

# Murmur

## From sound to light

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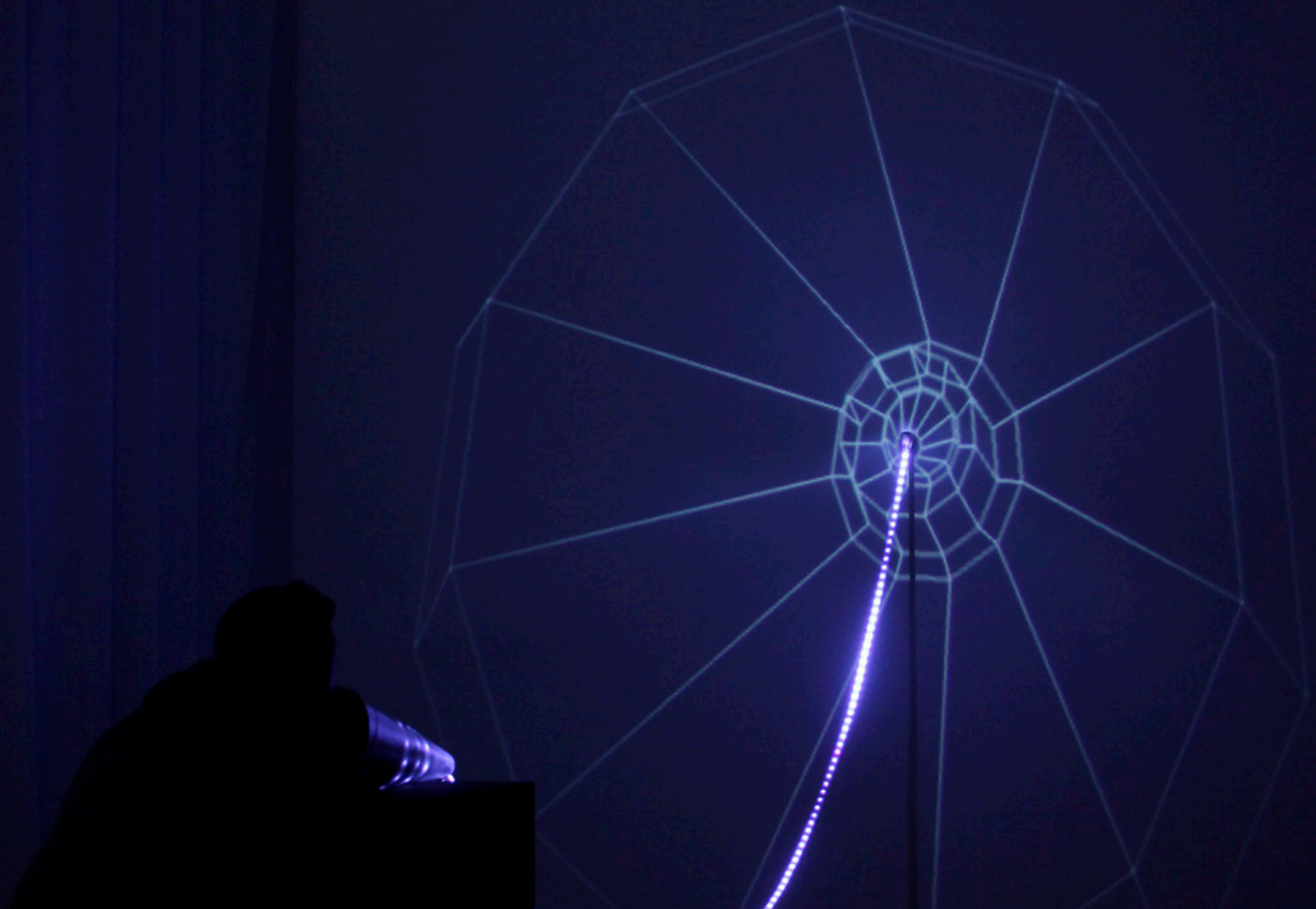
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# Murmur installation

