Artwork 1: Teknoabá

Teknoabá with app Epicurus' Garden on Fire (Virtual Reality customized application for artworks with a Brain-Computer Interface).

Concept (Java computer artwork): This artwork **results from a meeting between the artist performer Dani Dini and the computer artist Tania Fraga**. It weaves human emotions that affect images algorithmically created, resulting in a poetic interchange with the performer generating visuals in constant change. The emotions captured by a neural helmet inserted in behaviors of agents within the virtual domains affect the autonomous processes of the garden's growth. It is like waves on the sea, clouds on the sky, or a sunset, always the same, never the same. It uses photos of flowers and fungi of Brazilian rainforests threatened by fire. It is a recollection of what is lost when criminal fire destroys the incredible forest's realms. Built over a collective intelligence, it weaves art, science, and technology. It brings new dimensions to the dialogue between virtuality and physicality, which recombines mutually. In line with the Brazilian environment's present situation, amidst fires in many country regions – the artists have brought this issue to the artwork. Therefore, in symbiosis, body, mind, nature, and machine reveal the encounter among the two artists.

The performance occurs inside Tania Fraga's studio, and during the event, we will broadcast varied performance viewpoints on different days and social platforms. See an app video at: https://www.youtube.com/watch?v=Df7GKGTum_I

Description

Teknoabá is a site specific choreographic Virtual Reality performance with a Brain-Computer Interface. The customized Java application present garden's realms as pregnant fields of flowers, insemination life processes for pollination and renovation, features a Dionysian reality. This artwork brings new dimensions to the dialogue between virtuality and physicality, which recombines mutually. In line with the Brazilian environment's present situation, amidst fires in many country regions – the artists have brought this issue to the artwork. Therefore, in symbiosis, body, mind, nature, and machine reveal the encounter among the two artists, Dani Dini and Tania Fraga.

The application **Epicurus' Garden on Fire** is a locus for humans, numbers, and emotions. As emotions captured by a neural helmet, human data is inserted in behaviors of agents within the virtual domains so that human emotions affect the autonomous processes of garden growth. **The goal is to promote symbiosis resulting from the assemblage of human emotional states with automated computer processes**. In this garden, emotions such as excitement and frustration affect the fractal growth of trees and the spreading of pollen or bees. Cycles repeat themselves as seeds that grow differently at each iteration within the virtual garden where flowers with intense colors, and forms in movements, metaphorically, present the constant changes of life processes in an analogy of the ones happening in physical gardens.
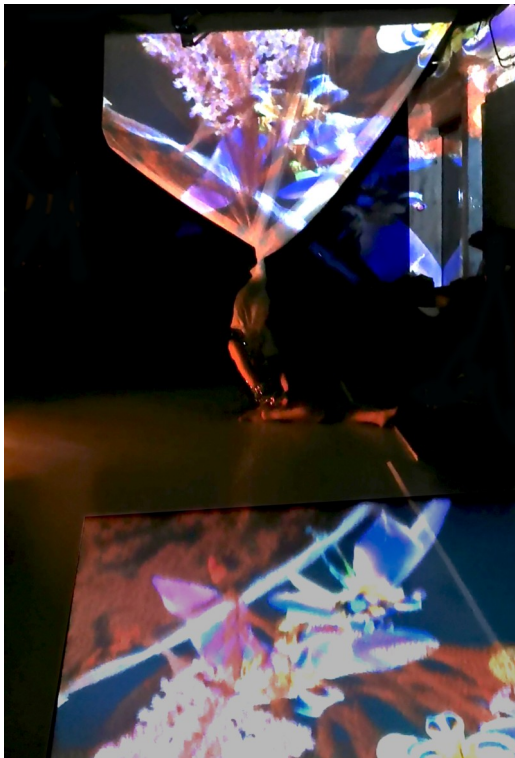
Images

Team:

Creation Site Specific: Dani Dini and Tania Fraga

Choreography and Performance: Dani Dini and the VR aplication

Music: Antenor Ferreira

Curators: Marcus Bastos and Priscila Arantes

Design, photographs, implementation, graphic and interactive design: Tania Fraga – http://taniafraga.art.br

