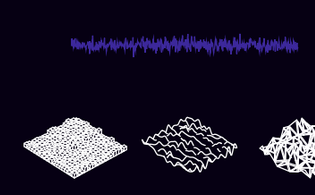
Dog (Barking)



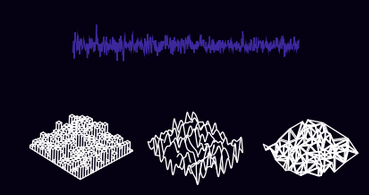
Wild Birds



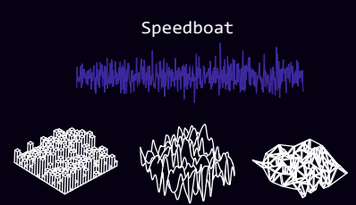
Ambient (Quite)



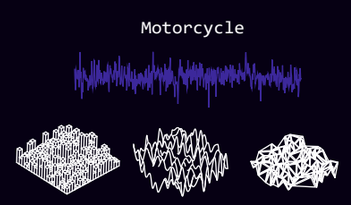
Ambient (Noisy)



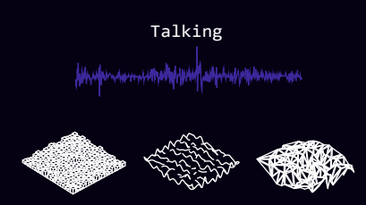
Speedboat



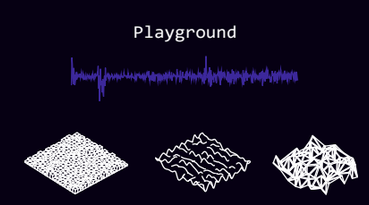
Motorcycle



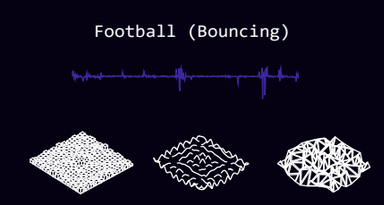
Talking



Playground



Football (Bouncing)



Islamic Praying #3

Islamic Praying #2

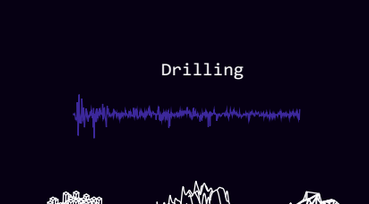
Islamic Praying #1

Woodsander

Sawmill

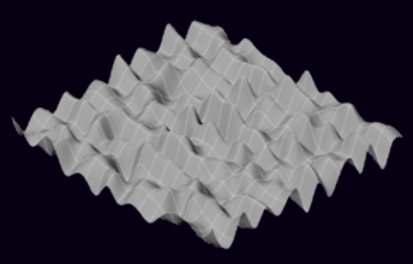
Poaper Taping

Drilling

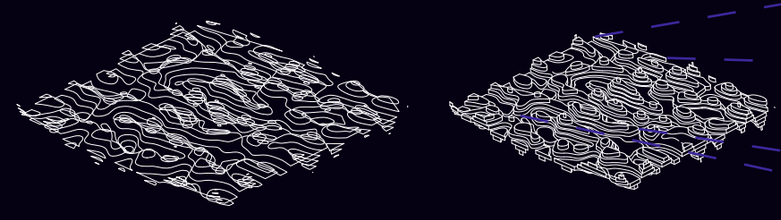


Chainsaw

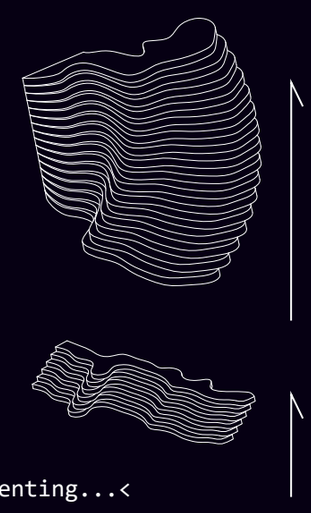
Form Evolution_Pattern...<



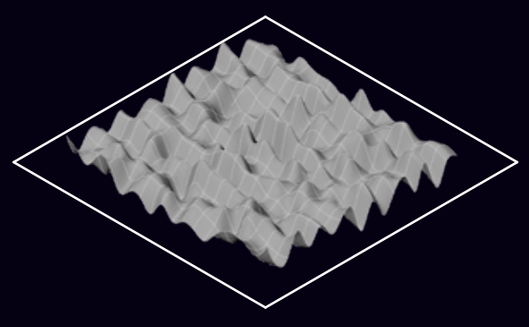
Sound Waves Surface...<



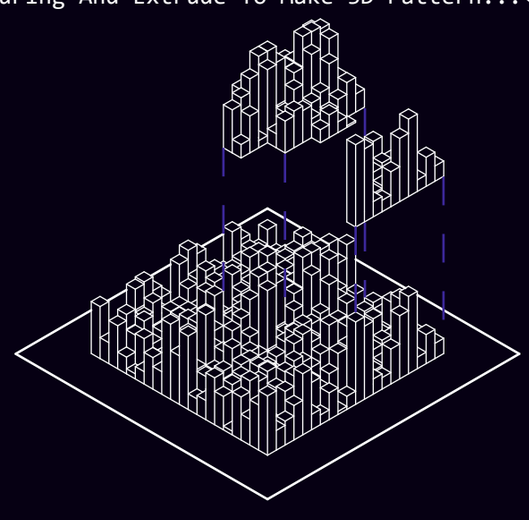
Contouring And Extrude To Make 3D Pattern...<



