

VIFE _alpha v.01

Real-time Visual Sound Installation performed by Glove-Gesture

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ABSTRACT

We present a Virtual Interface to Feel Emotions called VIFE _alpha v.01 (Virtual Interface to Feel Emotions). The work investigates the idea of Synaesthesia and her enormous possibilities creating new realities, sensations and zones where the user can find new points of interaction. This interface allows the user to create sonorous and visual compositions in real time. 6 three-dimensional sonorous forms are modified according to the movements of the user. These forms represent sonorous objects that respond to this by means of sensorial stimuli. Multiple combinations of colors and sound effects superpose to an the others to give rise to a unique experience.

Keywords

Synaesthesia, 3D render, new reality, virtual interface, creative interaction, sensors.

1. INTRODUCTION

Music and image always have been united, and it has been always tried to create its perfect fusion. This work investigates and experiments on that idea. Kandinsky actively contributed to the creation of a relation between forms and colors. In the Other hand Oscar Schlemmer began a contribution to the performance with him work "*Triadic Ballet*". The work AudioPad[1] is another influence for this installation, with him interface with colors and forms to represent the sound. The game REZ[2] is an important influence for this work. This game experiment with rhythm and visual effects, abstract forms and an incredible velocity. REZ have like influence Kandinsky, too. Joe Paradiso[3] and his work

made in MIT: "Passive Magnetic Tags" is another influence. The Passive Magnetics Tags are forms that cause a sound stimulation and visual effect, something like that appear in the interface of VIFE _alpha v.01, the objective of this work is create a perfect fusion between sound and synthetic computer image. VIFE _alpha v.01 is the first version, of a musical and visual virtual interface developed by RBF-soft [producing]. In this work, music and image are united to give form to a new reality. Synaesthesia is a concept more important for this work. We made our own interpretation from the theories and mentioned influences. In a 3D space, 6 three-dimensional forms that represent sonorous objects distribute of random way creating an endless ones of possibilities. The forms changes according to loop sonorous and selected effect. The 3D space (visual space) and the user space (sonorous space = real space) changing at the same time. Because when the virtual space are full of colors and forms moving around, the sonorous space are full of sound_loops creating a relationship between the interface-sound space-user[4]. These 6 forms are: Archanaoid (Base loop), Campanas (Bass loop), Mask (Percussion loop), Titan (Voices loop), Arachnid (Melody loop), Orbital (Matrix loop).

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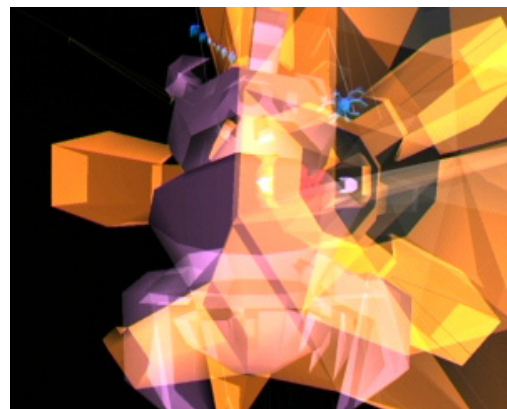


Figure 1. 3D forms rendering in real time.

2. FEEL THE EXPERIENCE

For this work we have created a sensorial glove called VIFE _glove and an analyzing box of analogue stimuli called R-CUBE IV. VIFE _glove[5] is a glove designed and constructed to allow the user to communicate with the virtual interface[6]. This glove has sensors of pressure in each finger (only in 4). These sensors detect the pressure that the user makes and triggers an analogue signal that he is transmitted by means of network TCP/IP. Then this signal is understood by the box R-CUBE IV, that send the signal to the computer of such form that the interface exactly knows what object or sonorous form is moving, what effect...The laptop is mainly in charge to analyze the movement of the user by the webcam and send this signal via TCP/IP to the other computer, at the same time receive the signal of R-CUBE IV and send this signal to the center computer. This one, made the 3D render in real-time and reproduce the sound and the effects, too. This computer is calculating all the moment the collision of user with sonorous objects. VIFE is currently using Ableton's Live™[7] like sound engine, but we are implementing the same in PD[8][9] patch to sequence. For this work we spend about 6 months, designing the interface, creating the three-dimensional forms, creating the sonorous rhythms loops, producing the software with PD[10] and GEM[11], producing the communication with LIVE by MIDI[12] protocol, creating the VIFE _glove, creating the R-CUBE IV and finally making the tests and the final full version. This VIFE _glove and the virtual interface are very intuitive. In this interface don't exist age limitation. People can feel the music with the glove. This interface can be useful to teach to children the musical expressions and the combination of different colors in a screen that is moving and changing all the time. The tests with children had been very successful because the children understand how to interaction with the work, learn very quickly and is an stimuli for him creativity. When there're an user performing, public are waiting to feel the same experience. This installation is a work in progress, but this version _alpha v.01 is a final version for this first step. In the future we hope to create new versions like _beta v.02 (with new features that we will develop)... One of then will be two user at same time and made new sonorous objects.



Figure 2. Sensorial VIFE_glove with sensors.

There're 2 roles for the audience in this installation, the active user and the passive user. Active user is the performer user. He can perform all of the installation, visual and sound, with his movements [13]. Passive user is the public. This user wait seeing the changes that appear around his eyes, and will wait his turn for try make another combination and feel the experience, too. The objective of this installation is create a fusion between visual and sound, to transmit a good an interesting experience to performer user and public. Only one user at the same time and public watching, around the user_area, the performance.

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