Green technology
Coming to a place near you soon
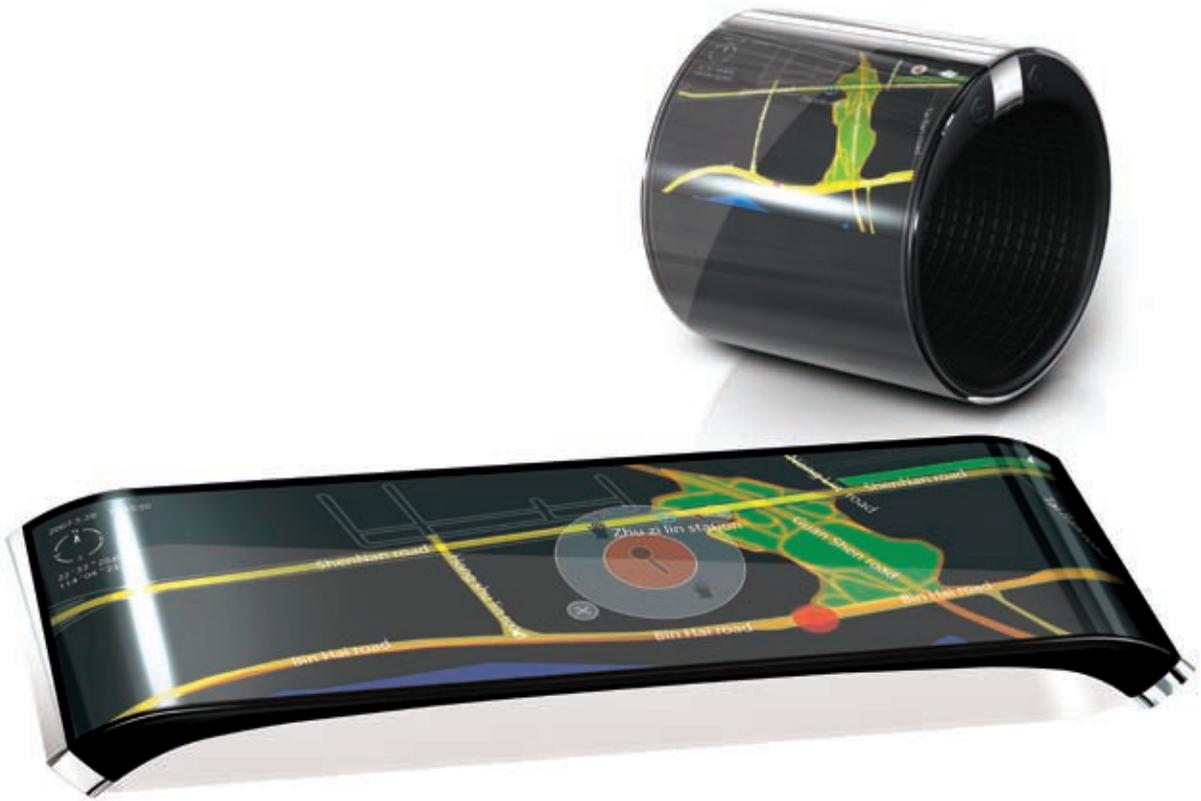
PICNIC 08

Special
Smart environments and RFID
Games for health

Introduction

For those not familiar with Waag Society: one of the founders of the organisation and present director, Marleen Stikker, also was one of the initiators of PICNIC, held for the first time in 2006. What is Waag Society?, you may ask.

In brief: Waag Society is an Amsterdam-based medialab, a non-profit organisation that develops creative technology for cultural and social innovation. The focus of Waag Society is divided in five domains: Healthcare, Culture, Society, Education and Sustainability and all our projects are engaged within one (or more) of these domains. The various parts of the organisation are further explained in the middle pages of this issue (page 12 and 13). Important new member of the organisation is the Media Guild, established late 2006. Media Guild is an incubator for new creative businesses; an article on its activities can be found at page 18, where Screening and Scouting Manager Auke Ferwerda tells more on the working principles of the Media Guild.