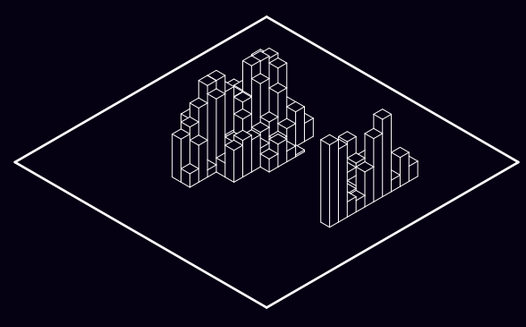
Stacking and Orienting...<



Sound Waves Surface...<

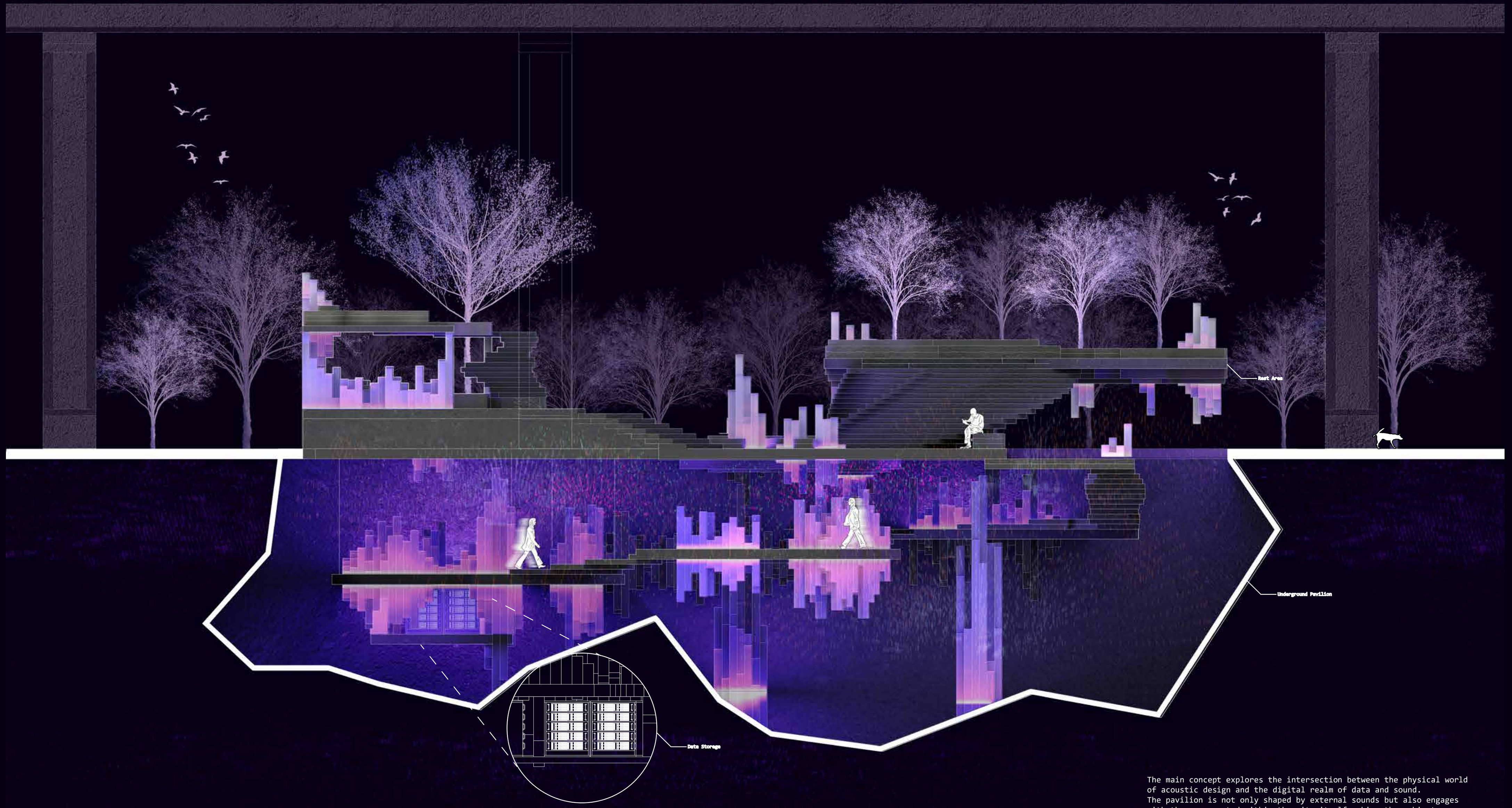


Converting Into Bitmap Data and Extract Out The Shape...<



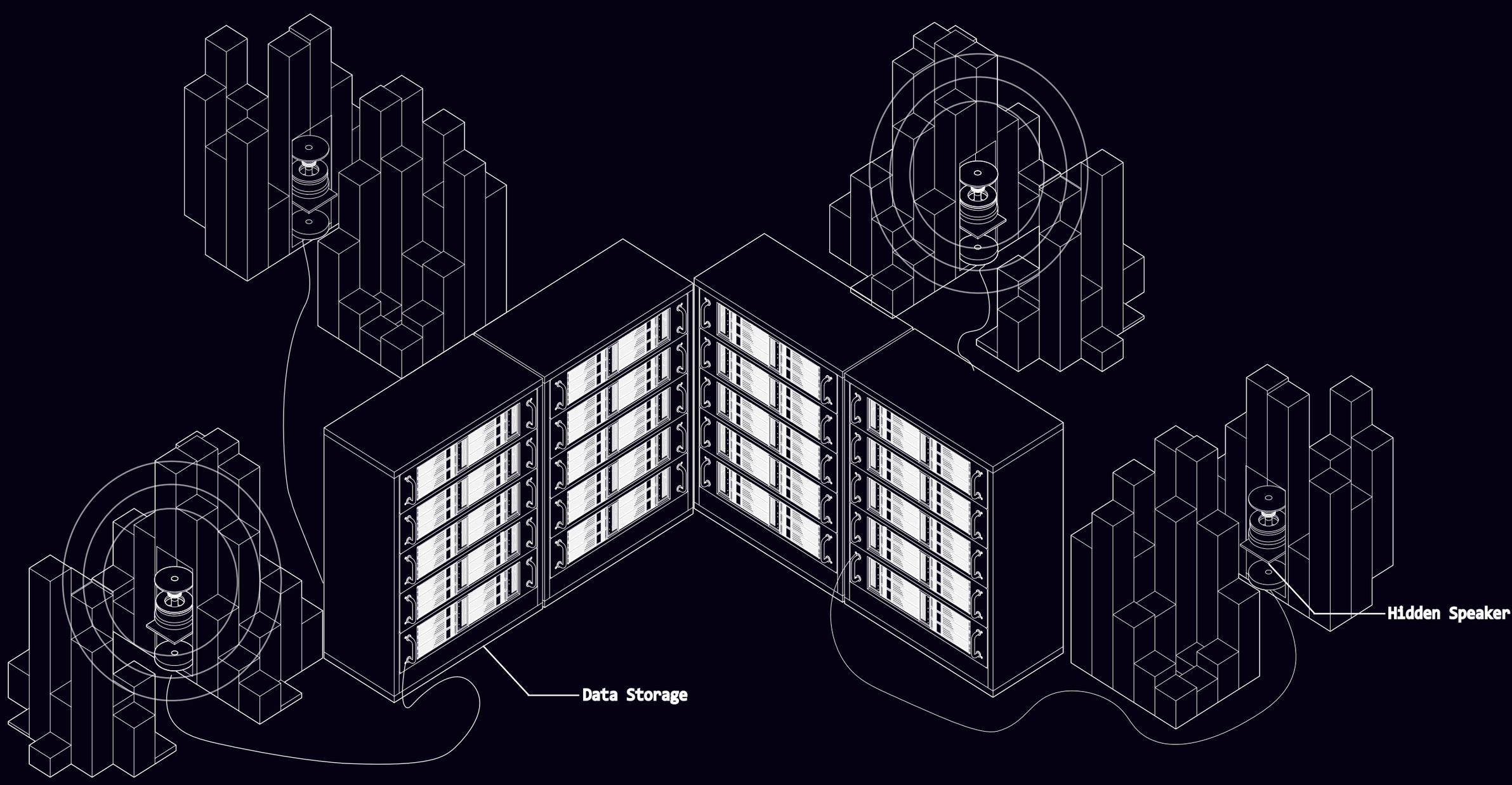
Layout and Arraying...<

Explode Diagram...<

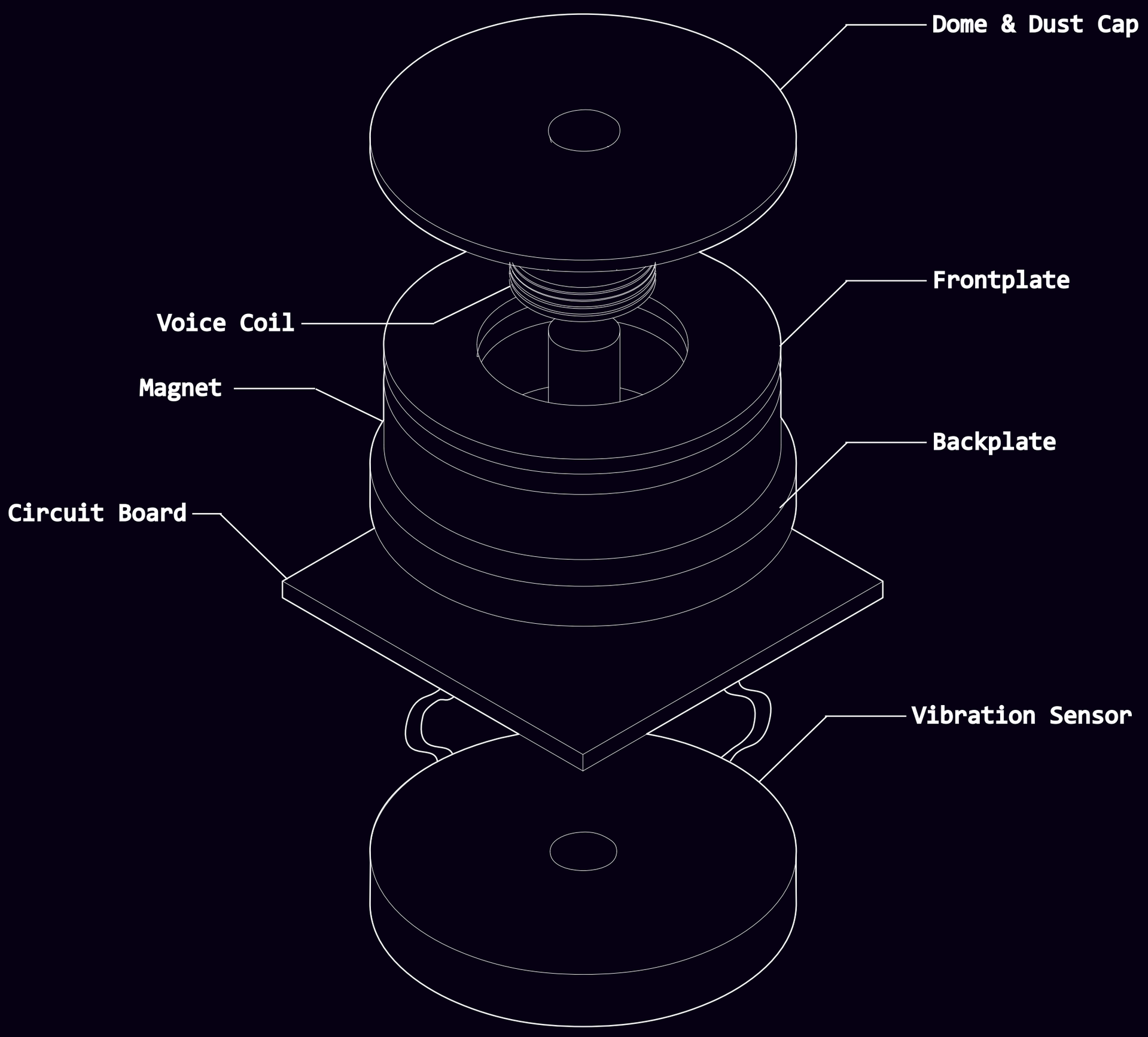


The main concept explores the intersection between the physical world
of acoustic design and the digital realm of data and sound.
The pavilion is not only shaped by external sounds but also engages
with those generated within the site itself—making the ambient,
incidental, and interactive sounds an integral part of the user experience.

