



**PORTFOLIO DAN XU**

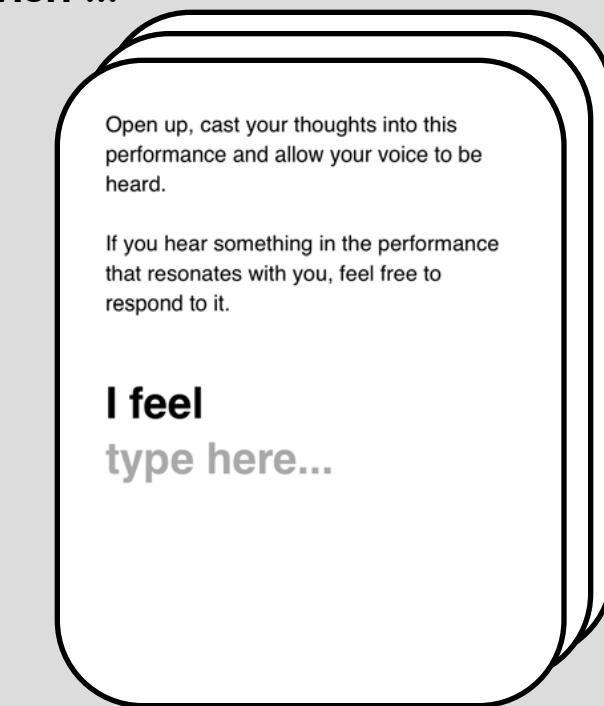
**I Wish You Knew That You Are Me** is a participatory performance connecting online and live audience members in the writing of a collaborative poem about the collective's dreams, memories, yearnings, untold stories, inhibited fantasies, and more.



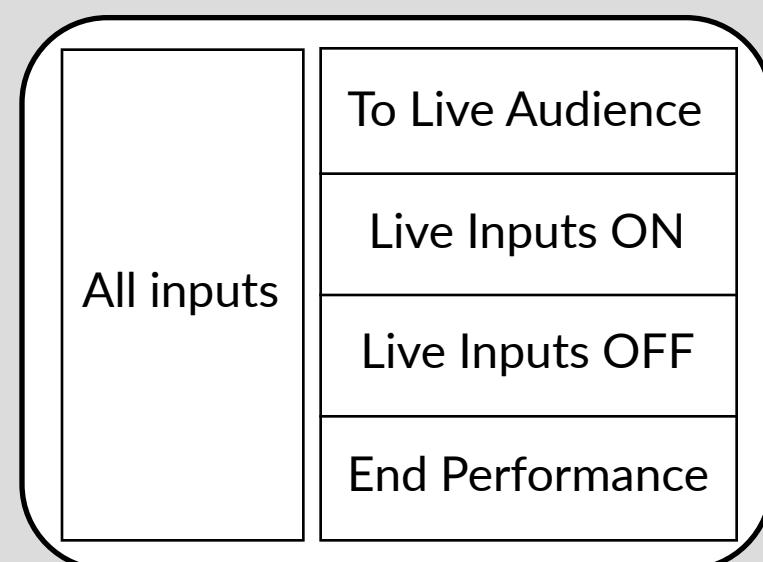
## Online Space

Online audience is instructed to share an intimate thought with a prompt like **I feel ... or I wish ...**

These inputs are send to a webpage only accessible to a performer



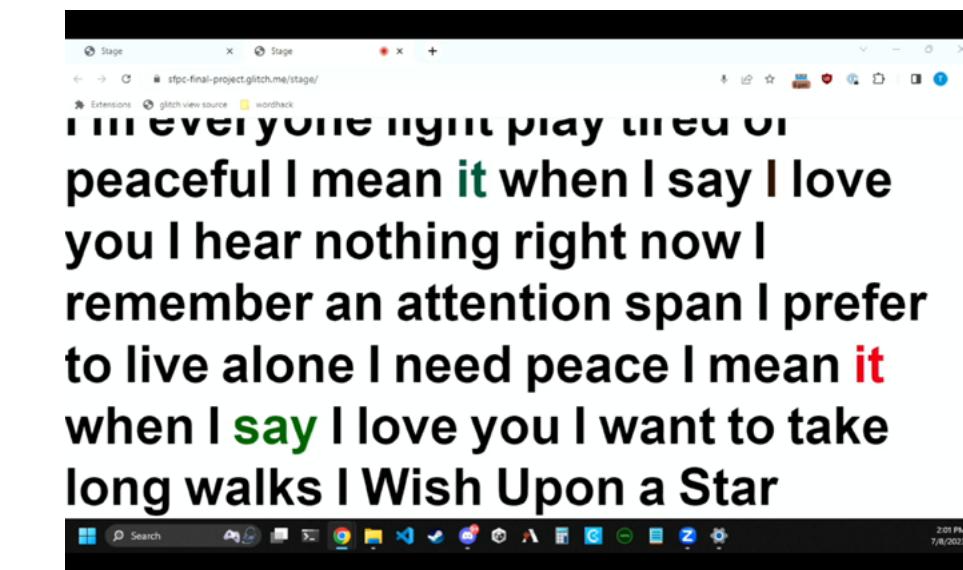
The performer can decide when to send an input to a live audience member, start and end the performance



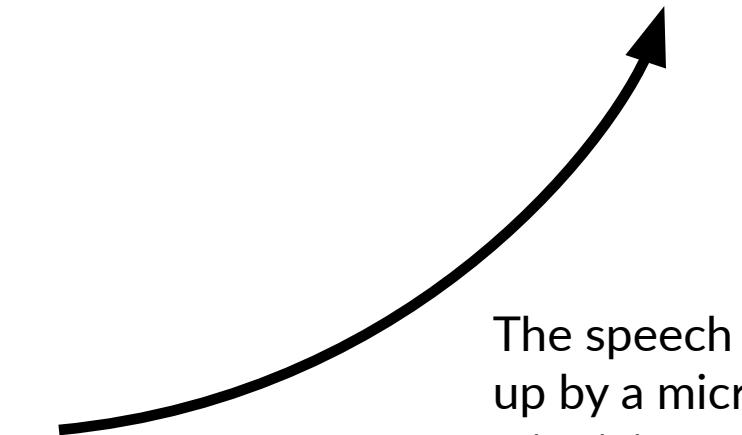
However, the selection of which audience member and which input is entirely random

Live audience receives the input and an instruction about how to read and perform it

## Performance Space

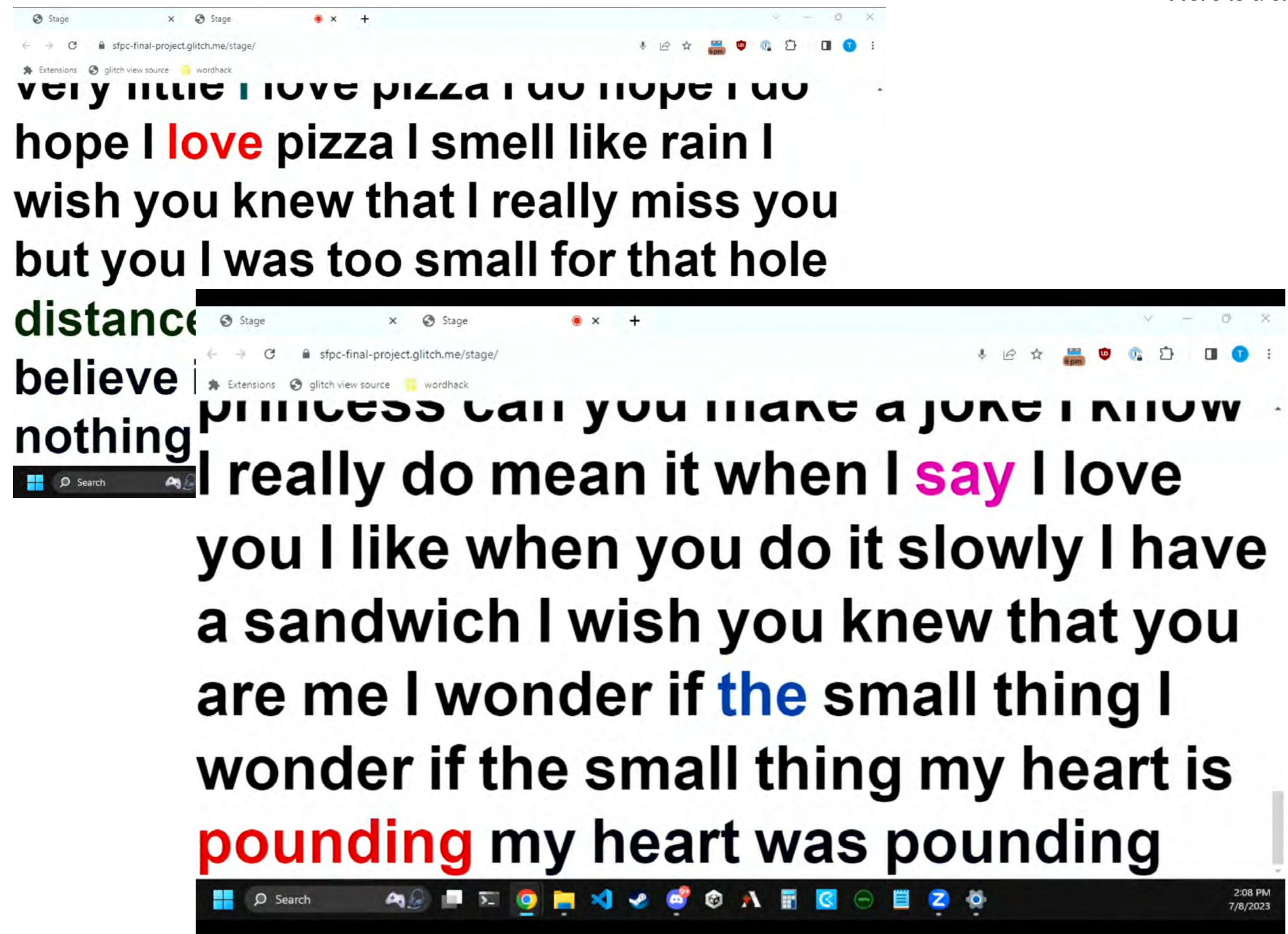


The text is displayed on a large projection screen.