In this magazine we have gathered some of our recent articles on topics that currently get our attention, like the role of RFID in our society (written by Rob van Kranenburg) and the use of virtual worlds within healthcare (by Sabine Wildevuur). Both authors work at Waag Society as Head of Programme and are experts in their field. Throughout this issue of our magazine you will find examples of new sustainable technology, as can be found on the Dutch blog ECOCOOL (ecocool.nl), with thanks to Casper Gijzen, who contributed those items. Most of them are still at the drawing board, but there is a good chance that they will become real products in the near future, making technology greener. Waag Society is currently exploring ways of making server technology more eco-friendly and supports the development of Sensornet in The Netherlands, to establish more measuring points for carbon dioxide (a first one was placed on the Waag in Amsterdam). Naturally, we are very curious to see what the PICNIC Green Challenge will bring in this year's contest for the best green initiative in the field of lifestyle, design, mobility and communications technology. At PICNIC, Waag Society's Marjolijn Bloemmen will conduct a Green City Lab, where participants from various domains will be challenged to construct symbolic prototypes of autarkic power plants. More about the PICNIC Labs on the next page.

We hope you enjoy reading this special issue of our magazine. If you are interested in our projects or expertise, don't hesitate to contact us.

The editors

RE: Labs
Lessons learned from the PICNIC Labs

by Frank Kresin

The PICNIC Labs are practical workshops, demo sessions and master classes that challenge you to re-imagine your business, develop new products and services, refine ideas and formats and come up with creative business concepts. Waag Society will host a number of PICNIC Labs and the concluding RE:Labs.

RE:Labs will bring together the organisers of the PICNIC Labs as well as thinkers and decision makers interested in new creative approaches to invention, innovation and business. We investigate the individual approaches of the PICNIC Labs, the outcomes and the validity of their practices to develop a new discourse and new products, services and business models. Special care will be taken to put the Labs in a larger context, in time, scope and space.

There is a growing awareness that to stay ahead of competition and to deal with societies diverse needs, companies, governments and institutions have to search for and implement new ways of innovation. Models in which monolithic knowledge silos compete on a small scale are no longer sufficient in a highly connected world in search of meaning. Ideas and concepts need collaboration with and participation of many disciplines, many of which are not to be found within a single agency, company or department. What is needed is, simply put, collaboration. But how do we achieve mutually beneficial collaboration when people speak different languages, histories, protocols and values? How do they get to understand each other and work from what each participant has to bring to mutual goals – when they succeed to find it? Which practices and tools can help us to speed up the pace of innovation?

We call the answer "Creative Research". Creative Research is concerned with "what if..." questions. It is experimental, interdisciplinary, critical research in which artists, designers, scientists, hackers and users play a central role in coming up with new visions, solutions and approaches, new products and business models. Creative Research is related to participatory design, rapid prototyping, practice based research and tinkering from which it borrows some methods. It generally comes up with applications, methods and tools that are well suited to the needs and means of users in different stages of their lives.

For all information about PICNIC Labs, visit:
picnicnetwork.org

PICNIC

Create the future

Collaborative creativity at **PICNIC** Cross Media Week
24-26 September, 2008
Westergasfabriek Amsterdam

Three inspiring days of ideas, fun and sensory stimulation in media, technology, entertainment, art and science.

www.picnicnetwork.org

Smart Environments and RFID

by Rob van Kranenburg, Head of programme Public Domain at Waag Society

In recent decades, society has changed fundamentally under the influence of digitisation. Waag Society was present at the start of the designs of a part of the - non-commercial - public space on the then-young internet, with the metaphor of the digital city. After 15 years of the World Wide Web (the Mosaic browser debuted in 1993), computers have become cheaper, faster and more convenient, and the cables and wireless infrastructure have been rolled out. We are on the verge of a next step: computers, sensors and chips disappearing into everyday objects and our daily environment.

The main question 15 years ago was: How do we create, based on art and technological expertise, a broad consciousness that open meeting places on the internet are necessary?
This question is topical once again, but now pertaining not to the internet, but to the city itself: in the real parks, squares and streets of the city.
The technological possibilities are even more wide ranging, the equipment is becoming cheaper and there is increased societal support for the use of technology (surveillance cameras and microphones) due to security concerns. With GPS (satellite), Bluetooth, and RFID/Near Field Communication, it has become possible for citizens themselves to make mediascapes: in other words, to place a digital layer of data over or on a specific location.