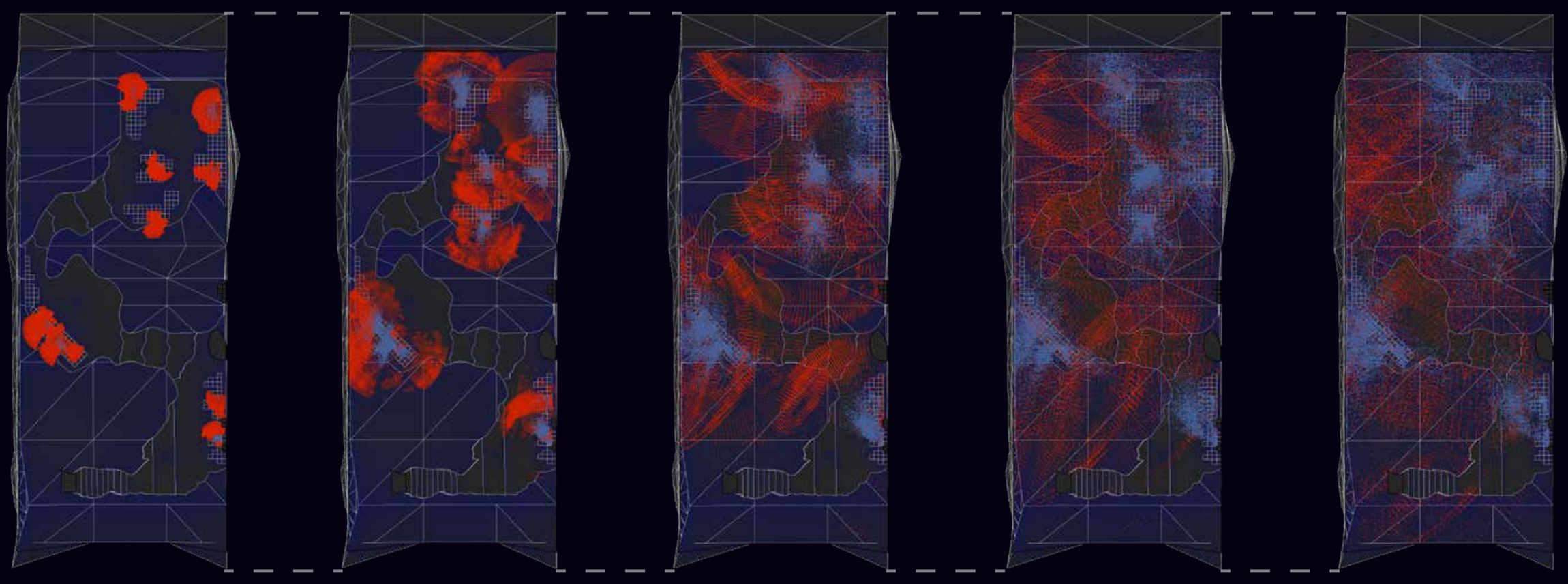
Installation Example...<



Installation Diagram...<



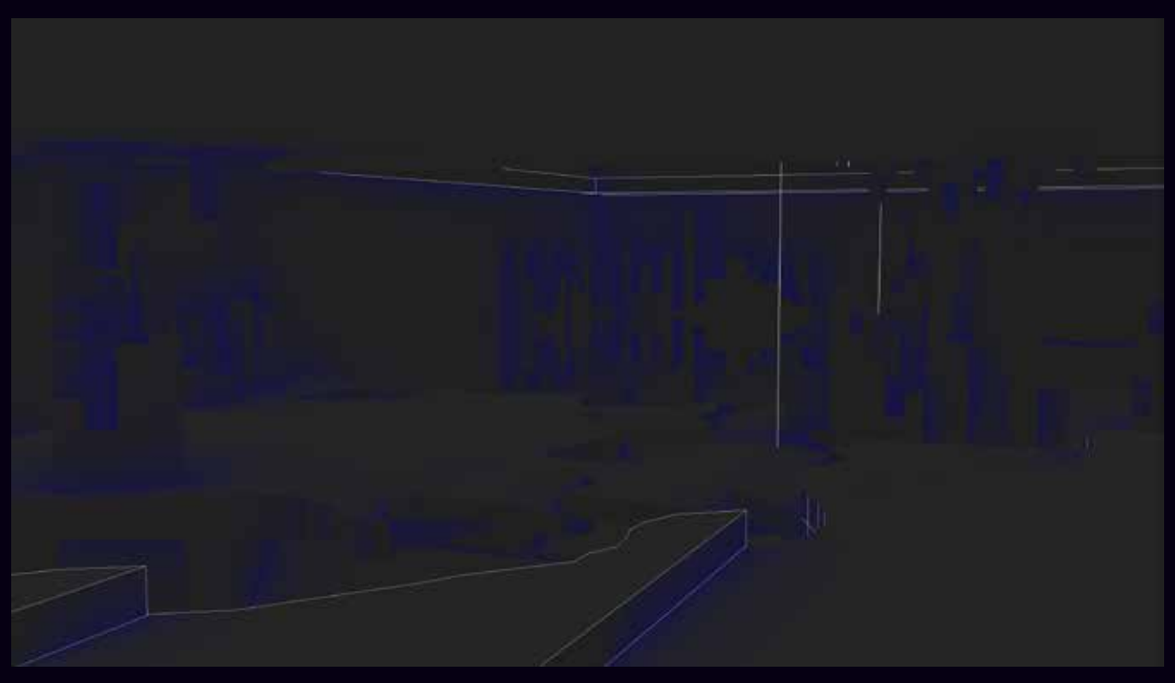
Sound Simulation...<



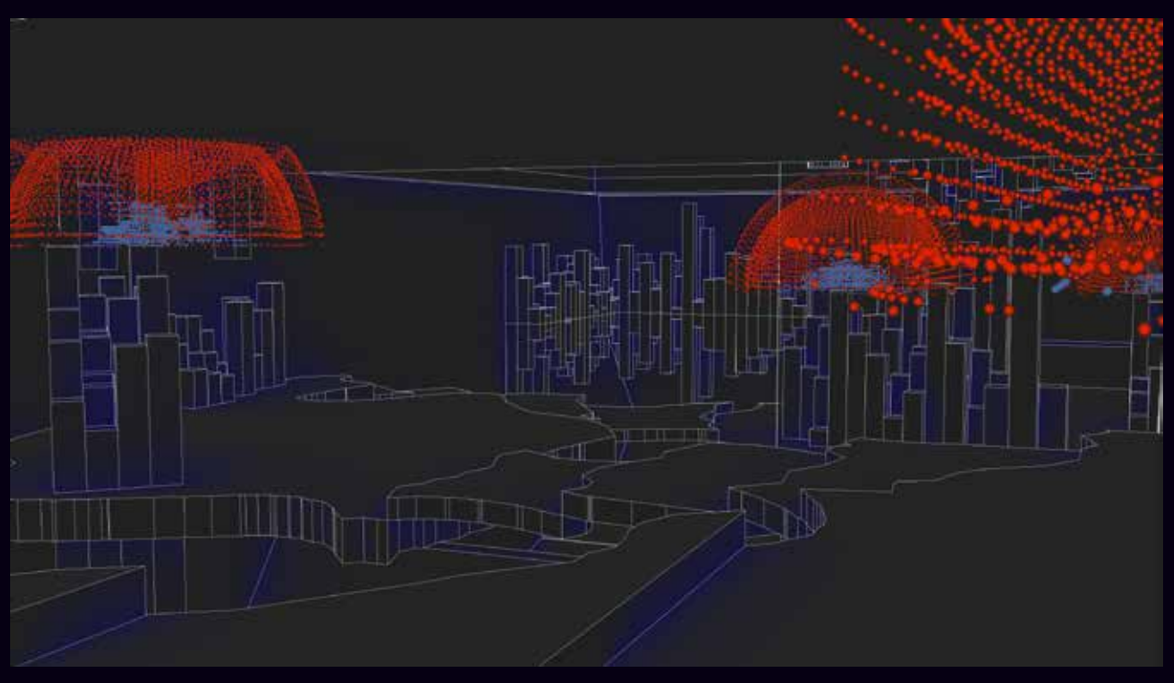
1 millisecond — 100 milliseconds

The pavilion’s form is carefully designed to enhance the way sound spreads and circulates within the space, creating a more immersive acoustic environment. Sound is played through custom acrylic soundbars installed throughout the interior, randomly transmitting harmonious tones and recorded sounds from local activities to evoke memory and atmosphere.

