Visual Voltage Amplified Projects

Daniel Baek and Andrés Andrade

Sven Völker

Bamboo Racing visualises a thought provoking idea on how to move a car. A miniature car is put into a Plexiglas tube. The car moves only through the power of fast growing bamboo sticks.
Esso Apple Car by Sven Völker features another miniature car retrieving its energy from apples bought at the Esso gas station. The biological battery made of these apples, metal boards, cables and a clockwork makes the car spin around. Both concepts were conceived within the academic research project **Petrolectrial,** which was initiated by Professor Sven Völker at the Academy for Design in Karlsruhe and deals with basic technical changes and their societal influences.
http://www.petrolectrical.com/Petrolectrical.html

Daniel Baek

HangBook Many people enjoy reading in bed and will fall asleep soon or later. Furthermore it is difficult to hold the book. **HangBook** offers a solution. The book is fixed on a cable and hung upon the reader and equipped with a tiny lamp on its end, which illuminates the sides of the book. By pulling on the book, respectively on the cable, the light turns on and off. Now light energy will not be wasted any longer, when the reader falls asleep, because the light will turn off, as soon as the books is released.
http://danielbaek.com/main.html#s05

Zane Berzina

The project **e-Static shadows** is a practise-based experimental research project by designer Dr. Zane Berzina and architect Jackson Tan, which creatively explores the speculative and poetic potential of static electricity found in our everyday environments, surrounding our everyday interactions. The aim of the project is to investigate how electrostatic energy could either be effectively utilised or play a part in the development of active, responsive and interactive textile systems which would be capable of detecting, translating and displaying this energy into dynamic audio-visual patterns. This design pilot project studies the possible translations of electrostatic energy into other types of energy such as light, sound and motion using specially engineered intelligent textile systems as mediators and displays for these processes.
http://www.zaneberzina.com/e-staticshadows.htm

Mila Burghardt

Those, who use bicycles instead of cars will be rewarded by **Velo Fortüne.** While pedalling a standard dynamo is activated. This is connected to an object similar to a vase that is attached to the handlebar. The more you pedal, the higher the flowers grow out of the vase.

Jon Cohrs	Jon Cohrs, a recording engineer and visual/sound artist visiting from New York developed a DIY-device called the **Urban Prospector** to search for hidden resources of oil in New York and other places. Until recently, hydrocarbon/oil prospecting has been a field left to the professionals only, because they posses sophisticated tools for detection. But in much the same way gold prospecting empowered people to find small nuggets of "profit", the Urban Prospector offers the chance to find small nuggets of oil near oil spills, abandoned gas stations, and industrial sites. It's real. It's live. Get rich! http://www.splnlss.com/wordpress/urban-prospecting/
Michel de Broin	For the **Shared Propulsion Car** all superfluous devices were removed from an 86' Buick Regal – the engine, suspension, transmission and electrical system – thereby reducing the weight of the vehicle whilst preserving its appearance. It was then equipped with four independent pedal and gear mechanisms that make it possible for passengers to form the self-propulsion group. A cutting edge transmission technology was developed to transmit the power supplied by the passengers to the drive wheels and to vary the reduction ratios between cyclists and wheels, so as to ensure their progressive coupling for start-ups. With a top speed of around 15 km/h, the vehicle's resistance to the culture of performance is raised to an unprecedented level. http://www.micheldebroin.org/projects/spc/index.html
Florian Erdmenger	**The ecological supermarket** is a future vision of an ecological supermarket, where the shelves light up themselves when a sensor spots movement. A shopping cart is connected to a dynamo, which will collect energy while being pushed. The shopper can swap the collected energy at the cashier desk for points or gifts.
HeHe	The project **Nuage Vert** is based on the idea that public forms can embody an ecological project, materialising environmental issues so that they become a subject within our daily lives. A city scale light installation onto the ultimate icon of industrial pollution – the cloud generated by a coal burning power plant - alerted the public: Every night from 22-29 February 2008, the vapour emissions from the Salmisaari coal burning power plant in Helsinki, Finland were illuminated with a high power green laser animation. The laser drew an outline of the moving cloud onto the cloud itself, colouring it green, turning it into a city scale neon sign, which grows bigger as local residents take control and consume less electricity. http://www.pixelache.ac/nuage-blog/