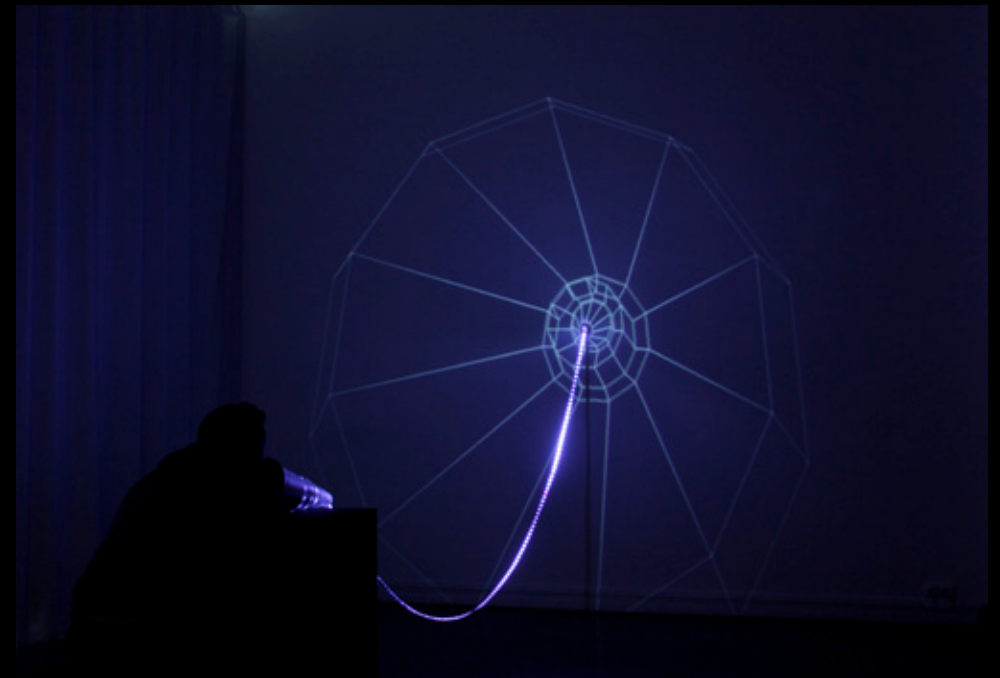


# Concept

*Murmur* is an architectural prosthesis that enables the communication between passers-by and the wall upon which it is connected. The installation simulates the movement of sound waves, building a luminous bridge between the physical and the virtual worlds. There is a magical effect, a mystery in the way that sound waves move. *Murmur* focuses on this movement, thus creating an unconventional dialogue between the public and the wall.

Video of the artwork  
[www.vimeo.com/67242728](http://www.vimeo.com/67242728)

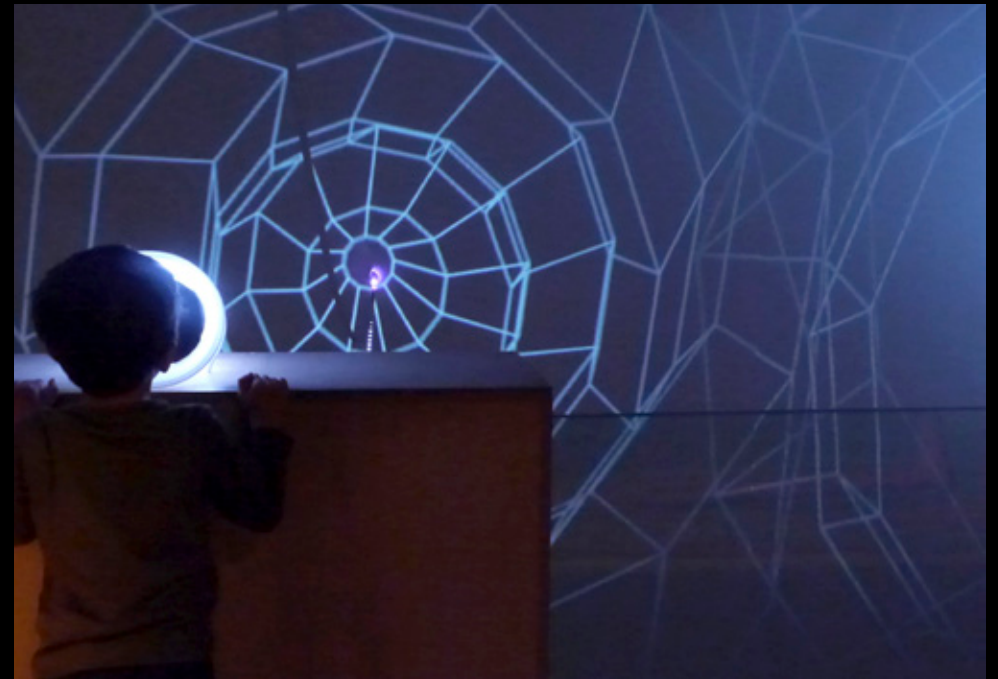
Website of the project  
[www.m-u-r-m-u-r.me](http://www.m-u-r-m-u-r.me)





