uma visão da expansão tecnológica da dança
TeDANCE
technologically expanded dance

PROGRAM OVERVIEW

		small auditorium	room 3	room 4	room 5	room 6	foyer
day 1 22.11.2007	11:00/12:30	**Welcoming session**					
	14:30/16:00	(**Panel**) Crossing methodologies 1		**I2.** Mutin Association. Aboulie	**I5.** Fernando Nabais. Interactive Scenema #1, Marilyn	**I4.** Beliz Demircioglu. The Crowd In Us	**I10.** Peter William Holden (*). Arabesque
	16:30/18:00	(**Panel**) Capturing movements					
day 2 23.11.2007	09:30/10:30		(**Panel**) Reviewing dance techniques 1				
	11:00/12:30		(**Panel**) Reviewing dance techniques 2				
	14:30/16:00	(**Panel**) Transferring structures	**Workshop.** António Caramelo. Introducing to Isadora (14:30/17:00)	**I3.** Ivani Santana. Cercando mulher nua caindo. Prazer	**P4.** Heather Raikes. futuRasa	**P3.** Mutin Association. BI#1- Le Poil (work in progress)	**I7.** João Rui Oliveira + Francisco Medeiros. FeeDbaCk
	16:30/18:00	(**Panel**) Staging networks and the virtual					
	21:30	**P5.** Sarah Rubidge. Global drifts 2006					
day 3 24.11.2007	09:00/10:30	(**Panel**) Crossing methodologies 2					
	11:00/12:30	(**Panel**) Questioning technology					
	14:30/16:00		**P10.** João Samões. We live in a world traversed by a limitless destructive force	**I6.** Filipe Pais. Living Room Plankton	**I1.** Kostas Daflos (*). Interactive environment c(2)ipo _06 (music box)	**I9.** Joana Gomes. Confront	
	16:30/18:00						Author's session. Ivani Santana. Book presentation.
	21:30	**P6.** Isabel Valverde. Real Virtual Games					
		P7. Stephan Jurgens. .TXT					

PANELS

DAY 1. 22/11 – Thrusday – 14.30h / 16.00h – SMALL AUDITORIUM

Crossing methodologies 1
Chair: Gil Mendo

C2 Stephan Jurgens. Generative techniques in Contemporary Life Performance and New Media Art

C10 Aylin Kalem. Generating New Corporealities

C15 Isabelle Choinière. Looking For a Choreographic Model Adapted to Our Time - The Orgiastic: a Strategy Via Technology to Renew Our Sensorial and Perceptual Experience of the World

DAY 1. 22/11 – Thrusday – 16.30h / 18.00h – SMALL AUDITORIUM

Capturing movements
Chair: João Madeiras Pereira

C3 José Braz. ANICOMDA: Animation Composition from a Motion Capture Database

C16 Sophia Lycouris. E-motions in Urban Networks

C25 Martine Epoque + Denis Poulin. NoBody Dance, 3D Rite of Spring in infochoreography of particles for the screen

DAY 2. 23/11 – Friday – 9.30h / 10.30h – ROOM 3

Reviewing dance techniques 1
Chair: António Veloso

C8 Ana Paula Batalha. Motion Capture Systems - the Point Shoes@Contemporanity

C18 Augusto Gil Pascoal + Cátia Cascais. Shoulder function on ballet dancers. The effects of the thoracic spine curvature and the pectoralis minor length on the 3D scapular and humeral motion during arm elevation

DAY 2. 23/11 – Friday – 11.00h / 12.30h – ROOM 3

Reviewing dance techniques 2
Chair: a designar

C14 Maíra Spanghero. Movement design in Cena 11 dance-technology

C9 Ivani Santana. The emergence from the adapting system as a poetics of the dance

C13 Heather Raikes. Digital Prana: Exploring Convergent Dimensions of the Body Electric

DAY 2. 23/11 – Friday – 14.30h / 16.00h – SMALL AUDITORIUM

Transferring structures
Chair: Stephan Jurgens

C6 Franziska Schroeder. Disparate Bodies - a path to multi-modal remote presence

C17 Isabel Valverde. Critical intermedia performance: Practicing inclusive posthuman corporealities in Virtual Real Games Project

C22 Helena Figueiredo. Expressive Processing

DAY 2. 23/11 – Friday – 16.30h / 18.00h – SMALL AUDITORIUM

Staging networks and the virtual
Chair: Marta de Menezes

C21 Rudolfo Quintas. The Augmented Body

C24 Ghislaine Boddington + Francisco Camacho. Post me. New ID. The post human condition of Modern Europeans. Network, collaborate, create and share - an action research project

C7 Asa Unander-Scharin. Moving mechatronics

DAY 3. 24/11 – Saturday – 9.00h / 10.30h – SMALL AUDITORIUM

Crossing methodologies 2
Chair: Daniel Tércio

C19 Fernando Galrito. Moving image and moving bodies

C20 Kirk Woolford (*). Moving an Audience: Biological Motion and Will.0.w1sp

C11 Tiago Porteiro. Audio capture of the verbal «material» communicated by Alexandre del Perugia in the context of movement teaching: methodology description that lead to his approach

C4 Kostas Daflos (*). Robotic interactive installations / Progressive body performances & interactive improvisations

DAY 3. 24/11 – Saturday – 11.00h / 12.30h – SMALL AUDITORIUM

Questioning technology
Chair: Fernando Nabais

C1 Daniel Tércio. Frankenstein's Syndrome In A Cyborg Time

C12 Paula Varanda + Justin Manor (*). The Virtual body – creative ideas generated by two dimensional samples of the real body

C23 Suguru Goto. The Case Study of an Application of the System, "BodySuit" and "RoboticMusic" – Its Introduction and Aesthetics

C5 Salvatore Iaconesi. Talkers

PANELS

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Reviewing dance techniques 2

Chair: a designar

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C13 Heather Raikes. Digital Prana: Exploring Convergent Dimensions of the Body Electric

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Staging networks and the virtual

Chair: Marta de Menezes

C21 Rudolfo Quintas. The Augmented Body

C24 Ghislaine Boddington + Francisco Camacho. Post me. New ID. The post human condition of Modern Europeans. Network, collaborate, create and share - an action research project
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Chair: Daniel Tércio
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C6 Franziska Schroeder. Disparate Bodies - a path to multi-modal remote presence
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P7. Stephan Jurgens. .TXT
Workshop. António Caramelo. Introducing to Isadora (14:30/17:00)

ABSTRACTS

ORAL PRESENTATIONS
22.11.2007

C2 Stephan Jurgens. Generative techniques in Contemporary Life Performance and New Media Art

This paper examines New Media Art practices where the artist uses a system, such as a set of language rules a computer program, or other procedural invention, which is then set into motion with some degree of autonomy resulting in a work of (generative) art.
Subsequently compositional tools aiming at generating and/or organizing movement material for use in structured improvisation and real-time choreography are presented, which have been widely used in Contemporary Dance during the past five decades.
Working methodologies in both artistic fields are compared in order to formulate common principles, that can be transferred from one area to another thus allowing for designing new strategies for the creative process.
Well-documented long-term artistic collaborations between choreographers and media artists and/or engineers are referred to arrive at a thorough analysis of algorithmic, or rule-based, creative processes. It follows a discussion of the research conducted in the context of two artistic residencies in Portugal 2006 and 2007, organized by the TeDance Project in collaboration with CENTA (Vila Velha de Rodão) and the Teatro Aveirense.
The paper concludes with the suggestion of a set of techniques for generative processes, which can be applied, combined and further developed in a number of ways.

C3 José Braz. ANICOMDA: Animation Composition from a Motion Capture Database

This present work concerns the development of a data base of motion capture sequences and of a graphical user interface that allows the composition of motion sequences based on SQL queries made to the database and the animation of a virtual human body with such sequences. The architecture of ANICOMDA may be divided into two main systems: a database of human motion sequences and a graphical user interface that accesses the database and allows the composition of both time-based and articulation based human motion sequences. Near 30 sequences of human motion, some of the complete human body and some from partial articulated parts (e.g. arms, legs, foots and hands, or parts of those members) have been captured using a six infrared cameras system from Qualysis and stored in a database. The database design is compliant with the HAnim specification and this way gives the user the possibility to choose partial movements (e.g. a leg or an arm) from a large human motion sequence to replace the initial movement of such human body part. The User Graphical Interface allows the user to choose an initial sequence as a basis for further work and replace partial movements from arms or legs with movements from other stored sequences of the same articulated parts. For the composition of different motion sequences in a time-basis ANICOMDA allows to pick and preview the sequences and edit them in a time-slider. In order to replace the animation of partial segments from the current animation with others stored in the database ANICOMDA allows the user to choose the body part and preview the stored animation sequences of such body part. ANICOMDA is being developed within the TeDance project and may be used as a computer graphics animation tool to teach or learn complex choreographies in artistic performance areas. Key-words: Motion Capture, Computer Graphics, Human Body Animation, Performativae Arts.

C10 Aylin Kalem. Generating New Corporealities

This paper is an analysis of the corporeality in dance and technology at the intersection of theory and practice. I will focus on various explorations of sensation through interaction in dance and installation works, in reference to Merleau-Ponty's Phenomenology of Perception and other contemporary theories. I will illustrate the basic notions with individual experiences, and raise questions around the problematic issues of designing perception and generating new Corporealities. The phenomenology of Merleau-Ponty is situated at the centre of the reflections on corporeality in dance. The primordial point of his philosophy is that the perception is always an incorporated one. The work of the corporeality in the projection of the imagination is always accompanied by the play of sensations. In many responsive environments, the participant grabs his own actions through his double. He may get a sound and/or visual reaction by the sense of touch. Interactivity helps the participant to perceive his embodiment by transmitting his actions to himself. Michel Bernard emphasizes the double by putting forth the notion of intra-sensory chiasm. He illustrates his statement by saying that in touching a table, there is simultaneously an active and passive dimension, showing his gesture to the participant himself. Thus, there is a double state of seeing and being seen. The participant perceives himself and the world around through his corporeality. The body acquires a state of neither object nor subject, but comprises both, and it floats in-between, in the space created between the physical body and the virtual body. There is also a second aspect, which introduces the inter-sensory chiasm. The fact that the interface transmits the act of touching to sound or image provokes an interaction between the senses. Michel Bernard mentions the 'listening eye' in his article "Sense and Fiction." The interface stands as a challenge for the participant to establish and enrich the sensory awareness. In other methods like telepresence or real-time projection in dance, viewing his body in interaction with another in a created space disrupts the perception of the performer. Here, his double plays an essential role. The perception of the performer is between the physical and virtual space. Merleau-Ponty formulates this state by saying that the human body exists only when it creates a re-crossing between seeing and being seen, between touching and being touched. This alternation in sensations stimulates perception. The central question of the human existence is based on the projection of the self, on the virtualisation in Pierre Lévy's terminology. What is striking in the encounter between the bodily movement and new technologies is this sort of crossing in which the body goes through sensations by the interface, exploring and enriching a corporeality which will determine its "being in the world." In the debates between neo-cartesians and phenomenologists, Susie Ramsay was suggesting that the only possibility of the union of man with the new technologies passed from embodiment. Similarly, Susan Kozel affirmed that "it is through flesh and not in spite of it that we gain access to the virtual." Now, as it is the design of the interface that determines the perception and corporeality of the participant, the critical question seems to be how to generate new corporealities in ontological and political terms.

C15 Isabelle Choinière. Looking For a Choreographic Model Adapted to Our Time - The Orgiastic: a Strategy Via Technology to Renew Our Sensorial and Perceptual Experience of the World

How understanding the infiltration of technologic thought might have some application in the development of new choreographic model.
This work is simultaniously rooted in a syncretistic process and founded on a strategy of perception renewing and of creation of a perceptual synaesthesia formed by the proprioception of the real body as well as the exterioception of the mediated body ; how can 21st century technology open the path for a new perceptual synesthesia , formed both by the proprioception of the physical body and the exterioception of the mediated body?
I propose this approach as a means to move beyond the instrumentalization that diminishes the dancer in relation to technology; could the chosen theme of the orgiastic be a means to counter this tendency by initiating a relation that enriches experiential corporeality?
And how can these ideas take place within my own work and how can they be situated within the context of contemporary dance.

There are two types of perception: proprioception, through which we perceive what comes from the inside, and exteroception, or the perception of what comes from the outside. The Feldenkrais method is the study of proprioception that provides us with the invariables of our personal movements and the space that we incorporate: i.e. what he call our inner environment. The Feldenkrais method is part of the somatic practices in contemporary dance.

