FUNDACIÓN
Telefónica

VIDA 4.0, 2001

FIRST PRIZE EX AEQUO

Scott Draves

Electric Sheep
USA

Electric Sheep, named after Philip K. Dick's famous novel "Do Androids Dream of Electric Sheep", aims to realise the collective dream of sleeping computers from all over the Internet. A screen-saver serves as a shared visual space, where clients offer computational power to generate animations or so-called "sheep". These are individual graphic entities based on a 65-number string of code randomly chosen by the server, rendered using the artist's fractal flame software (future versions will implement other generative animation software). Users can download the flock of sheep at any time and monitor the rendering of new ones – a permanent digital lambing season. User nicknames are stored for those who want to muster their own livestock. Though disk space limits the flock to about thirty live specimens, users can vote to extend the lives of their favourite sheep. The artificial life premise of this work functions effectively at both the metaphorical and software design levels: generative algorithms allow us to breed an online farm of digital "sheep". The work is strongly anchored in the ethics of freely distributed and participatory software development processes: creative energies firing new graphic beings come from donated computing cycles, and many enthusiastic shepherds have formed an active developer community. Thus, the "electric sheep farm" offers fertile ground for a new digital and social knowledge commons.
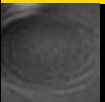
Haruki Nishijima

Remain in Light
Japan

We live surrounded by invisible electromagnetic waves. Wireless transmission signals create a dense network around us, a communicative tapestry that remains invisible. The Japanese artist Haruki Nishijima has visually represented these signals that surround us. In his installation Remain in Light the user becomes an entomologist who goes out to hunt for sounds equipped with a head set, a backpack handcrafted in the form of a traditional wooden collector´s box, and a butterfly net that doubles as an antenna. While walking through the city, the user captures fragments of sounds from media such as cellular phones or radio. In the installation site, the box that has recorded the sounds is opened for viewing, and is networked to a computer that coordinates a visual display. This display is composed of firefly-like lights projected on multiple transparent screens; each light corresponding to an individual sound. The screens are made of the same material that is used in Japan as insect screening. When the viewer approaches a projection screen, the floating points of light scatter, and as they hit the edge of the screen their corresponding sound is triggered. This is a poetic installation that binds an urban soundscape with an imaginary ecology.

THIRD PRIZE

Transnational Temps

Andy Deck, Fred Adam, Verónica Perales
Novus Extinctus
Spain

The artists have made an extensive Internet artwork that includes a taxonomy of Web domain names, a search engine that sorts through this strange data, marketing slogans, user input into the site, and mysterious graphics that seem to be constructed from code. The key idea and message of Novus Extinctus is that the expansion of human presence on the World Wide Web parallels a frightening decline in biodiversity in our real world habitats: the number of Web domain names registered climbs daily but so does the number of extinct species. And so, to build the metaphor, domain names on the site are associated with Latin species names. When one selects a domain name and processes it, this association appears and also links to real animal sites, like TigerDirect.com. The marketing spoof continues in the Free Domain search engine for finding domain names that have recently become available through extinction, and in testimonials where the artists appear among others, praising the usefulness of the engine. The sociopolitical astuteness of this work is summed up in the artists' statement that our growing data bank of genetic codes, as in the Human Genome Project, cannot in any way compensate for the loss of species. Following from this perception, the site marvellously undermines the platitude that computer code and genetic code are somehow interchangeable, reminding us that an easy idea can become a dangerous one. This work was developed with the support of the Electrography Museum in Cuenca, Spain.

HONORARY MENTIONS (alphabetical order)
Mauro Annunziato, Piero Pierucci
Relazioni Emergenti
Italy

Entering the space, one encounters feather-like abstract patterns spreading on the screen accompanied with sound. As the participant moves his/her hand on the screen, the generation of graphic patterns follows the hand movement. Although they are not given life-like forms, the graphical and acoustical patterns evolve autonomously according to the genetic information and algorithm that allows them to mutate. A participant can freely interact with them by guiding and nurturing them, as the hand position fosters germination. The combination of continuous autonomous evolution and the transplantation by participants produces distributed local communities of patterns with subtle variety and beauty. The experience is as if one is given a green thumb in a digital garden. Relazioni Emergenti invites participants to enjoy creating images with their bodies, showing the potentials of alife concepts not only in art-making but also in offering the joy of art and design experiences for many people.

Max Dean & Raffaello D' Andrea
The Table: Childhood
Canada

Table is an ordinary-looking piece of furniture, something you might have in your office, that unexpectedly displays autonomous movement in response to someone entering its environment. The artificial behaviour that is built into this work is simple in one sense, because the table just glides across the floor of a small room that it can't get out of. But it

is also unpredictable and complex. For example, it picks only one person from a group to respond to, it learns the body language of the individual it initiates a relationship with, and it also moves when there is no one in the room. The interaction is controlled through a vision system that uses a video camera and custom software. The Table's visible behaviour might be described as teasing: it makes small inviting movements when a person first comes into the room, it parries the person's movements as if it were challenging her or him (in fact, if a person is unresponsive the table becomes more active and enticing), and it might even block the doorway as the viewer is trying to leave through it. The Table: Childhood was a popular participant in the Venice Biennial, and its maturation process into adolescence and adulthood continues.

Ivor Diosi / E-BONE
Dingir 2.0
Slovak Republic

Ivor Diosi combines projected virtual entities and primitivistic sculptural elements in a multi-user interactive installation space. Optical trackers and sound sensors monitor participant body motions and speech, using data thus gathered to trigger and catalyse computer graphics avatar behaviours. The screened view of the world offered to participants conveys a simple but effective impression of enmeshed realities: multiagent software animates playful, responsive swarms of graphic creatures. One of the challenges in mixed reality works is to create a convincing visual register for the aesthetics of combined real and virtual worlds: how can we build coherent relationships between solidly rooted physical objects and their weightless, computer-generated counterparts? Inspired by Castañeda cosmology, Dingir 2.0 embeds its sensors and speakers in hulks of simulated organic appendages which, in the physically and virtually morphed universe displayed to participants, enter into strange resonance with the digital avatar swarms.

