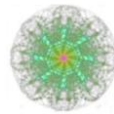


'I am, you are, we are all together...'

HOVERING BRAIN-FREQUENCY-BORNE ROBOT ARTWORK

Project plan for Vitus Bering Innovation Park (VBIP)

Artwork by Lisa Rosenmeier



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BACKGROUND

Vitus Bering Innovation Park (VBIP), which houses private firms, centres for business, innovation and tourism along with a university college, wishes to acquire a decoration that will give a stronger profile to the activities taking place in the building and provide a focal point for its users and visitors.

As the building is energy-friendly and technologically innovative, a digital work is wished for. Energi Horsens Fonden is the chief contributor to the project and will contribute the sum of one million kroner, which will be supplemented with funds from other foundations.



The house contains 8.000 m² distributed over seven floors and was built as a class 1 low-energy building – in itself a new departure for business premises – and was realised in a partnership between the owners VIA University College, the Energi Horsens Fonden and the Municipality of Horsens.

The purpose of Vitus Bering Innovation Park is to strengthen development and growth in the fields of education and business. The building, which has a capacity of 770 people and up to 550 daily users, was designed by Arkitektfirmaet C. F. Møller.

Artist Lisa Rosenmeier has been commissioned to present an artwork that will communicate a dynamic impression of inspiration, as well as aesthetic sophistication and technological innovation.

ARTISTIC IDEA



The project's working title is "I am, you are, we are all together...". The artwork will produce a visualization of the creative flow of thoughts in the house in the form of a mysteriously hovering artwork above the building's communal space – the atrium.

I AM, YOU ARE, WE ARE ALL TOGETHER ...



"I am, you are, we are all together..." will be a hovering sculptural system composed of a swarm of small units or seven singular units. People present in the house will contribute to the total mental state and will affect the emergence and fluctuations of the artwork.

Each hovering object will be able to move in programmed patterns and change colour in accordance with the level of concentration among the users of the house.

The brain produces electric impulses night and day. This activity will be registered via "accessories or gadgets" using EEG technology, or alternatively via non-invasive ECG monitoring of heart rhythms.

The artwork will consist of interacting forms, whose patterns of movement and colour changes will reflect seven levels of concentration (Delta, Theta, Alfa 1, Alfa 2, Beta1, Beta2 and Gamma).



SVARM

neutral



SVARM

formation

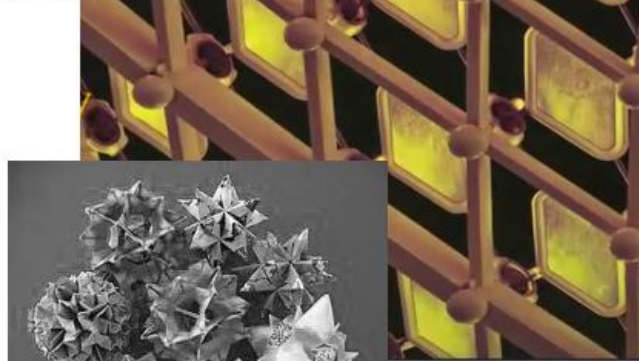
	COLOUR	SHAPE	SURFACE	LOCATION	MOVEMENT	ACTIVATED
DELTA 0,5-4 Hz Detached awareness. Sleep (0.5-1.5 Hz brings pain relief).	Black.	Amorphous, the smallest of the seven.	Dark, matt, closed structure.	Near the floor, the lowest of the all.	Steady, circular movement. Rotates around its own axis.	Few red flashes to lighten up.
THETA 4-8 Hz Meditation. Intuition, creativity and inspiration. Gateway to learning and memory (5 Hz equals sleep replacement).	Dark.	Organic, flat shape, can possibly change.	Geometric structures, like tight fish scales. Transparent, so the diverse structures underneath will show.	Free movement up and down, no defined speed.	Vertical axis. Moves up and down between floor and ceiling. High acceleration. Random movement pattern.	Light glimpses in green-blue and dark red.
ALPHA 1 8-12 Hz Relaxation and expanded awareness. Good for creative visualization. Frequency associated with earth's magnetic field 9.4 Hz.	Red, orange.	Organic, twisted origami.	Geometric structures, very organic, appears as if it could continue to grow by itself..	Free movement near Theta og Alpha 2.	Quiet, lazy, soft movement (slow motion dance).	Warm red and orange lights from within. Synchronized with Theta's activity with a one second delay.
ALPHA 2 12-14 Hz Associated with a quiet body and active mind. Paying attention. 13 Hz - "normal", basic state of mind.	Potentially all colours.	Symmetric, maybe round, stringent shape.	Symmetric structures.	Moves in its on cycle.	Appears to "bring together" all the other shapes.	Potentially all colours. Stable lightsource, easy crossfade.
Beta 1 12-16 Hz Alertness and concentration. Higher cognitive process and rational analytical, problem solving thinking (used to treat ADHD).	Blue-violet tones.	Rounded shape. Focused lines.	Covered by lots of little lights arranged in linear origami structures.	Moves about in the middle sphere of the space.	Majestic appearance, singular and significant changes of light and colour.	Blue-violet tones.
Beta 2 16-24 Hz Psychological arousal and response to threat. 18 and 21 Hz for a short period produce a sense of euphoria.	Sharp yellow, green, pink almost neon.	Small "angry shape". Maybe asymmetrical, appears to be out of balance.	Origami with long pointy tips.	Moves about just above the middle sphere of the space.	High speed, zigzag-movement around and around.	Light changes like wildfire.
GAMMA 36-42 Hz Euphoria, innovative and creative imagination and excellent performance.	White, opal, rainbow-shades.	An oval shape, pointing upwards.	Crystalline, the most beautiful of them all.	The upper sphere of the space.	The upper sphere of the space (alternatively "jumping up and down" as if in excitement).	Lots of light changes; puzzling fireworks. enchanting flickering.