Somatic practices are centred on developing an awareness of the moving body. These practices consist of learning synergistic interaction processes between consciousnes, movement and the environment. They make up the experiential study of corporeality (ex. : Alexander, Bartenieff, Body-Mind Centering, Feldenkrais, Pilates, etc.)
Ginsburg, C 2006 **Le Mouvement et l'esprit ; une critique en forme d'essai.** Nouvelles de Danse numéro 53 Scientifiquement Danse ; Quand la danse puise aux sciences et réciproquement : Bruxelles, Belgique. P.38
For a more precise definition of proprioception: By proprioception we understand the main considerations presented in the current literature on the subject: mechanical proprioceptive information (considered as subpersonal, and unconscious) proprioceptive consciousness (recessive awareness of the body) and visual proprioception (Gibson), or the ecological structure of movement perception.
Cf. J. Cole, N. Dupras, S. Gallagher, ***Unity and Disunity in bodily awareness : phenomenology and neuroscience***, actes du colloque ASSC4, Bruxelles, 29 juin-2 juillet 2000.
From the Greek *Sunaisthêsis*: "simultaneous perception": Plurality of sensory perception characterized by the perception of a supplementary perception to what is normally perceived by another part of the body or which involves another sensory domain.

C16 Sophia Lycouris. E-motions in Urban Networks

This presentation will introduce the project E-motions in Urban Networks, a single screen animation film project, based on motion-capture data, a pilot of which was developed in 2004 by architect Thomas Lindner and choreographer Sophia Lycouris with the support of essexdance (the regional dance development agency for Essex, based in Chelmsford, England, www.essexdance.co.uk) as part of Digilounge (a series of three professional R&D residential labs for artists wishing to further their knowledge, skills and development in the field of dance and emerging technologies http://www.igloo.org.uk/Hacienda/). Motion capture technology was provided by essexdance for the development of this film and the project explored how issues of urban planning can be addressed with the support of choreographic knowledge. Movement and gestures of people waiting in post office queues and supermarket tills were reconstructed by dancers in essexdance studios and recorded through use of motion capture equipment. These recordings provided data which was used to develop animations. Human silhouettes were created to perform 'post office' gestures which were gradually morphed into 'supermarket till' gestures. At the pilot stage, the aim was to screen this film in both 'post office' and 'supermarket' environments in the city of Chelmsford in order to provide an engaging visual stimulus for the persons waiting in these queues, which would encourage them to think about the multiple aspects of the built environment and consider possible links between these locations. Due to financial and practical constraints, the film was only projected on a small window above the central post office in Chelmsford (images of which can be accessed at http://www.re-title.com/artists/sophia-lycouris2.asp), however, the projection was highly effective. The final visual effect of the film emerged as a combination of the reflection of the tree opposite to the selected window and the film itself which was screened on that window through a projector located behind it. The film which was fully integrated into the fabric of the building was unexpectedly engaging, a pleasant surprise for passer-bys who discovered it as they were wondering in the open space in front of the adjacent shopping centre. The project provides a starting point for the development of appropriate methodologies and technologies through which visual material developed by artists will be used to address issues of urban planning, such as the adjustment of circulation patterns in the city centre and the periphery. This presentation can be accompanied by appropriate display of still and video documentation of the project (as produced by Thomas Lindner) in the form of an exhibition during the conference. Sketches of the project can be displayed on a wall surface or, if there is not enough space, they can be compiled in a catalogue. A short video documentation of the project, as well as the animation film which are available on DVD could be displayed on two monitors next to the catalogue or wall presentation of the sketches. If there is no equipment available to exhibit the two DVDs during the conference, they will be only included in the oral presentation.

C25 Martine Epoque + Denis Poulin. NoBody Dance, 3D Rite of Spring in infochoreography of particles for the screen

No Body dance, a 3D Rite of spring in infochoreography of particles for the screen» is a research-creation project based upon the «dance without body» author's paradigm. Funded by Canadian Social Sciences and Humanities Research Council (research-creation program 2005-2008), it is under experimentation and realization since September 2005.

This project consists in the realization of a 3D digital dance film that will never show the dancer's bodies. Thanks to optical movement capture (MoCap) of the choreography, this dance expression aim is to reveal the dance movement and the bodily personality of its dancers rather than to show their moving body shapes. To afford it and to insure to emphasizing the dance movements, the dancers are shown through an informal representation, in this case moving particles. These digital tools and processes give choreographic possibilities that allow dance infinite new aesthetics ways.

The authors will first present the dance works they created since 2001 to make clear how their idea of a «dance without body paradigm» appeared. Showing video projections, they will speak about the making of *Tabula rasa* 40 minutes long floor stage choreography with 22 dancers and a realistic digital one, Mona, from their LIFEanimation software) and *Tabula rasa: la suite* (a 23 minutes long staged choreography with 22 dancers, two digital dancers from LIFEanimation and light made digital dancers. They also will present the audiovisual notation system they developed for the creation of *Tabula rasa: la suite* (College Montmorency's Dance Department, May 03) and its reconstruction (UQAM's Dance Department, December 03).

They will then pursue with the making of their dance film «*No Body dance, a 3D Rite of spring in infochoreography of particles for the screen*».

NoBody dance aims at emphasizing the spectator's perception of the movement in dance. As in usual choreography for stage or for screen, interpreters are the raw choreographic materials. However, their body's envelope is not what is of interest in this kind of dance aesthetics: they only are used as the basement of multiple layers of numerical components, at the same time adjacent, superimposed, and intersected, which make the work up but visible only at the very end of the production.

Once after the 33 minutes length choreography was motion captured thanks to the Hexagram-UQAM optical Motion Analysis system, numerous digital 3D treatments using software like EVaRT, Motion Builder, Evolver, Real Flow and others permit Martine Epoque, Denis Poulin and their LARTech team to create the dance images enhancing not only the dance flow but also the kinetic signatures of their interpreters. In fact, MoCap is to dance what audio recording is for music and song since a long time. For the first time in dance history, it gives the possibility to register a dancer performance and to look at it without his body. Without being focused on the body shapes, MoCap technologies permit to highlight and show in an objective way their personal distinctive motion signatures.

The composition and realization of «NoBody Dance» requires from the creators to have simultaneously recourse to traditional material and processes and unusual methods of choreographing coming from digital tools: optical movement capture (MoCap), 3D animation, and fluids treatment software. In this meta-language of a «dance without body», the combination of all these elements forces the creator to negotiate with the unforeseeable, to compose with the plausible, to invent possible ones, going until compromising with the impossible in that they know best: dance itself, of which certain movements are incompatible with the MoCap possibilities

ORAL PRESENTATIONS
23.11.2007

C6 Franziska Schroeder. Disparate Bodies - a path to multi-modal remote presence

Keywords: motion capture, robots, avatar, remote presence, network This paper presents the work Disparate Bodies, a network music performance that explores multi-modal remote presence. In this work, geographically dispersed music performance presence is investigated; in particular, we discuss ways in which performers in separate sites can be rendered through hybrid objects by ways of their performative gestures. The design of these hybrid objects is informed by the movement of the performers' bodies. These performative gestures constitute an ambiguous entity defined by physical and local characteristics while displaying and reacting to mediated and remote performance activity. The paper will discuss the ways in which the performers' movements can be represented through robotic entities which host the physical and musical gestures that are performed by remote participants. These robots, also referred to as 'Remote.bots', consist of reflective elements, which move according to the analysis of each performer's audio stream and they project glimpses of 3D rendered imagery around the performance space. The performance is based on the notion of performance entities as reflected by telepresence, robotics and sound systems. As such, each performer (local and remote) has a specific sound diffusion set up and a chosen 3D avatar that consists of abstract representations of movement and gesture. The work Disparate Bodies was designed for being performed in a 'network'. Thus, we will trace some of the origins of the 'network' by examining concepts such as the "network society" as coined by the Dutch author Jan van Dijk in his 'De Netwerkmaatschappij' and as later elaborated upon by Manuel Castells (1996). We will investigate some of the underlying cultural meanings of a 'network' by drawing on the writings of authors such as Richard Coyne (2007) and will discuss "what it means to live [and to play] in the network society" (Shaviro, Steven, 2003). References: Castells, Manuel. The Rise of the Network Society, The Information Age: Economy, Society and Culture, Vol. I. Cambridge, MA; Oxford, UK: Blackwell (1996) (second edition, 2000). Coyne, Richard. The net effect: Design, the rhizome, and complex philosophy. Futures, special issue on Design out of Complexity (ed Theodore Zamenopoulos and Katerina Alexiou, to appear). Author's private copy. 2007. Shaviro, Steven. Connected - Or what it means to live in the network society. University of Minnesota Press. Minneapolis/London. 2003.

C7 Asa Unander-Scharin. Moving mechatronics

This presentation deals with the corporeality of dancing bodies in four choreographic works that are part of my artistic research project. I am interested in how different technologies, ontological perspectives and approaches to bodily movement can be used as choreographic tools to shape and shift the physicality of human and non-human bodies – actual and imagined – in a series of choreographic works. In my research I use the choreographic process and the works as a laboratory to elaborate on concepts and questions. In my artistic work I have become more and more interested in the physical feeling of movement – the poetry of human mechanics.

VIDEOS
THE LAMENTATIONS OF ORPHEUS (1998) – solo choreography performed by an industrial robot Choreography/ movement programming: Åsa Unander-Scharin Music: Claudio Monteverdi (from L´Orfeo 1607) Musicians: Keren Bruce (Viola da Gamba), Kerstin Frödin (Recorders), Urban Westerlund (Organ), Carl Unander-Scharin (Tenor) Dancer: ABB robot IRB 1400 Program development: Magnus Lundin Video documentation: Mateusz Herczka.

THE PEARLFISHERS (2004) – when touching the water contained in a box of stainless steel on the floor, the exhibition visitors evoke the choreography of a crawling dancer and a singing head. Concept, choreography, dancer and video: Åsa Unander-Scharin Programming: Mateusz Herczka Music: Georges Bizet (remix Carl Unander-Scharin) Singers: Karl-Magnus Fredriksson and Carl Unander-Scharin Costume: Mylla.

Ek PETRUSHKA´S CRY (2005) – a humanlike puppet emotionally captured in between hopeful and hopeless love in a never-ending mechanical repetition. Choreography and movement programming: Åsa Unander-Scharin Puppet construction, mechatronics and software programming: Magnus Lundin Mechanics and stage construction: Petra Kiiskinen, Erik Persson and Åsa Unander-Scharin Music: Carl Unander-Scharin (music for mecatronics #2) TYGER*SPARROW (2005) – two hybridized – human, animal, machine – bodies in a scene from the stage performance Hybrid, väsen och labyrinter Choreography and stage-space: Åsa Unander-Scharin Music and singer/tenor: Carl Unander-Scharin Dancers: Johanna Klint, Charlotta Ruth, Light design: Anders Larsson Costume: Gerard Aroyan.

C8 Ana Paula Batalha. Motion Capture Systems - the Point Shoes@Contemporanity

In Art, communication is shown through interior movement, it is giving a direction to what goes in the soul, it is transmission of multiple messages in accordance with the fidgets and intelligence of the artists. While in a live show, we can observe the inner performer, contrarily to what happens when we are in front of machines. However we must admit that technology is an indispensable partner in different areas, namely in registering the memory. Presently, the codes of the machines and the digital culture have to be in perfect interconnection and interactivity with the performing codes and the artistic culture. This paper is the result of our analysis, reflection and questioning relative to the creative universe face to the new technologies. Our aim is to show a motion capture system and archive of body movements.
This culture of inter-face, is an essential support to our *sui generis* baffling contemporary communication, The performing contemporary speech seats more and more in the premise of the absolute variability, while the machine is very obedient to the human being, but highly advantageous for the questions of the memory. To show the validity of the machine and the dissemination of the technological tools and its manipulation in the scope of the performing arts, is the main goal of our paper. From the moment where the digital culture makes it possible to codify texts, images and sounds, all the notation systems such as Labanotation, Benesh and Motif Writing, with the purpose of the captation and preservation of dance performances and always changeable movements, change its importance.
This process - human being / machine - establishes a new architecture in the performative space and assures the memory in accordance with the relations between body, space, time, rhythmic structures and sound. These relations are expressed in longitudes/latitudes, fast/slow, stretch/bend, contract/release, and share codified/non codified movements, which must be rigorously systematized. The procedures of systematization for constitution of an archive of movements are based on the structural units of the movement (i.e. body, space, time, rhythmic structures and sound) to the service of the some choreographic formats. It is our intention to integrate the conflict and the revolt of the artists, between the reality and the poetry, in a model dance-technology supported scientifically. This model, of centralization of the information is one more rigorous value and of great visibility. In the sequence of our research, we organize analysis instruments - forms that they are our tools of work, or either ours point shoes @ contemporanity. These forms had been investigated and organized according to structural units of the movement (body, space, time, rhythmic structures and sound). In turn, these forms can be monitorized and be incorporated in an archive of body movements. They are the human and technological assistants who assure the register of the events. Our proposal is that each one of democratic, simple form and in self management can annex their knowledge to a virtual page. We are before the true culture of interface and consider forms a true remote control. We will conclude, with a demonstration, opening the technological veil, in order to authorize one cyberspace that not only serves the memory of performances and happenings, but equally favours the possibility of exchange and allotment of all the types of point shoes @ contemporanity, in a cumulative process to know, freedom and mutual aid.