Christina Hemauer und Roman Keller	**Postpetrolismus** There is no doubt, the world's oil resources are limited and will be exhausted soon or later. In April 2006, Christina Hemauer and Roman Keller proclaimed a new era in a unique art happening. **Postpetrolismus** is the era after the exhaustion of all oil resources. The artists published a manifest and invited other artists to share their vision of a life without petrol. http://www.postpetrolismus.info/
Jochen Isensee und Martin Wahnschaffe	**Imagine Earth** is a computer game about global warming. The player is challenged to establish a civilization on a planet as quick as possible. While constructing cities, power plants, farms and factories he must care about their environmental sustainability. The aim of the game is to secure supply while minimizing the air and soil pollution. http://www.imagineearth.info/
Aylin Kayser und Christian Metzner	**IKARUS Wachslampe** is a wax lamp, which gradually melts over the course of a month, completely changing shape and morphing into what resembles some kind of jellyfish or other sea creature. Its users witness the physical consequences of their energy use, bringing to light the results of such dependence over time. A lampshade of pure paraffin is cast over a stainless steel frame. Depending on the wattage and strength of the light source, the shade will begin to melt from the inside out, gradually changing shape over the course of up to a month. http://www.christian-metzner.com/
Ton Matton und Studenten der Hochschule Wismar	**Strom ab!** Wednesday, December 9th 2009, 7:33 am, the Faculty of Design at the University of Wismar shut down all electricity. Professors, Assistants and Students of Architecture, Interior Design and Design were asked to find constructive solutions for their work and alternatives to conventional energy supply. http://www.fg.hs-wismar.de/de/aktuelles/aktuelles_ansicht&nid=69 http://www.mattonoffice.org
Myriel Milicevic und Hans Kadel	Our energy distribution infrastructures are clumsy, spilling off large amounts of energy as heat, light, and vibration in the process of delivering their goods. But these structural leakages are, in essence, a multitude of free power outlets for anyone wishing to collect them. How might people literally plug in to surplus energies that they've accumulated, powering their own objects or feeding a local micro energy

network? **Neighbourhood Satellites Energy Harvests** is an exploration of a new energy infrastructure through practical-utopian illustrations and objects. The little tools can harvest and store energy which is spilled off by e.g. shopping windows and loudspeakers.
http://rixc.lv/09/en/exhibition.participants/milicevic.html
http://neighbourhoodsatellites.com/

Marek Plichta

Eco Wario Ware is a computer game, which communicates sustainability in a playful and fun way. **Eco Wario Ware** is based on the original game Wario Ware for the Wii where one plays through a collection of bizarre, humoristic and extremely fast past micro-games. **Eco Wario Ware** stays true to the original with the exception that the levels are designed to mediate energy saving tips. Nevertheless, the aim of **Eco Wario Ware** is not primarily to teach energy saving tips, but rather to tint the subject of sustainability in a 'cooler' tone, which can have equally powerful consequences.
http://marek.monoid.net/work/interactive/ecowario/ecowario.html#anc

Sascha Pohflepp

How do we decide which worlds come true and which worlds are discarded? While we are typically thinking in terms of novel possibilities or scenarios set in different futures, it is rare to attempt an imagined past that might have led to a different present. Positioned at the right spot in the past, such counterfactual histories might offer an understanding of the forces at work as well as a fresh perspective on our present challenges. **The Golden Institute** is designed to be a vehicle for an ongoing investigation into questions about energy, visions of utopia and present-day ecological challenges. It presents itself in the realm of art the form of conceptual utopias and fake documentations.
http://www.dexigner.com/jump/news/18191