WHAT IS RFID?
RFID (Radio Frequency Identification) is a technology based on radio waves in which products (and pets) are fitted with a small chip that is passive (this means it does not have a battery) and which is read by an RFID reader. This sends electromagnetic energy (radio waves in the 300kHz to 3GHz spectrum) to the chip, which then is activated and says "*Here I am*." RFID makes it possible to provide every object with a unique digital number. For retail, it is a souped-up barcode and for privacy activists, it is a digital nightmare. And for us – Waag Society – the creators of eCulture installations and prototypes, it is a technology that can be used for community

neighbourhood projects, interactive performances, to spur on public debate and for the rollout of an infrastructure in which the interests of the public (government), the private (business community) and the personal (citizens) are in balance. Waag Society wants to investigate whether the ambient (smart) society would be more innovative, inclusive, sustainable and internationally competitive if it were developed hand-in-hand with social/cultural and creative reference points. In this context, the transition from privacy-compliant applications to privacy-compliant technology is of primary importance:
How can we take concepts about privacy, dealing with each other in public, and transparency about how the technology functions, and embed these as deeply as possible in the code, in the technology itself?

The Dam square in Madurodam (photo: Rob van Kranenburg)

RFID IN SOCIETY
As such, RFID technology is not new: it has been possible for a while now to put a chip in our pets, we are quite used to the big readers (security gates) in shops, and we can also have our bicycles fitted with a chip. But the inevitability that all the things that surround us will soon be tagged, which in principle can be read anywhere randomly, means that we need to think seriously about the consequences. If you examine these consequences of RFID in terms of the definition of our 'self', you end up with the most distributed form of existence (we leave tracks every where we go, and no one knows where).

Questions are regularly posed in parliament about the security of RFID chips. A negative impression has subsequently formed about a technology that is one of the anchors of Ambient Intelligence;

the expansion of a world in which technology surrounds us in such a way that it can be considered as a hybrid world, full of analogue and digital connectivity.

RFID is a necessary, unavoidable, logistic supply chain and demand business innovation, which coincides with a cultural and social demand for more control (certainty, security) and a technological transition to Ambient Intelligence. There are alternatives in each of these areas, but no alternative exists that is as good in all of these areas. That turns this relatively simple technological application of radio waves into the crux of various debates that are becoming increasingly significant in society. The cloning of the public transport pass, the hacking of the security of the Mifare

standard that is used in many access passes and the emergence of Melanie Rieback's RFID virus which demonstrated that RFID tags are susceptible to computer viruses: these things show that RFID has penetrated the mass media.