C9 Ivani Santana. The emergence from the adapting system as a poetics of the dance

This essay focuses on the dancing body and new technology in Digital Culture time, and introduces a few alternative modes to understand new configurations for these dances pieces. We from the Research Group for Technological Poetics in Dance (www.poeticatecnologica.ufba.br) are interested in moving beyond discussions centered on such dichotomies as real/virtual, natural/artificial and nature/culture. The concept of dance as an 'self system' understands environment as the place where new information emerges from the relationship among four principal features: the presence of dancers, the creation and interaction of sound and images during the performance, interaction with pre-existent images, and the interaction with the audience. Grounding our ideas in Cognitive Science (embodiment perspective), we propose to discuss the role of new media in the dance field, how technology operates as an agent in this new configuration of dance, and what in the end makes the 'poetics' of the piece possible. The embodiment perspective in this essay is derived from ideas of the linguist George Lakoff and the philosopher Mark Johnson. They affirm that their theories 'promote a dialogue between philosophy and cognitive science and, ideally, they should co-evolve and mutually enrich each other' (1999:552). Embodiment offers a strong theoretical approach to re-thinking physical performance in the arena of Digital Culture. This theoretical approach challenges the traditional ideas of nature and culture as disconnected instances and admits that human beings are implicated in their own production of objects, arts, thoughts, knowledge, and so forth. Consequently, I believe that the connection between people and their environment (and all the elements therein) occurs through a series of continuous and reciprocal information exchanges. This implication between body and system changes the perception and the way that human beings understand and behave in the environment. According to Lakoff and Johnson (1999:22), 'human concepts are not just reflections of an external reality, but they are crucially shaped by our bodies and brains, specially by our sensorimotor system.' In this respect, contemporary dance can be understood as an aesthetic result of its interplay with the world. The structure and organization that underlie this art form is a reflex of the current intensification and complexity of the informational flow. This brings about a reconfiguration of our bodies as we are confronted with different relationships to the surrounding environment. This embodiment of new knowledge generates new forms of dance. This configuration of environment I assume here as an adapting system, a system that re-organize itself all the time, in a continuous flow of transformation. This approach allows us to use the intelligent agents as well as interactive and augmented technological system not as a décor or a tool to give special effects to the piece. On the other hand, from this point of view, we can embrace the new technologies as an adapting system completely appropriate with our aesthetic approach. Lakoff, G. and Johnson, M. Philosophy in the Flesh: The Embodied Mind and its Challenge to Western Thought, NY: Basic Books, 1999.

C13 Heather Raikes. Digital Prana: Exploring Convergent Dimensions of the Body Electric

Digital Prana: Exploring Convergent Dimensions of the Body Electric (Working Title) Heather Raikes DXARTS, University of Washington, USA The dominant research foundation for this paper is an exploration of 21st century embodiment through a synthesis of yogic tradition; electromagnetic, energetic, and quantum conceptions of the body; contemporary digital paradigm, and human-computer interface. This synthesis of elements is underscored and supported by a recent – arguably present – historical zeitgeist which has not yet to my knowledge been articulated or explored. The 1990s saw the explosion both of the Web and digital culture, and the meteoric rise of yoga in the West. According to Yoga Journal, it is now estimated that more than 16.5 million people in the US practice yoga. In addition, almost one in seven non-practitioners, or about 25 million people, say they intend to try yoga in the next year. Superficially, the zeitgeist between digital culture and yoga could be explained by coincidence or by an increased need for physical activity due to prolonged hours at the computer. However, there are powerful parallels between these two realms that can be accessed through deeper levels of investigation. Many theorists have understood media as an extension of the body. Within this paradigm of analysis, digital media is an extension of the central nervous system. Comparably, the practice of hatha yoga awakens and develops energetic dimensions of the physical body through activation of the nadis, which are subtle channels of energy that arise from and connect to the central nervous system. Nadis are the conduits through which prana flows. This intrinsically electrical phenomenon has

been at the root of the practice since its origins in ancient Indian Harappan culture c. 2500 B.C. Moreover, the presence of physical electrical energy – which cannot be defined but only described by Western medicine and language – is the fundamental expression of the somatic life force and the dominant characteristic that distinguishes a live body from a corpse. Presently, the physical dimension of the digital condition is commonly described by the word "disembodiment," describing a state of being "out of body. This paper explores an alternative to this perspective: the possibility that the digital extension of the physical body corresponds to a fundamentally energetic, electromagnetic quantum dimension of the body that we do not presently identify with in our conceptions of physical being – but that is gradually developing in 21st century Western culture through the integration of yoga and other ancient Eastern practices of embodiment. Philosopher Frits Staal states, "In yoga, the body develops in new directions. What we arrive at is 'altered states', not 'of consciousness' but of the body." Bio Heather Raikes is presently pursuing a PhD at the University of Washington's DXARTS, where her research focuses on digital embodiment, technoetic performance forms, immersive media design, and new media language systems. She is former dancer with the Erick Hawkins Dance Company and a graduate of NYU's Interactive Telecommunications Program. Heather is also a certified yoga teacher, and has been practicing yoga for 14 years.

C14 Maíra Spanghero. Movement design in Cena 11 dance-technology

The aim, here, is to show how the Brazilian dance group Cena 11 (http://www.cena11.com.br) establishes a relationship between technology and their performances and the implications drawn from this meeting. It is this concept of fusing dance, science and technology that makes Cena 11_s style so remarkable, and is the vital basis on which their productions evolve. Since the group was founded at the end of the 1980s, they have put on seven pieces. Although each one stands on its own, it also marks a stage in a continually developing oeuvre. In Cena 11, the interaction between new technology and the body is more than just a medium in the performance. The design of movement takes place through a method that deals with the oscillations from control to non-control and systems of interaction between the body and changing environment, using sensors, cameras, speedometers robots, pattern detection programs and video. The dancers and the audience are recorded and integrated into the performance in the form of projections. Within this context, the audience is not just a witness. Its participation is fundamental to the outcome of the choreographic script. The result is a transition from nature to technology and culture, a transition that visually conveys the relationship to a theme central to the group: that between reality and fiction.

C17 Isabel Valverde. Critical intermedia performance: Practicing inclusive posthuman corporealities in Virtual Real Games Project

Embodied experiences in immersive interfaces isolates us visually from our physical bodies and surrounding and experience new bodies and spaces, challenging or interaction we reality as we knew it. Drawn in a incontournable / unavoidable process of virtualization. Art and Dance experiments with technologies have been fostering new understandings of the value and pertinence of recent digital interfaces in the pursuit of artistic critical discourses, particularly when commenting on their impact, and the ideologies they convey, on our embodiment and subjectivity. These multi, inter and transdisciplinary artistic discourses dialog with other (theoretical) discourses, in an attempt to make sense of what we want to call a posthuman embodied subjectivity. This paper aims to research how concepts such as posthuman embodiment, put forward by Katherine Hayles (2000), are explored or challenged throughout RVG's creative working process. I reflect upon the specific choreographic strategies and consequent performative engagements put to work to address corporeality in hybrid environments, towards a renewed embodiment enriched by the multimodal possibilities of deployment of visual and bio signals through other disciplinary domains. This is particularly revealing when enabling to objectify multisensed bodily experiences, and how are these objectifications and virtualizations questioning the (role of) interfaces and implied modes of interfacing. Therefore, this paper discusses how the adopted movement techniques departing from Release, Contact Improvisation, Bodymind Centering, and Yoga, as well as video editing, work as strategic choreographic tools in these immersive bodies and spaces, and how they can contribute to present new lenses from which to approach the posthuman issue as a renewed, constructive, inclusive and flexible corporeality. A second concept I want to refer in this discussion is virtualization, conceived by Pierre Levy, as the main project in the long

process of hominization. Are we becoming mediating beings amongst dominating tech gadgets that overpopulate the world and from which we become dependent to live and communicate with each other. What are the implications of sensing other bodies as our body, of connecting audiovisually with someone that is physically away? Under the consequences of a quick spread and massive accessibility to personal computer, game consoles and cell phones, pushed by the economic pressure to technological development and consumption in the spread of multinational corporations, we are rapidly changing, or is it mutating, who we are. In accelerated orientation towards modes of objectifying our virtualities, and vices versa, we communicate semio-phenomenologically through textual, numerical, visual and audio media languages, but still attached to boxes, or hand held devises. Living in never more real virtualities, detaches us from our physical realities, urged to control and adopt the interfacing behaviors imposed by new seductive gadgets. Always looking for ways of estranging and transcending in order to perceive the familiar a new, however we keep lagging our physical body, relating with it as a machinic thing we need to keep fit independent from our superior rational thinking activity, and this way perpetuating the Cartesian mind body split or fixed hierarchization. I believe such writing reflection based on the practiced experience within hybrid environments provides a much needed attention, in order to conceive of our mutating physical-virtual corporealities, in the interested of generating new possibilities for living and dancing in environments that facilitate physical-virtual permutations by working in new grounding aesthetic channels that reveal hidden dimensions of our interconnected senses, perceptions and realities.

C18 Augusto Gil Pascoal + Cátia Cascais. Shoulder function on ballet dancers. The effects of the thoracic spine curvature and the pectoralis minor length on the 3D scapular and humeral motion during arm elevation

INTRODUCTION: A flat thoracic configuration and a backward shoulder posture are often associated with ballet dancers. This morphological adaptation, imposed by ballet technique requirements, changes the scapular resting position on sagittal plane. Theoretically, this shoulder posture is an adaptive response to the lengthening of the pectoralis minor muscle (PMM) by separating the muscles' insertion sites on the coracoids process and the 3th-5th ribs. Increased PMM resting length would result in a reduction in muscles' passive tension during arm elevation, with a potential effect on scapular kinematics. The purpose of this analysis was to explore the relationships among thoracic spine posture, PMM length and shoulder 3D motion, comparing a group of child with a group of adult ballet dancers. METHODS: Two groups of 8 subjects were studied during arm elevation on sagittal plane: beginners (BG) (age:10.3±.43years;practice:5.3±1.7years) and expert (EXP) (age:19.5±2.5years;practice:11.7±4.9years) group. Kinematics was recorded using an electromagnetic motion capture system consisting of an electromagnetic transmitter and four receivers hardwired to an electronic unit: the thoracic receiver, placed on the third thoracic vertebra; the humerus receiver, mounted on a moulded cuff strapped to the distal upper-arm; and the scapular receiver, placed over the flat surface on the superior acromion process. A fourth receiver, mounted on a hand-held stylus (≈65cm) was used for digitalization bony landmarks. During digitalization, subject still with their arms relaxed at their sides, while bony landmarks were retrieved and digitized. Position from the transmitter reference system was converted to a local coordinate system (LCS) on each segment. Scapular and humeral motions was described by rotations from global to LCS, using a recommended Euler angles sequence (Wu et al., 2005). For PPM length measurement, the infero-medial aspect of coracoids process and the caudal edge of the fourth rib also were digitized. Shoulder motion and the PPM length were determined at 30º, 60º, 90º and 120º of arm elevation. Thoracic spine curvature was measured on resting standing and sitting positions. The T1 and T12 vertebrae were located by palpation and marking those spinous processes location on a flexible ruler placed along the contour of the spine. Thoracic Kyphosis Index [TKI] (curve depth divided by curve height) was then calculated. When relevant, comparisons between these postural and motion variables were performed with an independent t-test. Significance values were set at $P<0.05$. RESULTS: The expert group showed a scapula positioned more on protraction at 30º (BG=30,6±6,1;EXP=36,1±3,8;p=0,04), 60º (BG=35,3±7,1;EXP=42,3±3,6;p=0,02) and 90º (BG=38,2±8,9; EXP=45,2±3,7;p=0,04) of arm elevation position. At 120º, the expert dancers showed a scapula more in adduction (BG=3,5±3,9;EXP=-1,1±4,3;p=0,04) and an internal rotated humerus (BG=-66,573±11,903;EXP=-53,4±12,8;p=0,04). Both groups showed a similar PPM length (BG=13,2±1,5;EXP=13,6±1,8;p=0,17), and a standing TKI (BG=5,5±1,8;EXP=5,7±1,3;p=0,57). However, sitting TKI is high on the expert group (BG=3,3±2,5;EXP=4,6±1,8;p=0,001). CONCLUSIONS: Expert dancers showed a more prominent sitting thoracic kyphosis with implications on scapula motion on adduction and protraction. No differences were found with respect to the resting PPM length.