Kai Malte Röver

PUYL is a bicycle pump and portable light combined in one device. It is the first permanent illuminating bicycle light which does not need a battery. This combination provides an unlimited light source and a bicycle pump for urban cyclists. The idea is based on Faraday's law of induction. Instead of batteries, it uses electromagnetic induction. Moving the compressor/magnet through the two copper coils, which are located around the inner compression tube, generates the electricity. The battery is charged while pumping. The generated energy is stored in a rechargeable battery/ super cap. The light source is an ultra bright LED bulb. The magnetic recharge method allows the LED light to be recharged unlimited times.
http://www.formpasch.com/formpasch_design/PUYL.html

Prof. Dr. Jürgen Ruth and students of the Bauhaus University Weimar

The **Screenhaus.SOLAR** is a multimedia structure in the form of a diagonally-aligned, asymmetrically hyperbolic paraboloid. This mathematically defined efficient shell structure can be assembled using a series of rod-shaped elements, twisted towards each other in space and connected at certain points. This makes it possible to use cost-effective wooden materials such as simple planks or, in tropical regions, bamboo sticks in the erection of the supporting structure. What makes the Screenhaus.SOLAR special, and what gives it its name, are the flexible photovoltaic modules sponsored by CENTROSOLAR. These state-of-the-art solar cells are applied to the honeycombed structure of the Screenhaus. In the daytime, the modules convert sunlight into electric current, which is then stored in the internal system of the Bauhaus-University Weimar, ready to use in the evening for the operation of the cinema.

For the project **EnergyTerminal.SOLAR** three towers were created using a total of nine bamboo sticks. The energy created is initially used at night time in order to shed a pleasant form of light in a cost-effective way. This is achieved by means of LEDs attached to the rear of the panel behind an opaque acrylic-glass screen. In addition to this, three comfortable seats are provided for each of the towers, featuring nearby USB sockets for the loading of mobile phones, MP3 players, cameras, etc. The three towers are to be regarded as prototypes; they are works-in- progress, which we are continuing to develop further.
http://www.uni-weimar.de/projekte/twl-net/screenhaus/

Elisabeth Schierak

One problem, which wastes energy, is inefficient heating during winter times. Sometimes one forgets to close the window, while the heater is running. This is not only harmful to the environment, but also expensive. **Georg Fensterschließer** provides a solution. The device is installed close to the window is fixed to the thermostat. As soon as the window is opened, Georg Fensterschließer checks, if the heating is turned off. If not, it will immediately shut the window.

Andreas Schmelas

Interrupt is a guerrilla energy saving device and works similar to a bomb with a timer. The object can be plugged into any power outlet. When the time runs out, both contacts to the power outlet will be closed and a short circuit occurs. The fuse blows up and no electricity will be available in the room.

Stefan Stubbe

The invisible amount of water, which is used to produce a product, is called 'virtual water'. The project **Virtuelles Wasser** visualises the hidden and hard to imagine amount of water consumption and raises public awareness for it. The installation is designed as a four-part piece and demonstrates the required

	amount of virtual water for orange juice, milk, coffee and tea. At the push of a button, water starts running into a pot and the display shows the actual water level. http://www.stefanstubbe.com/pr_vwasser.php
Piotr Szpryngwald	**Strom Visualisieren** visualises the energy consumption of every day devices such as heaters, boilers, light switches and power cords. With the help of thermo foil the consumed and wasted energy becomes visible. http://www.muthesius-kunsthochschule.de/allgemein/arbeitenarchiv/id/grundlagen-gestaltung/Stromfetisch_Szpryngwald_gallery.php?i=4
Clemens Winkler	Electric current is not perceivable with our senses. Therefore the project **Unter Strom /Tensed up** tries to find a translation and expression layer for this medium. Processes of human perception are based on electric stimuli. Our senses convert information such as light waves or sound waves to an inner electric current. Winkler translates this concept to reactive textiles, which he energises and thus makes expressive. http://clemenswinkler.com/dipl/?cat=26