Margot Jacobs and Jessica Findley
Breathe
USA

These two artists have collaborated several times on interactive works, with an interest in creating experiences that invoke emotional responses. In the environment Breathe, the viewer has to enter a chamber made of white fabric where he or she lies down facing upward. A force sensitive resistor is strapped around the chest and then the person relaxes, breathing deeply. The resistor measures the flow of breath, and this is translated into a signal sent to two small motors that turn a pair of dowels. The person lying below sees two sets of strings moving up and down between the dowels: one follows their breathing, and the other plays back the breath of the previous occupant. A microchip coordinates all of the movement and records the breath. This mechanism generates a simple but elegant method for looping one person's experience into the next person's, or weaving together the breathing rhythm of an infinite string of people. This is a very accessible feedback system built with an intelligent economy of means.

Chico MacMurtrie
Skeletal Reflections
USA

Sooner or later, our world will be co-inhabited with humanoid robots with elegant looking yet robust bodies and intelligence. That is what robots such as

Honda's PINO or Sony's ASIMO demonstrate. However, Chico MacMurtrie's Skeletal Reflections is quite different. The autonomous robot is designed intentionally as a skeleton without skin, with artistic taste. It simulates human beings as a machine, with a system that controls muscles. When a human demonstrates a posture, the robot recognizes it using the motion capture software, and mimics it. Gestures that we know from paintings depicting historical moments such as praying or elegant bowing, which have been associated with social, psychological, spiritual activities of human beings and legitimated in art history, become strangely out of place when they are convincingly performed by the skeletal robot. The piece deliberately and ironically raises questions about the relationship between humans and robots, and the way we have represented and recognized our emotions through postures in the course of history.

Jon Mc Cormack
Eden
France

Eden is an interactive self-generating artificial ecosystem. McCormack uses a cellular automata model of A-life, with creatures in constant evolution simulating the characteristics of a real ecology. The creatures search for food, confront predators, and reproduce with other creatures. Simultaneously, they move through their environment transmitting and listening for each other's sounds, generating the soundscape that we hear while experiencing Eden. The survival of the virtual world depends on the presence of people in the installation space, because their movement feeds the creatures. The artificial world is projected onto two translucent screens that form an "x" in the space. This original configuration creates transparency and depth effects that enrich the reading of the work. Eden illustrates the emergent properties and open nature of A-life systems.

Samuel Neuhardt
Autistic-Artistic machine
France

This young French artist's work conveys a critical approach to robotics and artificial life, where new technologies are often acclaimed as improving communication and exchange, and the cloning mythology tends to focus on propagating ideal and idealised creatures. Many robotics artists today strive to build virtuoso artificial artists: in the lineage of Vaucanson's eighteenth century clavecin-player, increasingly accomplished robots delight us as they paint, play music, write poetry, etc. Neuhardt's "machine autiste-artiste" is animated but at the same time totally refractory to communication. It rocks mechanically in a corner, ignoring all contact with the outside world. Its patently, noisily mechanical movement bleakly conveys an undeniably human pathology. The artist's twin or clone, designed to reflect the introversion and obsession he experiences during creative activity, thus acts as a disturbingly, chillingly intriguing specimen of artificial life. There is no empathy at work here, just irrefutable recognition of the state of non-communication that – like it or not - is

also a vital component of human
behaviour.

Carlos Corpa, Basilio Martí, David Cabellos

Cuarteto de Cuerda Robótico
Spain

One of the most compelling aspects of this group's robots is that they are born as part of a performative "community" --breaking the stereotype of a solitary anthropomorphic robot developed to serve humans. The robots are highly specialised individuals whose contribution to a collective performance of visual art and music proposes new machine aesthetics. Carlos' work seeks to contrast high-art elements like the string quartet with festive events closer to a popular carnival of excess. The gesticulating robotic performers will grind and strum devotedly at authentic, finely crafted musical instruments to generate sounds for a 21st century salon of decidedly concrete music. To focus solely on the parodic elements of the work might be to miss the fact that the mechanical spasms of these aspiring maestros, these would-be Paco de Lucias, call into question our perception of robots as utilitarian instruments capable of executing precise pre-calculated movements. The jury felt that the Robotic String Quartet may be taken to a next level of chaotic sophistication by supporting their development.

Enrique Rosas González

El Contínuo
Mexico

Enrique Rosas González is a Mexican artist who is exploring the relationship between art science and technology in a thoroughly renaissance spirit, covering fields as diverse as electricity, electronics and botany. For the new Life 4.0 category to encourage new productions the artist has proposed "El Continuo", a complex, dynamic electrical and electronic sculpture. Enrique Rosas is interested in the cognitive processes of pattern recognition that we use to decipher reality, but from a very unique standpoint: he intends to relate scientific studies of matter with other more esoteric fields of knowledge such as archetypal memory and futurology. "El Continuo" clearly evokes Marcel Duchamp, particularly his famous "Bachelor Machine" considered by many people to be a metaphoric model of artificial life. "El Continuo" connects many elements including a plant, 24 networked computers, and two rotating discs that generate sparks and become praxinoscopes, those XIX century proto-cinematographic optical apparatuses that recreate the illusion of movement from static images. Couched in enigmatic language, this project reminds us of alchemical investigations of another era, which aimed to connect matter with the energetic dimension of life. The technological sophistication and highly personal aesthetics of Enrique Rosas's work appealed strongly to the Life 4.0 Jury.