C21 Rudolfo Quintas. The Augmented Body

This paper proposes a systematical thinking to the context of technological performance practice and theory in the context of Stage Performance and Performance Arts having the example the work developed by Swap-project in the past years, in works such Transfigurations 2003, Overlap 2003, Displacement 2004, Swap 2005 and eDGe 2006/2007. Critical concepts such as Liveness, Extratemporality and Adaptive Composition will be discussed in order to map some principles that were able to be introduced significant novelties in the way we conceive and experience a performed work. Is there a new performance ground? The author will start by questioning the convergences between Choreography and Visual Arts Performance Art to create a critical platform to discuss the technological concepts driven by Performance Art in the 80's and 90's were technology was thought as mean that would make us (humans) loose physicality and those becoming "obsolete". The author will balance this perspective with emergent body-technology experiences that increase physicality by promoting new perspectives to understand the body/technology relation.
Being a discussion about the technological performance practice, the author will focus on the theoretical aspects that might distinguish a project from being a technological driven practice by a works that use technology conceptually or technically to expand the way we think and perceive Art. Does innovative technology applied to art by it self generates an art work? In other words how to classify the use of technology when it does not expand the thinking but only the approach. Are there new poetics to performance arts? Does the relation between physical/material and digital/immaterial is one of them? How Choreography relates to Performance Art today?
To address the topics of this discussion the author will briefly map the problems addressing contemporary choreography, since "as a term and as a field of activity has shifted radically since the 1990s". Contemporary approaches to choreography "question the relations of movement, composition, the production of a dance, its relation with the audience and it has been moving choreography as an art that includes a wider range of conceptual tools, materials and strategies". Such examples from the 90's are Jerome Bel, Vera Mantero, Xavier Le Roy or Meg Stuart. At the same time emergent interactive performance works, both stage and installation are pushing forwards new ideas and conceptions using gesture and movement.
But how does contemporary choreography relates to visual arts performance arts? The author stats that a significant part of chorographical art works question ideas that were introduced since the 60's by visual art performance artists.
If contemporary Choreography as an art is "expanding and including a wider range of conceptual tools, materials and strategies" is it developing as an emergent Art or is it just making its one way trough the developments of the history of choreography?
This relation might seem to wide to discuss technological performance practice but the author believes that to understand the artistic significance of performances that contemporary use technology such balance has to be made.

C22 Helena Figueiredo. Expressive Processing

Expressive Processing is an artistic project that approaches the idea of **Constrained Expressiveness** in Dance Performance. A dancer controls a virtual character displacing her senses to her shadow. The event is registered by seven video cameras and video footage is used to generate logic data **processed** from body gesture, movement and articulation. A final video dance piece is produced with music made from the sonification of video data and it is also algorithmically edited based on the transcription to MIDI of the dancer's movement and gesture. It results in an audiovisual piece that unveils the **expressiveness** behind the synchronous bounds between video, music and image composition. This work follows up from of previous experimental projects by the author: "Expression's limits" and "Human processing". These Projects address the idea of human processing and how personal limits can be used as a characteristic which can empower valuable and unique ways of expression.
In "Expression's limits" a translucent confined space, was contained by much larger space of an auditorium crating a tension between magnitudes. Inside this enclosed box a performer struggled to interpret music trough very small and limited movements. The result was a particular expressiveness of micro-movements. This original and interesting stylistically way of expression could not have been achieved without the imposed physical constraints.

Instead of processing human movements using motion capture or any other computer gesture recognition method, “Human processing”, proposed a paradigm ware a performer is the one to process the data provided by the computer. The performer translates audiovisual information, through his emotions, to expressive gesture and movement.
“Human processing” approaches the external reality and the way it constrains our personal experiences and memories, as well as, the way that memories, including the body memory, limits our corporal expressiveness.
Hence, in “Expressive Processing” these same ideas framed by another dimension of human cognitive feedback are approached.In this case the performer is in fact “processing” his own interior image and letting go of the consciousness of his own body to become conscientious of his unconscious being.
This is a form of body displacement, and simultaneous materialization of unconscious inner facets.
Furthermore, to express the concept of this new project, instead of using real-time technology in performance (as in “Human Processing”), or not using technology at all (as in “Expression’s limits”), Expressive Processing focus on a production and post-production process in order to create a final a video art piece.

C24 Ghislaine Boddington + Francisco Camacho. Post me. New ID. The post human condition of Modern Europeans. Network, collaborate, create and share - an action research project

Ghislaine Boddington and Francisco Camacho co-present POST ME_NEW ID - a dynamic collaboration between body>data>space (London, UK), Eira (Lisbon, Portugal), and CIANT (Prague, Czech Republic) examining the complexity of 21st century European human identity through an exploration of the evolution of cyborg culture through technologies of the body.

A group research Blog leads into a series of practical and debate led Research Engines bringing together artists, creative technologists and producers from all 3 Co-organisers and resulting in the creation of a Performance, Forum, Book and DVD. A network of younger artists will be involved in these reflection and creation processes and the international Partners of the project will input into the research and extend the knowledge to wider group of connections.

POST ME_NEW ID will practically explore the physical and digital social networking of creation processes for interdisciplinary artistic projects in a way that questions and nudges at the oblique border that lies today between the human and the post human. The use of body based and mobile digital tools, multi-ids, avatars, user generated content, mix, rip and burn culture, artificial intelligence, cyborg citizens, i-generations will be investigated.

- What is the dynamic interrelationship between digital technologies and the embodiment of such technologies in young Europeans?

- How will the creative participation and contribution of the young generations as players (not just spectators) effect and change artistic processes, the tools in use and the culture created?

- How do these changes in trans-national physical and digital mobility, plus shifting gender ideologies and European intercultural social circumstances alter the generations to come?

POST ME_NEW ID will be a driver for change and growth, a learning exchange between diversely skilled experts working together in a value chain of shared expertise from process to product and to the public. The long-term aim is a sustained co-operation, a knowledge network that will continue to deepen awareness and strengthen of understanding of the identity of the 21st century post human (digital) European.

ORAL PRESENTATIONS
24.11.2007

C1 Daniel Tércio. Frankenstein's Syndrome In A Cyborg Time

The character of Frankenstein was transposed from the shadows of times into the universe of the 19th century Literature. The young novelist Mary Shelley conceived the Frankenstein creature as an assemblage of different members of different corpses. To have an organic body – to gain a human form – the creature needed to be more than a simple addition of parts, and this was achieved by a discharge of energy. This did not avoid the monstrosity, the spark revealed the visibility and the functionalities of a body made out of pieces but it did not reflect a human soul. At the time when this novel was published research on electric energy was a new technology. For art (in this case, Literature), electricity worked as the unknown (and consequently was a menace for humankind) and also as a metaphor of life's energy. Electric fluxes resembled the invisible flow of desires, moving quickly, capable of connecting or unconnecting things. When we first started the TeDance project, one of the most discussed issues was the necessity of the Motion capture technology. In a laboratory of Biomechanics we started collecting samples for our own project in dance. The procedures are well known: moving bodies, with passive or active markers attached to it, were captured by several high speed digital cameras, and the signals were codified into a 3-D model. In some way, we are creating small Frankensteins, since one of the main purposes of this project is to build a database of human movements. In theory, from that database, one could get a fictional body with the left harm boxing, the right harm in a codified ballet position, both legs doing Bharatanatyam and so on. This paper proposes a discussion on the relationship between art, technology and fiction. Moving body is the main issue to be considered and the question that we pose ourselves could be: 'Do new technologies stress the fragmented body of modernity, or do they address the reunification of the body?'

C4 Kostas Daflos (*). Robotic interactive installations / Progressive body performances & interactive improvisations

In digital culture, "the code" can bring into existence inert spaces and give them the meaning of being active & an interactive environment by notionally stimulating them & ascribing to them the content of place. Body movements & physical contacts in an appointed active space produce situations of impromptu perception & physical experience. The contemporary pursuit is toward a medium of the artwork –user (-a human aspect), who is imposing into the space his/her particularities – characteristics with his/her physical involvement in a time-based visual installation, that opens the path to the new outcome every time. The architectural space can be assigned with further bioorganic meanings from the participatory action, as an open conceptual ground for practices. The "ipo", "cipo", & "cibo" are active agents that agitate & bring the passive spectator into an active & interactive relationship with the subject. The interminglement of both, spectator (body) & subject (technology) transforms the given space into an experimental hybrid space where body & technology meet. The medium of artworks is action-based. It involves the physical viewer participation & life's energy of human presence of the spectators or the performers-dancers. The body actions support the improvisation of self-discovery through this medium, and in turn the artwork itself becomes an improvisation. The successive transcriptions – rewritings - transpositions of human presence & action in schemes, traces, signs, diagrams, represent the distributed body, which is transcribed through various multiple mediums. The major source of transmitting & processing this information are the technological artificial agents (cipo & cibo). These automatic agents function in random kinetic situations. The CIPO is a project in progress, and alternative versions have and will continue to be developed. The nature of its random interaction with the user – subject requires for the continuum of the development. Each experience which in essence is an experiment brings forth other needs and opens new horizons for improvements of the CIPO agent. Thus, every unit from CIPO_03 to CIPO_06, incorporates critical comments, reflections & responses of the participants / spectators from their experiences. The CIPO occupies ephemerally spaces by creating various planes, measuring

the demands of different spaces and the roles of the performers- spectators. The interactive environments created give the participants/performers the feeling of: a kinesthetic narrative, a haptic experience, the essence of self-discovery of space, the suspense created by the exploration of the realm by their motions. The participants developed different personal & independent behaviors, a personal attitude in the event (which focused on different points), such as: conscious and unconscious spontaneous reactions, an excessive will to control the robot, a mood to improvisation with plethoric body actions, minimal body expressions trying to explore and understand intellectually the chain-react system, playful practices - for example (playing with the sounds they create and the distribution of their disembodied image), as well as many other independent behaviours. •Find the boundaries of hybrid spaces •Explore the limits of real spaces and activate these spaces. •Merge body with technology, extend the body. •Produce telematic environments and data spaces.

C5 Salvatore Iaconesi. Talkers

ITalkers explores a sensorial expansion of the human body as produced by emerging technologies.
"The human body is obsolete" and "we have always been cyborgs". This leit-motif, probabily two of Stelarc's most famous sentences, inspired the Talkers performance.
Technology has always been an extension, both physical and mental.
Through technology human beings have always been able to use their bodies in expanded ways and to sensorially perceive the world (space and time) in ways that go beyond our bodies' definition.
Technology opens up new sensorial and physical spaces.
Through the Talkers performance we focused on this concept using network related technologies.
Performing arts tend to define complex environments where communication lives at different levels.
The languages of aesthetics, of the body, of symbolism, and the natural energy flows created by the presence of the performers and by the evolution of the action mix together and form a whole, creating the performative experience.
In the Talkers performance this whole has been interpreted as a network and has been expressed/expanded through the use of technology. Internet-related technologies are probabily the ones that have created the fastest evolution ever exerienced in human society. We used inernet to expand the body of a dancer, connecting it bi-directionlly to the audience and to the performance space.
Through this augmentation the dancer bacame a cyborg with two levels of additional sensoriality. The dancer's costume was connected to a networked computer system. Several devices were placed all over the body of the performer.
Rotation sensors communicated the movements of the legs, arms and neck to the system, that used them to modify in real time the video projections on the stage's walls and to create visual feedbacks on the interfaces of the network-connected terminals that were available at the front of the stage, to be used by the audience.
On these, people could interct with the performance. A first interface allowed people to move circular shapes to change the sound environment and to send low-voltage electrical stimuli to the dancer's body, altering her movements and sensibility. A second interface was used to type in sentences that fed a linguistic artificial intelligence (the Talker), evolving its language knowledge with the inserted text, that was analyzed hrough a series of neural networks and used to generate a form of linguistic intelligence that was truly collective. Sentences were generated by this intelligence all along the performance, synthesized with an artificial voice, and played live in a series of speakers mounted on the cyborg-dancer.
The dancer's body actually talked with the voice of the collective mind. The status of the cyborg-body, the interfaces, the live video and the effects resulting from the global interaction were available and usable during the performance, making it a totally displaced, global, experience.
Two key poits have beed highlighted by this experiment: the tendency towards passivity of the audience, and its opposite.
Audience is used to "watching" a performance. Interaction is something to which they are just not yet accustomed to.
We used several "tricks" to induce people to interaction. Mainly noise/nuisance and pop aesthetics.

