

Mediaura Project

Biomorphic Music Visualisation

Introduction

It is a study of the use of biofeedback as an alternative form of human-computer interface, but in particular as a method of enhancing a user's sense of embodiment in typical virtual activities.

To achieve this it aims to create an experience that connects emotional responses to a virtual environment traditionally void of user interaction.

{Field Definition}



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Biofeedback

Biofeedback is a process that involves measuring a subject's specific and quantifiable bodily functions...

David Rosenboom: "The term 'biofeedback' will be used herein to refer to the presentation to an organism, through sensory input channels, of information about the state and/or course of change of a biological process in that organism, for the purpose of achieving some measure of regulation or performance control over that process, or simply for the purpose of internal exploration and enhanced self-awareness. Normally, this information will be of a type not otherwise available to that organism. It does not presuppose, however, that such an external indicator could not, through disciplined practice, be replaced by an internal mechanism of which the subject can achieve awareness without the aid of an artificial monitoring system."

{Field Definition}



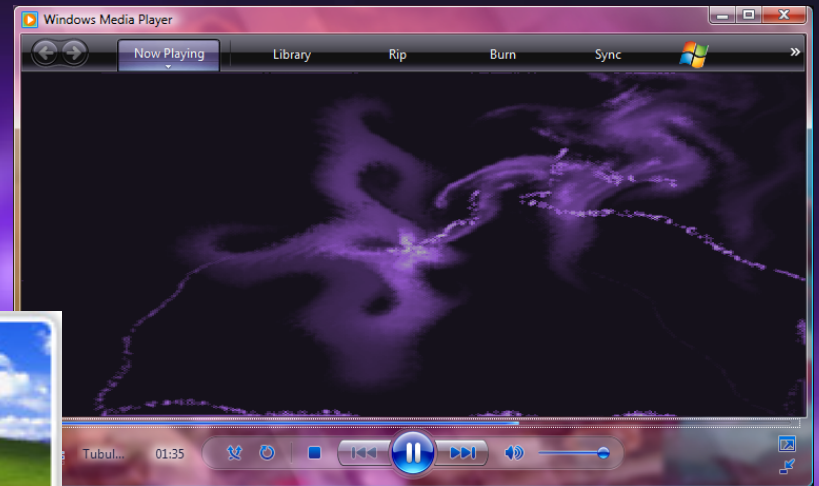
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Music Visualisation

I chose the music visualisation as an application because it is an interactively sterile digital environment while conversely being an expression of a form based on artistic and emotional grounds.

Microsoft DirectX and Windows Media Player offers the flexibility to create a specialised application, and a large audience to distribute it to.



{Technology}

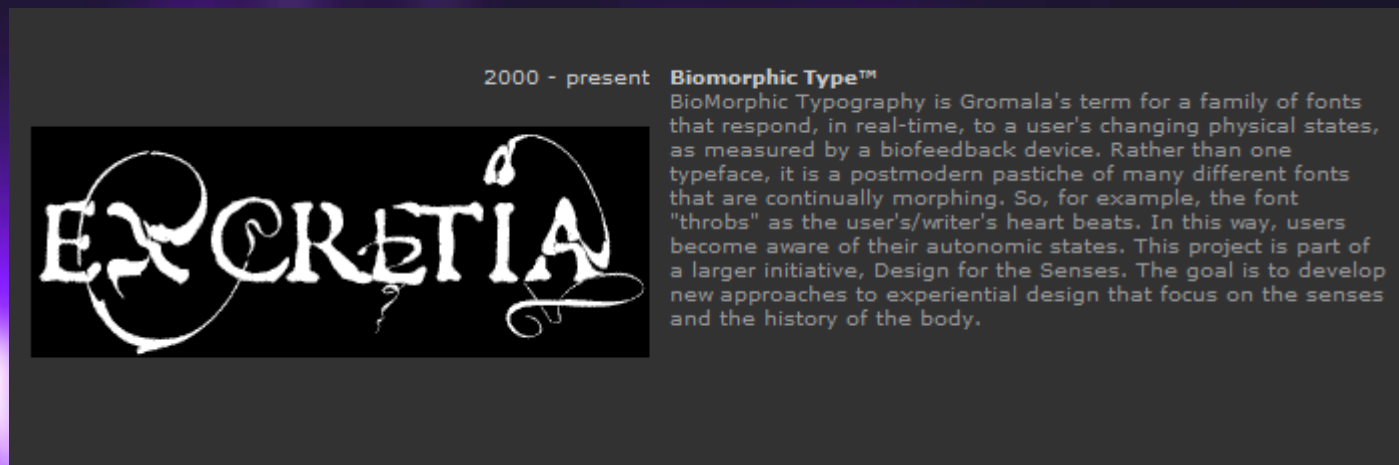


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Similar Works

Diane Gromala's Excretia biomorphic font – a typical feature of a modern virtual interface that has been adapted to respond to biofeedback stimuli.



{Key Players}



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Similar Works

Journey to the Wild Divine 'entertainment product' – the objective of this system is to make a user more aware of their autonomic functions via feedback in such a way that they can manipulate it to a more desirable state under heavy influence or suggestion from the software itself.

It is strongly connected with biofeedback's 1960's origins as a form of medical treatment.