The speech of the live audience is picked up by a microphone and processed with a text-to-speech algorithm

Activities in the performance space are streamed live to the online space



The title *I Wish You Knew That You Were Me* emerged from the first performance as a response from an online audience.

Here is a snapshot of the collective poem from the performance:

I'm everyone **light** play tired of peaceful **I mean** it when I say I love you I hear **nothing** right now I remember an attention span I prefer to live alone I need peace I mean it when I say **I love** you I want to take long walks I Wish Upon a Star I would like to have some peace I remember very little I love **pizza** I do hope I do hope I love pizza I smell like **rain** I wish you knew that I really **miss** you but you I was too small for that hole distance I can build my own dreams I believe in **humans** I remember **nothing** I hope that you don't run away I hope that you don't run away here clicks I prefer to I do want to be present but always feel distant I hate when you love me living room **Chromecast** I need a word on Minecraft play my boyfriend add water speed of a **boyfriend** I only **hope** we can stay like do stop it I can make a joke I wonder if I'll get to see I hate **liars** I hate liars I like whenever but everyone participates I saw Sunset I saw **sunset** I have dirty **shoes** I like when everyone participates I close my eyes I hate when the rain falls I would do anything for you I could be a wolf I know nothing about my deepest fear I love **gravity** it was great I like the princess can you make a joke I know I really do mean it when I say I **love** you I like when you do it slowly I have a **sandwich** I wish you knew that you are me I wonder if the small thing I wonder if the small thing my heart is **pounding** my heart was pounding I was going to be a contender I hope you **make** it out I have to say it's **over**

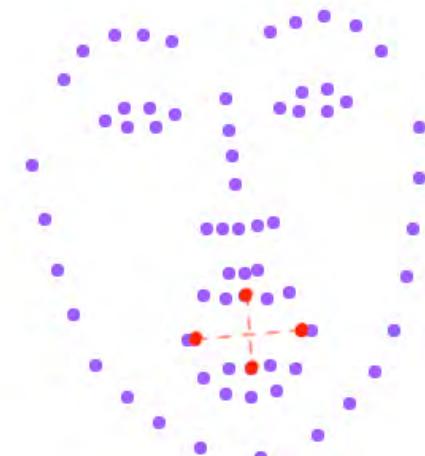
[Click here to watch the recording of the live performance.](#)

***I Wish You Knew That You Are Me*** was developed for the final showcase of Experiments in Networked Performance 2023 course from School for Poetic Computation.

Concept and development: Dan Xu, Jonathan Thaw  
Host and live audience management: Lauren Wedderburn

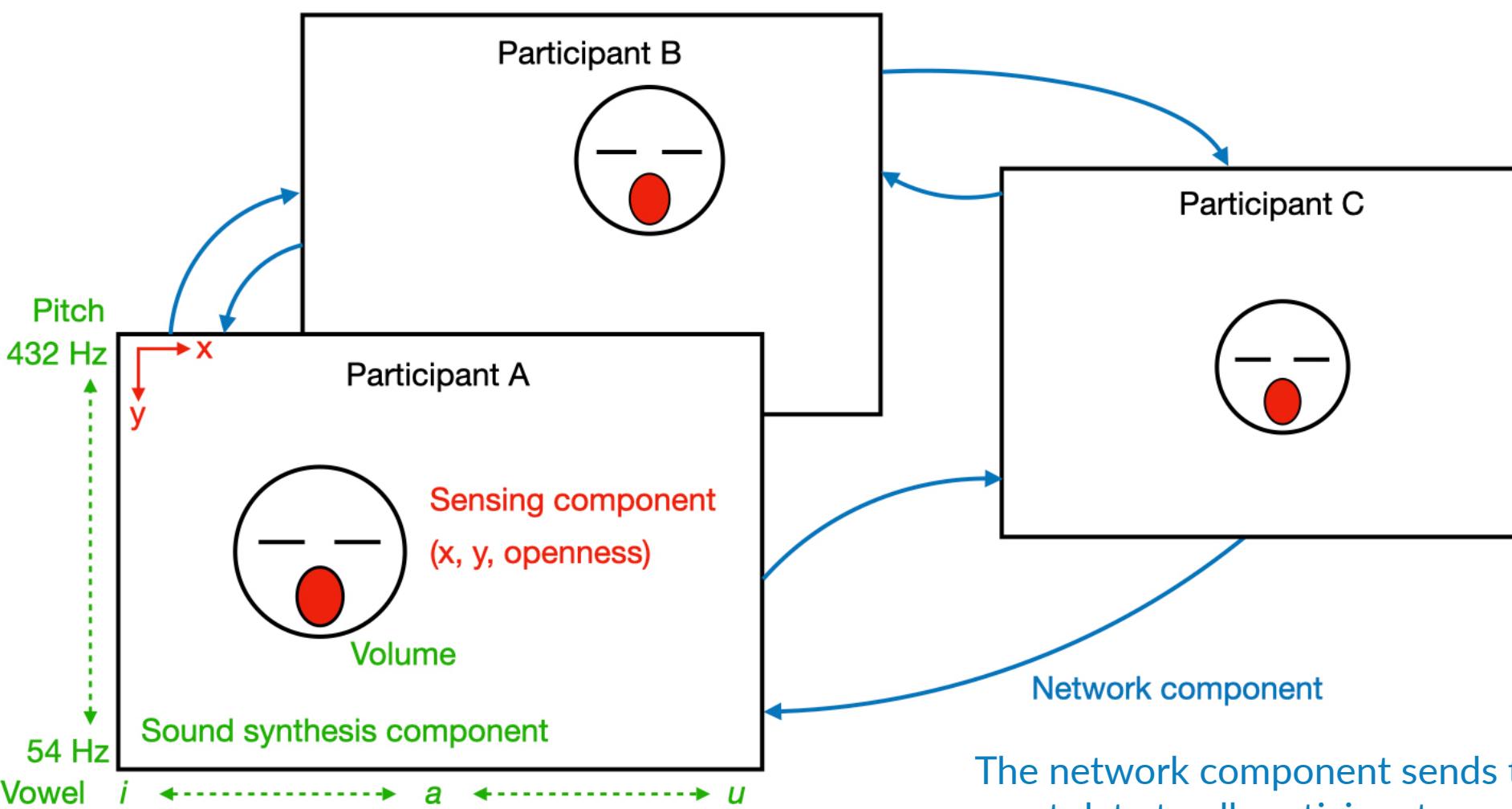


**Face Choir** is a prototype system for networked collective interaction that allows spatially distributed participants to generate vowel sounds using their facial movements, simulating a collective choir singing experience while being apart.



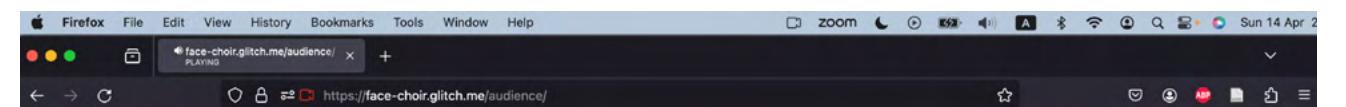
A face recognition system is used to track the participant's mouth movements.

The sensing component detects the participant's mouth position and openness.



The sound synthesis component uses the sensed data to control the pitch, types of vowels and loudness of each generated sound source.

The network component sends the mouth movement data to all participants on the same network that is used to generate different singing voices.



The participant only sees their own video image with a circle providing visual feedback about their mouth movements, the presence of other participants are only perceived via sounds.

Try it out here:  
<https://face-choir.glitch.me/audience/>

Face tracking: [face-api.js](#)  
Sound synthesis: [tone.js](#)  
Network: [socket.io](#)

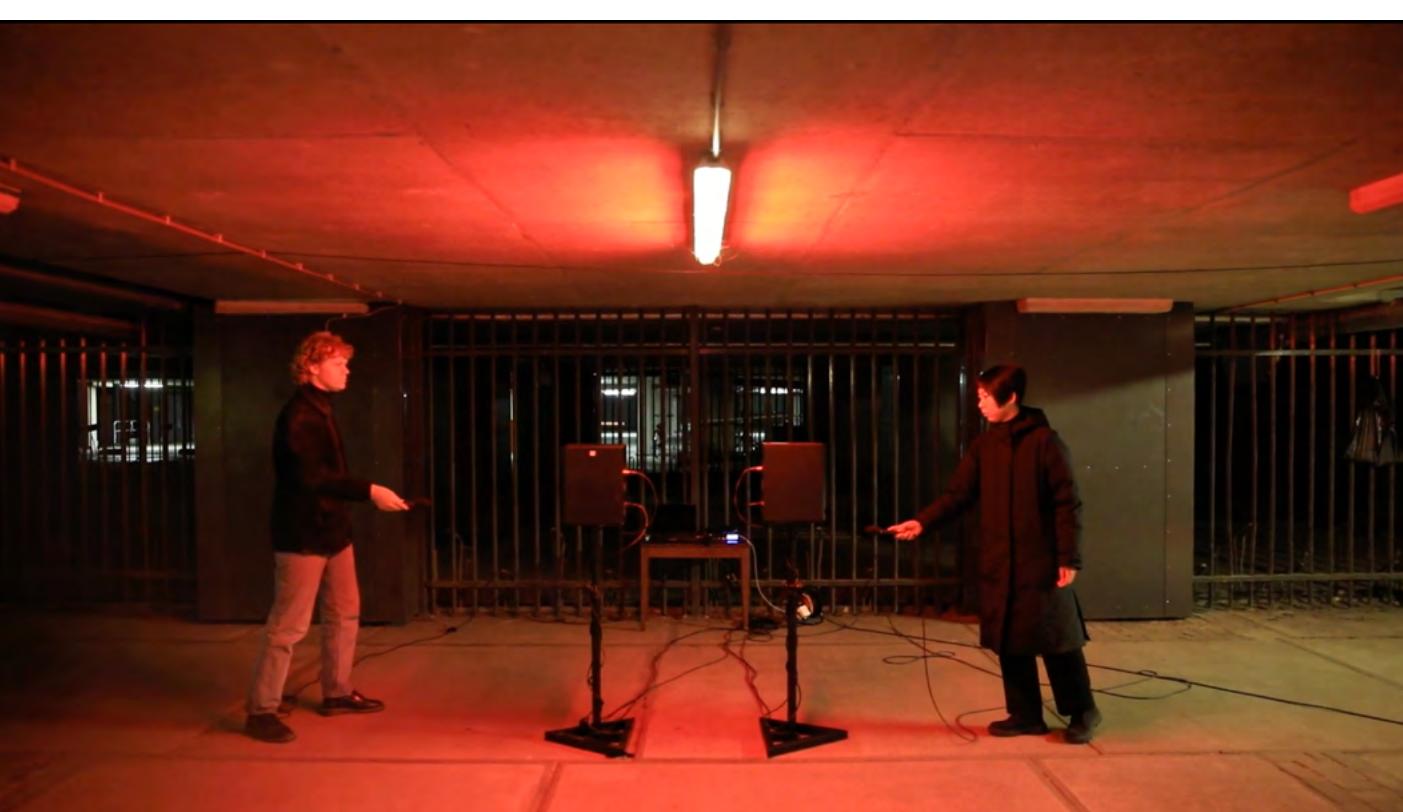


**SIFL (Socially Interactive Feedback Loop)**  
is a collaborative interactive installation based  
on the principle of audio feedback.

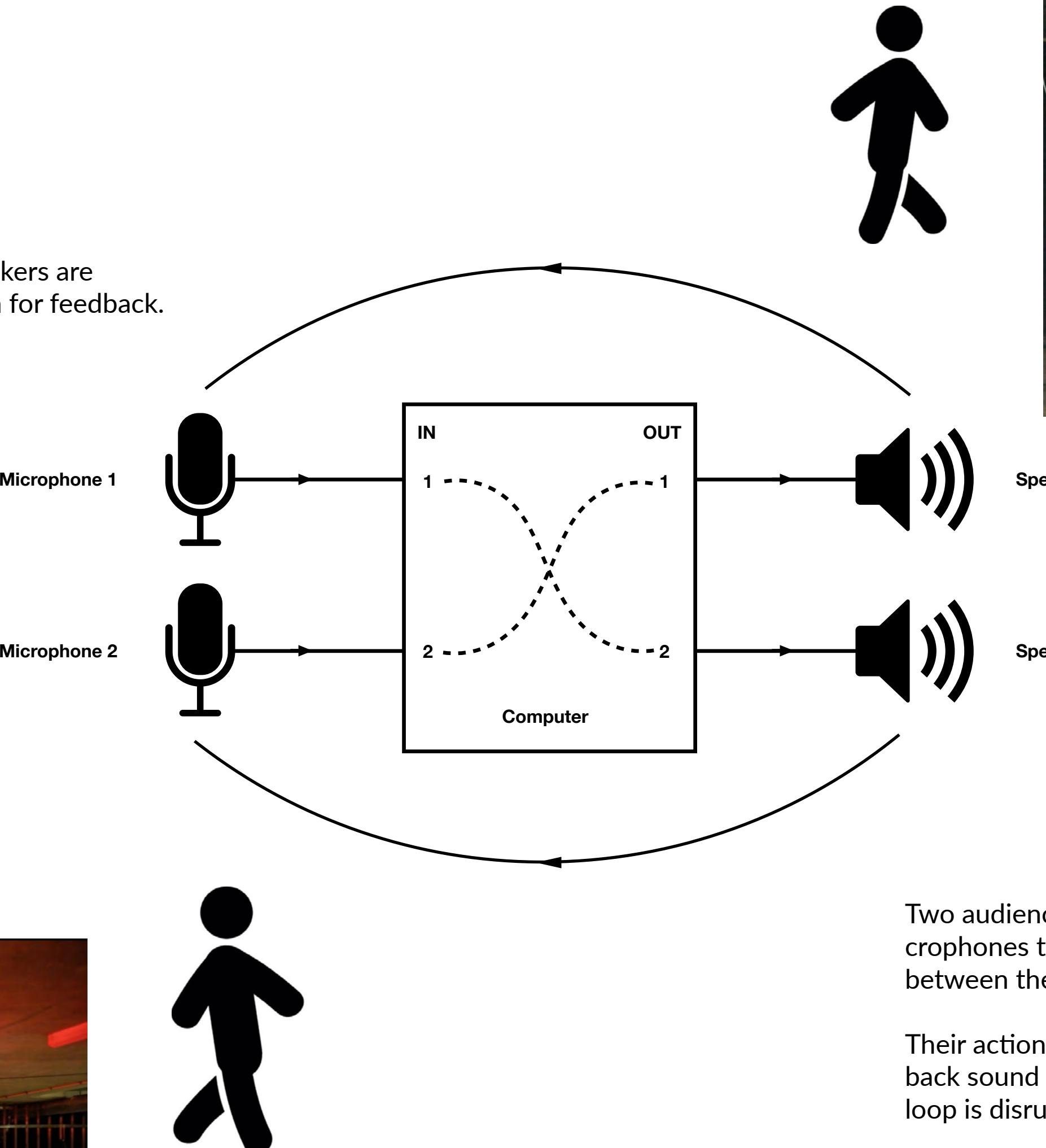
Two pairs of microphones and speakers are cross-connected to create a system for feedback.



[Audience improvise with SIFL.](#)



[Here is a snippet of us performing SIFL at the Elektron festival in the Hague.](#)



[This is how kids react to SIFL.](#)

Two audience members are invited to play with the microphones to influence and disrupt the direct connections between the microphones and speakers.

Their actions become interdependent through the feedback sound and if one person covers a microphone, the loop is disrupted and the feedback halts.

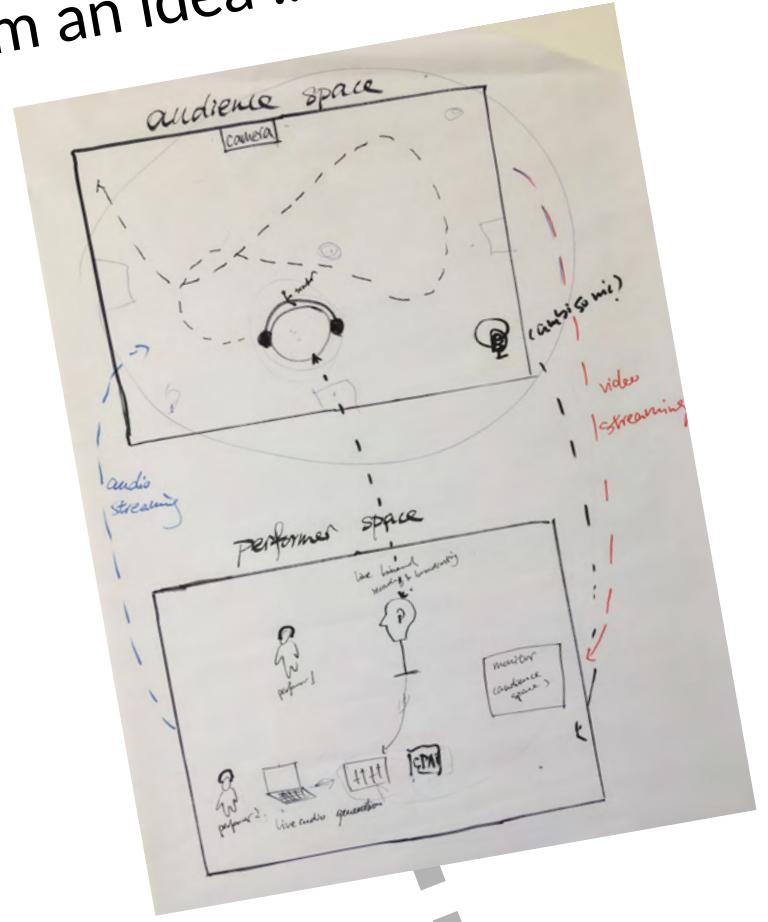
**SIFL** was created with Bram van Klink during the Recoding Workshop by Edwin van der Heide, with supports from Creative Coding Utrecht.