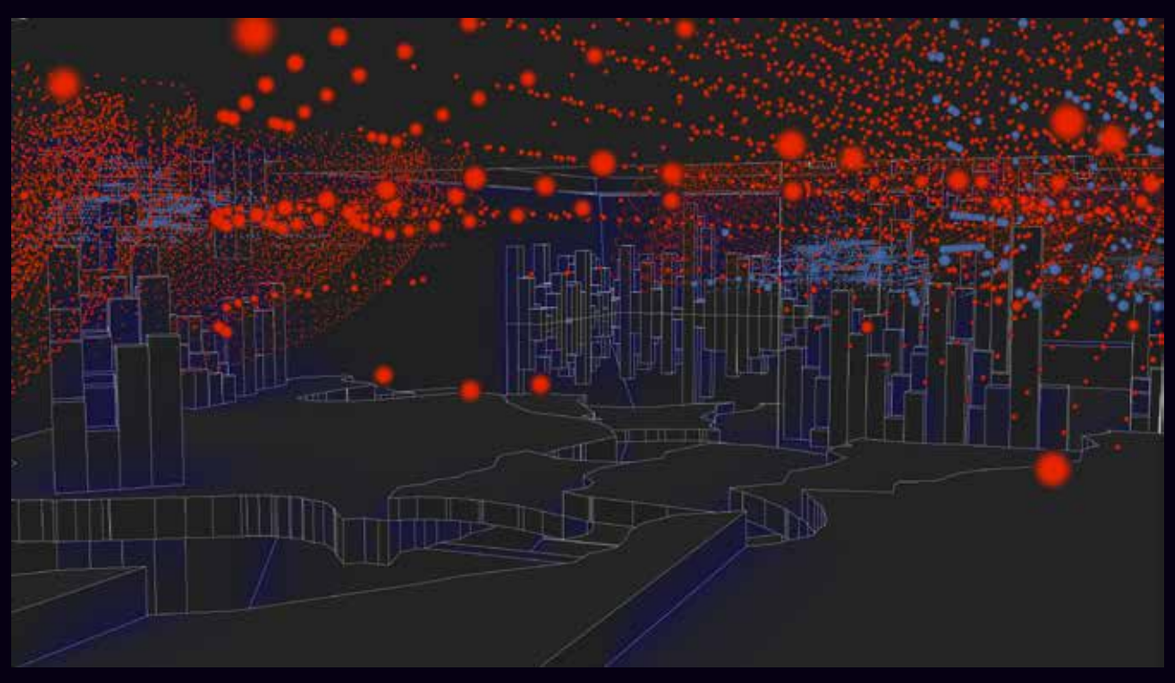
Additionally, ambient microphones are discreetly embedded within the site to continuously capture the surrounding soundscape. These recordings are archived and occasionally replayed, allowing past moments to resurface and be experienced again, blurring the boundary between memory and presence.