# Object

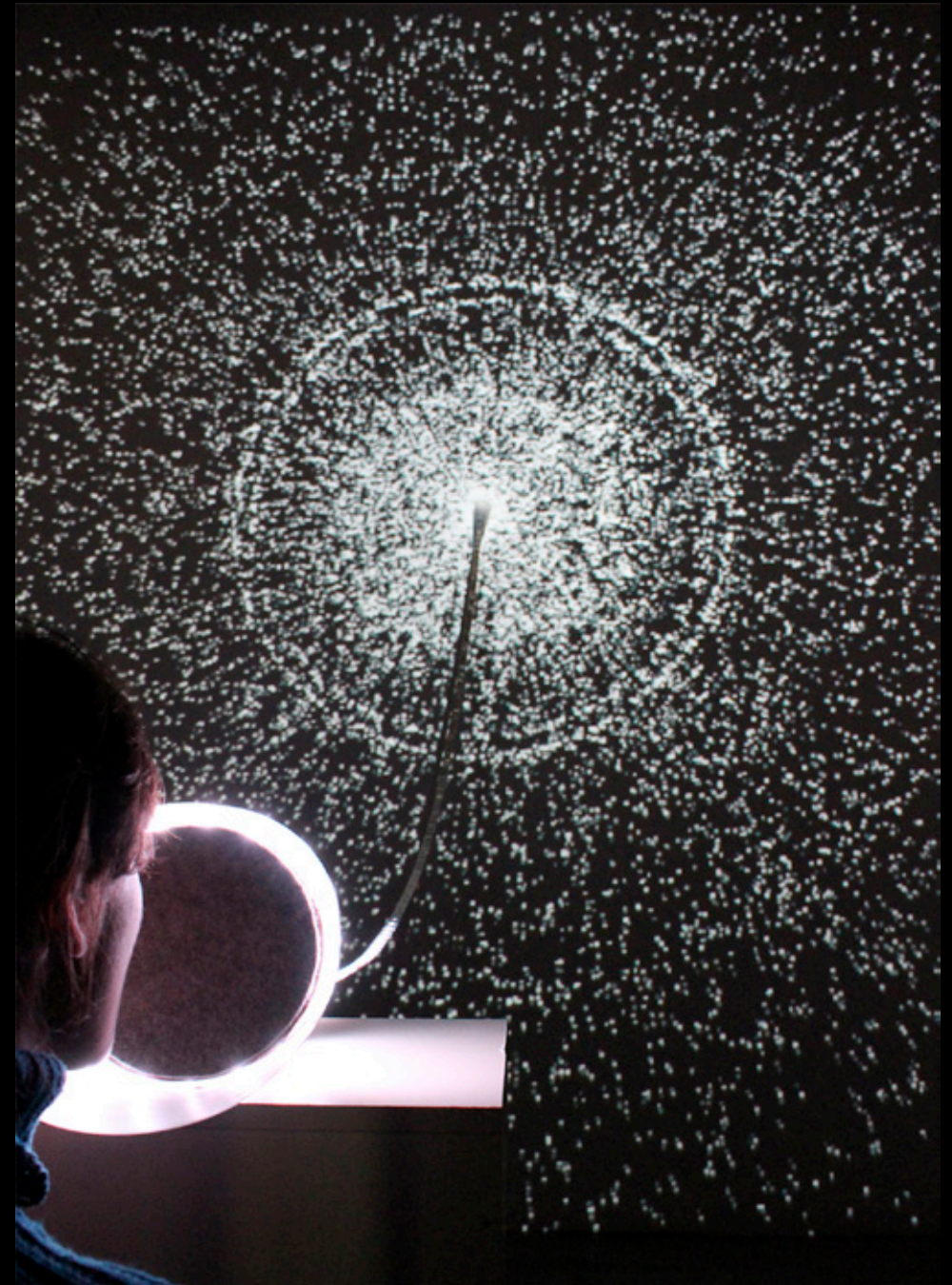
Within the frame of the project, a specific device was designed and created in order to collect the murmurs of the public. This object has been called "Echo Chamber", making reference to Greek mythology. It represents not only the key technique of the Murmur device, but also its magical aspect, turning sound waves into light waves.