Java computational programming: Pedro Garcia and Tania Fraga

BCI Software Engineering: Mauro Pichiliani

Mathematical consultant: Donizetti Louro

Final statement:

Epicurus' Garden on Fire uses a customized software implementation interface, a frontier between the virtual and physical realms. It establishes a flexible, non-permanent, non-invasive membrane between the human biological brain and the electronic brain. The artwork employs algorithms for creating diverse three-dimensional fractal landscapes and seed trees that use photos of flowers, fungi, and insects to develop eight virtual domains. It is a Java application (using Java3D API) that uses a video resulting from captured emotions of a user through a brain-computer interface (BCI) to change the agents' behaviors. Therefore, the feelings of this user affect the endogenous behaviors of growing fractal trees and, the insemination of flowers, and the dispersion of pollen and seeds by insects inside the virtual domains.

Artwork 2: Rainforest Awakens II

Concept:

Rainforest Awakens II is a video from an interactive online choreographic Virtual Reality performed "live and online" in August and October 2020. It allowed the exploration of a visionary metaphorical 3D Rainforest, letting beauty emerge within the Coronavirus pandemic crisis and reinstating the urgent need to preserve such an unfathomable environment. It is an artwork that weaves art, science, and technology.

Description:

Maida Withers, a noted American dance artist, and choreographer, performed in iridescent 3D virtual worlds in a sonic forest of sound created by Steve Hilmy. In real-time, Maida's living room, transformed into a choreographic space, received the virtual worlds remotely manipulated online from Sao Paulo. At the same time, Maida danced, with virtual images projected from her MAC laptop over a wall and a camera on her put her on the screen with the virtual worlds, in the US, with live music by Steve Hilmy from Florida. These performances allowed us to review an old net art project. They also subverted Zoom constraints to bring dynamic interactivity in a Zoom webinar. The entire performance video is at: **https://vimeo.com/471183584**.

Rainforest Awakens II is a mathematical metaphor presenting simulated beings that populates the Brazilian Rainforests such as:

- The sucury-moon, an anaconda that gives the skill of drawing to women and sacrifices itself as shamanic power to humankind;
- The Boto-tucuxi, the pink dolphin that crowds folk tales;
- The Poraque, a kind of massive electric eel;
- The beautiful blue butterfly;
- The huge ray fishes;
- And the incredible vastness of the Amazonian water domains.

It is a memorial of what is being lost by criminal fires that destroys these unfathomable natural forest's realms.

Once, while on a boat's rail looking at the fantastic hugeness of a river like a sea, I saw a vast undulating shape come out of the water: it was a pink dolphin. After this extraordinary experience, at sunset in the dolphin's bay, I saw meandering dolphins come out of the water to breathe and sing. These images forever printed in my mind are similar to the simulated virtual water realms and virtual pink dolphin realm. These memories feed the performer that undaunted calls the forest spirit to help us care for the Rainforest's unfathomable diverse beauty.

Zoom as a platform, unfortunately, dilutes the brilliant colors of the virtual worlds and makes it difficult to hear the spoken texts, and also challenges the fullness of the electronic music/sound by Steve Hilmy.