RFID quickly conjures up uncertainty and even fear. With Consumers Against Supermarket Privacy Invasion and Numbering (CASPIAN), Katherine Albrecht embodies the protest against the creeping implementation of RFID. In her view, if manufacturers and retailers 'suddenly' convert to RFID, without any consultation, a storm of protest will break loose. Not from hackers, squatters, anti-globalists or other 'marginal' figures, but from ordinary consumers who will not put up with being excluded in this way.
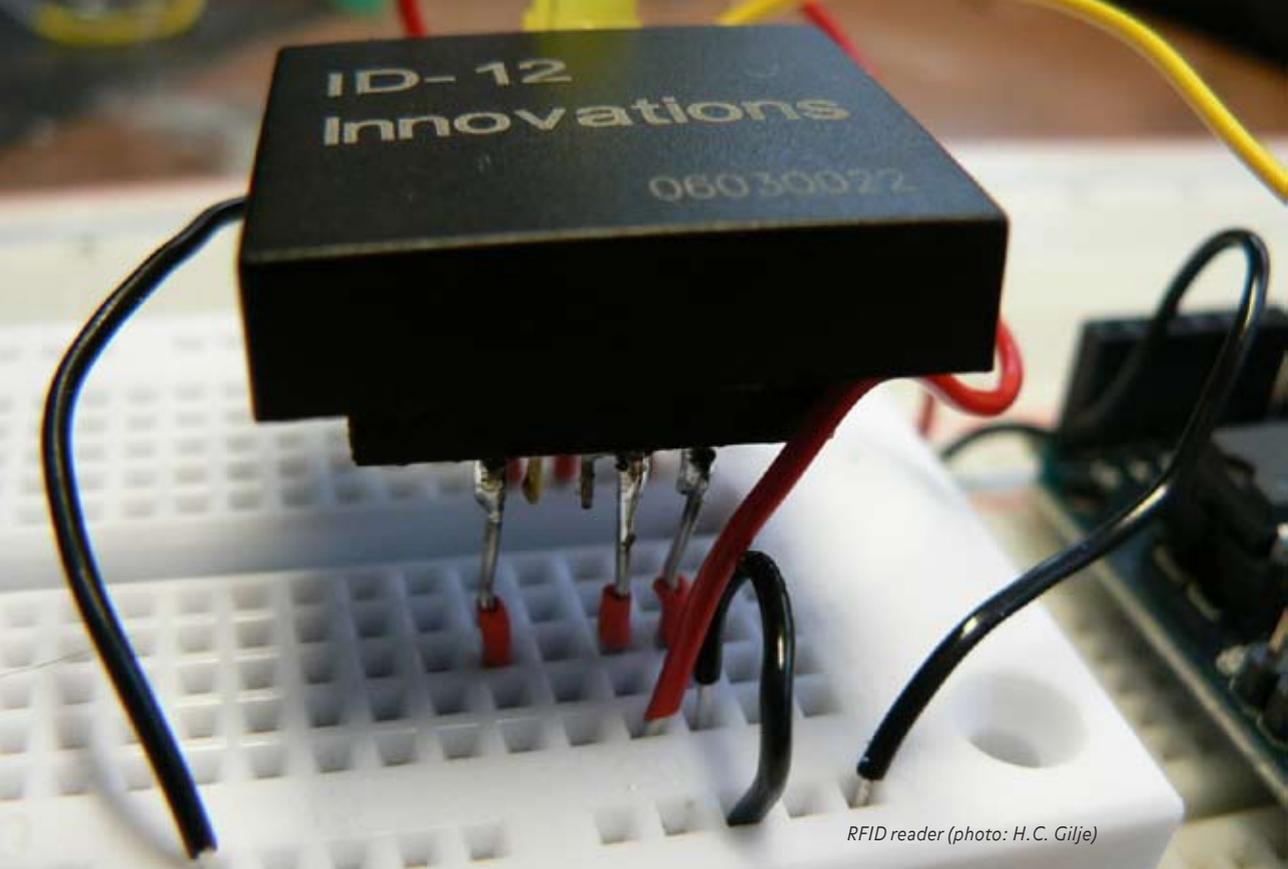
RFID reader (photo: H.C. Gilje)

Waag Society's Smart Environments programme wants to become the expertise centre for the social and cultural influence of RFID with respect to the relationship between the three 3Ps: *Public* (government), *Private* (business community), and *Personal* (citizens).

The Smart Environments programme was developed based on the vision that the ambient smart products and services based on RFID must be as inclusive as possible, with as broad as possible support among the population, and as transparent as possible, in order to create this broad support. If companies, consumers and the government actually want to profit from RFID, then they need to take part in the discussion. This conversation is no longer informal. The choices being made now will have a major effect on the playing field and innovative power of individual citizens in the 'smart society'.

DIFR NETWORK
Rob van Kranenburg (Head of programme Public Domain of Waag Society) has taken the initiative to establish the DIFR Network which combines all the positions in the RFID debate from ECP Global, GS1.nl, the Rathenau Institute, the HvA Media Lab, KABK to the Balie, the Institute for Network Culture and the Nijmegen University hackers.

The mission of DIFR is: "*To demonstrate how RFID can have various types of significance for individuals and society*". DIFR's goal – through the use of creative forms of research, presentations, workshops, equipment prototypes, software modules on mobile phones and specific hardware and infrastructure – involves bringing together a wide-ranging field of highly diverse points of view, from hardcore activism to hardcore technology push, to move towards sustainable infrastructure, useful applications and services with innovative business models.