A truly annoying sound played at a really high volume when no-one from the audience used the terminals. Colourful interfaces with a "pop" look flashed in people's faces, luring them to interaction. Once captured, we noticed an exponential rise in interest: having avoided to explain anything in advance, the surprise of actually being the creators of the dance, sounds and visual effects of performance caused quite a long line to form in front of the terminals. In perfect web 2.0 style. Dance 2.0?

C11 Tiago Porteiro. Audio capture of the verbal «material» communicated by Alexandre del Perugia in the context of movement teaching: methodology description that lead to his approach

This talk presents the work done in order to obtain the PhD degree in Theatrical Studies at Université de La Sorbonne-Nouvelle, Paris III (2006), in the field of "scenic corporality". One particularity of Alexandre del Perugia's work is that he is involved in several domains and areas, both artistically and as a pedagogue, in the field of "basic scenic corporality" of the performer. The areas and domains of his intervention are in dance and theater, "new" circus, puppetry and street theater (namely Centre National de la Danse, Ballet Atlantique Régine Chopinot, Conservatoire National Supérieur d'Art Dramatique de Paris, Centre National des Arts du Cirque, among others). In the studied process of motion teaching, the word is the main element. This justified the option of selecting audio recording as the main methodological tool to archive the verbal "material" produced by del Perugia while teaching. In the multiplicity of the observed contexts, two different approaches were used: Observation and participative observation. To these two approaches two recording strategies were used, respectively: the use of a long range microphone, moving around the space in accordance to del Perugia space occupation, and an ambulatory moving system made of a tie-tack microphone and an audio recording equipment hidden in the observer-participant's clothes. In this particular case, when del Perugia started his verbal speech, it was necessary to do a nearing "gesture" and start the recording session. For two years the collected material was transcribed, selected and organized. All along that period the material served as the bases of the discussion process being developed between the researcher and del Perugia as a pedagogue. Regarding the used methodology two aspects can be highlighted: when doing a direct observation, the fact that the observer knows upfront that the verbal material, collected in real time, can be afterwards studied, that fact opens better and ample possibilities of analysis of the "here and now"; when re-listening and transcribing, knowing that it is possible to rewind and forward in order to access material already listened, enables, in the other hand, a detachment and better capacity in the analysis process. The labyrinthine "gesture" of the progressive organization of all the collected phrases, created finally the base material of research: the "log book" is made of more than 300 pages of Alexandre del Perugia's words transcription, systematized by chapters and items. This documental record is now available for future studying and to the pedagogue himself. This material, however, has implications in terms of methodology, doubts and questions no less important and to be taken into account. For instance, what's the value of the transcribed information out of its generation contexts and prosodic dimension? From this material and using an analysis process of the text – from which fundamental "concepts" and "notions" were extracted, intertwined, contextualized and justified, after considerations on finding answers to these questions – results will be presented on how it was achieved a characterization of the pedagogical-artistic perspective of Alexandre del Perugia.

C12 Paula Varanda + Justin Manor. The Virtual body – creative ideas generated by two dimensional samples of the real body

The digital revolution taking place in our civilization has radically changed communication and is strongly affecting our personal and social lives. The replacement of material resources by virtual ones and the infinite possibilities of archive and reproduction also regard the body and space realities. Today it is possible to create believable worlds where the live experience of emotions can take place within virtual environments inhabited by virtual beings, that closely resemble the real body. Professional categories are also changing, with many new jobs appearing for "digital expertees" and several others requiring upgrade with computer skills.

There hasn't been a significant consequential transformation in methodology and outcome in the majority of the artistic dance work currently developed worldwide. But there are possibilities available today, which can directly affect the artistic result of the work and, eventually, the state of the art. On one hand, the very specific technology needed to work with all sorts of data, implicate that the choreographer has to involve in the creative process the knowledge of digital artists and technicians. On the other hand, the virtual body and the virtual space, used as separate or joint devices, offer a new territory for creating, experiencing, viewing and analysing dance.

The virtual body is here considered to be something that can only exist from technological capture, manipulation and reproduction, either through sampling or synthesizing processes. Despite the incredible possibilities of the synthesizing process, and the motion capture sampling process, I have only developed practical research with the sampling process of visual capture. Nonetheless, I see the virtual body created from a sampling image process as a wide field for creativity.

In this presentation I will refer to some experiences developed by other artists, and I will present the particular possibilities offered by the hardware and software created by Justin Manor, a digital artist I met by chance a few years ago. Like other systems of sampling, this device affects the way I move and compose movement and brings original ways of visualizing and perceiving it. When I saw Justin's work I immediately understood how suitable it could be to provide a different experience for the dancing body. The next issue to be addressed is: how far can we extend this collaboration? How can we successfully accommodate the appealing aesthetics of the virtual body with the necessary dramaturgy of content, and develop a contemporary performative object.

Complementary information:

Credits:
Artistic and production coordination, texts and choreography - Paula Varanda (PT)
Visual and Digital guest Artist - Justin Manor (USA)
Guest Musician - Anthony John (UK)

C19 Fernando Galrito. Moving image and moving bodies

Motion is the first language. Motion is the dance basis. Motion is, also, the basis of the moving image and the essence of animation. Dance and animation are motion arts And the motion permits the manipulation of forms and of the emotions. From the pre-cinema until today, from the optical toys until the motion capture, from the works of Edward Muybridge to computer interaction animation ware always connected and find new motions for the the body. The relation between moving body and all the "technologies" of motion his essence of this paper.

C20 Kirk Woolford (*). Moving an Audience: Biological Motion and Will.0.w1sp

Neuroscience and the varied fields of consciousness and cognitive studies have given us a great deal of insight into visual perception. One current debate revolves around the question of whether human beings have not only a specific form of motion vision, but whether perceiving in this manner causes the observer to move his or her body in response to what is seen. This paper presents an overview of debates surrounding the observation of biological motion and outlines how the dance installation, Will.0.w1sp, articulates these ideas.
With the publication of "Art and Visual Perception: A Psychology of the Creative Eye"[1], Rudolf Arnheim created an inseparable bond between visual Art and Psychology. However, both Psychology and Art have traveled great distances between the mid-60s and early 21st century. Neuroscience and the varied fields

of consciousness and cognitive studies have given us a great deal more insight into visual perception. One current debate about visual perception revolves around the question of whether human beings have not only a specific form of motion vision, but whether perceiving in this manner causes the observer to move his or her body in response to what is seen. Will.0.w1sp attempts explore this motion vision and use it to animate its audience.

In 1973, one of the most important papers dealing with vision and motion was published by Gunnar Johansson. In “Visual perception of biological motion and a model for its analysis” [2], Johansson described a method for isolating “Biological Motion”. He dressed subjects in black, placed lights on their major joints and recorded them walking against a black background. In many ways, his experiments were similar to the chonophotographs created out in the late 19th century by the French biologist, Etienne-Jules Marey. However, Marey made stills showing the traces of movements wheras Johannson created moving images showing nothing more than the movements of points of light.

Johannson was able to demonstrate that even at this level of abstraction, subjects could tell the difference between a moving human being and a moving mechanical dummy. However, if the human or the dummy stopped moving, observers could no longer tell them apart.

A great deal of research has been done on biological motion since 1973. Research from Dittrich [4], Koslowski and Cutting [5], Fox and McDaniel[6], and others demonstrate that we can tell the difference between male and female motion; we can recognise a multitude of gestures including walking, jumping, ironing, greeting, and boxing; they have even provided evidence that infants as young as 3-months old can tell the difference between human and mechanical motion.

Before I was aware of any of this research, my own work with motion capture demonstrated to me that I could tell the difference not only between biological and mechanical motion, but I could easily distinguish between dancers even if their movement was reduced to only 8 dots. As I learned of experiments combining biological and mechanical motion into animations, I began to wonder if I could use this research to create an interactive installation. I went back to some of my motion capture files and wrote software to create thousands of individual dots or particles which moved in relation to the motion data. Initially, I had these particles swarm around motion capture points, but this was immediately readable as a human being because it not only had human motion, but the expanse of the particles gave it a semi-human form. I began experimenting with the flow of particles between points to find the borders of readability of both form and movement. As I worked on the imagery, I realised I needed to go back and re-choreograph the movement to add more variation in the tempos.

Eventually, I began exploring different ways of using the position and motion of viewers to constrain the accuracy of the particle’s motion. I constructed a 6m wide curved screen in order to allow the particles to flow freely though space. In the final version of the installation shown at ARCO’06, the particles scatter when viewers approach the screen too quickly. A system of motion sensors moves the particles away from rapidly moving viewers and into sections of the space with little or no movement. This behavior combines with the motion data driving the particles to create a digital performer, which despite being composed of pixels and having no set form, feels extremely biological.

During the development of Will.0.w1sp, I learned of David Milner and Melvyn Goodale’s discovery of a dichotomy in the Visual system while exploring the relationship between visual perception and visual imagery. In The Visual Brain in Action [7], they explain that sensory information received from the eye is sent down two separate pathways. One stream is used for recognition of objects while the second stream determines the spatial location of the object. The French neurologist, Alain Berthoz [8] proposes that this second stream is involved not only in positioning the object, but in planning and moving our own body in reference to the object. This has lead to construction of theories of “mirror neurons” as coined by Rizzolatti, Fogassi and Gallese [9], and other neuroscientists from Parma who discovered that the same pattern of neurons were triggering in a monkey’s brain when the monkey watched a movement as when the monkey performed this movement. Further research indicated that this was only the case with specific motions, particularly with grasping motions. Recent research demonstrates not only that this is the case with human beings, but studies by Vivianni and Stucchi [10] indicate that it requires prior experience of the motion.

Pierre Jacob and Marc Jeannerod state in their book, Ways of Seeing: The scope and limits of visual cognition, [11] “some of the findings on the perception of biological motion… raise the intriguing question of the inseperability between action and perception, or more precisely, between the perception and the preparation of some actions.” In other words, by watching an action, the observer’s body prepares to move in relation to it. I attempt to trigger these forms of preparatory movements in the bodies of viewers who watch the will.0.w1sp installation.

C23 Suguru Goto. The Case Study of an Application of the System, “BodySuit” and “RoboticMusic” – Its Introduction and Aesthetics

This paper is intended to introduce the system, which combines “BodySuit” and “RoboticMusic”, as well as its possibilities and its uses in an artistic application. “BodySuit” refers to a gesture controller in a Data Suit type. “RoboticMusic” refers to percussion robots, which are applied to a humanoid robot type. In this paper, I will discuss their aesthetics and the concept, as well as the idea of the “Extended Body”.

Keywords: Robot, Gesture Controller, Humanoid Robot, Artificial Intelligence, Interaction

ART INSTALATIONS
22.10.2007

I2. Mutin Association. Aboulie

Aboulie is the project of a video installation based upon the memory of a choreographic phrase. Starting with basic material, writing out a movement phrase, how the gesture is translated, transposed, deformed? What is the memory of the body, of the unique body, of the multiple body? How is the movement expressed in body differences, the representations of bodies, deformed bodies of strange black dolls? Aboulie is a reflection upon the different levels of movement representation. The video installation Aboulie focuses on variations with the same basic matter, on the different interpretations of one single subject. Aboulie simultaneously and randomly features two levels of representation of movements side by side. The various representations go from reality to shadows, natural to virtual, from a tangible body to deformation … We also have a live video and audio performance linked to this installation (see on Aboulive in performance in our website)

I4. Beliz Demircioglu. The Crowd In Us

Memory is more than a looking back into a time that is no longer it is a looking out into another kind of time all together where everything that ever was continues not just to be, but to grow and change with the life that is in it still." Frederick Buechner "The Crowd In Us" is an interactive installation that plays with the body, time, space and our perception of them. It creates 3 matrices of time; present, 5 seconds ago and a pre-recorded time, mixes these matrices together and creates one visual matrix where all the different times exist in one space. When the viewer steps in front of the projection wall what they see is their own live video footage and 5 seconds ago and a recording of the same space while a solo was being performed. The audience has the opportunity to interact with the past since the past becomes the future in this continuous flow of different times. And they have the possibility to arrange their movements according to the way they would like to foresee the future interacting with the past. By blending a completely different time of a recorded video of a performance danced in the same place, the installation gives the audience the option to create a piece that blends virtual reality with the reality of now and here. Beliz is a performance/installation artist who works with "Bodig" of Turkey, a performance platform that concentrates on the body. More information on her work in New York and Istanbul can be found at http://belizd.com