The live Zoom interactive broadcast webinars happened on August 13th (Artomatic Festival, Washington, DC) and October 21st (Trans-disciplinary Art Congress, Brazil), 2020. They are at:
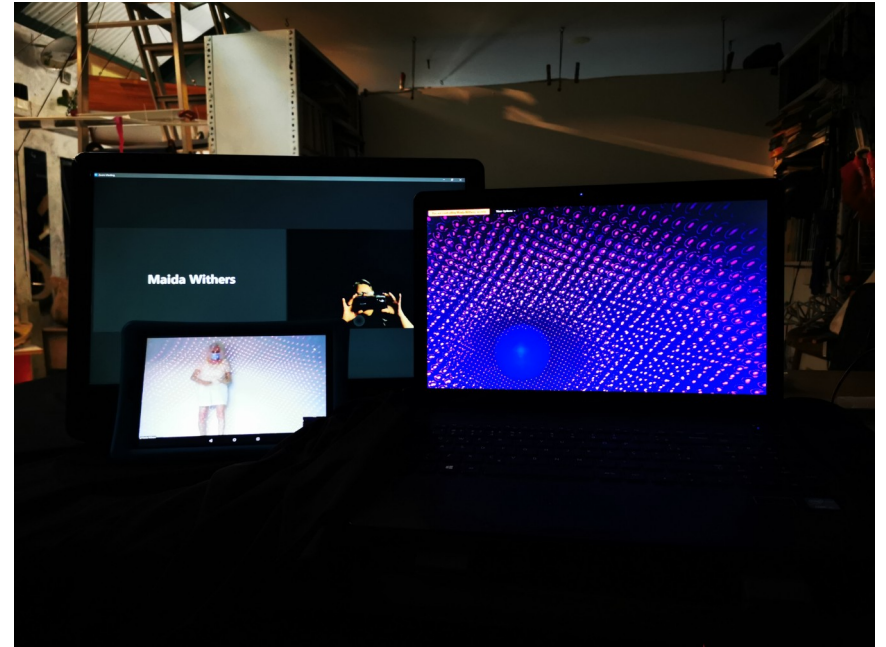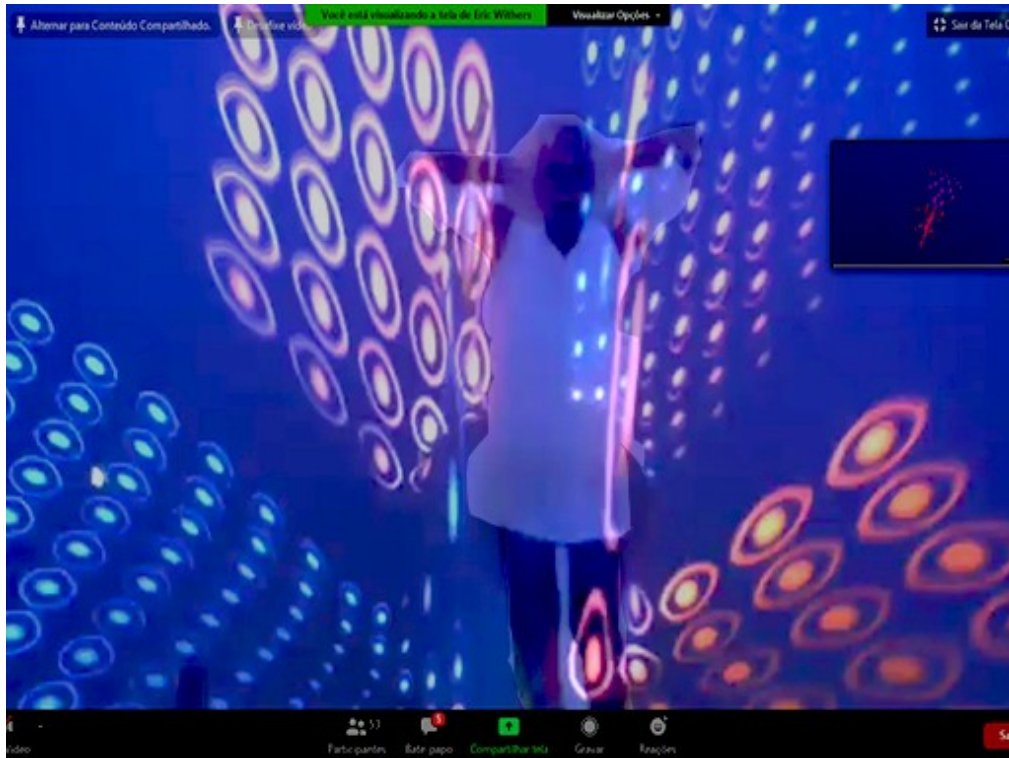
https://vimeo.com/471183584#at=2

http://maidadance.com/works/rainforest-awakens/

https://youtube.com/channel/UCw274rzHP9t7muJG9zAW_aw

http://taniafraga.art.br/computer_art/RainForestAwakens.html

Performance images

Acknowledgments: