...Tuuli

Silvia Basso | Silvia Boscolo | Alessandra Ferragina

AIM

The main aim of this project is to allow people to communicate manipulating time and space; in this way busy people or that live in different cities can keep in contact.
A system of little boxes, set in different places, connect each other and send daily messages that users can listen and record whenever they like. The messages can be vocals but they can also be sounds or noises.

USERS

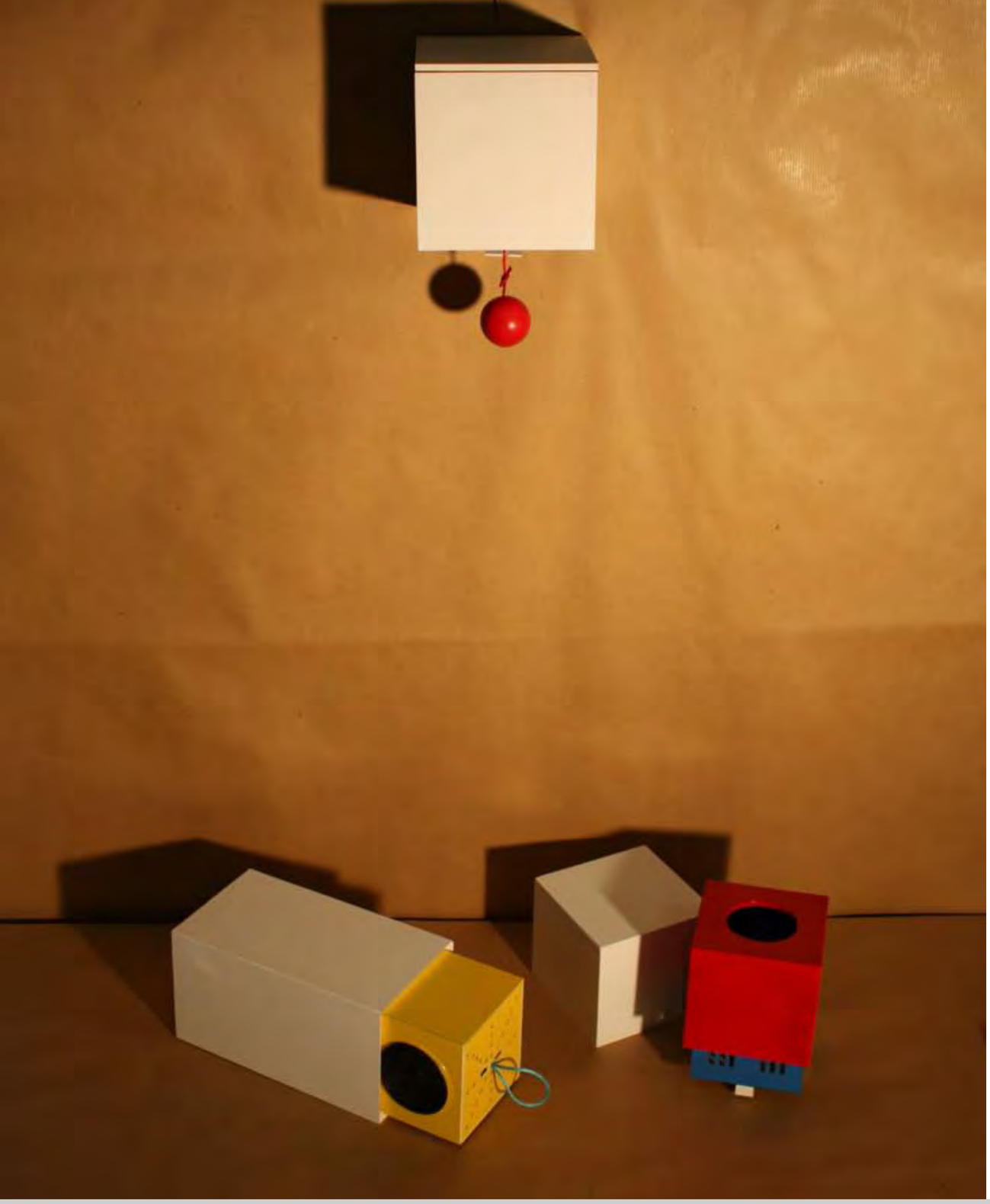
The users will be people that love to keep in touch with family and friends in a regular basic; they can live near each other, but also at hundred miles of distance.
They don't like the cold communication offered by a computer screen or a telephone; for this reason we're concentrating on sounds research so to give each one an individual personality.

CONTEXT OF USE

We're imaging our little box over a table, inside a nice and intimate room, while the user move in that place with confidence and habit.
It surely know the person at the other end and can imaging him/her in their personal space.
Other way the boxes can also be move by the users in order to record sounds that are playing outside.

MOOD

We would love for our
users to feel at easy
using this prodoct,
thanks to the simple and
intuitive interaction. The
physical aspects and
behaviour
of the object will
produce an intimate an
poetic atmosphere,
while the mood is a lot
related to the messages
that are exchanged.



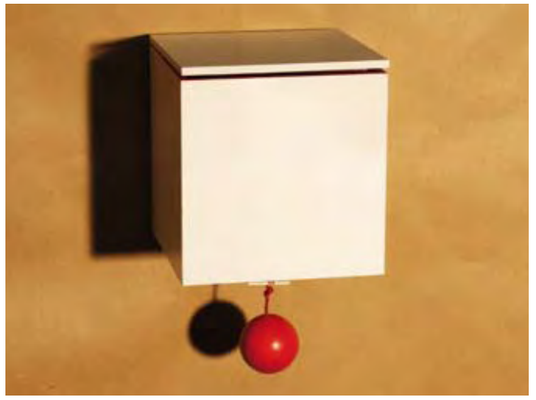
THE TUULI FAMILY

The Tuuli family is made of three boxes that outside are made of the same white plastic, but the inside reveal their real strong personality with different vivid colours.
Also, if from one side they have similar input and output, in the other side they show a personal character by interacting with the users with different behaviours.