I5. Fernando Nabais. Interactive Scenema #1, Marilyn

Interactive Scenema #1, Marilyn A primeira obra de uma linha de exploração artística no âmbito da arte digital que, partindo de elementos clássicos do cinema, lhes procura integrar uma dimensão interactiva contextualizada. Ao contrário do conceito de Interactive Cinema, linha de investigação académica e artística entretanto substituída por conceitos e keywords mais recentes e que reflecte sobre a evolução em termos narrativos, plásticos e interactivos do Cinema, Interactive Scenema é uma procura de intervenção interactiva numa única cena ou numa recontextualização de várias, partindo de um dispositivo de interacção, ancorado na narrativa desses mesmo elementos cinematográficos que o alimentam plástica e conceptualmente. Pretende-se a familiaridade resultante da iconografia dos elementos manipulados, com uma procura de contextualização do "artifício" de interacção em elementos decorrentes da própria narrativa. O vento, que provoca o esvoaçar da saia, é também o elemento interactivo evocado, pressupondo que o espectador/utilizador interage através do sopro. Esta peça, parte do filme Seven Year Itch, de Billy Wilder, especificamente da famosa cena da saia esvoaçante à passagem do Metro em Nova York,

criando um referência a outro grande ícone desta cidade, Andy Warhol, e da sua também inspiração neste mesmo ícone do século XX, Marilyn Monroe. Se Andy Warhol partia de imagens perfeitamente estandardizadas da cultura pop como matéria de criação, esta peça desmonta os laços entre ambas através de elementos interactivos. O som, controlado através do sopro pelo utilizador, baseia-se numa entrevista ao próprio Andy Warhol, em que este fala sobre os seus métodos de criação, na realidade, não tão diferentes dos que estão presentes na criação desta mesma obra. Descrição Assim, a instalação consistirá numa projecção de um loop de video da referida cena, sempre em repetição, que, através do sopro do espectador/utilizador se transformará num dos célebres quadros de Marilyn Monroe de Andy Warhol. Repetindo também aqui a sua abordagem de criação através da referência a esta mesma actriz. O processo, intensidade e velocidade desta transformação serão o resultado interactivo da intensidade do sopro do espectador/utilizador. Esta transformação é efectuada através do mapeamento das frames de vídeo a um sistema de partículas. Do ponto de vista sonoro, estando o sistema de partículas em repouso, ouve-se a passagem do metro como ilustração das imagens de vídeo da saia esvoaçante de Marylin Monroe, quando o utilizador sopra, expandindo o sistema de partículas e visualizando a imagem de Andy Warhol, pode-se ouvir uma entrevista do mesmo reflectindo sobre os seus métodos de criação. Mas detalhes sobre o projecto poderão ser consultados no blog http://www.interactivescenema.blogspot.com

I10. Peter William Holden (*). Arabesque

As with all my recent work I'm not only concerned with the sculpting of three dimensional spaces but also the fourth. Creating work that evolves / regresses with time. "Arabesque" is such a work: a real time animation.

The installation itself is a mechanical flower which has its roots both in Mary Shelly's Frankenstein and the alchemist's laboratory . Life sized cast human body parts with translucent qualities bare their internal robotic mechanisms to the public. The wiring itself is an aesthetic expression deliberately integrated into the installation to bringing chaotic lines of abstract form to contrast with the organized symmetry of the body parts. When activated air flows invisibly, bestowing life to these mechanisms and its presence is only betrayed when exhaled loudly from the valves attached to the serpentine air hose. This combined with the clicking of relays creates a contemporary music which seems to complement Strauss's "Blue Danube".

Due to its nature "Arabesque" is in fact a performance: immersing the viewer in a similar way as cinema. With the extra advantage of its three dimensions the observer can choose from a multitude of viewing positions each offering a different insight into the dynamically changing form of the work. With "Arabesque" I aim to create an installation that will hopefully appeal to a broad audience utilizing unconventional methods, taking the grotesque and producing a kaleidoscope of paradoxically beautiful patterns.

ART INSTALATIONS
23.10.2007

I3. Ivani Santana. Cercando mulher nua caindo. Prazer

The title of this installation brings two principal points: motion and surveillance. It's a metalinguistic poetry because these two focus belong to the language of video. I'd like to explore the very properties of video, and for that reason we turn back to chronophotography (study of movements using sequential photography) create by Etienne-Jules Marey (1830-1904). I'd like also to investigate the simple motion of a body falling down. The woman desires to fall down her naked body to the gravity. The shot images from different points of view give us images that we can see just with our eyes at all. The media give us the opportunity to see muscle contractions and body configuration in another way. The sound is continuous as the same of the shoots, but the images are fragmented. The difference of these two perceptions plays with our imagination, alluding our idea of the real and the imaginary situation. As in Marey works, our goal is became invisible in visible. The imperceptive motion that has just 15 seconds is reconfigured in our mind. Muybridge works (i.e. Ascending and Descending Stairs) as well as Marcel Duchamp (i.e.Nu descendant un Escalier. No.2) were also my inspiration. As Duchamp I played with the words: the title end with pleasure, but we shouldn't know if the woman has a pleasure to fall down or the audience when watch that. As a panoptic space we created a circular space. But, the woman is surrounding and not the members of audience. There are 3 screens enclose the watcher. The surveillance feelings are disturbed, because we change the position of the observer with the thing observed. This installation discusses the two principal points of video: motion and vision.

I7. João Rui Oliveira e Francisco Medeiros. FeeDbaCk

Concept
FB01 is an interactive installation where the audience is invited to play and touch the exposed objects.
The aim is that the audience, by manipulating the interface, is able to control a chaotic system like the FeedBack, discovering new visual and sound possibilities.
The main purpose of FB01, is to create proximity and a link between the artistic object and the audience. In this project the audience is active, the final results of the art installation depends on how the audience interacts with it.
In a continuous and circular motion, all dynamic process is a reality transformer.

Description
In FB01, image and movement work as video and sound generators. The aim of the project is to promote the proximity between technologies and the audience. Therefore in this project the whole environment surrounding the installation is very important. The aim is to create a "living room", where people can feel comfortable only to observe the installation as well as to interact with it. FB01 is also adaptable to space so, the material used depends on it; 5 or more televisions, and/or 1 video projector (depending on the available space), 2 couches, a coffee table, an antenna (physical interface) and a web cam.
When manipulating the interface, the body works as conductor. Touching the antenna's extremities, the electric signal passes through the user's bodies, creating an audio feedback loop and consequently hanging the audio and the video colors (which is also in a feedback loop). The signal manipulated with the

rotation of the antenna, is connected to a computer by an Arduino (micro controller for sensor readings), producing effects in video and sound. The video motion tracking, made through cv.jit, changes the fractals and the colors generated by the feedback loop, the dimensions and rotation of the video.
All these processes are made in real time, without pre recorded materials, with a software (FBP01), programmed in Max/msp/jitter.

ART INSTALATIONS
24.11.2007

I1. Kostas Daflos (*). Interactive environment c(2)ipo _06 (music box)

Description: (2)_06 The c(2)ipo-06 is a musical cooperative organism with a structure related to the neurological system. It is activated by the human presence and it communicates with the environment via a sensor, while in its internal environment there are additional ten contact sensors which supply the system with responses. (They interrupt and re-establish endless routes of information). These contacts transform the results of the impromptu sound effects obtained from the environment into a multitude of random sound frequencies. The kinetic systems of the four motors correspond to the counterbalancing rejections of the mechanical movements, which disengage the impromptu responses of random duration and outcome of the organism. C(2) ipo_06 behaves as a regulated machine of decision making, which waves impromptu between the (binary) optical responses of a blue and red light directed towards the human presence (constructing randomly assumptions that correspond to two genders). The __organism__ c(2)ipo_06 consists of a fixed neuron-network with ten (10) contacts of touch sensors. The moving parts of the arrangement are the four (4) metallic adjustable small arms which support ten (10) adjusted contacts of sensors. The ability of the system to be supplemented with new additions of branch constructions, allow the existing network of inputs of information to increase indistinctly, regarding its quantity and its extent. The new additional terminals of sensors can expand uncontrollably and take up real spaces. These endings with formless branches of terminals can take part in hubs, be embodied in the system and extended, thus realizing a sprawling spatial network of appendages, active inputs of information. Respectively, this could be expanded as long as it is allowed by the availability of power supply and the moving system of the __organism__ which operates in an upper limit of maximum power for the necessary interactions. A following characteristic of the arrangement is its ability to appropriate to the behavior of a preset machine of decision making. The __organism__ can alternate in an unstable way its “decisions”, between the binary optical responses of a blue and red light. These optical signals are a consequent from a heedless procedure, -the distribution of energy from the “organism”, so that, at the moment where the human presence intervenes in the conversational process the procedure is influenced by his/her presence.

I6. Filipe Pais. Living Room Plankton

Living Room Plankton is a visual and interactive installation that re-creates a biological organism that grows through time and space and interacts with the real world and human actions. Using a system with input-sensors this unicellular organism differentiates itself into other children nods and filaments where velocity and growth limits are defined by temperature and humidity, and a sound and light input define the organism opacity level at the canvas. With this interactive life-cycle the spectator has the opportunity to contemplate canvas that change within the organism development and it’s feedback answers to light, frequency and amplitude sound variations. There are some characteristics related to form and functionality taken from unicellular organisms and plankton but the way this organism reacts to light and sound variations brings to this object an interactive augmented reality experience without using a microscope. The visual compositions we get, are no more than dynamic time-lapses from the organism behaviors. The duration of this organism growth can be adapted to a specific place or event. (It can take a few seconds/minutes or a couple of days to get this growth finish).

Living Room Plankton
In nature we find phenomena and choreographies emanated by living beings and inanimate matter which are Invisible to the eye or that slip our attention either for being too mercurial or supine and unhurried.

Mirroring nature at some level this interactive installation leads to plastic contemplation through an organism's daily routine.
Through a generative algorithm an organism sharing features with many others present in nature move, flourish and responds to its surrounding environments.
This life cycle and growth is visually portrayed in a projection on an existing wall on any space subject to perceivable daylight fluctuations. Given some luminosity, the organism and its structure its presence is revealed provided that the room is devoid of noise. Being there some intrusion and commotion it detects the sonance and retreats camouflaging it self.
In a lightless environment, the creature's skeleton is engraved as if leaving its ghost behind.
These echoes combined build up into shapes and colors derived from the organism's behavior.
This pattern is intimately related with the atmosphere of its placing.
From Scandinavia to Equator, its outputs will range dramatically, as the habitat it dwells in with its climate conditions will dictate its performance.
These visual outturns are time-lapses in progress and in constant mutation that weave its seemliness, like notes on an ever changing composition.

I9. Joana Gomes. Confront

This Project is the result of an "ensemble" of interactive videos, which are handled by means of spectator movements in relation to the projection resulting in an interactive "video art play". Using key points of the body (hands and feet), the video responds the body language of the spectator. Let us imagine that the user starts to approach the screen, the vide is going to react to that approach, the same will happen when the user gets further, moves sideways, moves his/her hands, etc.

The objective of this work is to create a "rapport" between the spectator and the part moving away and, if possible even destroying the separation between the real and the virtual worlds, between the person and the character. Such objective will be reached through the reaction almost instantaneous of the character, which will involve the spectator/user... a new form of "rapport", in a world neither real nor virtual…

The videos are going to present, to encourage such very intimate interaction one sole character each time, who is involved by a white immensity, a esthetic that results in total lack of parameters for comparison. The part is in this way completely isolated. The parts vary in terms of sex and attitude, but always motivated to interact and to stimulate the spectator in a way to create ties with it, even if it provides them discomfort and hard feelings…

This way, this Project goes beyond the simple observation and of the acknowledging of its existence. This project can be considered only if the spectator really abstracts from what is real and from what is virtual. The capacity of emotional responses that the system should be able to reproduce to involve the user in an emotional relationship will be the main difficulty.

PERFORMANCES
23.11.2007

P3. Mutin Association. BI#1- Le Poil (work in progress)

The association mutin wishes to create a networked project on the body intimacy related to digital technologies. The project Body Intimacy wants to be built as a series of reflexion on the body and its intimacy. It would be like a private diary of the body. Build day after day, gradually, becoming meaningful only in the series. It is not the idea to create the private diary of one person, it is not a single point of view on intimacy but that would be a place of exchange. A place to share the actual image of the body in relation to digital technologies. In our projects, we are continuing to feel the necessity to work on a digital intimate body, to take the construction of this intimacy. This is what we wish to share in this project. Body Intimacy, a project as a web built with multiple skins, drew by various images. Little by little an image could emerge and create a cartography of body intimacy. Body Intimacy will invite artists, friends, creators to take part and give their vision of a body intimacy. These multiple and cross points of view will draw the cartography of the intimate body, will draw the body images in a digital world. This project proposes to see the body in its intimacy and to expose the results on the web. To gather the proposals, the idea is to create a space on mutin's website. This virtual space will be able to receive the proposals in image, in words, in video, in sounds, in performances reports... and will be conceived like a space of sharing. On the website, there will be two sections. The first part, a space of exchange conceived as a wiki where each artist wishing to take part in the network will be able to send his vision. In addition, for the second part, after exchanges and reflexions, the proposals will be organized by an interactive and dynamic interface conceived under flash. Together, the projects will draw the cartography of Body Intimacy. To the end of the project, the idea would be to find places for presentation. To expose the results in different forms : installations, performances, exhibitions... To initiate the reflexion a first performance BI#1 – Le Poil will be create. BI#1 - Le Poil is the project for an interactive solo. Built on a intimacy evolving in between interiority and exteriority, the project wants to show the invisible part. Placed in an interactive set up, the dancer, Céline, will expose her body. She will explore her limits, mixing pictures and her surfaces. During the performance, Céline will build her image, her sound, playing with her body and her record image, her deformed body, her interiority. She could interact with her image to show it with an other point of view. For TeDance, we would like to propose an hybrid presentation mixing a theoretical explanation of this networked project Body Intimacy and a short interactive performance work in progress of BI#1 – Le Poil.

P4. Heather Raikes. futuRasa

futuRasa Heather Raikes DXARTS, University of Washington, USA Direction, Choreography and Animation: Heather Raikes Dancer: Heather Raikes Electroacoustic Sound: "Tear" by Shahrokh Yadegari Joint Proposal with accretion, submitted by Stephanie Andrews* Overview futuRasa is a “pocket performance” that explores technoetic dimensions of embodiment through a liminal synthesis of physical gesture, 3D animation, video projection, electroacoustic sound, and live performance. futuRasa is a performative inquiry into the deepest sensate kinesthetic dimensions of corporeality vis a vis technology; and a continuing investigation of the body and its mediated extensions working in poetic resonance as experiential metaphor. This 9-minute solo work is performed by a dancer covered completely in white clothing and body paint positioned in front of a white vertical rectangular canvas. A 3D animation is projected onto the hybridized surface of her body/canvas. This small, integrated theatrical format explores contemporary evolutions of historical futurist performance forms – i.e. extreme, innovative, self-contained performative syntheses of body and machine. Theatrically, the dancer performs a series of slow, archetypal movements based on Michael Chekhov’s psychological gesture: a physical movement that evokes the essence of a complete emotional state

within a performer. The gestures are based on four rasas. Rasa is a term from Hindu aesthetics that defies precise translation, but can be described as “juice”, “flavor”, “emotion”, “essence.” Rasa is arguably an archetype of sensate emotion. The piece progresses through shanta rasa (peace, tranquility), adbhuta rasa (wonder, curiosity), shringara rasa (love, devotion), vira rasa (force, empowerment). In resonance with the physical choreography, the gestural rasas are utilized as the basis for kinetic 3D animation which is projected back onto the canvas of the body, creating a poetic interfusion of sensate embodiment across the physical – digital continuum. Documentation: www.heatherraikes.com/futurasa Commentary futuRasa premiered at On the Boards June 9-10, 2007. “Heather Raikes’ animated performance installation, futuRasa, was sublimely beautiful and was, for me, the highlight of the evening. It was one of those rare works that leaves the viewer with the sense of having witnessed something exciting and entirely new. The combination of dazzling animation and simple choreography seemed to be, among other things, Raikes’ meditation on the body’s capacity to dominate any technological milieu and its stubborn insistence on remaining figure, in spite of all attempts to render it ground.” – Anne Lawrence, Seattle Post-Intelligencer Sound-Off Bio Heather Raikes is a media/performance artist. Her work has been presented across the U.S. and Europe, and includes media performances, installations, videodances, hypertext, visual art and interactive media design. Heather is former dancer with the Erick Hawkins Dance Company and a graduate NYU's Interactive Telecommunications Program. She has held art/research positions at Temple University, the University of California San Diego Center for Research in Computing and the Arts, and the California Institute for Telecommunications and Information Technology. Heather is presently pursuing a PhD at DXARTS – the University of Washington's Center for Digital Arts and Experimental Media – where her research focuses on digital embodiment, technoetic performance forms, immersive media design, and new media language systems.

P5. Sarah Rubidge. Global drifts 2006

In July 2006 a multi-sited digital performance event entitled accented body took place as part of the Brisbane International Festival, Australia (www.accentedbody.com). It comprised 5 performance events, created by 5 groups of artists, each responding to the generic notion of the ‘accented’ body. Each group of artists could choose to create a discrete performance event or an interrupted performance event for a specific site on the Creative Industries Precinct at Queensland University of Technology. global drifts, however, was conceived as a mobile performative system, designed to meld the individual accented body performance events into a distributed totality. A collaboration between myself and Hellen Sky of Company in Space, Melbourne with digital arts practitioners Hyojung Seo and Suenghye Kim, global drifts comprised a 90 minute digital promenade performance, featuring a choreography of distributed performance vignettes and linked systems of digital imagery. The imagery was projected onto 9 screens, distributed throughout the site, each of which could be activated individually or made inactive at the press of a button. Using two performers and a complex electronic matrix to connect the screens, computers and digital image systems, the live and virtual imagery that constituted global drifts wove through the accented body event, variously paralleling, referring back to, and serving as harbingers of accented body events to come, thereby creating a subliminal texture that seeped through the event as a whole. The digital imagery comprised 5 independent non-linear systems developed in Isadora. Each image-system used the same non-linear structural framework, and comprised both system-specific and shared imagery. This ensured moments of unison and variation within the nine, frequently, simultaneous displays of imagery. Using the full extent of the complex electronic matrix, the distribution of the imagery was improvised across the screens throughout the accented body event. In this presentation I will focus my discussion on the structuring of the global drifts digital image systems and the choreography of their simultaneous distribution across the accented body site, and the rationales that underlay it. I will address the artistic, philosophical and technological issues that exercised me during the development of these systems, revealing how the content, structure and distribution of the imagery constituted a choreography of image and thought. Rather than present this as a lecture, I would like to present this such that the imagery can be distributed onto at least three screens (not on one wall), preferably with delegates standing in an open space to create the sense of being within the systems of imagery. (It could be a foyer area).

PERFORMANCES
24.11.2007

P6. Isabel Valverde. Real Virtual Games

Collaborators: António Caramelo (media artist) Isabel Valverde (intermedia choreographer) Jorge Gonçalves (dancer, intermedia choreographer) Helena Figueiredo (media artist) Inês Negrão (dancer) João Costa (dancer) Regina (virtual dancer) Abstract Originated during the Tedance Residency at CENTA 2005 and with its support, Real Virtual Games (RVG) develops as co-authored collaborative intermedial dance project for physical and virtual site-specific environments and performers, with potential audience participation. The performance attempts to question immersive interfaces in hybrid environments (ex: computer vision interaction and screening systems: VR glasses; web cam - movement-sound/image) and the relation to the so-called “disembodying” effect. Via such presence and movement mediating apparatuses, we develop choreographic situations experimenting with altering and estranging common embodied interactions and perceptions, towards experiencing an emerging posthuman corporeality and renewed perceptions of particular realities within the contemporary Westernized condition. Departing from the dislocation of the virtual (game) situation into the physical space, and vices versa, this project is situated in the reflection about the challenges to embodiment posed by increasingly immersive interfaces, particularly the massive adoption of virtual sites as real time communicative models. Through a constant intertwining of dimensions of experience, RVG advances in the virtualization of physicality (space and bodies) and the embodying of virtuality, where corporeal and virtual are interconstitutive aspects of the very hybrid realities created and perceived. Parallel real time interactions are developed towards situating the performative action in associations with real-virtual immersive environments. These interactions are complex as they allow multiple readings of the various simultaneous interfacings at play. Whereas one performer engages with the VR immersion, facilitated by the VR glasses, while contacting with the other performers mainly through touch, the other performers immerse themselves in the physical space, where, through a ‘interactive’ device, their engage with movement, time and space relations as they generate sound and image scapes, along with following the VR space and bodies projected. In the virtual on-line environment, the autonomous virtual performer engages with its virtual site, but is also with the physical performer through its avatar. The audience members are asked to witness the multiple mediated immersions and to establish associations amongst the parallel and connected realities, if possible experiencing the systems before, during or after the performance. Through a practice based research on posthuman corporealities where technologies of virtuality and materiality are both impregnated in our ways of behaving, relating and communicating, we aim towards a conscious and transforming creative familiarization with the very technologies, aware of their reductive and expansive affects to our physicality, modes of perception and reasoning capacities. VRG includes practices of appropriation of VR on-line environments and virtual beings as well as real world artifacts. Provoking momentary disorientations to regaining a renewed embodied awareness and agency that integrates virtual entities towards emerging posthuman corporeal subjectivities. The processing of bodily movements feeds the interlinking of materials and artistic disciplines to reveal an organicity to the mediatic elements. Emphasizing the deployment of the choreographic process and of audio and visual representations/depictions of the spatial and temporal experience in/between realities.

P7. Stephan Jurgens. .TXT

txt Keywords: computer vision/motion capture, speech recognition, data mining / information visualisation, real-time choreography, expanded cinema/polyptych cinema, fluid screens, particle systems, kinetic typography and character animation. “.txt” is a project that has been developed since 2006, being originally conceived of during an artistic residency at CENTA (Centre for Experimentation and New Artistic Tendencies, in the north of Portugal) as part of the TeDance (Technologically Expanded Dance) Project, and developed during another residency at the Teatro Aveirense. Meanwhile “.txt” has been

awarded a subsidy by the Portuguese Ministry of Culture, and a 20' work-in-progress was shown in May 2007 at the International Animation Festival "Monstra" in Lisbon, Portugal. The ".txt" project is culminating in an interactive live performance work, mediated by several sensory technologies, that explores innovative transversal forms of artistic languages resulting in the creation of unique vocabulary, which can be expressed vocally, physically, through interactive soundscapes, visual composition and real-time choreography. Working methodologies are developed "on the fly" during the different phases of the creative process. Recurrently the concept of bi-directional transfer of principles between two different artistic languages, for example choreography and 3D animation, is employed, often resulting in surprising new creative strategies for the rehearsal process. Four ideas central to the project can be identified: 1. the "big-bang" of (artistic) language is a recurrent theme: the birth of a gesture, a sound, an image and their evolution and relation to the performer throughout the piece 2. the multidimensionality of any artistic language allows for the transversal dialogue between heterogeneous members of an art&science project. This kind of dialogue consists of development, testing and fine-tuning methodologies in each field of specialization: choreographing the video projections on fluid screens, conceiving of and "programming" the dancers' movement using the logic of a particle system etc. 3. Interfaces between performer and technology become content 4. Reflection of convergences between art and science in its social, historic and aesthetic dimension can be part of the performance itself "The Electronic Revolution" by William S. Burroughs has served as a dramaturgic base to develop the narrative structure along the lines traced above. In his 1970 essay Burroughs identifies essential questions about the use and abuse of multimedia technologies. On the other hand he proposes artistic ideas and techniques, as well as humanistic concerns, that have been inspiring the narrative dimension of the ".txt" project. Some of the compositional devices shared by many artists of his time are re-visited, refined and transferred to other areas. His famous cut-ups for example today can be compared to the re-sampling and re-arrangement of fragments of all kind of digital and analogue media materials. Finally, in the context of the triangulation of artistic, academic/scientific and industrial/technological communities the ".txt" project allows for alternative aspects of a production that goes far beyond the creation of a stage performance: we participate in residencies/laboratories aiming at artistic research, have been traveling to investigate and disseminate, and we also are actively engaged in the organization of conferences, public debates and publications.

P10. João Samões. We live in a world traversed by a limitless destructive force

Uncertain sounds in total darkness.
The light fades in, slowly, and both the context and action are gradually revealed.
Randomly, two performers slightly touch the surface and the textures of the bones of an anatomical model of a human skeleton with contact microphones.
When the intensity of light reaches its peak, and the image becomes completely clear, the action ends.
* This performance is a fragment of "The Labyrinth, Death and the Audience", which will be premiered on 14th July at the Black Box of the Centro Cultural de Belém (C.C.B.), in Lisbon.

Workshop. António Caramelo. Introducing to Isadora (14:30/17:00)

BIOGRAPHIES PRESENTERS

Ana Paula Batalha. First PhD in Dance in Portugal. The only Full Professor in Dance in Portugal. Head of the Dance Depa[...] American Universities. Author of a two books – Analysis of Dance and Methodology of Teaching Dance. Author of several papers in different national and international Conferences. Analysis of Human Movement, Analysis of Teaching Dance, and Ethnochoreographic research- Choreograph Map. Supervisor of several students of PhD and Master studies.

Åsa Unander-Scharin is a choreographer and dancer who create new works in collaboration with composers, visual artists, computer programmers, robotic researchers, dancers and [...] The dance works of Åsa Unander-Scharin always offer aesthetic and exhilarating experiences. Åsa Unander-Scharin stretches and adds new perspectives to body, space and acoustic ca[...] two live laboratory rats. In the choreographed exhibition "Navigation" from 2004-05 the audience have an influence on the different installations. Her digital dance works has been presented at the Swedish Dance Biennal, ARCO International art fair in Madrid, Monaco Dance Forum, Art Movement festival at the Baltic Art Centre [...] Media and European Cultural Policies) in Gothenburg, at the Interactive Institute seminary in Stockholm and at ICMDD (International Guild of Musicians in Dance) in Stockholm 1998, [...]

Augusto Gil Pascoal. ACTIVITY: Assistant Professor (FMH-UTL)
BACKGROUND:
2001 - PhD Human Movement Sciences (FMH-UTL)
1992 - MSc Human Movement Sciences (FMH-UTL)
1987 – Graduation on Human Kinetics (FMH-UTL)
1987 – Graduation on Physiotherapy (ESSA)
SCIENTIFIC INTEREST: Shoulder functional assessment of the glenohumeral and scapular 3D kinematics during overhead arm activities in clinics, ergonomics and sports.
PUBLICATIONS:
Matias, R. & Pascoal, A.G. (2006). "The unstable shoulder in arm elevation: a three-dimensional and electromyographic study in subjects with glenohumeral instability." Clin.Biomech[...]
Tainha, C. & Pascoal, A.G. (2005). *Shoulder kinematics during clinical glenohumeral tests: Differences between no-players and water-polo players.* (Poster), XXth Congress of the Inte[...]
Pascoal, A.G. & Tainha, C. (2006). "Alterações no padrão de rotação externa e abdução horizontal do braço em jogadoras de pólo aquático." Revista Re(habilitar) 2 3-21.
Veeger, D. & Pascoal, A.G. (2006). "Upper extremity biomechanics: Are we closing the gap?" Clinical Biomechanics 21 (Suppl-1): S1-S2.

Aylin Kalem. Holder of a BA degree in English Language and Literature, and an MA degree in History from Bogazici University, Istanbul; and a DEA degree in Dance and New Technol[...] of Performing Arts Department of Bilgi University, at the Modern Dance Department of Mimar Sinan Fine Arts University, and at the Dance Programme of Yildiz Technical University wi[...] performance and digital culture. Her interactive video installation called "l'entre-deux" is exhibited in various organizations. She was the co-organizer and curator of the international [...] performing arts and digital culture.
www.bodig.org
aylin@bodig.org
www.aylinkalem.blogspot.com

Cátia Cascais, nascida a 24 de Janeiro de 1984, Licenciada em dança pela FMH. Portadora do Curso Técnico de Bailado d[...]

Daniel Tércio has a BA in Philosophy and another in Fine Arts, a MA in Art History and a PhD in Dance. He is a full Profes[...] senior researcher, he is in charge of Technologically Expanded Dance, a project being held with the support of the Portugu[...] Fiction novels and short stories edited by Portuguese and Brazilians publishers. He is also a dance critic at "Expresso" [...]

Denis Poulin is founder (1985) and coordinator of the Dance Department of Collège Montmorency where he teaches the [...] technology (bachelor and master degrees).
Denis Poulin is the laureate of the first *Cinéaste Recherché* concourse organized by the National Film Board of Canada (19[...] scenic environment for his own multimedia choreographic works for stage and those of his wife Martine Epoque. His dance[...] was presented «hors concours» at the International Festival of Films on Art in 1990 and at many times at the *Centre Geor[...]* Many times lecturer into important international conferences on dance and technologies, he holds a special interest for ne[...] founded (1999) and where he is co-researcher and co-director. *NoBody danse, un Sacre du printemps 3D en infochorégraphie de particules pour l'écran*, their current project, is experime[...] Stravinsky. Even if recorded by Motion Capture, its choreographic images never show neither dancers bodies nor features[...]

Fernando Galrito.

Francisco Camacho (Artistic Director EIRA, Lisbon) is a choreographer, director, performer and curator who produces his [...] Massano, Meg Stuart, Alain Platel and Carlota Lagido and at present is touring "BLESSED" by Meg Stuart. As an actor he [...]

Franziska Schroeder.

Ghislaine Boddington (Creative Director b>d>s bodydataspace, London) is an artist, director and curator specialising in [...] events, workshops and symposia on body technology in Europe, the US and Asia. She holds a Research Associateship with [...]
http://www.bodydataspace.net

Heather Raikes is a media/performance artist presently bas[...] Program. She has held art/research positions at Temple Univ[...] where her research focuses on digital embodiment, technoeti[...]
www.heatherraikes.com
A longer bio can be accessed at: http://www.washington.edu/[...]

Helena Figueiredo. Graduated since 2003 in Sound and Ima[...] In 2003 she carried out an internship at the Company Yerea[...] *Orientations in Art and Technology* (NOTA).
From 2004 to 2006, she continued her studies at the Pompeu [...] Her recent work has been presented in several national and in[...] OFF-ICMC 2005 (Experimental Eletronic Music - International [...] Presently she is a teaching assistant at the School of Arts of t[...]

Isabelle Choinière. Recognized by local and international pr[...] natural and the synthetic body. Her actual choreographic lan[...] Having first studied classical dance, Isabelle Choinière was thi[...] Advanced Inquiry in the Integrative Arts (CAIIA) affiliated to [...] By crossbreeding disciplines and by questioning the their mut[...] of renewing the sensory experience and perception, the twen[...] Her works and research on the integration of electronic arts in[...]
www.corpsindice.com

Isabel Valverde.

Ivani Santana is a dancer and choreographer working in the [...] the Graduate Program in the Performing Arts (Theater and Da[...] in 2004 as well as the Laboratory for Advanced Research on t[...] *dança e Novas Tecnologias* [Open Body: Cunningham, Dance[...] selected for Monaco Dance Forum in 2004 and 2006, and at t[...]

Justin Manor (USA) He is a designer and artist living in Cam[...] information. Manor was an artist in residence at Ars Electroni[...]

José Braz has an Msc. in Radiotechnical Engineering from the Odessa Politechnic Institute and an Msc in Computer Science from the Instituto Superior Técnico / UTL. After 10 years c
the EST-Setúbal where it is now Assistant Professor in the Areas of Computer Graphics and Computer Vision. Nowadays he shares his time between the teaching in the EST-Setúbal th

Rudolfo Quintas.

Salvatore Iaconesi started working with art and technology in the hacking and pirating scenes all over Europe at the beg
Rave parties and engineering represent two turning points. Through engineering he started creating projects on web and r
Through raves and rave culture he focused on the performative aspects of art.
In 2004 he assembled in Rome a 3-months continuous festival of the digital arts, called Art is Open Source (AOS).
Since then he has been performing mainly on the network and on performances.
His recent works focus on the theories of the virtual, extended and mixed realities, on software as art medium, on hacking
Intelligence son of prof. Derrick de Kerckhove and a cloned prostitute, analyzing the essence of digital life, identity, public

Kirk Woolford.

Kostas Dalfos. PhD Candidate at the N.T.U.A., School of Architecture
He has studied Architecture, at the National Technical University of Athens (N.T.U.A.), School of Architecture.
Sculpture, at the National Athens School of Fine Arts (A.S.F.A)
Masters / Postgraduate Degree in the course "Digital Form of Art", (A.S.F.A) in collaboration with the Dept. of Computer & Information Science, Polytechnic School of Patras University
Kostas Dalfos is an independent visual artist & practicing architect in Greece (has received awards). Since 1997, he has participated both national & international in several research p
The areas of expertise include human computer interaction, computer mediated environments, new media, and interactive multimedia installations. His interest is to create a new clas
artwork has expanded the real space in the World Wide Web. In addition he has authored a number of essays on contemporary architecture, arts & communications. He teaches Visua
http://kdaflos.blogspot.com http://users.ntua.gr/kdaflos

Sophia Lycouris.

Stephan Jürgens is a free-lance choreographer and Contemporary Dance teacher resident in Lisbon, Portugal. He receive

Maíra Spanghero is professor, researcher and dance critic. [illegible]
Department of Computing Science, where she teaches for the [illegible] artists to develop a unique and experimental
She is the author of "A Dança dos Encéfalos Acesos" (Itaú C[illegible]
(Itaú Cultural, 2000), for the 'Corpos que Falam' project, an[illegible] Dance) team, a two-year European funded in
Webaddress for full CV: http://lattes.cnpq.br/8348648538808298

Suguru Goto is a composer/performer, an inventor and a multimedia artist and he is considered one of the most innovati

Martine Époque holds a Teaching Certificate in Physical Edu[illegible]
Department of the University of Montreal from 1967 to 1974[illegible]edia dance works at Université du Québec à Montr
A key figure on the Quebec choreographic scene, she founde[illegible]
and screen works have met international acclaim both on sta[illegible]
Founder (1985) of the UQAM Dance Department that she dir[illegible]
fully dedicated to contemporary dance in Montreal, L'Agora de[illegible] given at Pompidou Center, in Paris. In 2006, his "RoboticMusic" was commissioned by AV Festival in Newcastl
She has published numerous articles and the books *Arts et te*[illegible] (LYON, 1995, Les chemins de la recherche, no 27) and *Les coulisses de la nou*
was organizer for three of them in Montreal and Lyon (Franc[illegible]

Paula Varanda has been developing a professional career i[illegible]
community projects. Since 2004 she works at the Institute fo[illegible]

Tiago Porteiro [illegible]

BIOGRAPHIES PERFORMERS

António Caramelo.

Beliz Demircioglu.

Fernando Nabais.

Filipe Pais.

Francisco Medeiros was born in Lisbon in 1981. In 2003 attends a Video Jamming Workshop lectured by João Pinto e José Budha in the Restart (School of creativity and new techno
(Performance, electronic installation and real time interactivity) and Andre Bartetzki (introduction to interactive image systems).
Develops his activity as VJ_X in places such as Music Box and Crew Hassan, also collaborating in performance and interactive installations projects. At the moment he is in the last yea

Heather Raikes is a media/performance artist presently based in Seattle, USA. Her work has been presented throughout the world, and includes media performances, installations, v
Program. She has held art/research positions at Temple University, the University of California San Diego, the Center for Research in Computing and the Arts (CRCA), and the Californ
where her research focuses on digital embodiment, technoetic performance forms, immersive media design, and new media language systems.

www.heatherraikes.com

A longer bio can be accessed at: http://www.washington.edu/dxarts/profile_bio.php?who=raikes

Isabel Valverde.

Ivani Santana is a dancer and choreographer working in the field of dance-technology since 1994. She holds a Master's I
the Graduate Program in the Performing Arts (Theater and Dance), Universidade Federal da Bahia (Federal University of B
in 2004 as well as the Laboratory for Advanced Research on the Human Body since 2000. In 2001/2 she was artist reside
dança e Novas Tecnologias [Open Body: Cunningham, Dance and New Technologies] (São Paulo: EDUC/FAPESP, 2002) ar
selected for Monaco Dance Forum in 2004 and 2006, and at the last year she was awarded the UNESCO Prize for the Prom

Joana Gomes.

João Rui Oliveira was born in Beja in 1980. In 1998 he finished Fine Arts in the Instituto Politécnico de Macau. Since the
interactivity), Andre Bartetzki (introduction to interactive image systems), Eric Singer (physical computing) and Miguel Az
Francisco Medeiros and João Rui Oliveira have been collaborating together with other artists as Dancing Foot Productions

João Samões (1970) is a performer, choreographer and painter. His creations and collaborations establish work marked
2002).
In the year 2000, he choreographed the solo "18 MINUTES". A solo where the body is a place of energy. A luminous chore
object that is used to develop the muscular strength of the human body. The object as a device for considering and reshap
the audience in a fluid movement between contemplation and active participation in the metamorphosis of the set.

Kostas Dalfos. PhD Candidate at the N.T.U.A., School of Architecture
He has studied Architecture, at the National Technical University of Athens (N.T.U.A.), School of Architecture.
Sculpture, at the National Athens School of Fine Arts (A.S.F.A)
Masters / Postgraduate Degree in the course "Digital Form of Art", (A.S.F.A) in collaboration with the Dept. of Computer &
Kostas Dalfos is an independent visual artist & practicing architect in Greece (has received awards). Since 1997, he has pa
The areas of expertise include human computer interaction, computer mediated environments, new media, and interactive
artwork has expanded the real space in the World Wide Web. In addition he has authored a number of essays on contemp
http://kdaflos.blogspot.com http://users.ntua.gr/kdaflos

Mutin Association.

Peter William Holden.

Sarah Rubidge.

Stephan Jürgens is a free-lance choreographer and Contem
pursuing a PhD degree at the Technical University Lisbon in D
collaborating with animators, video artists, Djs, fine artists ar
curriculum (Performance Art, Digital Performance, Dance for
groups. Currently Stephan is part of the TeDance (Technologi