The brain's seven different frequencies can be compared with the gears of a car. We ought to be able shift and "change gear" to achieve optimal activity and progress. With this fluctuating, pulsating art work VBIP's users and visitors will become conscious of these important processes.



INPUT / OUTPUT

- Singular flying robot units
- Each unit carries LED
- LED-colour and movement defined by current brain-frequency input.



Each unit will have a battery system, which will define shifts in light and movement. Helium will be used. As a rule the sculpture will be active as long as there are people in the building. The units will rest in a docking station in a hole in the floor/wall. The programming and final output will be determined at a later stage in the process.

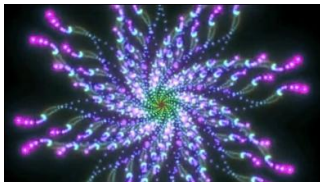
Inspiration derives from technically up-front productions and from natural phenomena. See:



<http://www.youtube.com/watch?v=HVhVC1FMg6Y&feature=related>
Kinetic Sculpture



<http://www.youtube.com/watch?v=Qy90d0XvJlE&feature=related>
Self-illuminating Jellyfish



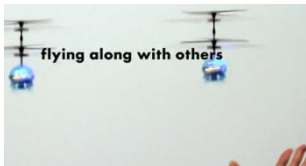
http://www.youtube.com/watch?v=uiQ7H8w5_Wo
Structure of Diode Light Patterns (gammadrone)



<http://www.youtube.com/watch?v=jPGgl5VH5go&feature=related>
Festo Air Penguin



<http://www.youtube.com/watch?v=SkvpEfAPXn4>
Robots with a Mind of their own



<http://senseable.mit.edu/flyfire/>
Flyfire from MIT



http://www.arup.com/Projects/Yas_Hotel.aspx#!
LED structure – living sculpture

SOUND MODULE

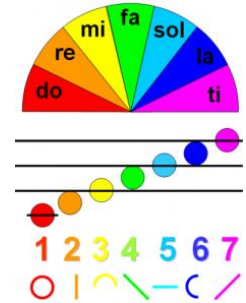
Just as brain scientists divide human brain activity into seven stages, musical theory distinguishes between seven tones in a scale, which can in principle contain all the music in the world. There are two seven-tone scales, one in major, the other in minor.

It is a natural idea to operate seven tone sequences for the seven stages of brain wave activity. The sculpture can include seven loudspeakers, each with its own tone sequence.

The musical sequences may have a duration of up to a year, and it will be possible to mix them depending on how they are programmed, and where the robots are in relation to one another. In this way the sound will also be harmonised in accordance with the brain wave frequency measurements.

The sound picture in the space will thus constantly fluctuate. Depending where in the space one is, it will be possible to work with the difference between “long sounds” to motivate greater focus as well as with “relaxing sounds”.

The sound module is a potential add-on, decisions about sound to be made primo 2012.



TIME SCHEDULE: tasks and resources

2011-09

Development of prototypes initiated, arrange collaboration between VIA University College and relevant partners. Explore and confirm potentials.

2011-10

Further definition of artistic principles, data content and technical solutions.

2011-12

Status and knowledge-sharing in respect of the result of the collaborative process.

2012-01

Detailed project plan, status of financing and agreements concluded with external suppliers.

Realisation of the project is expected to start in mid-2012 and be conclude by the end of 2012.

The art work is conceived by **Lisa Rosenmeier**, who was trained at the Royal Danish Academy of Fine Arts and has taught innovation processes at the Designskolen Kolding. She has taken part in group and solo exhibitions in Denmark and abroad and is represented at several Danish museums. Lisa Rosenmeier's artistic production is largely research-based and she works with lyrical and often technically sophisticated installations that address all the senses (further details: www.lisarosenmeier.net). The artist is working in this project together with art historian and project developer **Line Rosenvinge** from Tender Task, who develops and supports major as well as short-term projects for public organisations, private companies and individual artists (further details: www.tendertask.com).

SUMMARY:

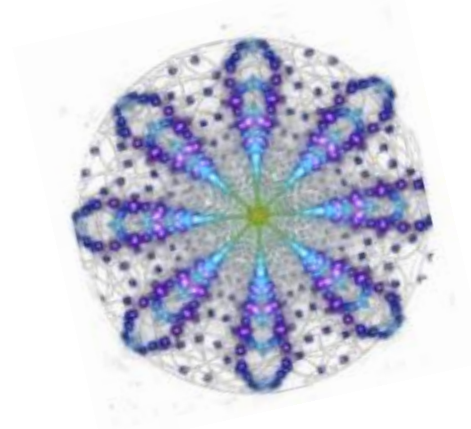
aesthetic principles and relevance

The sculpture will highlight the multiplicity and impermanence in mental states and processes.

The sculpture will be composed of small forms that together constitute a swarm. The individual forms will represent the individual persons who are present in the building.

The changing movements, patterns and colours of the sculpture will constitute a visual rendering of brain waves, for the brain waves may be dreams, potentials, reflections and visions on their way to being concretised. The work is therefore a visualisation of the ongoing innovation processes that are a vital part of VBIP's essence and activities.

Technical implementation and aesthetic relevance will be balanced precisely in relation to form, function and content.



- The artwork will be a visualisation of the **flow of creative thoughts** in the building
- The artwork will strengthen the sense that we have of the **strangeness and changeability** contained in innovation processes.
- The artwork will show that the building embraces **innovative technology** from its innermost core to its outermost exterior.



www.lisarosenmeier.info

“There are about 100 billion neurons in the human brain, the same number of stars in our galaxy.”