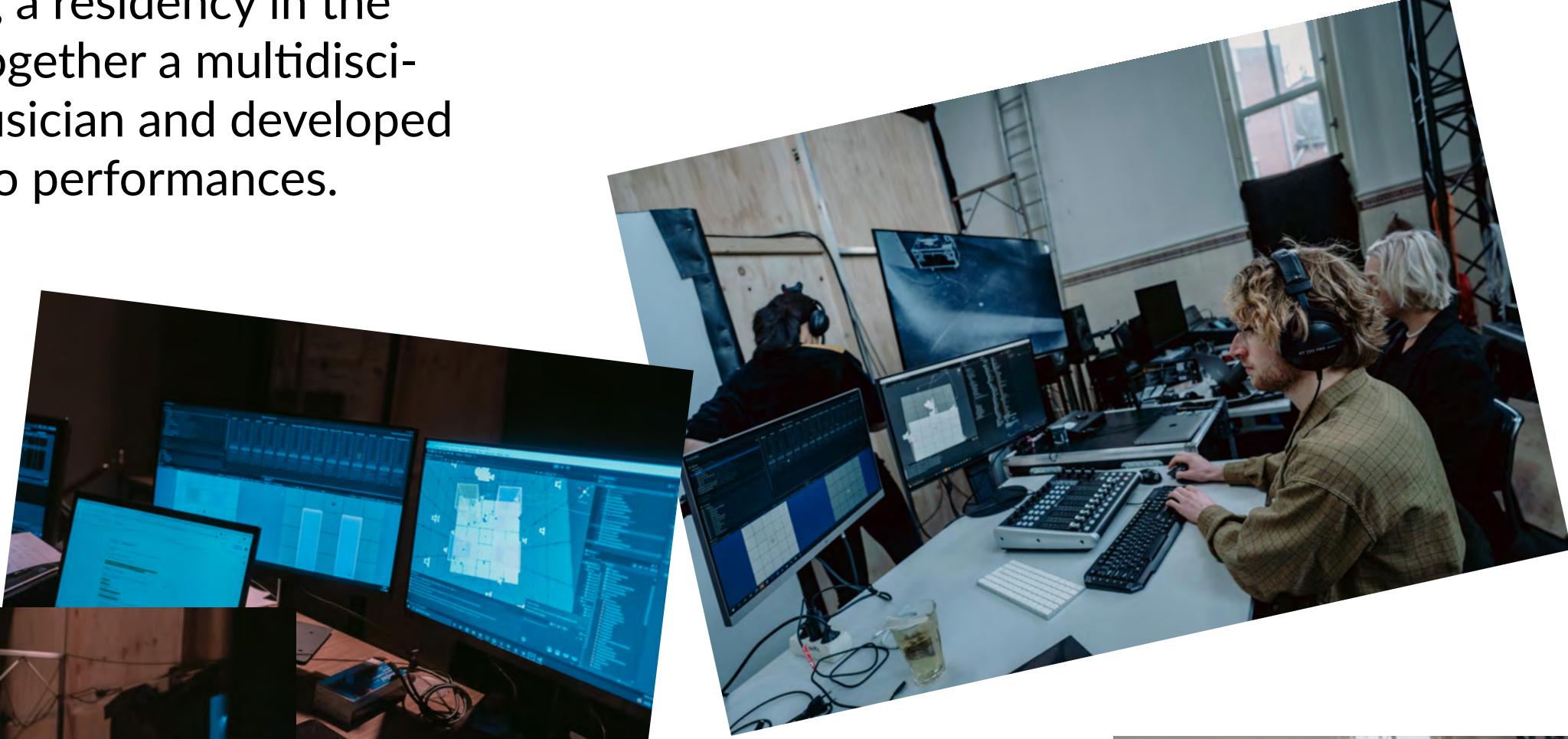
**Dreamer** is an immersive participatory performance where an audience member is invited to embark on a dream-like journey through many impossible spaces made of sound only. There, they will be accompanied by an invisible ‘ghost’ (a live performer), and only to find out that the space, the ghost and themselves are the reflections of one inseparable existence.

**Dreamer** is the result of a collaborative project created during a residency in the Innovation:Lab of Theater Utrecht. In this period, we brought together a multidisciplinary team of performer, researcher, creative technologist, musician and developed a sonic VR platform for creating immersive and interactive audio performances.

From an idea ...



... to countless discussions and prototypes ...  
[Watch the development phase.](#)

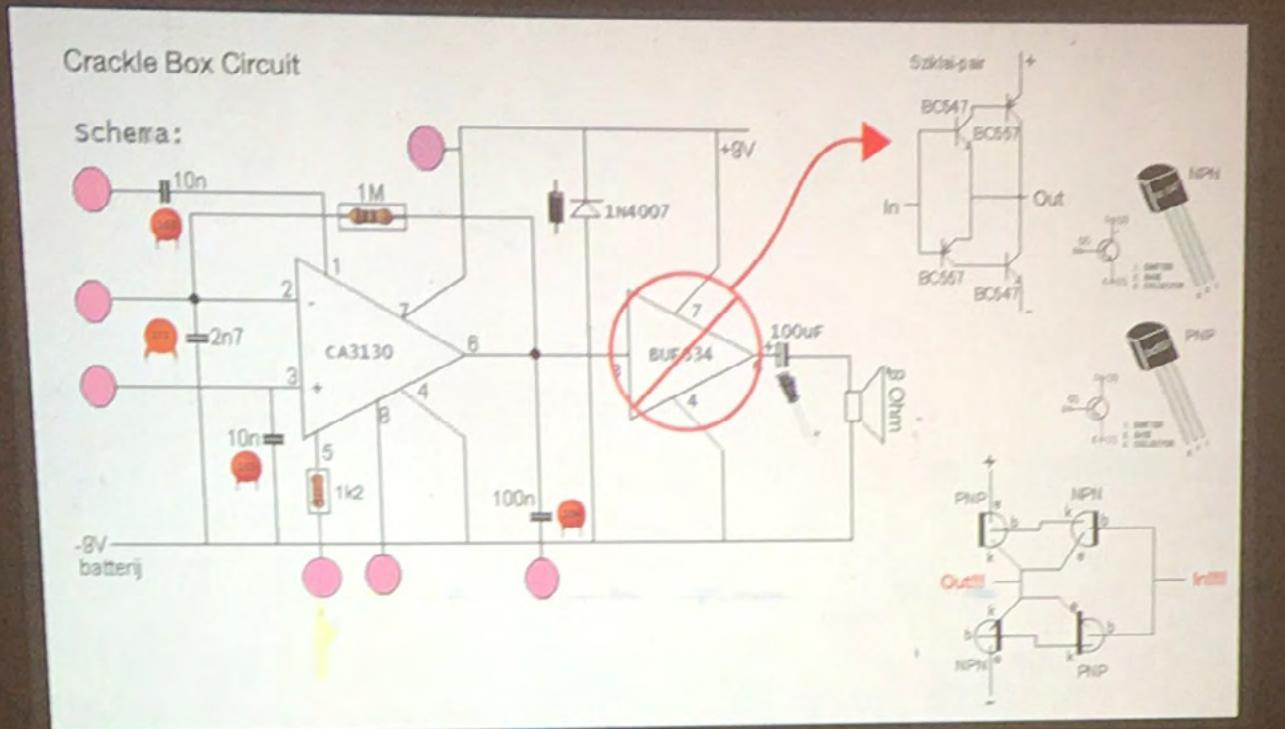


... to the final performance!

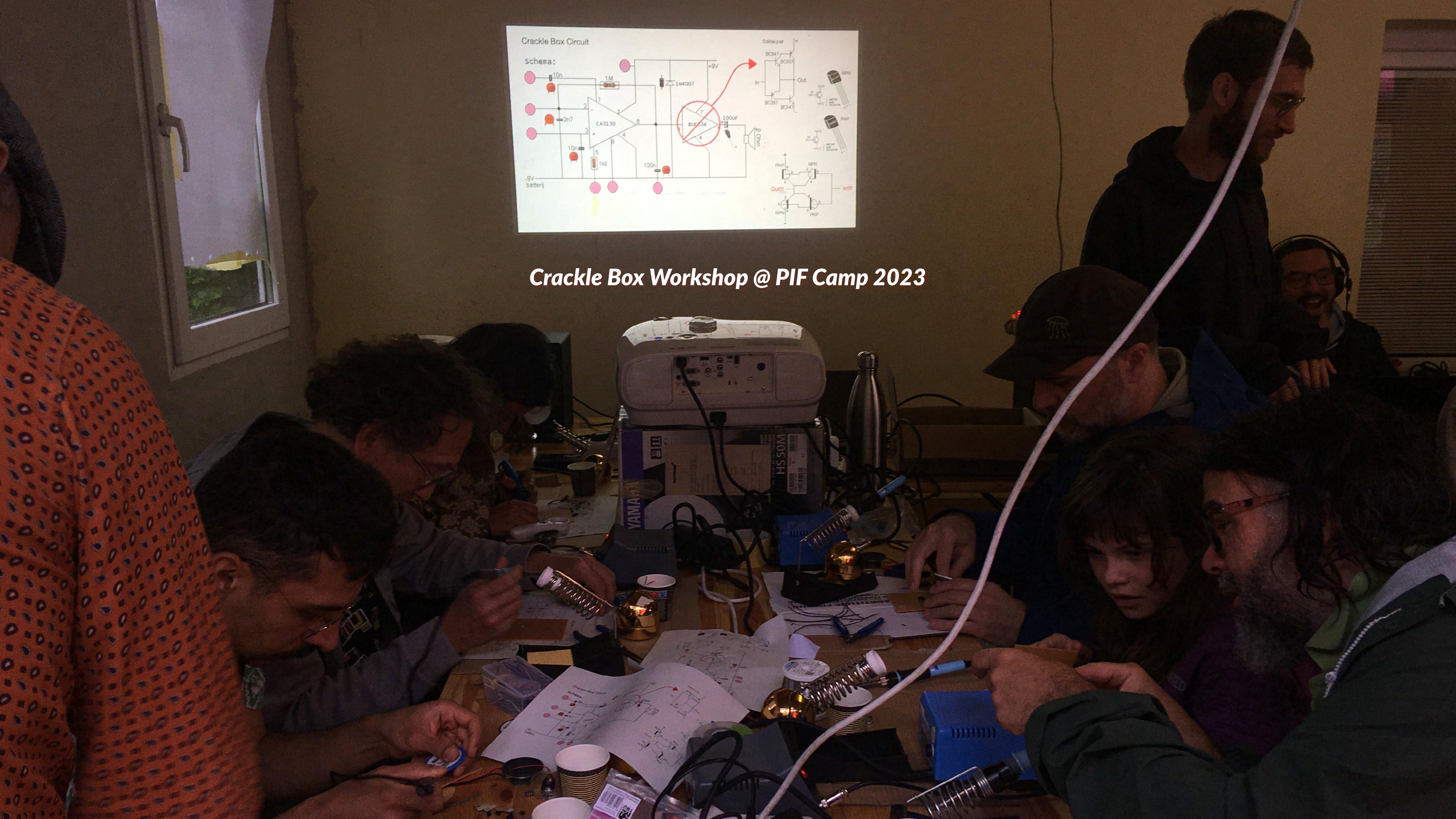


As it was a one-person experience, we invited other audience members to listen along through silent disco headsets and watch the participant through our monitor.