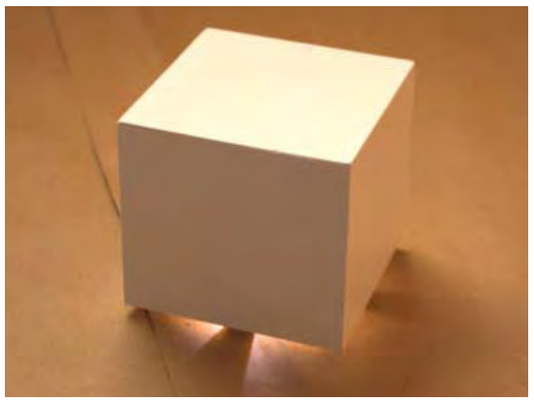
INPUT

OUTPUT

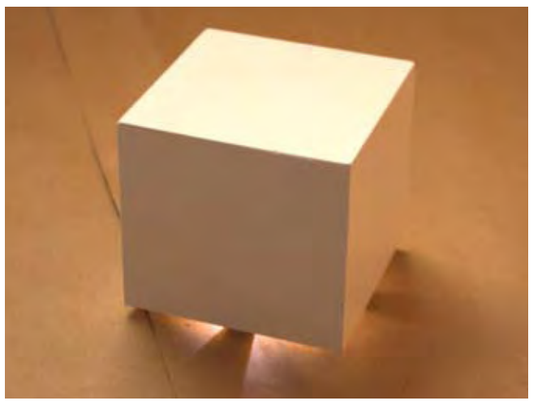
no input receive



a message arrives



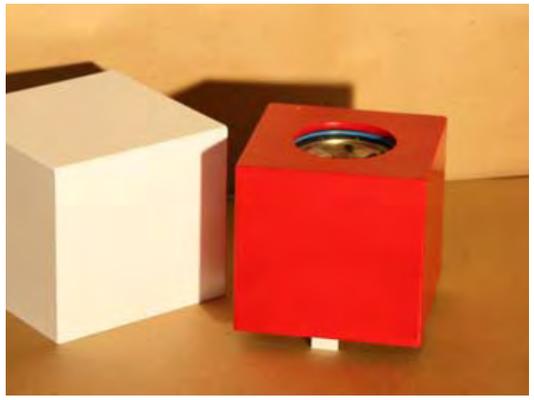
same input,
after some hours

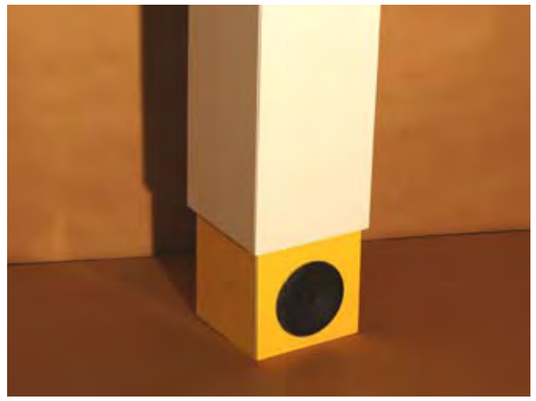


INPUT

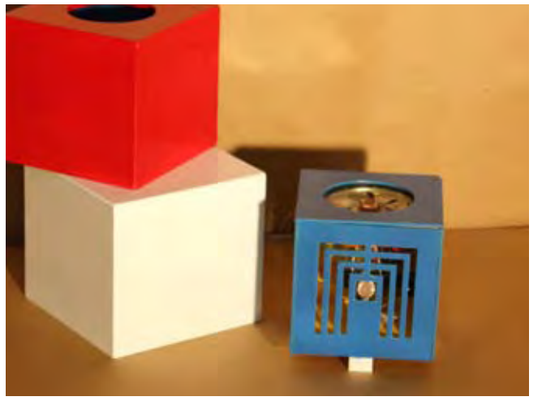
OUTPUT

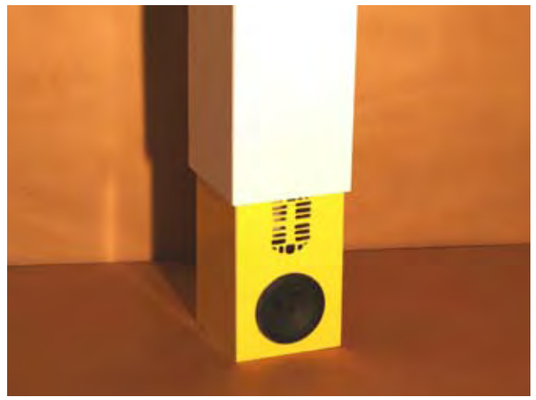
a sensor detect
a different state



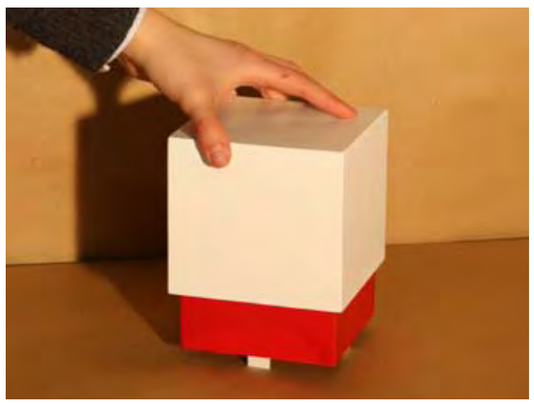


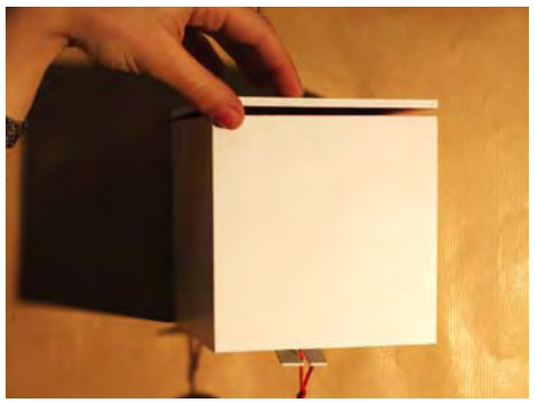
another sensor detect
another change of state

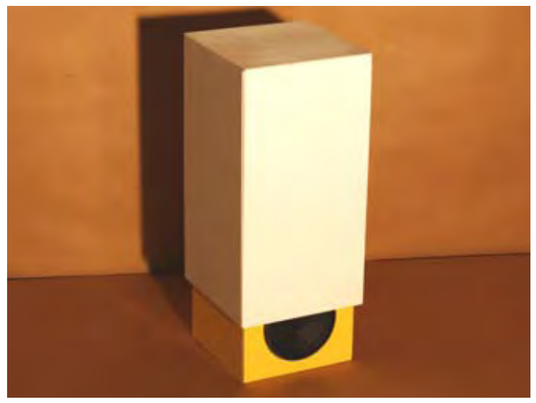


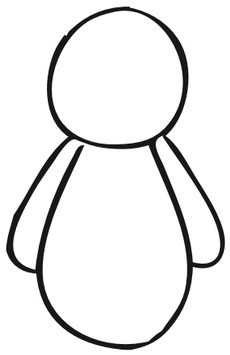
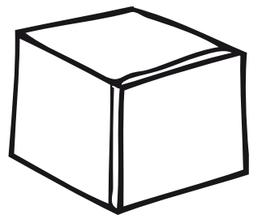
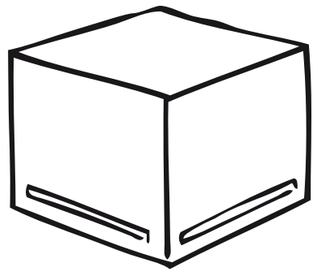
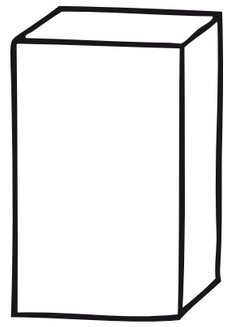
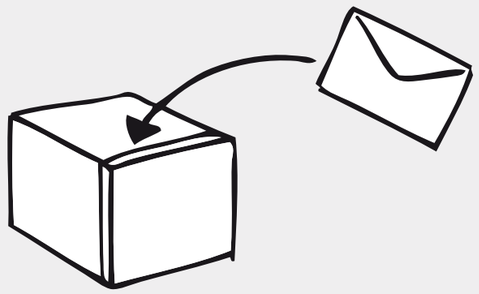
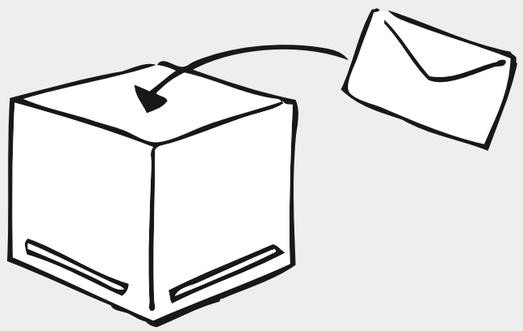
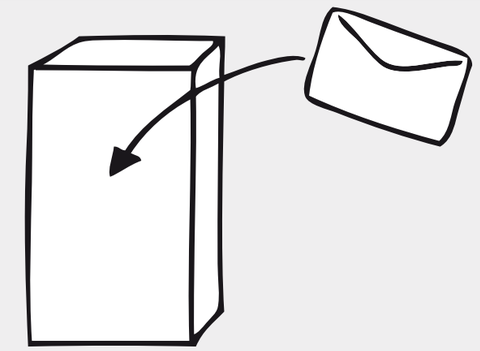
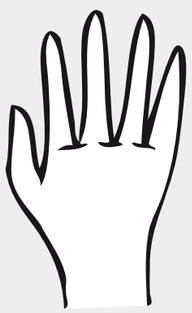
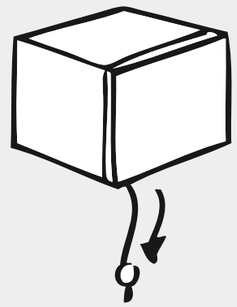
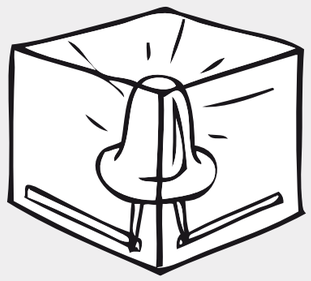


the sensor detect
the initial state







USER	BOX 1	BOX 2	BOX 3
			
			
			