{Key Players}



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Similar Works

David Rosenboom – The Performing Brain, produced pieces of music based on biofeedback, using brainwaves as a performance interface. While the emphasis is moving away from changing the user's behaviour to conform to the system but rather vice versa, the performer's behaviour paradigm is still the same in the sense that there will be wilful manipulation of their own autonomous responses.

Fundamentally it is showing the use of biofeedback purely as a form of control interface rather than providing a feedback loop for creating a state of awareness.

{Key Players}

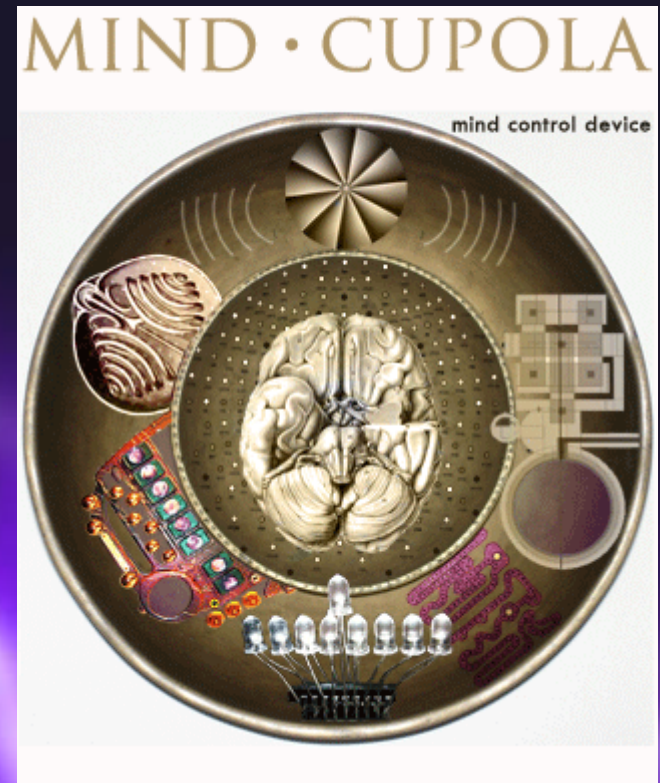


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Similar Works

Brigitte Zics – Mind Cupola piece – this artwork has a similar objective to the Wild Divine game, the objective being that through the mediation of the piece the observer will come to be aware of their own autonomous responses and be ‘guided’ to a state termed as “equilibrium”.



{Key Players}



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Visual Response

Fast moving water and rapidly changing colour provide an imitation of the traditional music visualisation.

Biofeedback also has a slower but longer impact on the surrounding terrain, forming hills and dips.

The avatar provides a symbolic link to biofeedback's origins as a medical process.



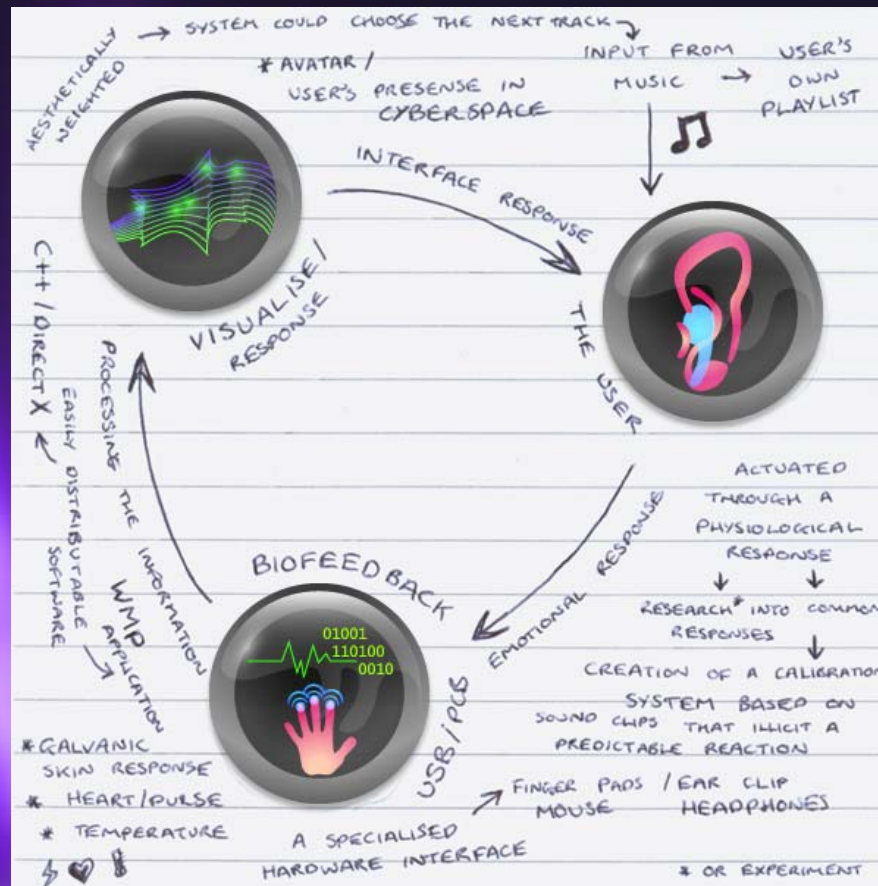
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Questions?



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