Concept & Direction: Dan Xu, Lieke van der Vegt  
Creative technology: Jelger Kroese, Roland Smeenk  
Sound design & engineer: Baulk Moerman, Sander van der Werff



## Crackle Box Workshop @ PIF Camp 2023



**Crackle box** (or kraakdoos in Dutch) is an electronic-noise-feedback-synth-instrument designed by Michel Waisvisz in the 70s. It is played by directly touching selected points in the circuit thereby becoming part of the circuit and completing a feedback loop to generate sounds. During PIF camp 2023, I led a workshop with fellow participants to make our own Crackle Box.

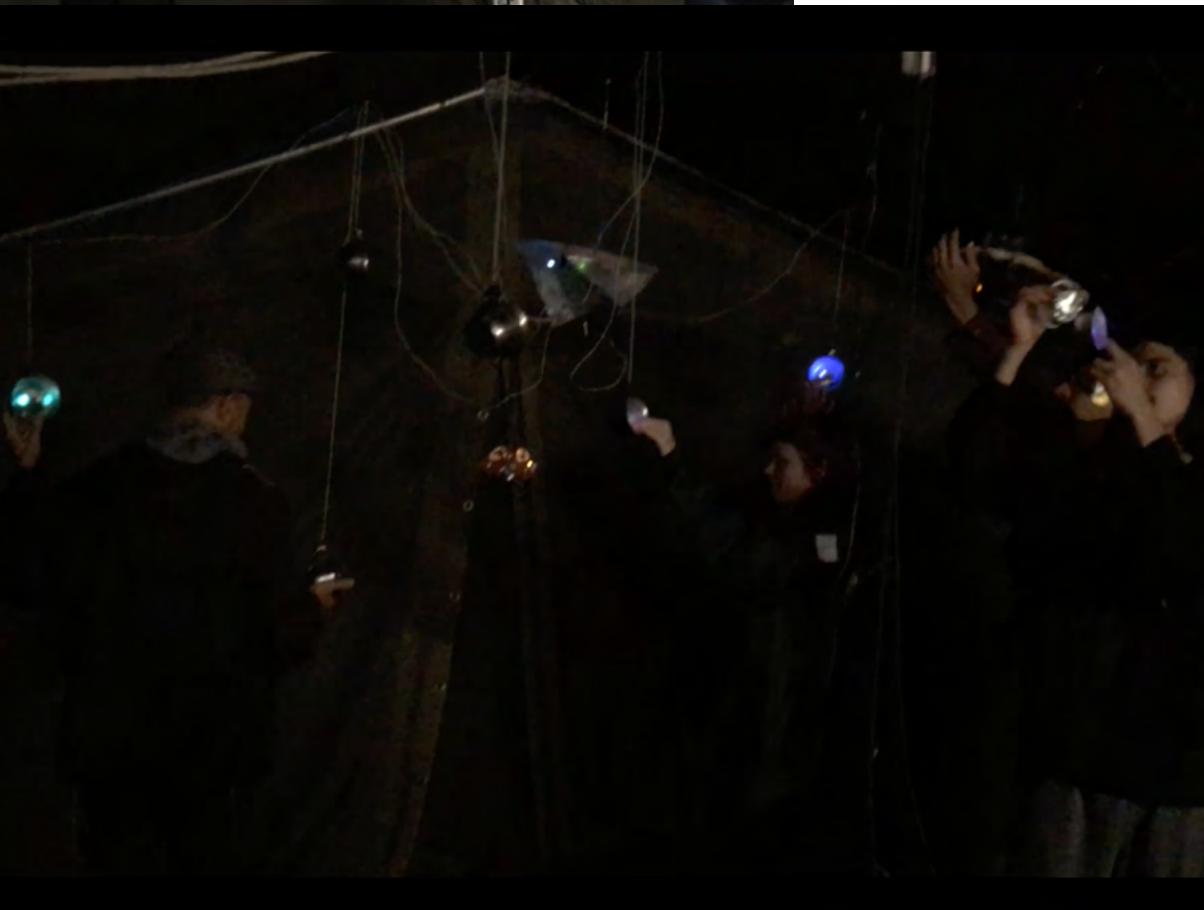


Snapshot of (late-night) touch-play-jam sessions.



We turned the tent at the camp into a noise/sound installation.

[Watch the interaction here.](#)

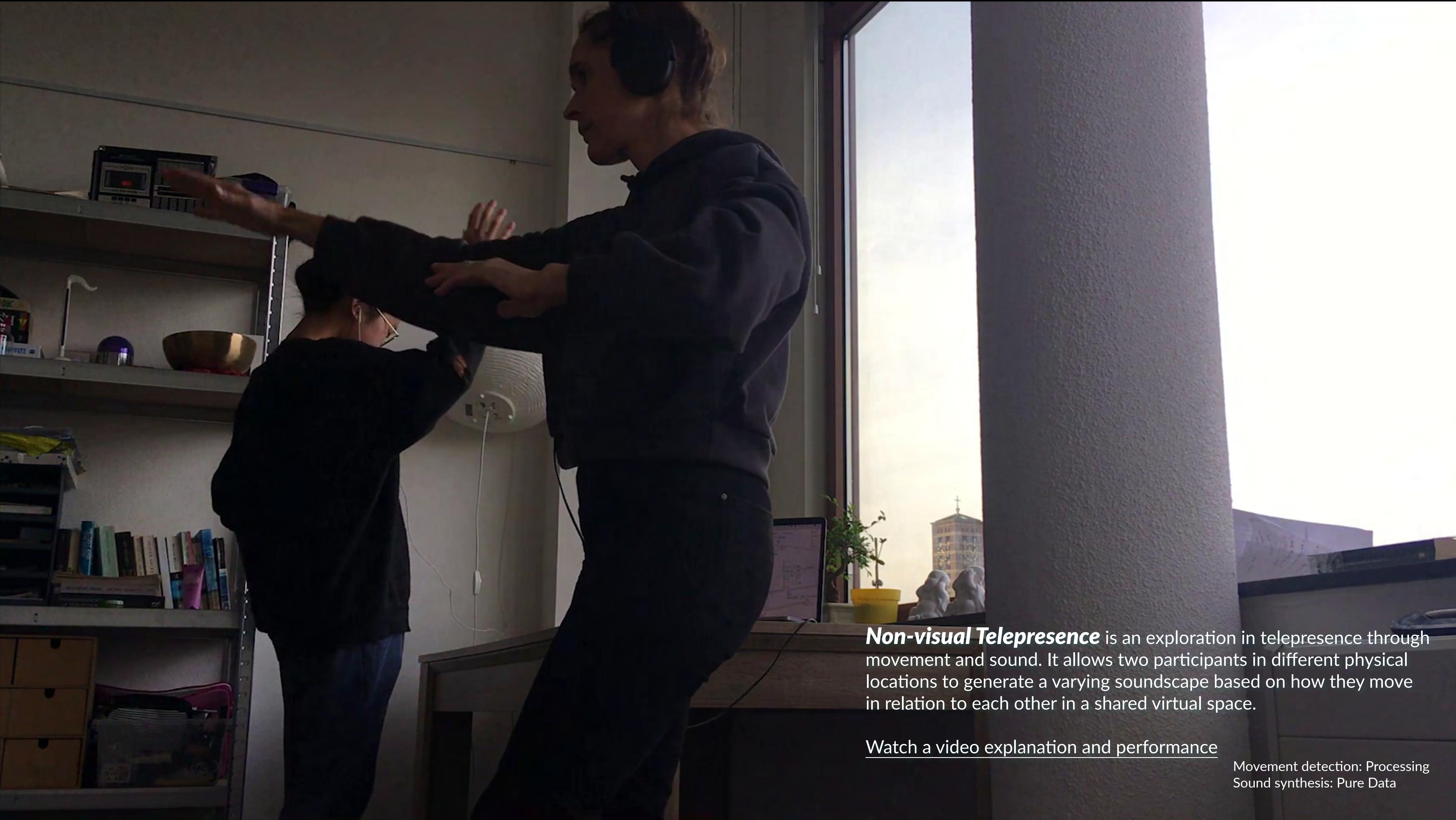


Inspired by other participants' practice, we also created an ultrasonic crackle box to be played with bat detectors.

[Watch the iconic crackle-o-bat duet.](#)

Featuring:

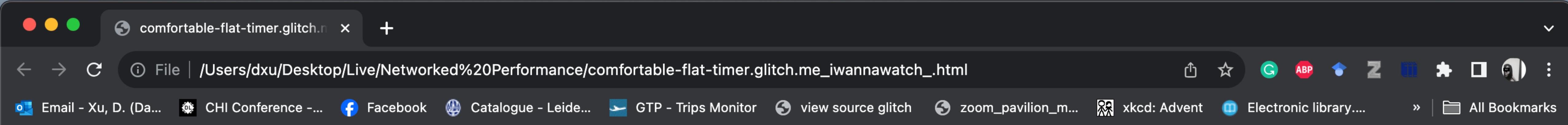
Rodolfo Acosta Castro on ultrasonic crackle box  
Tina Tonagel on bat detector



**Non-visual Telepresence** is an exploration in telepresence through movement and sound. It allows two participants in different physical locations to generate a varying soundscape based on how they move in relation to each other in a shared virtual space.