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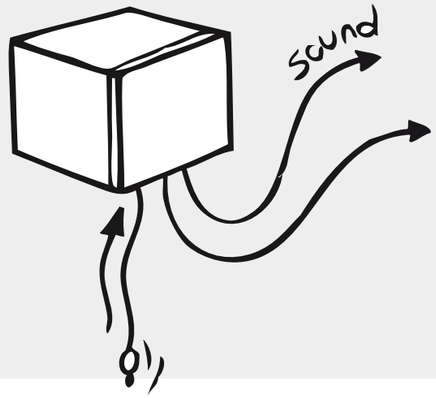
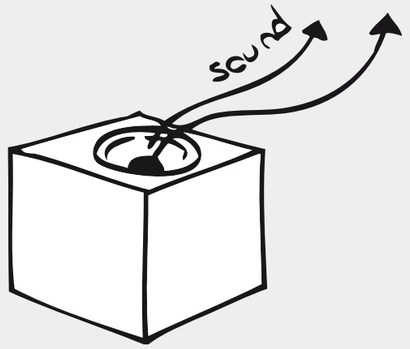
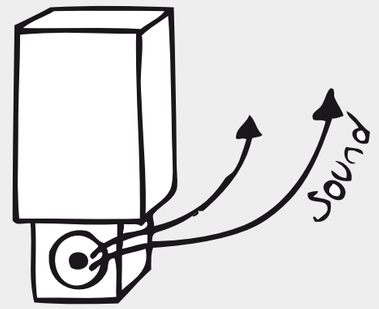
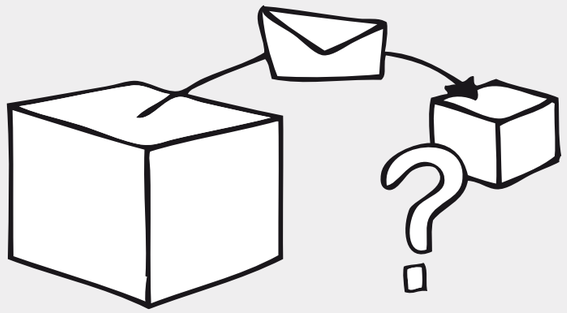
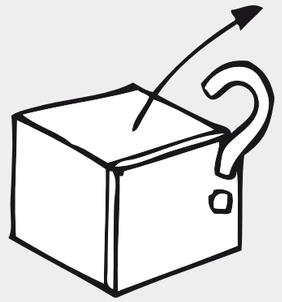
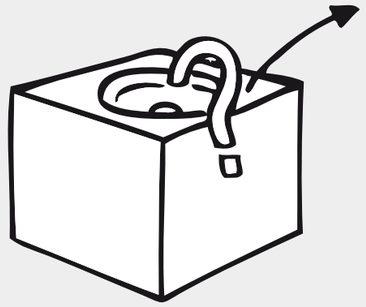
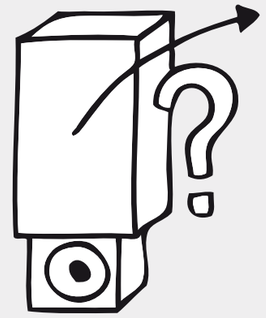
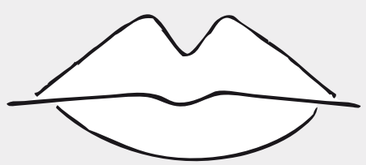
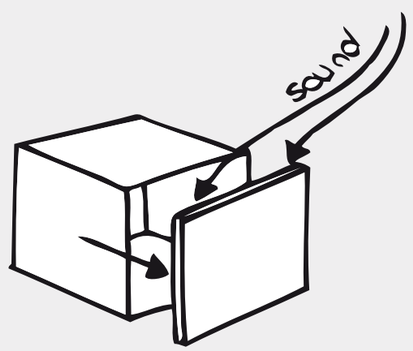
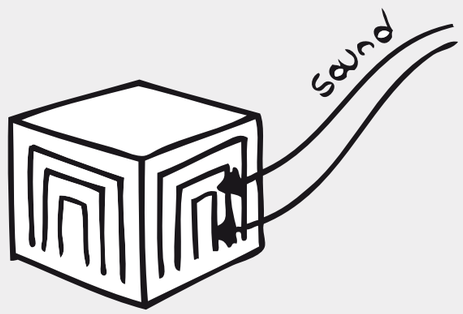
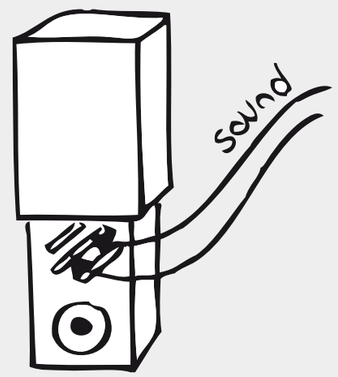
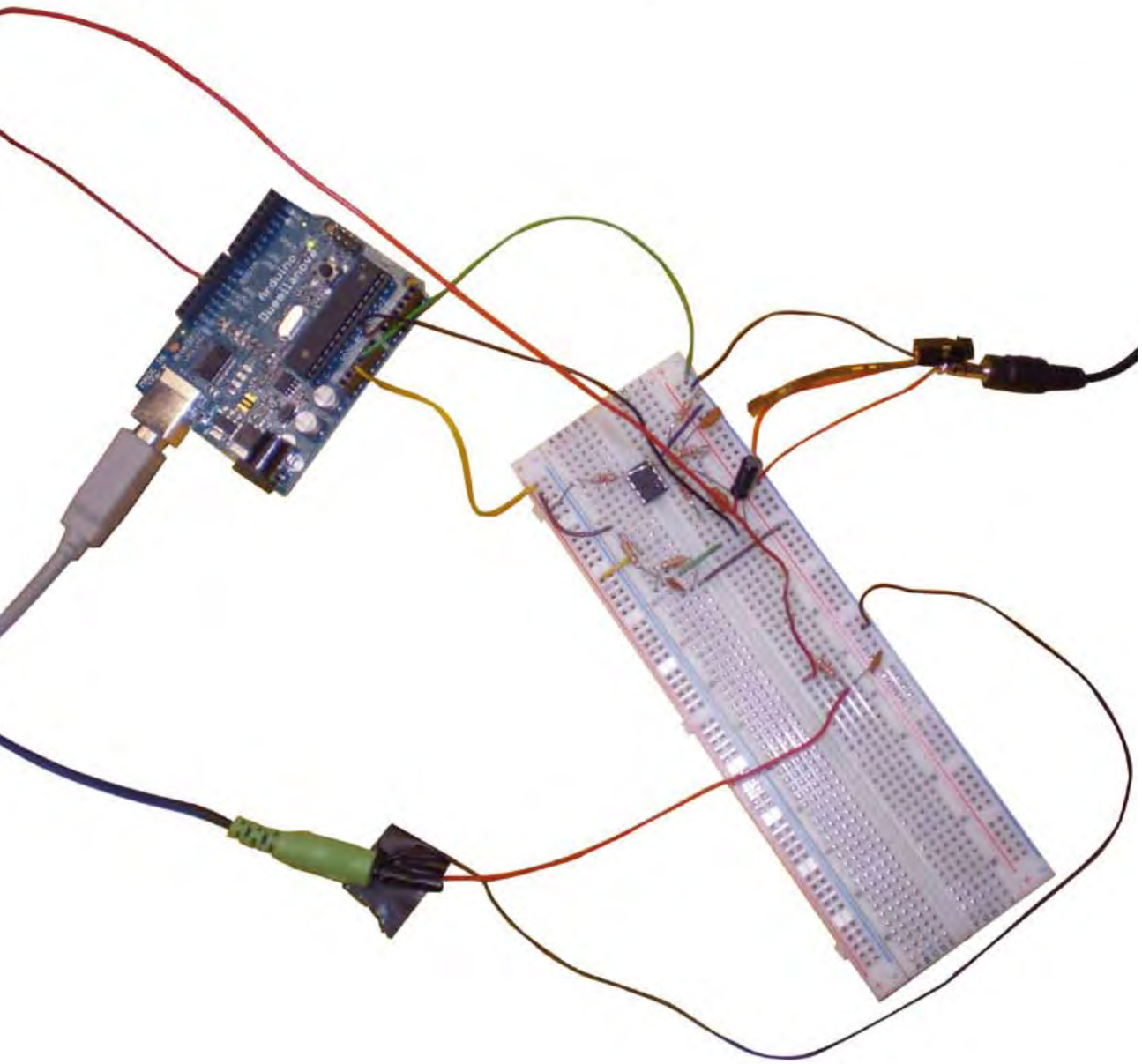
			