waag.org/smart
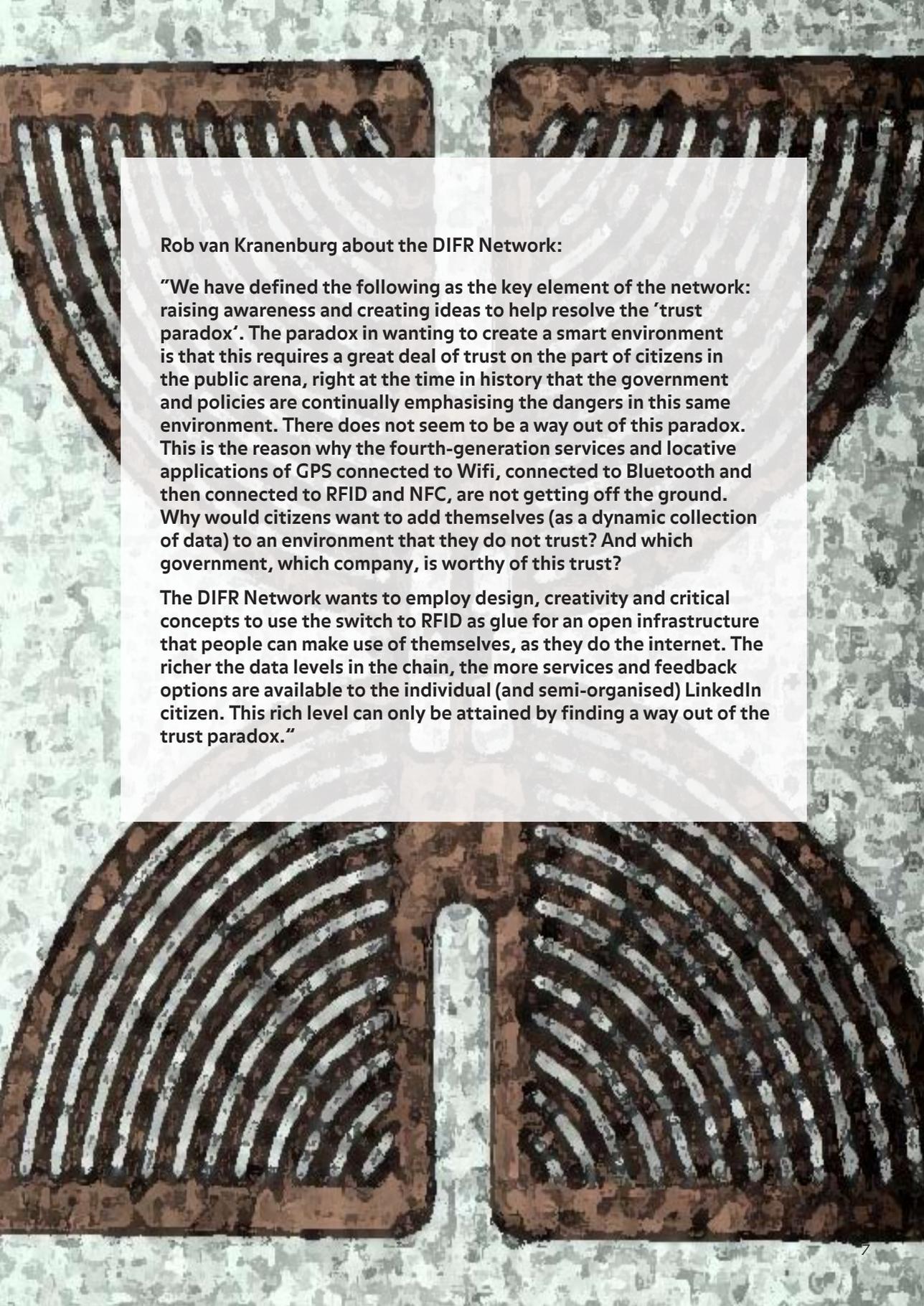
Rob van Kranenburg about the DIFR Network:

"We have defined the following as the key element of the network: raising awareness and creating ideas to help resolve the 'trust paradox'. The paradox in wanting to create a smart environment is that this requires a great deal of trust on the part of citizens in the public arena, right at the time in history that the government and policies are continually emphasising the dangers in this same environment. There does not seem to be a way out of this paradox. This is the reason why the fourth-generation services and locative applications of GPS connected to Wifi, connected to Bluetooth and then connected to RFID and NFC, are not getting off the ground. Why would citizens want to add themselves (as a dynamic collection of data) to an environment that they do not trust? And which government, which company, is worthy of this trust?

The DIFR Network wants to employ design, creativity and critical concepts to use the switch to RFID as glue for an open infrastructure that people can make use of themselves, as they do the internet. The richer the data levels in the chain, the more services and feedback options are available to the individual (and semi-organised) LinkedIn citizen. This rich level can only be attained by finding a way out of the trust paradox."

Example of a training for medical staff in a virtual world (source: National Naval Medical Center Bethesda, Maryland (USA).