[Watch a video explanation and performance](#)

Movement detection: Processing  
Sound synthesis: Pure Data



# I just wanna watch.

1: i can

1: i cant

1: i cant'

1: i cant'

1: i cant'

1: i cant

1: i cant'

1: i cant't

1: i cant't

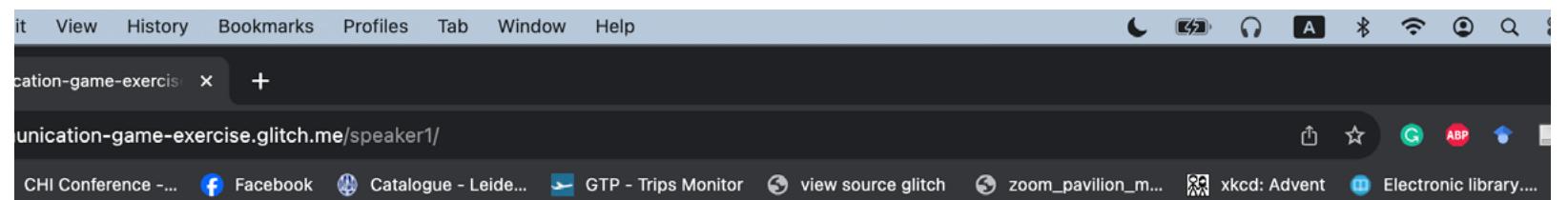
1: i cant't s

1: i cant't st

1: i cant't sto

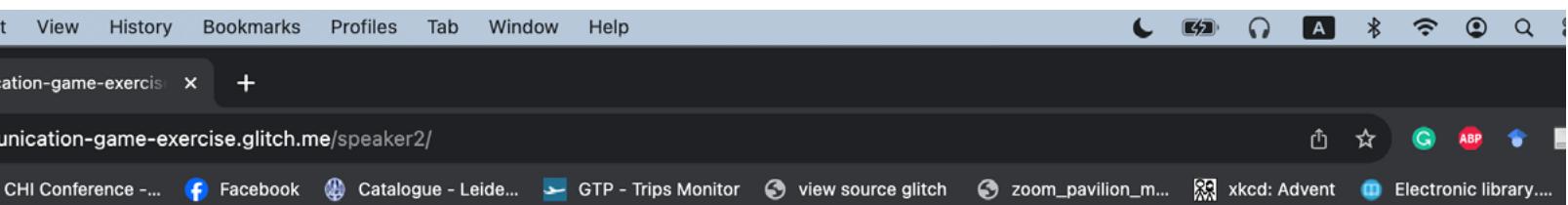
1: i cant't stop

**Communication Games** explores properties of mediated communication. It takes the form of an online chat room and participants can join the chat room via a unique url, which leads to a different speaker profile and is embedded with a different mediation/deceiving strategy.



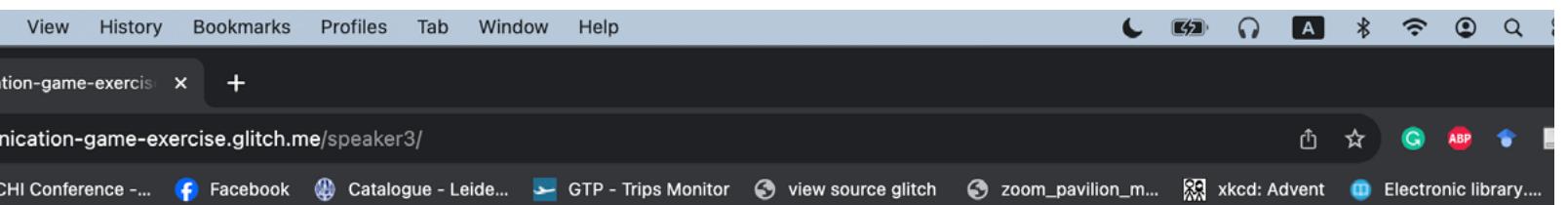
Please! Tell us something about yourself.

Speaker 1's keyboard actions are directly broadcast to all other participants but the self-revealing speaker.



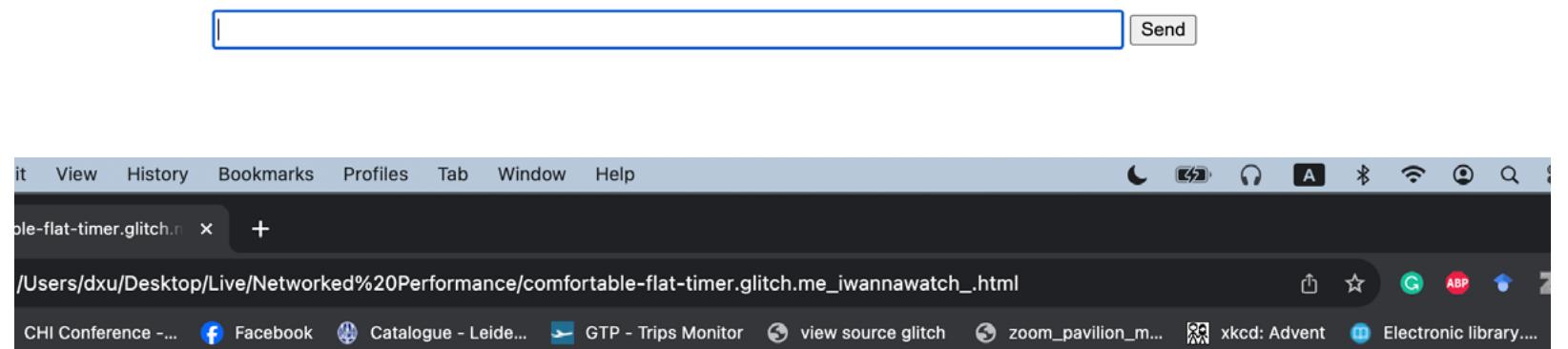
Please! Show your appreciation for the other participants.

Speaker 2's reactions are delayed for a random period (max. 20s) for all other participants but the appreciating speaker.



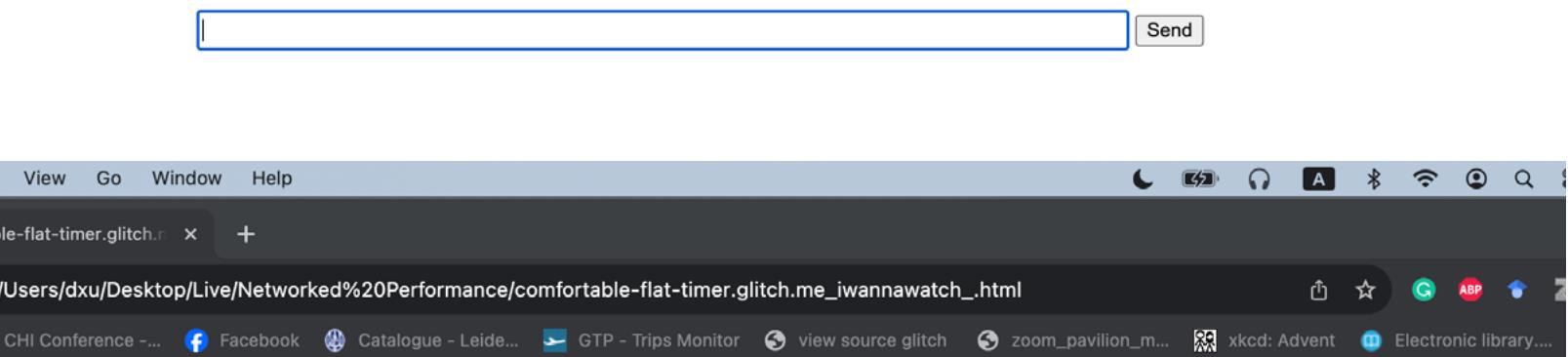
Please! Give us some advice.

Speaker 3's words are randomly selected and replaced with '...' for all other participants but the advising speaker.



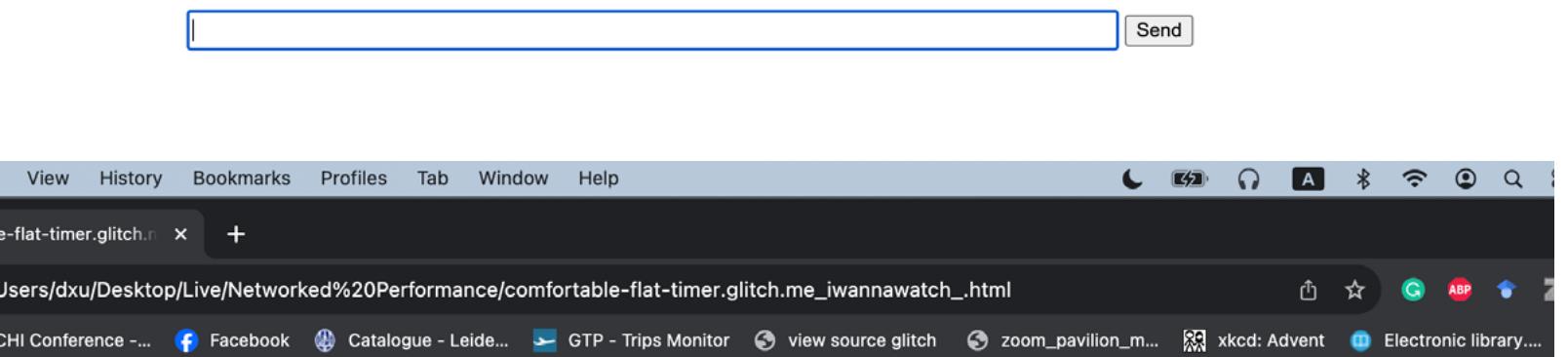
I just wanna watch.  
1:  
ca

1: i can  
1: i cant  
1: i cant'  
1: i cant'  
1: i cant'  
1: i cant'  
1: i cant  
1: i cant'  
1: i cant's  
1: i can't st  
1: i can't sto  
1: i can't stop



I just wanna watch.  
1:  
you think there is a chan

1: do you think there is a chan  
1: do you think there is a chanc  
1: do you think there is a chance  
1: do you think there is a chance  
1: do you think there is a chance o  
1: do you think there is a chance of  
1: do you think there is a chance of  
1: do you think there is a chance of l  
1: do you think there is a chance of lo  
1: do you think there is a chance of lov  
1: do you think there is a chance of love  
3:  
2: i want to clap for all of you



I just wanna watch.  
3:  
you ... stop

3: be curious about the ... of communication  
3: ... to cope with these kinds of mediation  
2: out and about  
3: be interested ... reading  
1: timing  
2: fantastic  
3: you will see later, ... disturbingly similar  
3: share ... inner workings  
2: speaker 2 is on a lag ?  
3: lay ... different roles for people with different functionality  
3: create ... behavior  
3: discover ... behavior

**Names of Grey** narrates the changing shade of colors based on a “handpicked list of 30200 unique color names” using computer vision.