			
			

PLAY THE MESSAGE:



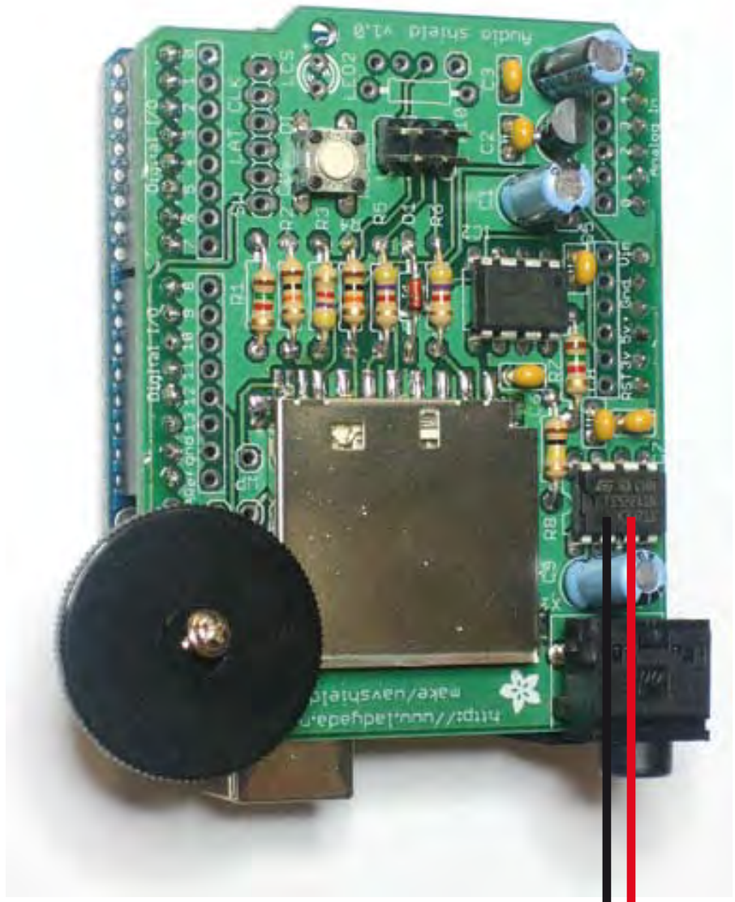
WHY ARDUINO IS NOT THE BEST

After some experiment we noticed that it was really difficult to generate a good quality sound with arduino, because of the conversion of the sound
• from analogue to digital (using the microphone)
• and from digital to analogue (using speakers).
The resault was a noise and disturbed sound, really unpleasant.