# Interaction

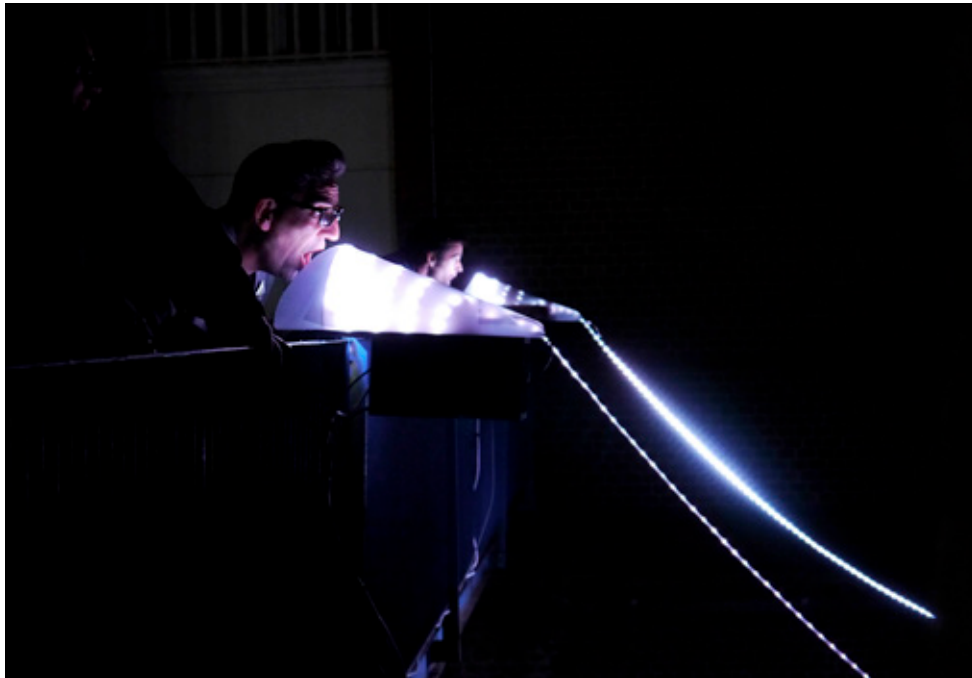
*Murmur* allows the public to communicate with a surface by creating a visual "echo". This echo is deliberately out of sync with the emission of sound, it is noticeable in wave form on the LED strip that connects the "Echo House" to the wall. As soon as the transmitter understands that it is connected with the wall surface, it can start playing with the rhythm, volume, and pitch of its voice to modulate light and graphics generation.

After a few "echoes", a visual and sound dialogue is established. *Murmur* integrates several visual universes that each react in a particular way to the sounds emitted.