[Watch a timelapse of all the names of grey in a Dutch winter day](#)

Computer Vision: Processing

Natural Language Processing: Python



raging sea

overcast day

stone hearth

london road



**Deep Meaning** is a speculation on a synthetic future where algorithms not only dictates our consumption reality but also becomes the voice for our spirituality. The robot preacher engages with the pilgrams and delivers life lectures generated by a recurrent neural network trained on lecture script from [Patchwork Foundation](#).



Don't sit around and try to change your past, when you have your entire future to look forward to. the other person. It is a very important issue. Thus the contrary, the entity is a necessary still receive. So you still fear with a full sense of life in the self as you know. The resulting people's objects are truly in the human being. It is the creative factors you will not have to become the conflict and the truth of your own distortions that work on this path, therefore you can become aware of the inner feeling of life and reach out to them. The solution and the spiritual development exists in your life in the wrong way as a result of responsibility in every human being in the course of your feelings and life. You can relinquish. All these moments is the only part of you. It is a result of the mass image. The conscious life you struggle against them, you will look at it by exploiting this fact of the human being. This is why the person is the only stream of life. Therefore you know that this is so included, you could not live up to another person. But all this is the same as denial, and outer parts of your emotions are not as a result of your inner being. The more you are confused and it is also different from the self which you f

RT @beardvillain: Future "Wicked" video LIT! as an emotional being. In spite of the superimposed conscience lies in your own existence on the other.

It is the only way you must be recognized as a result of your fate, ill in a state of being, you are often as yet unconsciously constantly not so lower than the fact that it is that the end is the same.

The more the self is left against his self-punishment in your soul. The fear of loving is a very necessary state of development. The worst of these two factors responsible for the law of

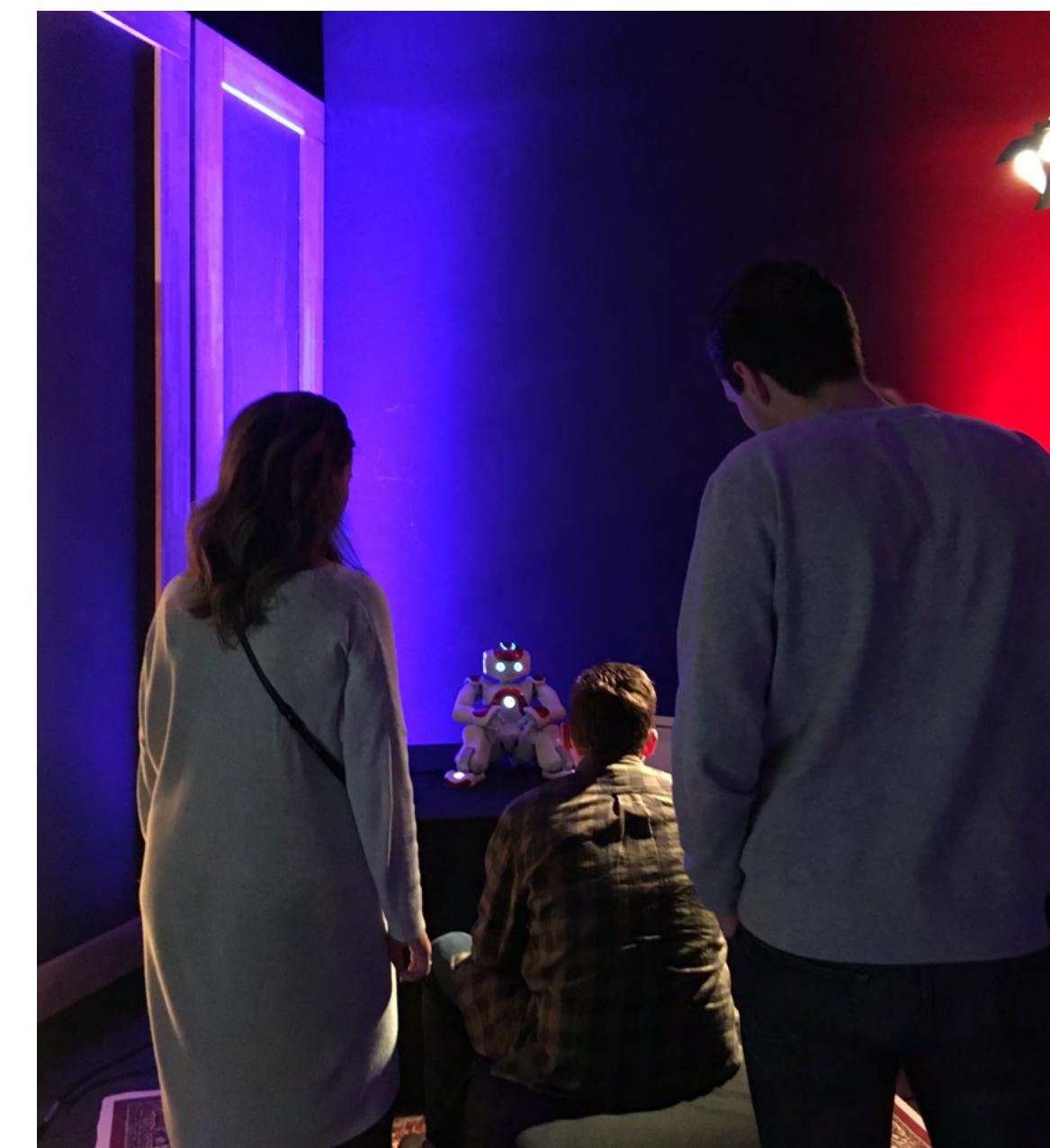
pleasure supreme with the possibility of frustration and reality. This is a positive result of your being, when the outer ground is a very deep feeling that you can never be loved and actively without a different power, but without expressing your outer attitude toward it. The universal law of meditation even aware of the problem – but only by accomplishing your self-confrontation in the past, for the ego can realize that you do not see the

truth, and the fear of self-punishment and go suffering is all the entity. The more this will not be something anyone who is not something in you because you do not give yourself the laws of the self that cannot be destroyed and defensive and



**Deep Meaning** was first shown as a palm-reading ceremony. Everytime a participant put their hand on the interface, the latest tweet containing the word 'future' is extracted as prompt for the AI oracle. The generated teaching is then displayed and narrated with a synthetic voice.

Exhibited at *Futures Open Lab* expo at *Vrijplaats*, Leiden, NL, Jun 3-4, 2016



**Deep Meaning** was again revived as a robot preacher.

[Watch the robot preacher](#)

[Watch kids interact with Deep Meaning](#)

Concept and AI development: Dan Xu

Exhibition design: Peter van der Putten

Robotics: Joost Broekens

Exhibited at *Beyond Human Festival 2019* at *Naturalis Biodiversity Center*, Leiden, NL, Nov 9-11, 2019



**5 Percent Piano** is a sonic urban intervention inspired by the practice of graffiti. Everytime someone passes by the piano, a playful audio response is triggered, inciting passers-by to stop, ponder, explore, interact, and show some rage.

# 5 PERCENT PIANO: AN AUGMENTED PIANO WITH PLAYFUL AUDIO RESPONSE

## 'WE LISTEN BUT WE ARE UNABLE TO HEAR'

Modern life usually implies a busy routine, leaves little room for contemplation, as Lefebvre stated in his discourse on everyday life: "..., we look but we are unable to see."<sup>1</sup>

Our ears too are filtering out incoming signals, the sound of traffic becomes the new silence<sup>2</sup>.



## MIXED REACTIONS FROM PASSERS-BY

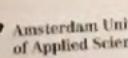
Our brief in-the-wild deployment showed that 5 Percent Piano succeeded in attracting passers-by's attention, despite their ignorance about the audio content. The augmented audio response also encouraged acts of creative expressions like conventional piano play. Similar to a street concert where social gathering occurs, 5 Percent Piano served as a probe through which people started to engage with each other.

The most obvious playful exploration occurred when the construction workers were on their lunch break, during which they were more open for distraction. For those who were commuting or working, the repetitive audio went unnoticed or became a source of irritation.

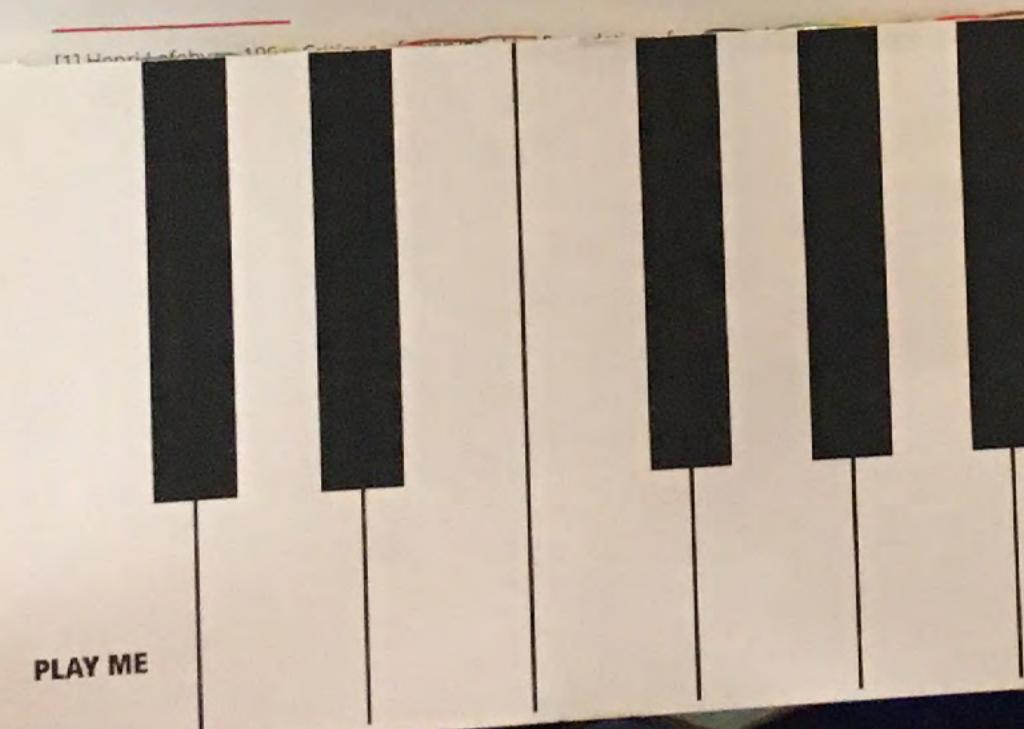
We ponder whether the talking objects of the future will not just make us be able to listen, but hear again.