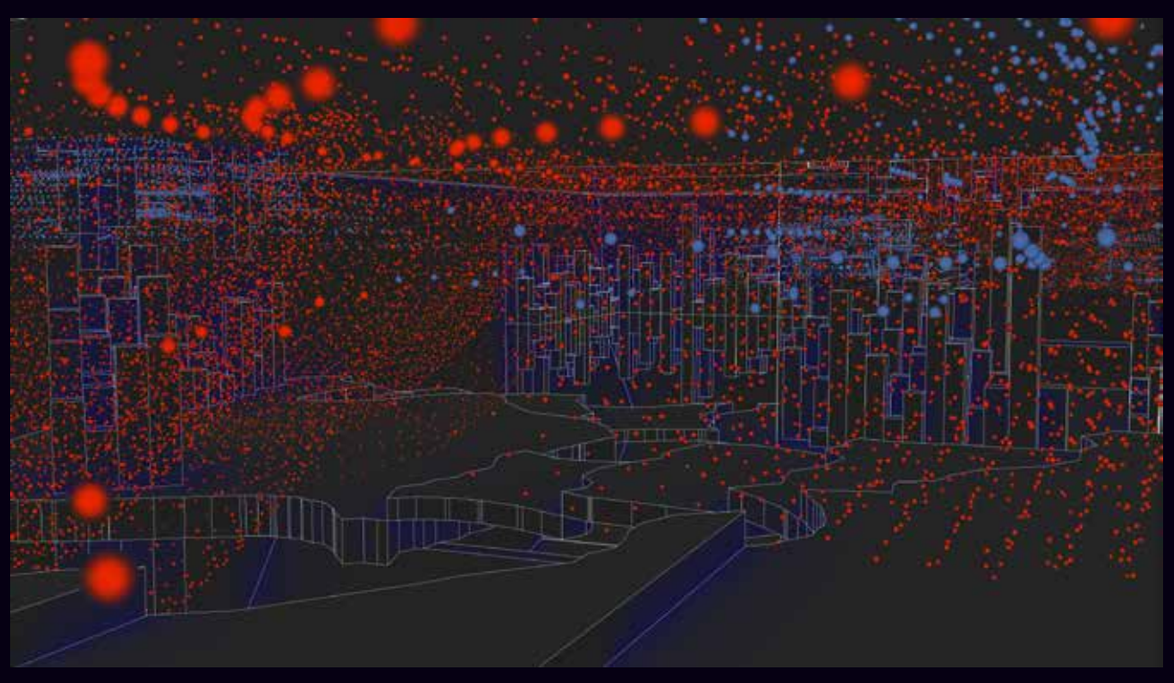
0 millisecond



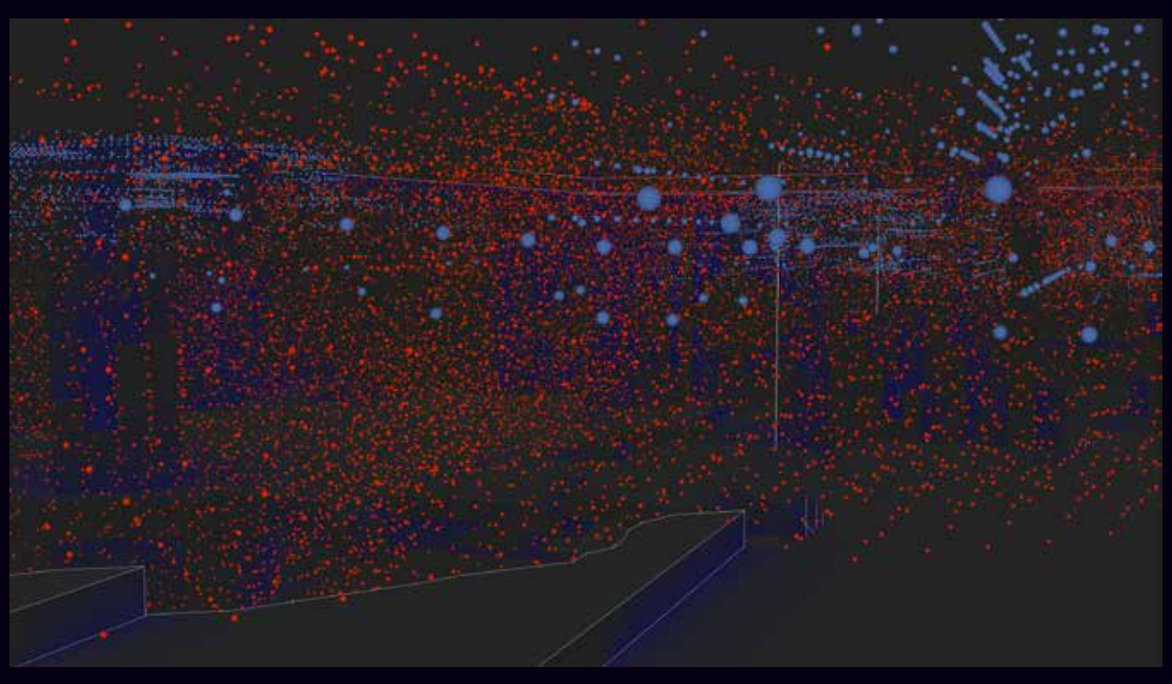
10 milliseconds



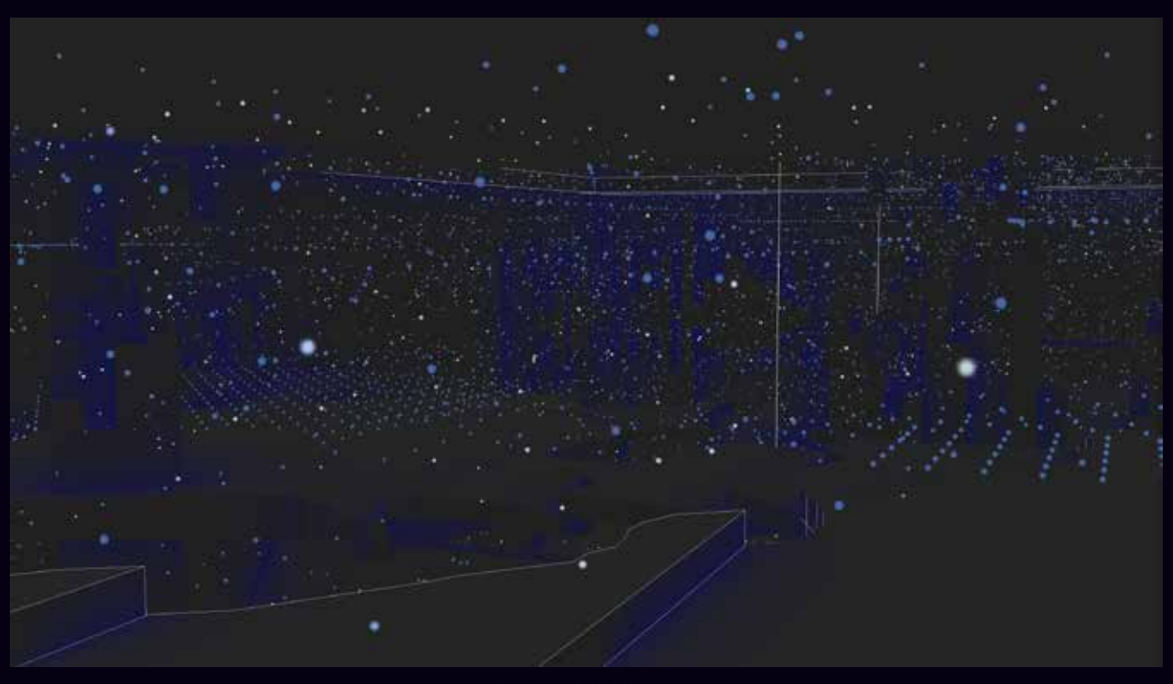
25 milliseconds



50 milliseconds



100 milliseconds

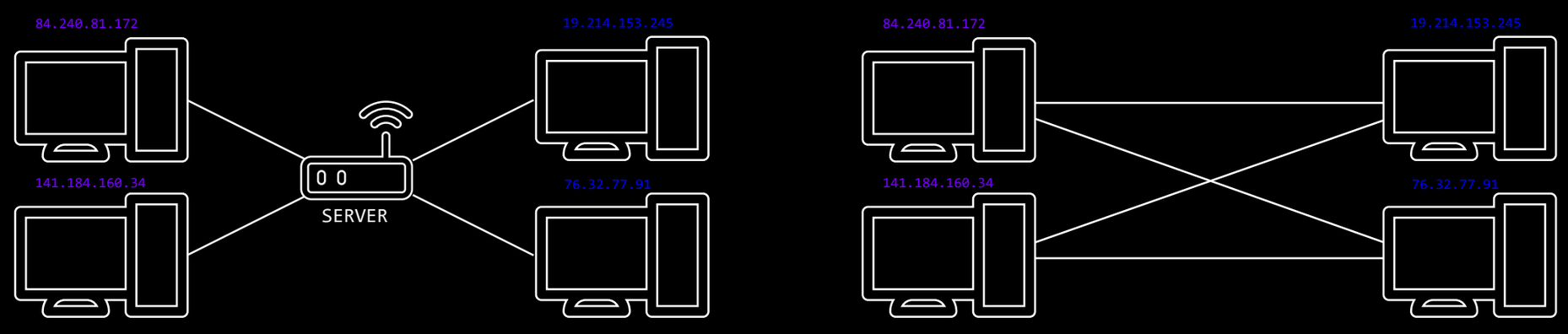


500 milliseconds

Case Study...<

THE_PIRATE_CINEMA

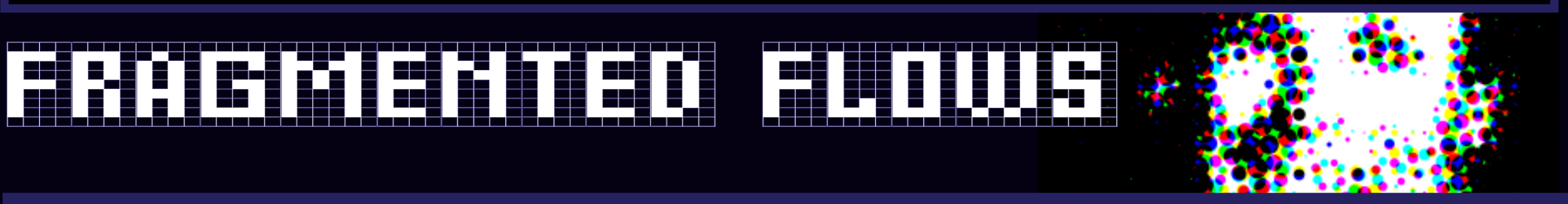
The Pirate Cinema is a provocative exploration of the invisible processes underlying digital file sharing. By exposing real-time BitTorrent activity, it transforms P2P data exchanges into a fragmented visual and artistic experience, making the invisible flows of digital information tangible.



Peer-to-Peer Sharing System

It highlights how our digital actions are always traceable, questioning the boundaries between privacy and exposure. It celebrates the global, decentralized nature of peer-to-peer sharing, while also reflecting on its chaotic and uncontrolled spread.

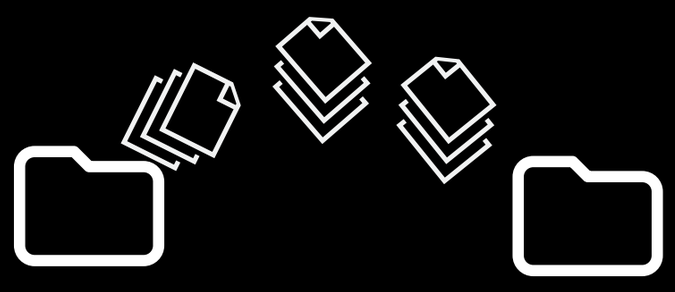
The installation maps the flow of data as a new kind of geography, visualizing the movement of digital culture in real-time. By turning raw data exchanges into a cinematic experience, the project critiques both the promise and the peril of the interconnected world. It forces viewers to confront their role inthese systems, whether as consumers, sharers, or monitors.



BITTORRENT

What is Bittorrent?

BitTorrent is a peer-to-peer (P2P) file-sharing protocol that allows users to distribute and download files efficiently over the internet. Instead of relying on a central server, BitTorrent enables users (peers) to share parts of a file with each other, making downloads faster and reducing strain on any single source.



How it work?

File Splitting: Large files are divided into small chunks.
Torrent File & Tracker: A small .torrent file contains metadata and helps users find peers.
Swarm System: Users download and upload chunks simultaneously.
Seeders & Leechers:
Seeders: Users who have the full file and continue sharing it.
Leechers: Users who are still downloading the file.
Decentralized Exchange: Peers communicate directly, reducing dependency on a single source.