ABSTRACT

The project presented here aims to explore the artistic possibilities offered by digital performances in real time, in the form of dance, which is regarded as a privileged form of body language in the interaction between the performer and a digital artifact, interaction that establishes itself as the driving element of the whole scenic narrative. To research the aforementioned possibilities, a digital artifact, named NUVE, was conceptualized, developed, and implemented for the purpose of creating a dance performance where a performer will interact with the system, resulting in a fluid digital performance, based on the theme of the analog body versus the digital/virtual body, that will be exhibited in public.

Keywords: Body Language, Dance, Digital Performance, Identity, Interaction

1. INTRODUCTION

NUVE is an artistic project that aims to explore the artistic possibilities offered by the digital dance performances. In NUVE we conceptualized, developed and implemented a digital artifact, resulting in a fluid digital performance based on the theme of the analog body versus the digital virtual body. In this project, the authors conducted a process of research and experimentation in close collaboration with a dance company (Balleteatro), under the direction of Né Barros, aimed at creating a scenic narrative of exploration of interactive performances between the individual and his virtual double in a questioning of identity and corporality. The work follows an iterative process recording the body movement in real-time, seeking the visual exploration of the body in motion, exploring the generative computing techniques to find new possibilities for visual and interactive performance, exploring image capture, motion perception and programming languages technologies. In this paper we make a general introduction to digital art and interactivity. Then we introduce the concept of digital performance and its contextualization in digital and contemporary art. In the follow-
ing sections, we present the development of the artifact NUVE in its different components (visual representation of the motion; generative representation of the body and also the sound development).

2. DIGITAL ART AND INTERACTIVITY

One can define digital art as art produced in digital environments (Paul, 2008), being characterized as a virtual process conducted through software. The term digital art is applied to contemporary art, which uses methods of mass production and resorts to digital media (Gere, 2005). Kuspit states that, in this area, the importance of “code creativity” goes beyond the creativity of the image, being the main element when it comes to artistic creation (Kuspit, 2005).

Marcos, Branco and Carvalho define digital art as art that explores the computer medium as both a tool and material for the creation (Marcos, Branco, & Carvalho, 2009).

Interactivity is present in digital art when one can create a dialogue between the spectator and the artistic creation (Ascott, 2003) (Vairinhos, 2002). Thus, an artistic creation that involves interactivity allows the existence of communication, founded on a critical and reflective action. Interactivity thus becomes a tool for the artist, characterizing the relationship between the artist and the creation and the relationship between the creation and the spectator who experiences it (Oks, 2007).

To Ascott, the concept of interactive art encompasses several practices, means, structures and adaptable environments, allowing the action of the subject who experiences the creation in the system of that same creation, by participating and interacting with the work (Ascott, 2003). For the authors, the concept of digital art is closely linked to the concepts of interactivity, simulation and artificial intelligence. The development of systems, structures and strategies that mobilize feelings and emotions in the spectator, promote in the multimedia and hypermedia environments, the experimentation and acquisition of meanings.

For Marcos et al. (2009), digital art is supported by three basic concepts: Randomness, Virtuality and Interactivity:

- **Random Access**: (Pseudo) non-deterministic instruction-based algorithms open the possibility of instant access to media elements that can be reshuffled in seemingly infinite combinations;
- **Virtuality**: The physical object is migrated into a virtual or conceptual object. The concept itself becomes perceptible through its virtualization;
- **Interactivity**: The viewer may assume an active role in influencing and changing the artwork itself.

The Figure 1 shows, according to the authors, the concepts presented in a structured way.

In the project to be developed, interactivity is a relevant factor in that the whole creative process objectifies with the artistic result of the conjugation of the real process, the performer, who is exploring the space, his movements, which are real and physical, and the digital space, which is transformed by those movements.

3. THE DIGITAL PERFORMANCE

When one conceptualizes a performance, one mediates, translates and regulates the interior and exterior space, the relationship with others (Critchley, 2002). In a digital performance, where the technologies take on a central role, they can be seen not as tools but as filters for our meetings with others or ourselves (Kozel, 2008). It is assumed here that performance involves attention, perception and reflection, translated in a way that there is room for a change, an evolution, following Amin and Thrift claim that the performative practice is “a partial and temporary resetting which consists of attempts to make something new in the mo-
Modeling and Synthesis of Realistic Visual Speech in 3D
www.igi-global.com/chapter/modeling-synthesis-realistic-visual-speech/4172?camid=4v1a