PLAY THE MESSAGE:

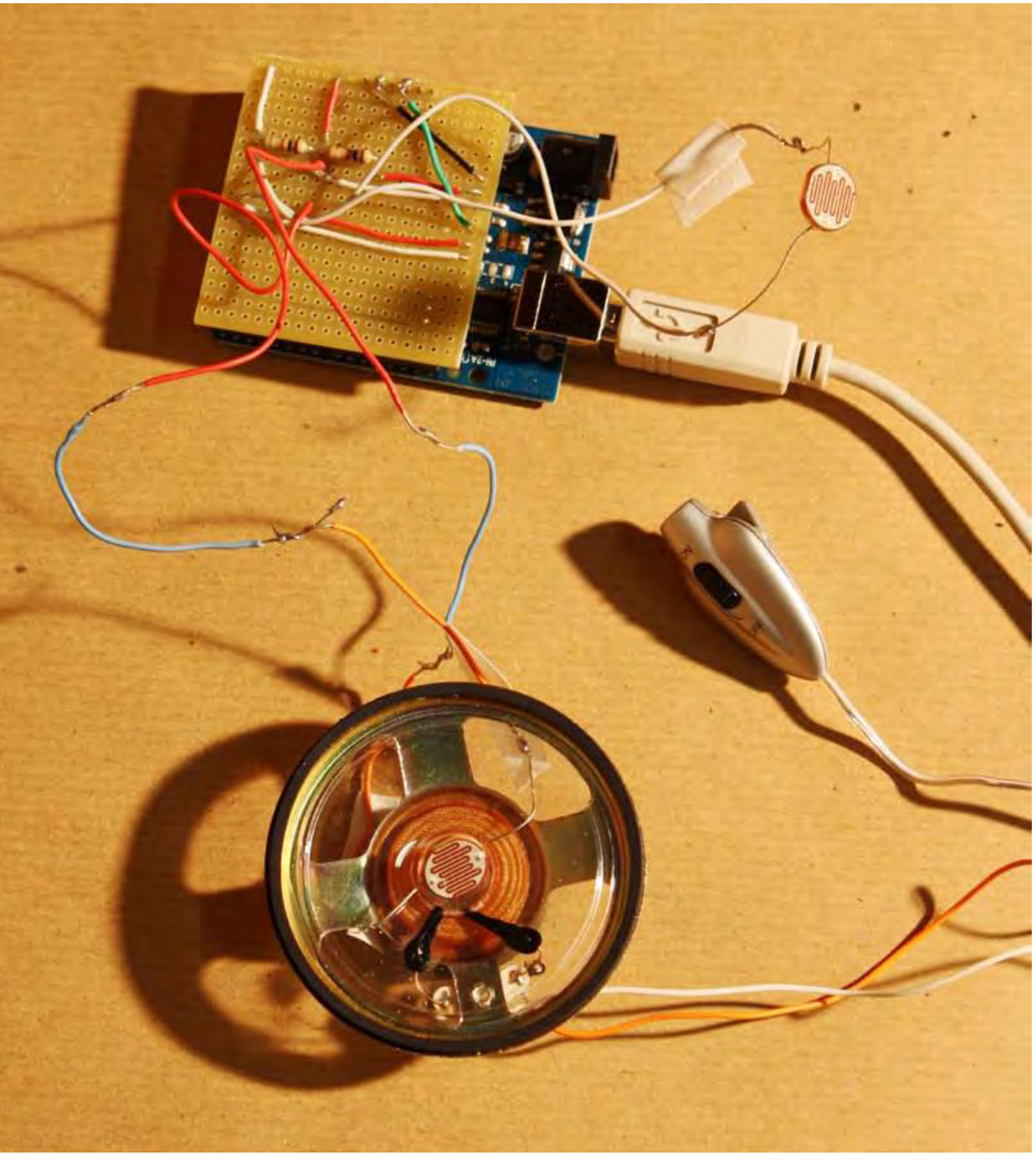
OUR SOLUTION

"Wave Shield" is an analog audio shield for the Arduino and it allows to play audio sound bytes.



WHAT'S ABOUT RECORDING?

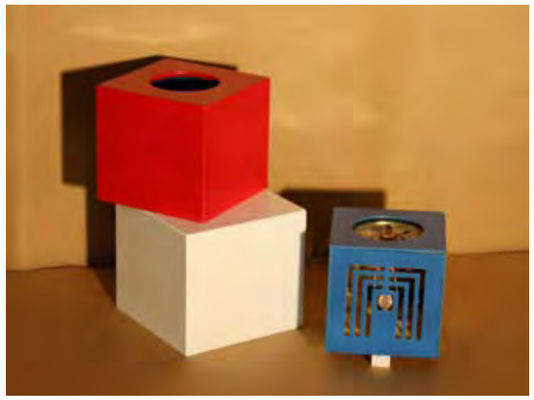
The voice shield can give and receive sounds, but there can be also the possibility to implement it with a microphone.
In this way the microphone can use the sound converter of the shield and record the voice (analog) with good quality.

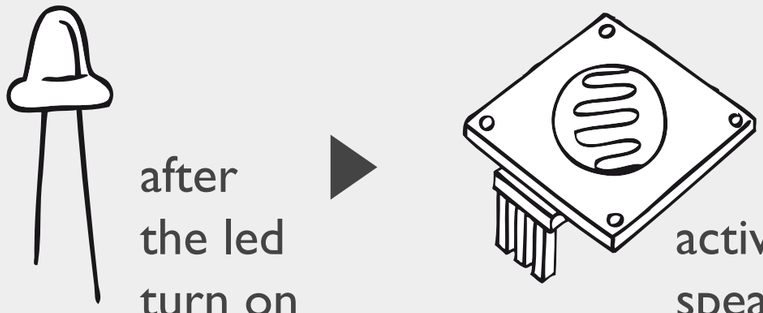


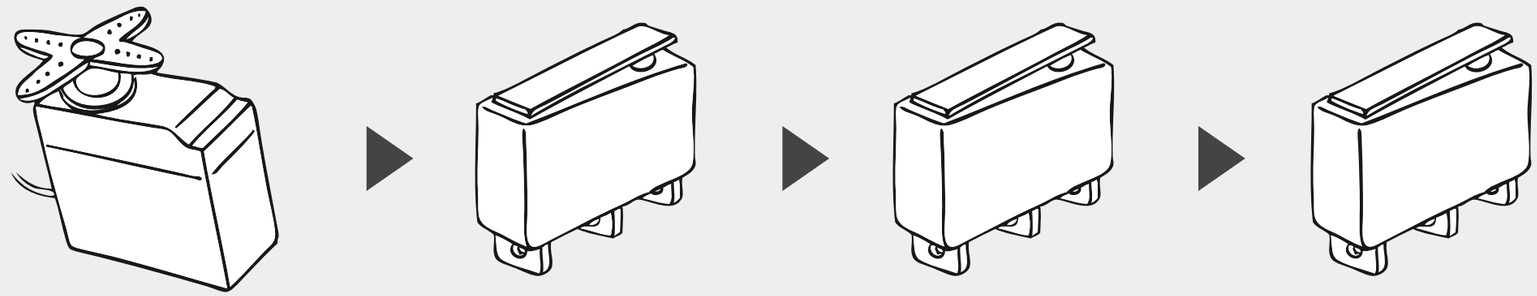
SOUND IN PROTOTYPING

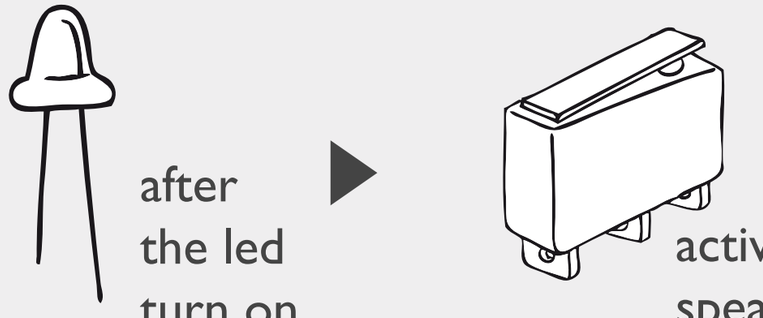
For the prototype we didn't use the wave shield, because of the difficulty to write the right code. Instead we connected the two elements, the microphone and the speaker, to a computer and we are going to control them with a processing code.

SENSOR









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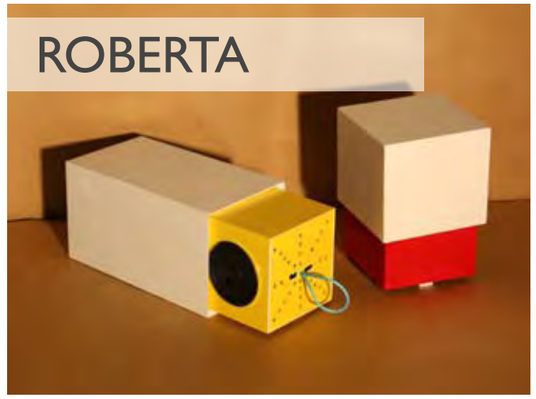
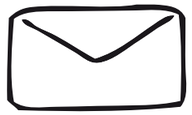
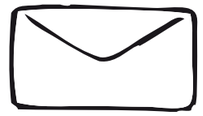
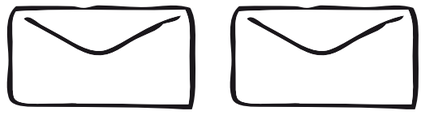
TELECOMMUNICATION

personas & boxes









IP ADDRESS

IP ADDRESS

IP ADDRESSES

technology & communication

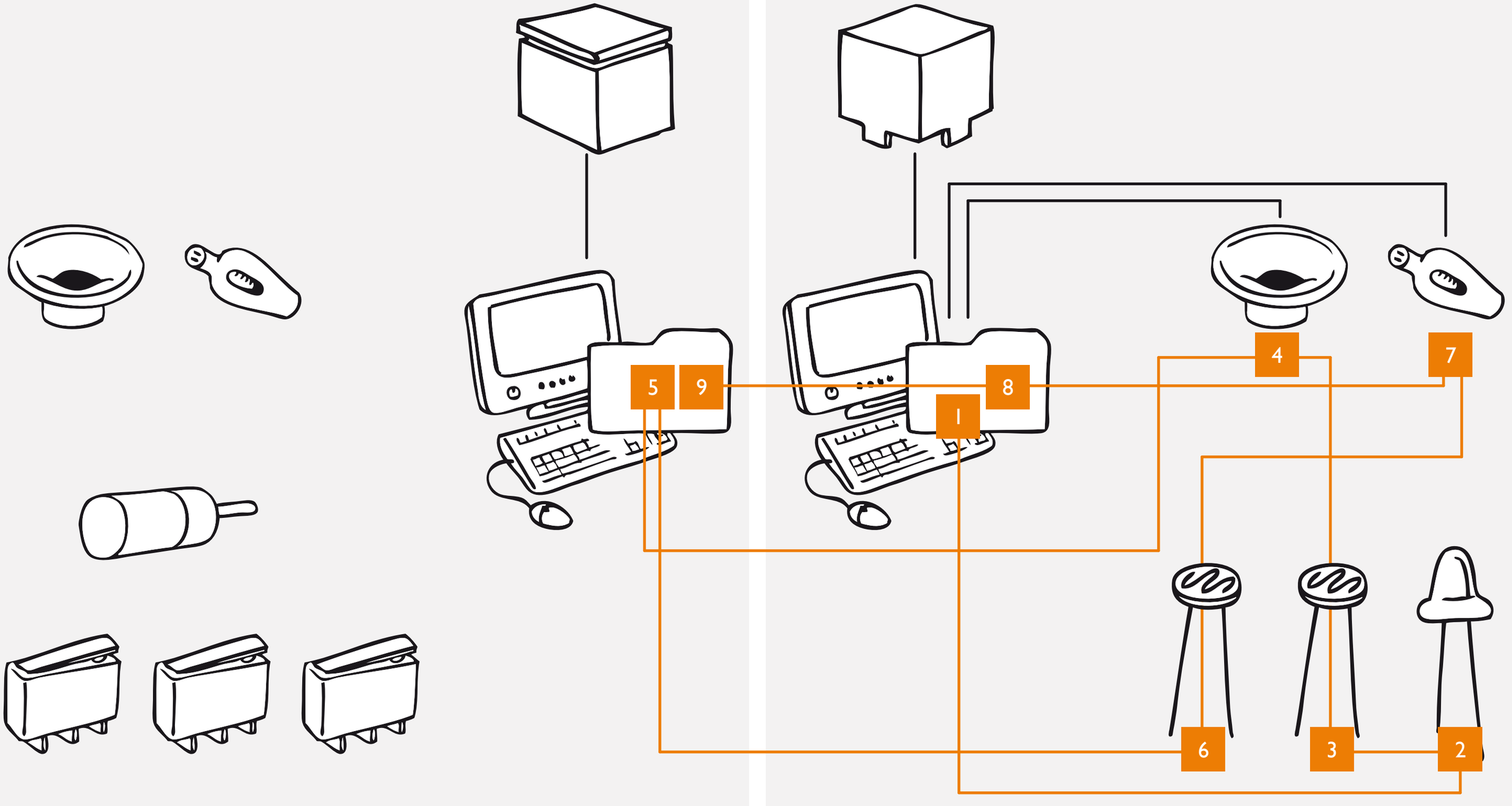
ETHERNET

OR

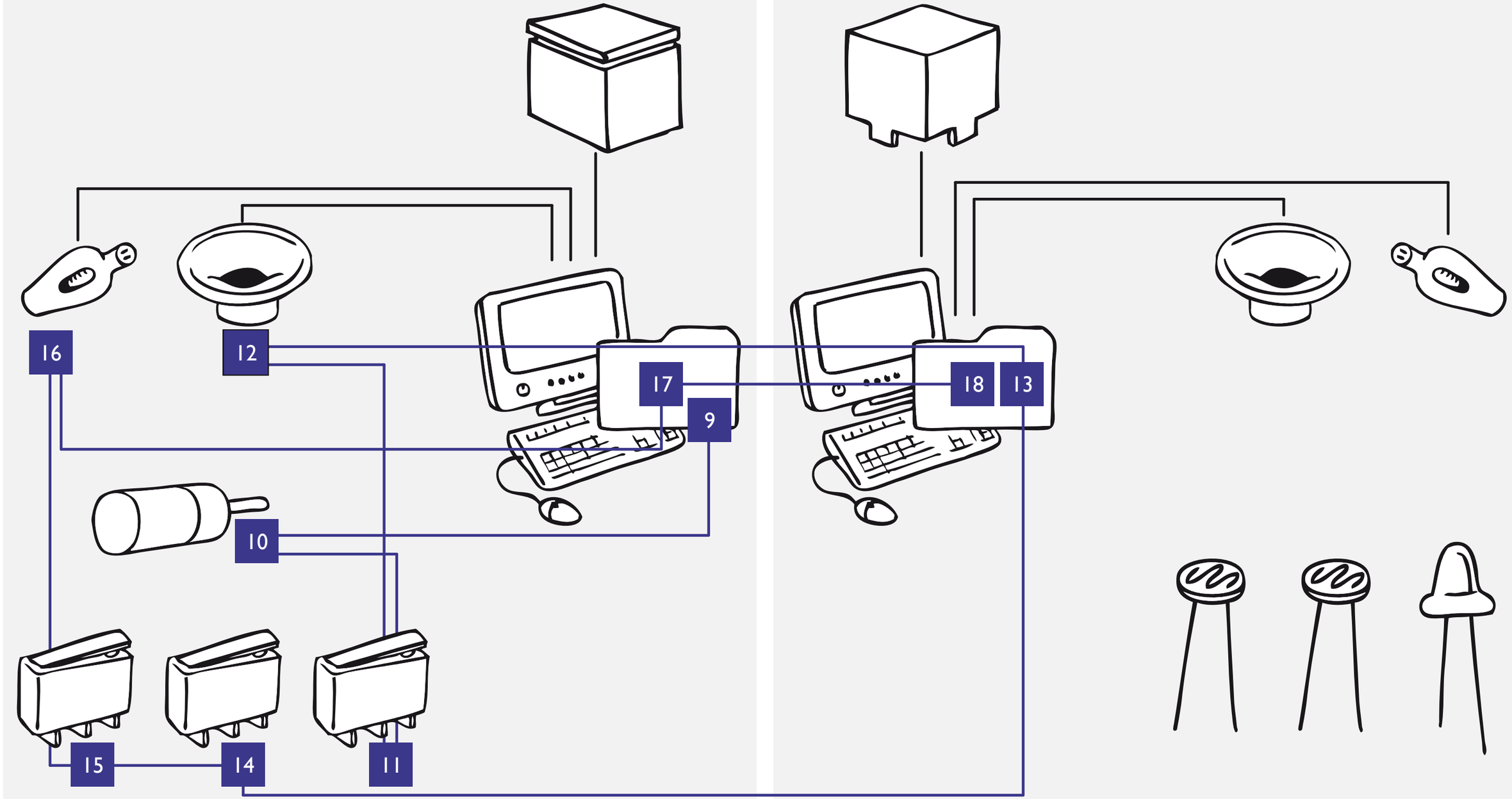
PC SERVER

WEB SERVER → BETTER SOLUTION

PROTOTYPING: TELECOMMUNICATION



PROTOTYPING: TELECOMMUNICATION



Thanks!