Recovering in a virtual world

by Sabine E. Wildevuur, Head of programme Healthcare at Waag Society

It seems like a contradiction: computer games and health care. And yet the role of serious gaming in the health sector has grown tremendously over the past five years. Children learn how to lead healthy lifestyles in virtual worlds, medical personnel learn how to treat disaster victims, and patients with social behavioural disorders learn in a virtual world how to interact with others. Situations that are sometimes difficult to practice in everyday life. The virtual world 'blends' into the real world and vice versa.

At the mention of 'games for health', the taxi driver in Baltimore (USA) launches into a speech about his 23-year-old son, who logs onto the computer as soon as he gets home from work to do 'I don't know what'. In the United States, there is an ongoing discussion about whether video game addiction should be added to the official 'handbook' of psychiatric disorders, the DSM-IV. So far, the jury is still out. This is a minor topic during the 'Games for Health conference' organised by the Serious Games Initiative and now in its fifth consecutive year. Instead, the conference focuses more on the positive side of virtual worlds, 'exergames' like Wii and braintrainers used to stimulate, educate and treat. Walking into room 306 of the

conference centre in Baltimore, one might get the impression that the 2008 Games for Health Conference is one giant playground. The *Exergames* room is filled with people dancing, ski jumping, leaping from one coloured tile to the next, or poised in full concentration at a console racking up points. But upon taking a closer look, it turns out that the dancer has a prosthetic limb, the gamer is in fact a nurse learning how to treat patients who have suffered a trauma, the coloured tiles are intended to help get children moving as a fun way to tackle obesity, and the ski jumping event being played on Wii Sports has already been adopted by rehabilitation centres to help mobilise patients recovering from

a stroke, for example. The use of virtual worlds in the health care sector plays a major role in the conference.

VIRTUAL WORLDS

For many people, 'virtual worlds' immediately calls to mind Second Life (SL). The virtual world that began in 2003 online has since evolved into a 'real' virtual world where millions of people live, work, socialise and create a world. The hype seems to have faded somewhat, but millions of people live their lives as an avatar in SL. It is a place where different groups of patients have found one another, from cancer patients to wheelies (people in a wheelchair), people with depression, Multiple Sclerosis, and brain injuries sustained in an accident. Neuroscientist John Lester from LindenLabs guides people who have suffered a stroke or have a certain type of autism (Asperger's disease) along their way to and in SL. He has been an active user of the virtual world for five years. He introduces patients with Asperger's disease to SL in order to help them learn social skills. They create their own world in which they feel safe, and according to Lester this sense of security transfers to the real world. 'It boosts their self-confidence'; regardless of how virtual the world may be, there is still a real person behind every avatar. He also sees stroke survivors flourish in SL. It is important for these individuals to stay active and continue to stimulate their brain and memory. This is easier to do in a virtual world where they do not need to leave the house than in the real world. They meet others, competitions get underway and everyone challenges each other. SL is also actively used to train medical professionals. John Miller started training nursing staff in SL simply due to budget restrictions.

A virtual hospital in Second Life. Second Life is actively used as an environment for training and education in the health sector.

He, too, is positive about the opportunities to simulate certain medical situations in SL, to bring students from all over the world into contact with one another and consequently raise awareness about cultural differences in health care and the various nationalities of patients. Obviously, practicing on a virtual patient entails fewer risks, students can practice certain procedures multiple times, and it is easier to keep track of a student's progress.

WHYVILLE

While SL automatically comes to mind when most people think of virtual worlds, there are in fact many other virtual environments, both online and stand alone. It is not a virtual world, it is the real world, says Whyville founder and neuroscientist James Bower. Whyville is a virtual world for children and especially popular in the US and Canada. Since it was founded nine years ago – Whyville was a virtual world

before SL existed – the number of registered users has risen to 3,3 million, of which a surprising two-thirds are female and the average age is 12.5. The first step towards whyworld.org will be taken shortly, with a Spanish pavilion adapted to both language and culture. Incidentally, there is a Dutch presence in Whyville, too, with 1,532 users registered since the inception and 1,000 currently active.

Bower makes 'crap that works'. Virtual worlds are not the real world but at the same time they are the real world. Despite the simplicity of the site, it is supremely effective for the social context. Whyville is a place where children are not told what and how to do things; instead, they learn their own way with ease. It is a world in which they want to live as a child; it is interesting and they feel at home.

