CHUDY_2012.

César Escudero Andaluz.

Interface Culture.
(Kunstuniversität, Linz)
Im Waingarten,1
4020 Linz, Austria.
cesarescuderoandaluz@hotmail.com

0. ABSTRACT.

Input device, inspired by old optical-telegraphy systems; detecting through tracking-video the positioning of the fingers on a box equipped with five holes, converting a binary code of five elements in alphanumeric, allowing the communication via computer.

Keywords: *Physical interface, Anachronism, telecommunications, telegraph Audio/visual.*

1. INTRODUCTION.

On March 22, 1792, The meeting of the *French National Brotherhood,* entrusted to the priest **Claude Chappe** to build the first *Optical telegraph line* between Paris and Lille, which began operating in 1794.

Located on top of towers could form a communication network, Its repetition at a distance of three miles could afford to send a message faster than a rider on horseback.
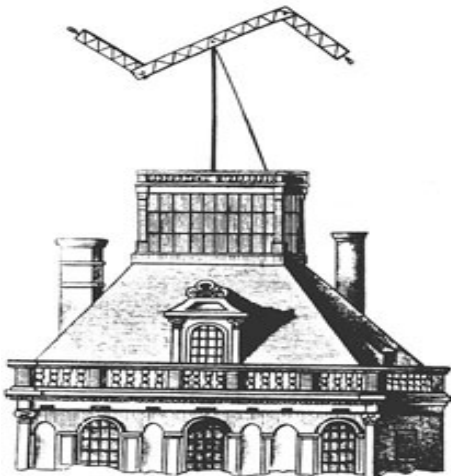

Fig1:Telegraph Chappe. Louvre, French.

The first optical telegraph line between Paris and Lille was twenty-three relay stations between four and ten miles away, depending on the terrain.

Joseph Chudy in 1796, used the theater and opera in order to draw attention in his invention, which he had built nine years earlier. It was a device for transmitting messages through a combination of sounds and images.

It was formed by a large proportions panel, inside there was five horizontal and equidistant perforations.

In the backside of the panel was equipped with five shutters, one for each hole. It was driven manually, opening or closing each of these five elements, allowing or restricting the passage of light. (*Diagram: Fig 2*).

The communication principle takes place when the five lights are on, [OOOOO]. When the last lamp was closed was the letter A [OOOOØ].

Fig 2,3. Chudy/alphabetic, code translation.

B [OOOØO].

C [OOOØØ]. So on until a total of thirty-two signals. This could represent the five letters of the alphabet and the combination of these, in what we can call *quinary* code. This code was also transferred to the sound with bells.

2. DESCRIPTION.

Creating a physical interface and portable, mediating between the symbolic code of Joseph Chudy and the alphabetic code. With the aim of establishing dialogue, between humans & computers.

The interface consists of a wood or plastic box of an approximate size 15x15x15cm, with five parallel and equidistant holes of 5 mm in diameter, at a distance of 15mm from each others, on one side of the box. Inside, a webcam recognized by tracking when the hole is closed by the positioning of the fingers.

Using programming code (Processing) It is transformed the quintary code in alphabetical.
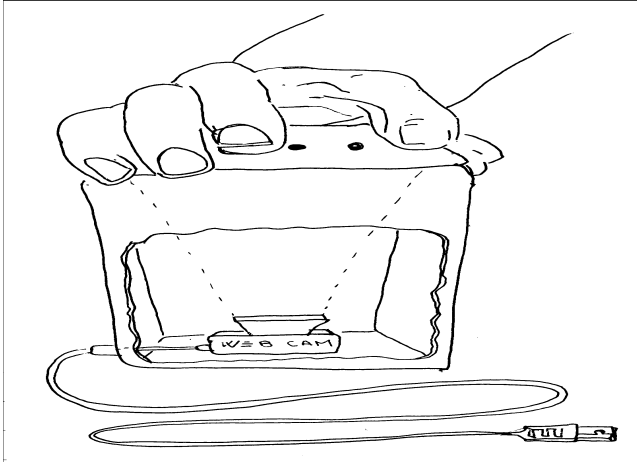
Form of use:

The end outcome is a peripheral of the similar proportions to the mouse. The application start when the user placing his hand on the top position and it is covered each one of the holes with the fingers, pressing the corresponding hole.

Software requirements:

- Processing. URL: http://processing.org/

Hardware requirements:

- Box (wood, metal, plastic, paper) 15x15x15, aprox.
- Web Cam.

3. REFERENCES.

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<http://mitpress.mit.edu >. Págs 183-194.