Scan the QR code to see and hear  
5 Percent Piano at work.



DIGITAL SOCIETY SCHOOL



[Video of the augmented poster](#)

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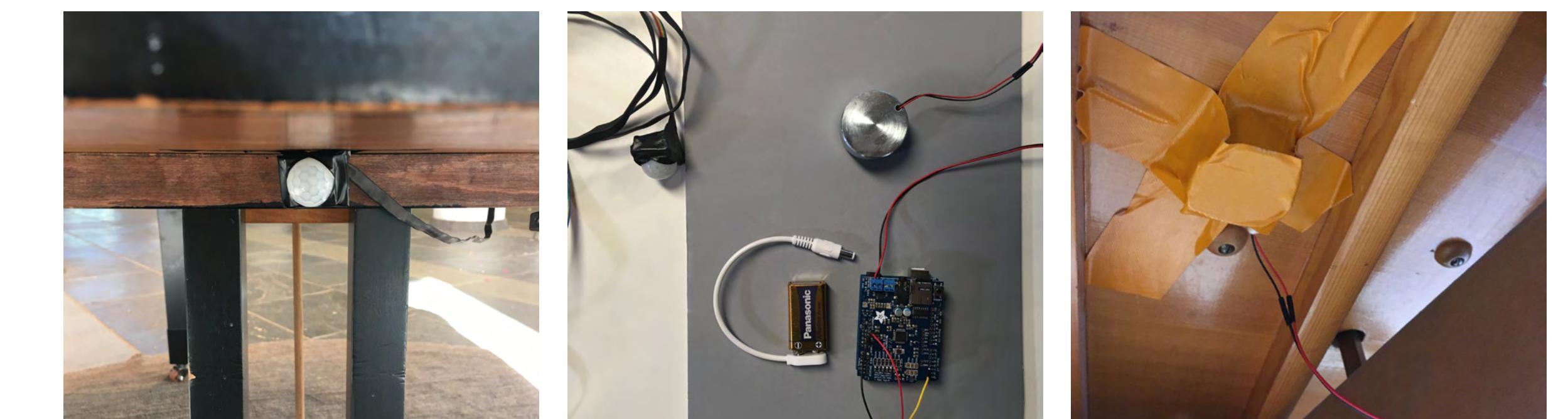
Amsterdam University of Applied Sciences  
Digital Society School

However, a public piano is not always appreciated as intended.

To (re-) draw attention to an often idle piano placed in the university building lobby, we augmented the piano with a motion-triggered, novel audio response that aims to surprise and playfully engage passers-by.

## DESIGNING '5 PERCENT PIANO'

To raise awarenesses about current political affairs, we extracted an audio fragment from the Trump-May news conference on June 4th 2019, which transcribes into "5 percent, to 10 percent, to 15 percent, to 20 and then to 25 percent" referring to the tariff rates President Trump was suggesting to impose on Mexico. It often resulted in a repetition of '5 percent'. Thus we adopted the name '5 Percent Piano'.



[Watch 5 Percent Piano at work](#)

[Publication about 5 Percent Piano](#)

Presented at the Halfway to the Future Symposium 2019, University of Nottingham, UK, as an augmented poster (see left).

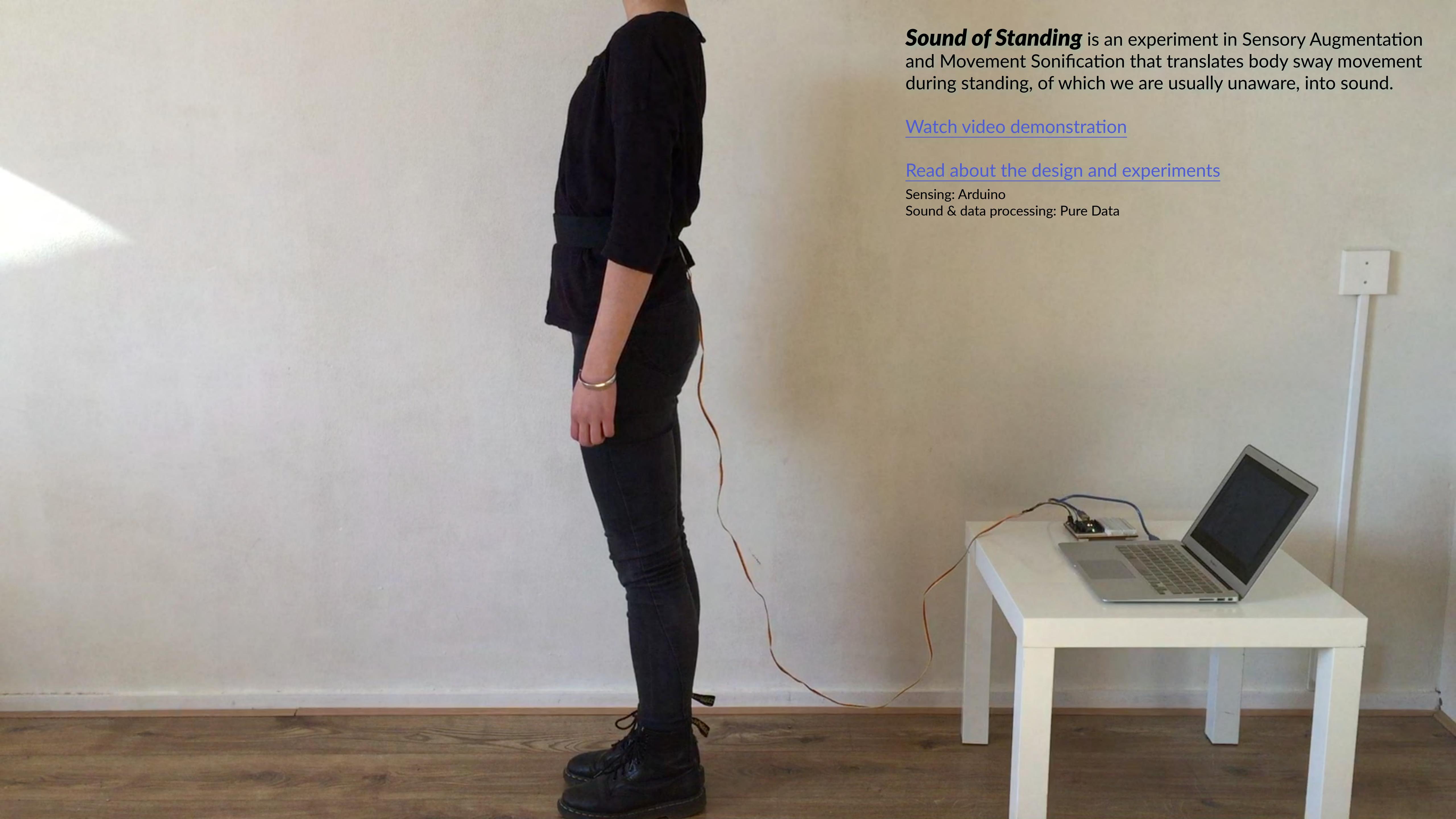


**Crash: read with GloVe** retells the story Crash by J. G. Ballard using GloVe (Global Vectors for Word Representation).

[Watch video explanation and demonstration](#)

Interaction: Processing

Natural Language Processing: Python



**Sound of Standing** is an experiment in Sensory Augmentation and Movement Sonification that translates body sway movement during standing, of which we are usually unaware, into sound.

[Watch video demonstration](#)

[Read about the design and experiments](#)

Sensing: Arduino

Sound & data processing: Pure Data



**Flatlanders** is a visual illusion installation that challenges our perception of reality in relation to the frame of reference. As our perception is conditioned by the straight geometry of the built environment, being inside the slightly tilted wooden box, our brain automatically corrects the frame of the wooden box and perceives the objects placed in strictly horizontal and vertical positions as tilted.

[Watch inside view](#)

Created with: Robin Bergman, George Bouzias.

Exhibited at Hubspot, Leiden, NL, Feb 3-9, 2017 as part of Media Technology Semester exhibition 'Return'.

A young man with short brown hair, wearing a blue V-neck t-shirt, is holding a large, white, cylindrical megaphone-like device. He is looking directly at the camera with a neutral expression. The device has a blue circular logo on its side and a small digital screen or sensor area near the handle. The background shows an orange wall and a wooden cabinet with various items on top.

**Trumpet** is a modified megaphone that plays back the passionate voice of Donald Trump yelling "I love China" everytime someone speaks into it.

[Watch Trumpet](#)

Interaction: Arduino

**Pendulum Wave (Sonified)** is a simulation of a set of uncoupled simple pendulums with varying lengths. When released from the same height, the pendulums start to oscillate at different periods, coming in and out of phase with each other, resulting in complex harmonic motions. Meanwhile, each time a pendulum reaches the furthest point, a pitched sound proportional to its length is triggered.

[Watch Pendulum Wave \(Sonified\)](#)

Programming: OpenFrameworks