The world is in 2.5-D (on a screen, but with 3-D views). The reason why Whyville works, according to Bower, is that it is a social

place where people can meet and do things together. The most recent Cheetah Girls concert in Whyville Rocks drew 11,000 fans. Whyville also publishes a newspaper, the Whyville Times, and there are elections for the Whyville Governors. One of the most recent initiatives involves healthy eating and living. WhyEat was designed in cooperation with the Nutrition Association. Healthy eating is rewarded, while poor eating habits are accompanied by a higher risk of contracting diseases. In 2007, the virtual nutritionist received 587,000 questions about diet and nutrition, and children now accompany their parents on shopping trips to tell them what they should and should not buy with regard to healthy food. On Valentine's Day, Whyville spread the 'Y virus' and infected users got acne or had to sneeze, which in turn deleted their chat. The idea was to get well as soon as possible and to get the necessary shots. The Center for Disease Control in the US introduced a virtual vaccination programme in Whyville, and so far 134,000 have been vaccinated. Thousands of grandparents, too, opted to get virtual shots at the insistence of their grandchildren. Given the large number of female users, Whyville is also now being used to promote math and science subjects among girls. The children learn about immunology and vaccinations, such as how they are made and marketed.
Bower believes that one of the reasons why it has become so popular is that it is not some silly game; instead, it assumes you are intelligent (according to the children in a survey). It is a world in which children set up their own business; the more skilled you are, the farther you can go in the virtual world.
Whyville shows that virtual worlds do not necessarily have

Woman with a prosthetic limb dancing (photo by Like Wildfire)

to be high-tech and elaborately detailed in order to work and to be successful. Consider the virtual world Club Penguin, which Disney recently took over for 7.4 billion dollars.
At the other end of the spectrum, there are highly detailed worlds such as *Pulse!!*, which is used to train medical personnel to act in the event of trauma or biological and other terrorist attacks. *Pulse!!* has become an exceptionally advanced, very expensive serious game that, following extensive testing and modifications, will likely be used in professional training courses at the end of the summer in 2008. Is it necessary to invest so much

money in a high-tech and detailed world?
According to researcher Patricia Youngblood at Stanford University it is not necessary in every case to invest billions of dollars into the development of a virtual environment. Simulation-based learning should not be regarded as a replacement for regular education, says Youngblood. Instead, it should act as a supplemental tool. Using the online classroom *Olive* she observed how students responded in crisis situation, how they worked in a trauma team, how they acted in a specific situation and what they did well and where they fell short. The

major advantage of a virtual world is that you can objectively evaluate someone's performance. Other qualitative advantages include the opportunity for people who work mostly night shifts now have the opportunity to choose their own training times.

In the meantime, the woman with the prosthesis is still dancing; she does not seem to want to stop any time soon. At the end of the day, if there is one thing that matters it is that serious games must be fun — otherwise, what is the point? **waag.org/healthcare**

Social skills training

Waag Society, together with partners in the field, developed a test environment in *Second Life Teen* to investigate the appropriateness of a simulation game as medium. Like Second Life, Second Life Teen is an online, social 3-D world, except that it is off limits to adults. The project, called *Self City*, aimed at social skills training for children in *Special Education Cluster 4*. Cluster 4 pupils are socially and emotionally impaired as the result of any number of causes. They often display stereotypical behaviour and find it difficult to assume different roles. Consequently, they often quickly come into conflict in socially complex situations.

Self City is a simulation of the everyday reality of adolescents. In the game, teens can walk around the virtual city 'Self City' online. The central object is simple: do what you have to do to go to the cinema. On the way, the teens find themselves in all sorts of challenging social situations. For example, an arcade bouncer makes things difficult, or the woman in the ticket window at

Above: screenshot from the SIM game Hospital Tycoon (source: Worth Playing)

Below: screenshot from Self City.

the cinema refuses to let you in because you are too young. The simulations teach the player how to learn to deal with those situations. This can sometimes be very difficult; for example, the player can find him or herself in a situation where they must apologise to an irritating person. The teens play the game using an avatar that resembles them, and along the way they are accompanied by a *daemon* , an alter ego (in this case an animal) who offers them advice in conflict situations. The daemon rushes to their aid when a problem arises. For example if the teen gets angry

and hits someone, the daemon suggests alternative actions. The farther the player advances in the game, the less advice the daemon gives, and the player can decide when to ask for advice.

There is sufficient cause to continue the development of Self City. During the second phase of the project, the game will be worked out in more detail, so that additional research can be done on the learning effects.

