

Christoffer Vincent Thon

Vision

The project aims to explore the possibilities of combining EEG with real time control of lights and projection mapping in order to create an immersive, performative experience.

About the technology

EEG or electroencephalography is a non-invasive method of reading and recording electrical activity in the brain. In recent years portable EEG devices are becoming increasingly accessible, allowing for a wide range of DIY and artistic applications. Still, while there are many limitations to the technology, there are two approaches that sparked our interest: either measuring general states of attention and discomfort and mapping the values to generative visuals and lights or using the technology as brain-computer interface that allows a more direct control of linked devices with one's mind.

In practical terms this means that as the EEG electrodes measure the electric signals of the brain, computers can be trained to recognize and interpret specific mental commands of the user to control linked devices and softwares by thinking of it or translate mental state of the user into waveforms and numbers that can in turn be mapped as parameters of projected motion graphics and light such as rhythm, dynamics, brightness and colour.

How I envisage it being applied in relation to the performative arts

First of all, we are working towards an application of the technology to an extent where it can be introduced to our potential collaborators to explore how it can be applied in a performative context. Either by training the EEG interface to execute a choreography of thought-driven visuals or to enhance and extend the expressive potential of a performing body by revealing the performer's cognitive processes through, in our case, the medium of light. While the technology could allow us to enter what might seem like the realm of science fiction, we believe that critical reflection on the pitfalls, misconceptions and pseudo-scientific profiteering that surrounds all things "neuroscience" can give a strong narrative edge to our work, as the world of biofeedback miracle cures, neural marketing and promises of cybernetically augmented self actualization is fascinating and terrifying in equal measure.

Future ambition

While the immediate goal is to devise a performance or installation for Click Festival 2019, we hope that it will only be the first milestone for fruitful collaboration, as the project can be both relevant and exciting in relation to both performing and visual art venues, festivals and events and maybe even tap into the world of academia and tech.

Bio

Christoffer has a background from the IT University of Copenhagen and the Technical University of Denmark. He sees technology as a media of artistic expression on par with more traditional materials and his artistic projects revolve around natural or technical phenomena often intangible in nature. In practical terms, this could be visualizing the trajectory of particles from space or creating an interactive art installation with which a path finding algorithm is used to find the shortest path between people. Read more about Christoffer's work [HERE](#).

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