AMORPHOGENESIS

Post-anatomical architecture, real virtuality and non-carthesian body-spaces

Installation-Performance Environment by ***REVERSO***

ETP *European Teleplateaus*_Final Presentations_June 2010

In Madrid, Telc, Dresden, Norrköping
25th, 26th and 27th June, 15'00 to 21'00 and **Sat 26th at 22'00.**

- **Installation** from 15'00 to 19'00
- **Dance Performances** at 20'00
- **Performance** Sat 26th at 22'00

Concept: Jaime del Val
Coordination:CIANT
3D Graphics: CCclient-Stephane Kyles
Sound: Michal Marianek

Produced for ETP by CIANT (Prague) in collaboration with Jaime del Val is a performance and installation environment based upon a concept of digital interactive or generative architecture in which amorphous 3D structures are transformed through the movement of bodies in physical installation spaces of four net-connected European cities. Four human and post-human 3D characters (a female, a male, a transsexual and an alien) are being interactively deformed and transformed into abstract architectures, each one relating to one of the four European cities. The project proposes the development of liquid amorphous spaces, far away from the aesthetics of simulation: not a virtual reality, but a real virtuality for a relational collective architecture across the EU. A laboratory for embodied experience, for redefining sensation, relationality and presence beyond identity and form in late-capitalist digital culture.

ETP_Prague Development Process

by Jaime del Val

The environment **Amorphogenesis**, was developed by CIANT in June 2010 under artistic direction of Jaime del Val_REVERSO, taking as a starting point a previous project by Jaime del Val, from 2003, an interactive dance performance, *Morphogenesis*, and some of the ideas developed by the ETP_madrid group for the project.

Conceptual Framework

REAL VIRTUALITY: The initial idea was to work with 3D, or virtual/digital interactive/generative architectures, that would defy traditional accounts of simulation and cartesian space: fluid amorphous spaces that would deform and transform with the interaction of the local and remote participants, who would thus collectively shape the architectures.

We thus challenge the notion of Virtual Reality, which relies on the idea of simulating a "real" world, and propose instead a REAL VIRTUALITY, where nothing is simulated and instead new kinds of embodiment, of spatial interaction, are put into play.

Challenging the culture of simulation is equivalent to challenging surveillance in the society of control, since simulation is a priori a technology of control. If we attempt to overcome the traditional mind-body split of Cartesianism and look at the body-subject in terms of affects, we see that there is no possibility to ontologically split the analogical from the digital as real vs. virtual.

Abstract Avatars

For this occasion meshes of human 3D charachters were used as a starting point: Four meshes were built: starting from a male and female charachter a transsexual and an alien were also created. This was also a comment on the sexism of 3D and gaming industry, where models of naked women are to be found easily, but no so of men and even less of transsexuals. At the conceptual root of the project we have thus a diversity of charachters, human and posthuman.

However these will never appear in their recognisable form, rather, they are crunched and warped from the very start, so that they become an abstract fluid shape. It is this abstract fluid shape that will be further deformed and transformed through the interaction. Each form is an *abstract avatar*. The proximity between the avatars increases the degree of their deformation and sublty transforms the sound. Each avatar is assigned to one of the four cities. The avatars follow the position of the local and the remote participants and transform their shape according to proximity between one another.

Technical Implementation – Fundaments

by CIANT

Visual part of AMORPHOGENESIS was inspired by a multimedia dance performance Morphogenesis directed and created by Jaime del Val (2003). Since it strongly relies on real-time rendering of 3D graphics, which is not the main focus of the Kalypso technology, we opted to employ CiantClient tool for the 3D rendering part instead. Though, we were still relying on the optical motion tracking features provided by Kalypso.

The CiantClient software is a modular tool developed by CIANT for real time management, synchronization and rendering of digital media including visuals (video, 2D and 3D graphics), audio and lights. Outputs of the software can be interactively controlled by a large set of various specific input devices including motion capture, touch pads, EEG/EMG, etc. Usage of the tool spans across artistic installations, live multimedia performances and presentations that can focus on different aspects of the tool.

Visuals and interactivity

The core of the visual part is four 3D objects (mashes) each representing one dancer in his/her city. In order to make this relation even more obvious to the audience, a specific colour has been assigned to each mash (blue – Prague, green – Dresden, yellow – Madrid, red – Norrköping). The goal was to create amorphous living structures with a high degree of transparency, to generate crystalline like

structures where the richness of the image comes from the multiple layers of accumulated transparency.

Thanks to the tight interconnection with Kalypso software based on OSC protocol and distribution of this information amongst all the cities, we were able to map various rendering parameters (position of the mashes, deformation, colours, etc.) to the outputs of the Kalypso's optical motion tracking system (position of the dancers, size of their silhouettes, dynamics and speed of their movements, mutual proximity, etc.). This way we were able to show the mashes as if they were following the dancers and produce a deformation of the meshes according to a mixture of speed and proximity parameters.

The performance was divided into four parts, each having different visual look based on actual setting of its parameters:

1. SOLID - maximum transparency - white background
2. WIREFRAME - high transparency - red background

For the last two parts we added a trail effect, so that the meshes leave a long trail, creating an abstract painting:

3. TRAIL - wireframe - medium transparency - red background
4. TRAIL - wireframe - high opacity - black background

Since the creativity process is never finished, the list of future ideas for improvements has been already growing:

- bring in particle and line objects to give light for the trails
- look into the possibility to increase the number of triangles of the mashes to have even more detailed images
- experiment with 3D camera interaction, which was static during the performance to preserve the relation of the position of the mashes and dancers
- try to get real skin textures, that look and feel like skin