THE INTERPRETER

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The Interpreter is an interactive installation that generates glitch ambient sounds and visual flow patterns from pre-recorded dance motion data and a touchscreen interface made available to visitors. The goal is to deconstruct the dancer's movements and encourage participants to experiment with different kinds of audio-visual mappings.
This installation is based on "Breakdown" [1], an audiovisual dance performance that was presented at "Ears, Eyes and Feet" concert in the B. Iden Payne Theater, UT Austin, May 2014. During the rehearsals, sequences of movements from the dancer were captured with an Xbox Kinect [2] camera and saved to a database. Each movement sequence is represented as points in space and time that are related to the silhouette and skeleton of the dancer. The interactive system is constantly reading the motion data to generate real time graphic movement visualizations, paths from displacements in the space, morphing of the silhouette's shape over the time and geometric patterns by points and lines connected to virtual body joints.

The Interpreter intends to explore those movement sequences by visualizing and sonifying motion data to provide new perceptions, interpretations and outcomes. Due to its characteristics, digital data can be shifted, transformed and materialized into new forms, context and domains. *"The premise that any information can be algorithmically sonified or visualized is the starting point for a conceptual transformation and/or aesthetic experience"* [Levin, 2009]. The transmutability quality of digital data allows infinite possibilities, perspectives and metaphors from a dataset. This enables the exploration of visual and sound patterns that emerge when different mappings and abstractions are manipulated over time.

In the sound domain, granular synthesis and physical modeling synthesizers are used to create an ambient soundscape superimposed by short sonic events. The sound file for the granulator includes a rich harmonic and spectral pallet to create the aural base. The physical modeling engine provides a direct way to sonify the motion capture data and respond to changes in the visualizer. A generative algorithm will keep altering the harmonic and rhythmic structure of the granulator.

The Interpreter is an installation that invites visitors to explore and interact with various parameters that affect the audiovisual interpretation of a pre-recorded dance sequence.
Using a touch-screen device the audience will trigger specific audiovisual mappings relative to the number and the position of the fingers. The number of fingers defines the shape of the performer body and introduces sounds effects. The position of the fingers also manipulates the camera angle. These explorative interactions allow the visitors to experience first-hand the challenges and solutions afforded by new interactive technologies for live performance.

[1] Breakdown (Rodrigo Carvalho, Yago de Quay, Shen Jun, Austin 2014) : http://youtu.be/U-JRc2OmRNg
[2] Xbox Kinect: http://www.xbox.com/pt-pt/kinect/

LEVIN, Golan [2009]. "Audiovisual Software Art". See This Sound compendium, Linz. [http://see-this-sound.at/compendium/abstract/74].Accessed 20.09.2013.