# Interaction



# Interaction





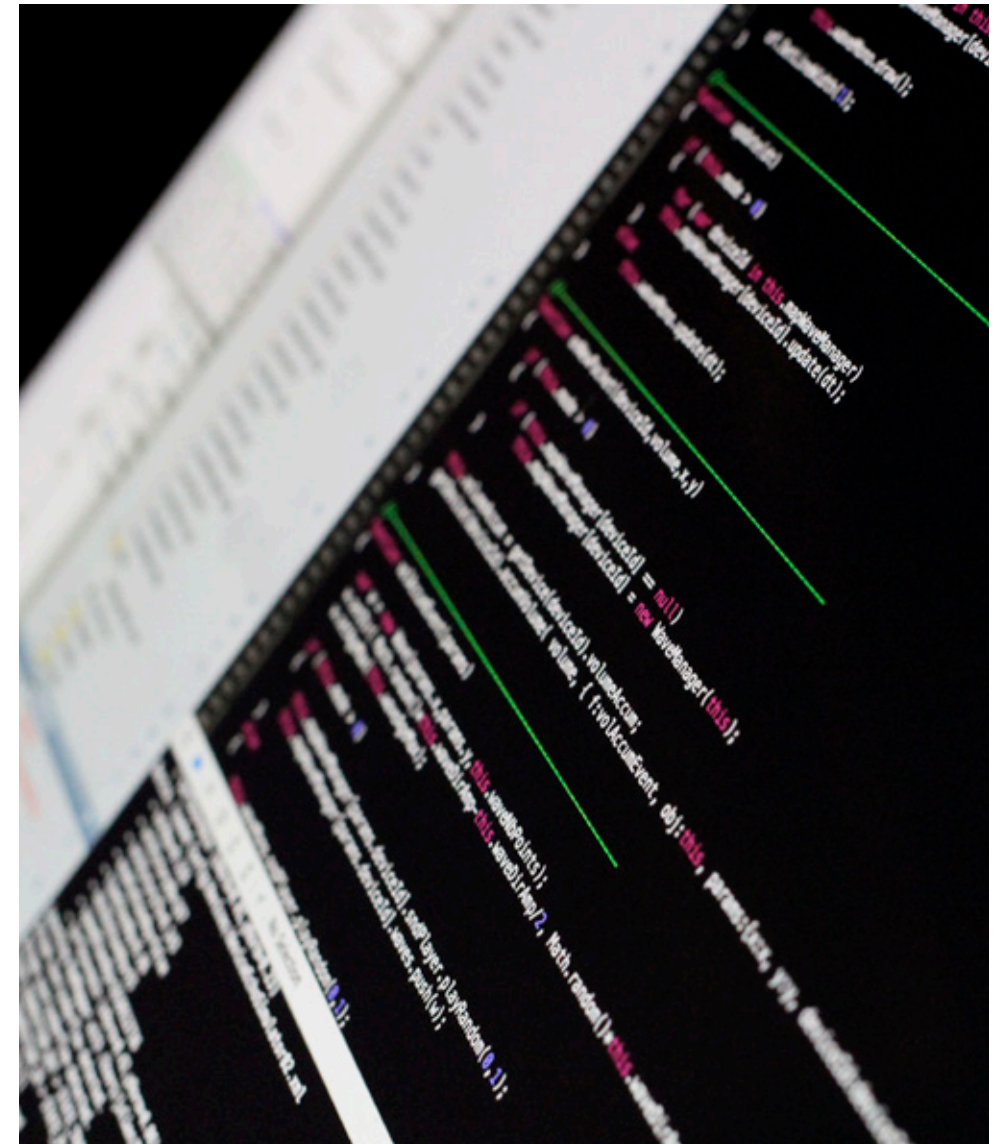
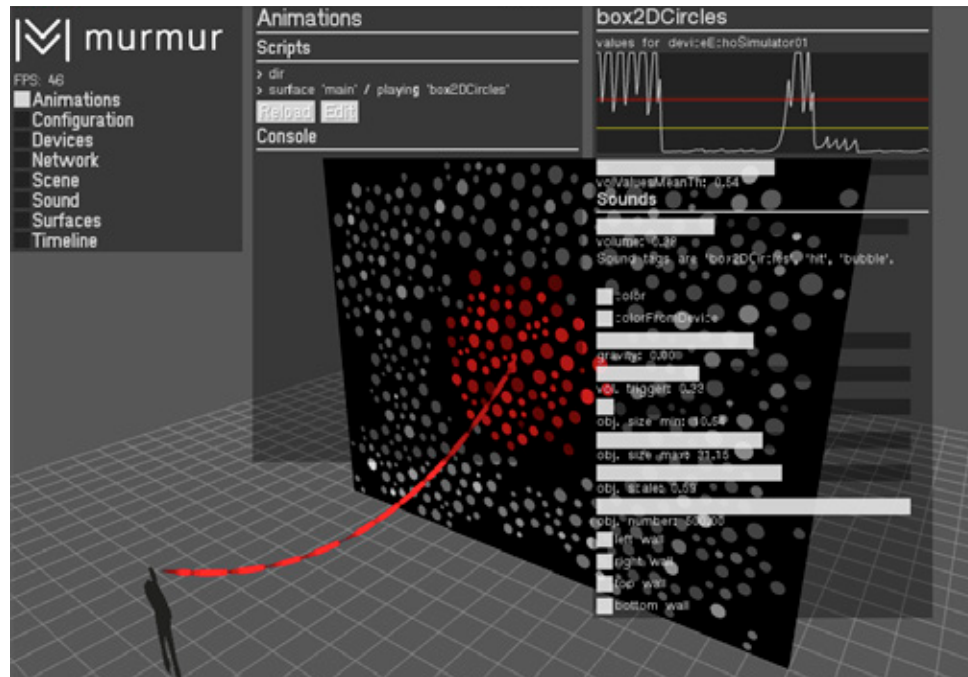
# Technologies

The project is based on open source technologies (hardware and software).

At the heart of the Echo House there is a Raspberry Pi connected to a microphone and a programmable LED strip.

The application, realized in C++ with Openframeworks, allows to control the whole installation, LED and video-projection included.

Github repository of *Murmur*  
<https://github.com/v3ga/murmur>



# Prizes

## Golden prize

European Design Awards 2014  
Digital Category  
[www.europeandesign.org](http://www.europeandesign.org)

## Silver prize

Lumen Prize 2014  
[www.lumenprize.com](http://www.lumenprize.com)

# Exhibitions and Festivals

## MAIF Social club

Paris, 2019-2020

## KIKK Festival

Namur, Belgium, 2019

La Roche sur Yon, France, 2018-2019

## Constellation numérique #2

Espace d'art contemporain du Cyel  
La Roche sur Yon, France, 2018-2019

## Microworld & Fusion: Adventures in Digital Art

by Lumen Prize  
Eureka! The National Children's Museum, UK, 2018

## Tout se transforme

Le Signe, Centre National du Graphisme  
Chaumont, France, 2018

## Waouh Zone

Le Pass, Parc d'aventures scientifiques  
Mons, Belgique, 2017 - 2022

## Interstices

Etopia, Centre d'art et de technologie  
Saragosse, Espagne, 2017

## La Nuit Blanche

Arts Festival  
Paris, 2016

## Art & Algorithms

Digital Arts Festival  
Floride, USA  
du 5 au 10 octobre 2015

## Audi City Codes New Media Art

Exhibition  
Beijing, Chine  
du 18 au 31 septembre 2015

## Edinburgh International Festival Scottish Chamber Orchestra et Murmur

Édimbourg, Écosse  
30 août 2015

## Trace(s)

Ville de Bagnols-sur-Cèze, France  
du 7 au 27 mai 2015

## Adelaide Festival

Adélaïde, Australia  
du 27 février au 15 mars 2015

## New York Institute of Technology Lumen Show

New York, USA  
du 2 au 5 décembre 2014

## Capitaine Futur

La Gaîté Lyrique  
Paris, France  
du 18 octobre 2014 au 8 février 2015

## Onassis Cultural Centre's

Lumen Show  
Athènes, Grèce  
du 31 octobre au 30 novembre 2014

## Signal Festival

Prague, République Tchèque  
du 16 au 19 octobre 2014

## Cinekid Media Festival

Amsterdam, Hollande  
du 11 au 18 octobre 2014

## File Festival

São Paulo, Brésil  
du 26 août au 5 octobre 2014

## File Festival

Museu das Telecomunicações  
Rio de Janeiro, Brésil  
du 7 juillet au 3 août 2014

## Mirage festival

Lyon, France  
du 19 au 23 février 2014

## Spectra Light Festival

Aberdeen, Écosse  
du 6 au 9 février 2014

## Journées du Code Créatif

Stéréolux, Nantes, France  
du 15 au 31 janvier 2014

## Le Tetris

Le Havre, France  
du 17 au 20 novembre 2013  
du 19 au 22 septembre 2013

## Nuitnumérique #10

Centre culturel numérique  
Saint-Exupéry, Reims, France  
25 mai 2013



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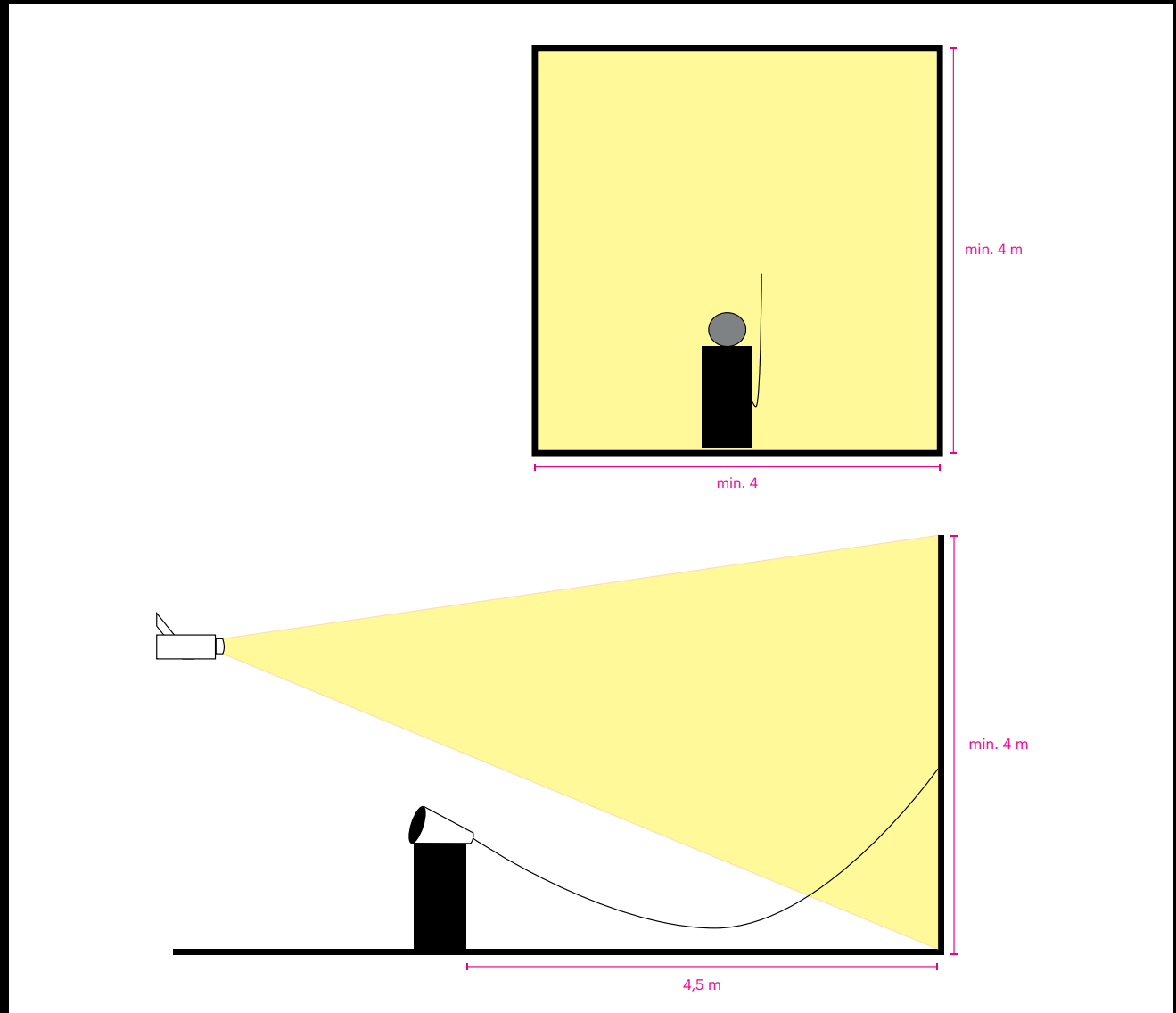
# Technical information



# Installation venue

## Needs

- 1 interior space in dim light
- 2 video projection wall (minimum desired measures 4x4m)
- 3 the dimensions of the room must be appropriate to place the stripLED (5 meters long) and the video projector with enough recoil and height to project on the entire wall without creating shadows
- 4 220V electrical input





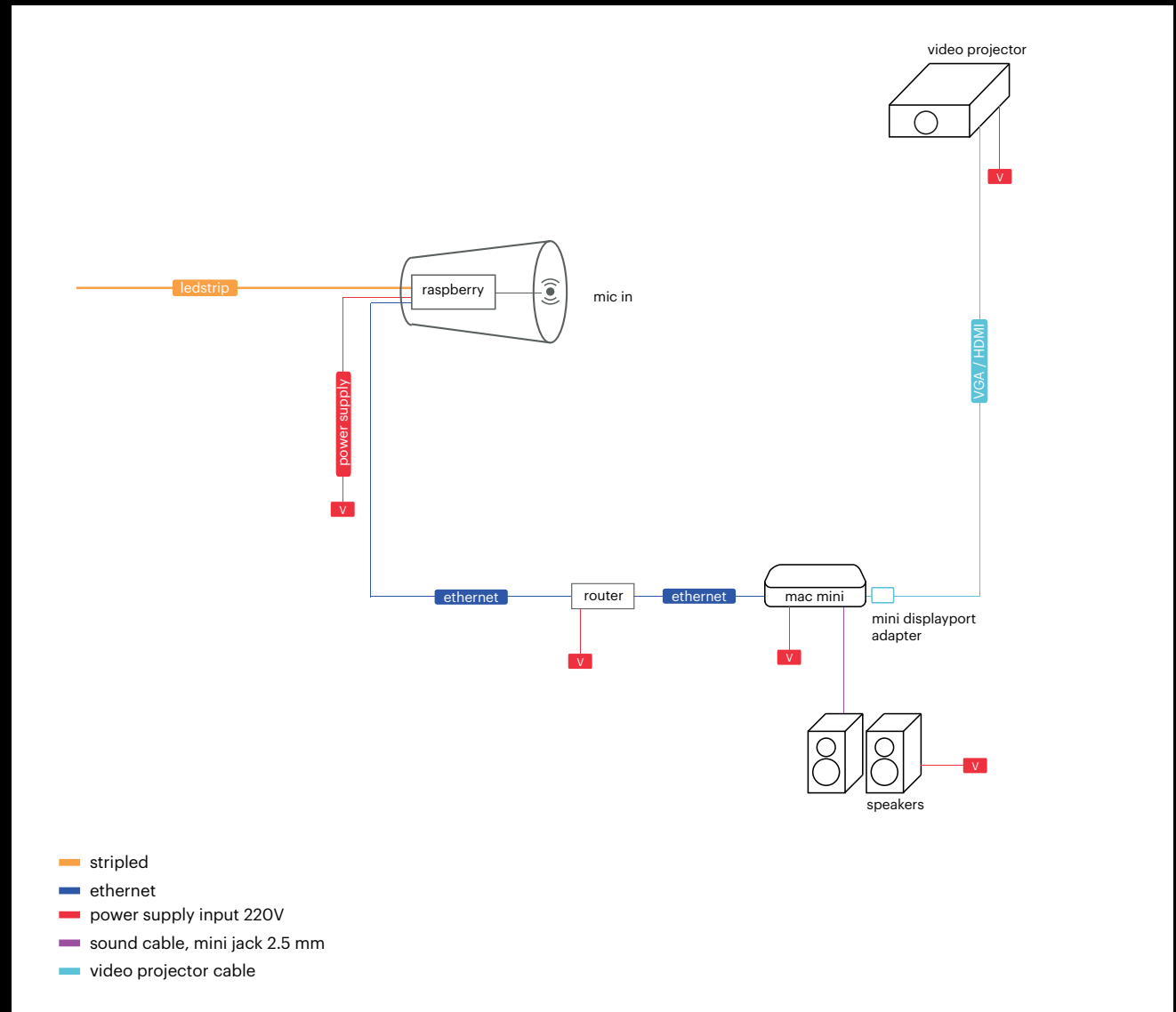
# Technical needs

## Provided by the client

- 1 Video projection system
- 2 Video projection wall
- 3 Sound system
- 4 Plinth
- 5 Mediation with the public team, insurance, security
- 6 Internet connection for the computer through ethernet cable (in case of any technical maintenance intervention)

## Provided by Murmur team

- 1 Murmur hardware
- 2 Murmur software
- 3 Router and ethernet cables for Murmur's local network



# Technical plans