A study report is available to download from: **waag.org/selfcity**

Conditions for innovation

The Waag Society approach
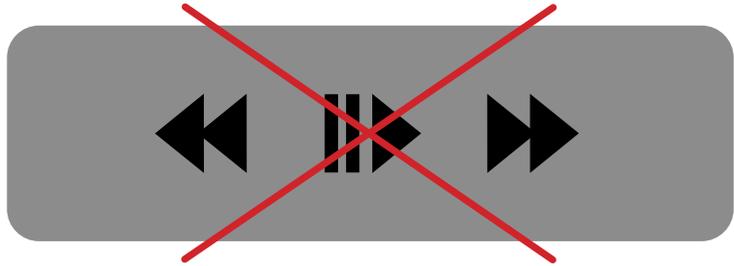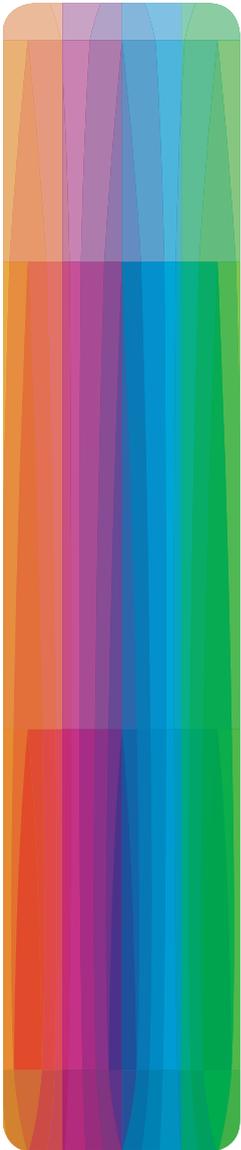
Creative Research

Development
Concepts
Pilot Projects
Events

Incubator

Innovation Workshops
Rapid Prototyping
Creativity Boosts
Pitching Training

Products

IT Services
International
Partnerships
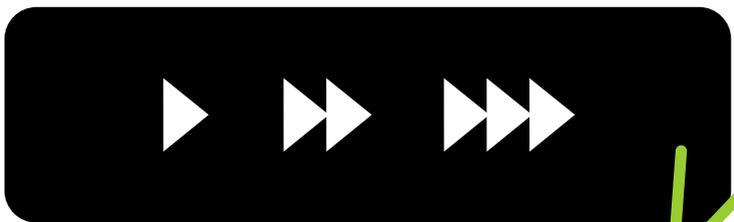
Recently, SenterNovem has acknowledged Waag Society as a knowledge institute. This means that small and medium-sized enterprises (SMEs) can use Innovation Vouchers issued by SenterNovem when asking Waag Society for advice. SenterNovem is an agency of the Dutch Ministry of Economic Affairs, promoting sustainable development and innovation.

Innovation Vouchers enable SMEs to submit research questions to knowledge institutes, thereby encouraging meetings between the two. Vouchers are given to SMEs that need a little bit of research to innovate products, production processes or services. After completing their research, knowledge institutes can cash the vouchers with SenterNovem. For more information visit:
waag.org/innovationvouchers

⬡ Waag Society

Waag Society is a foundation and non-profit organisation tha does reseach and develops concepts and prototypes, using creative technology for social and cultural innovation.

⬡ WaagProducts

Waag Products introduces concepts developed by Waag Society to the market. Since 2003, The Storytable, Pilotus, Monstermedia and 7scenes became products sold through national and international partners.

⬡ Creative Learning Lab ///////

The Creative Learning Lab develops creative technology for education. Housed at Pakhuis de Zwijger where it has its own training facilities and an extensive training programme for primary and secondary education.

MediaGuild ᴹ

Media Guild at Pakhuis de Zwijger is an incubator, where start-up enterprises can find facilities, knowledge and an international network to develop their product and refine their business model.

⬡ /fablab

Basically, a fablab is a set of computer-driven machines. It can be used to make almost anything, ideal for rapid prototyping. Visitors are encouraged to come and make stuff themselves.

CULTURE GRID
cultural service provider

Culture Grid is a joint venture of Waag Society, V2 and Media Guild and acts as Cultural Service Provider for Surfnet in The Netherlands, offering more than 50 cultural organisations internet access, hosting and other IT services.
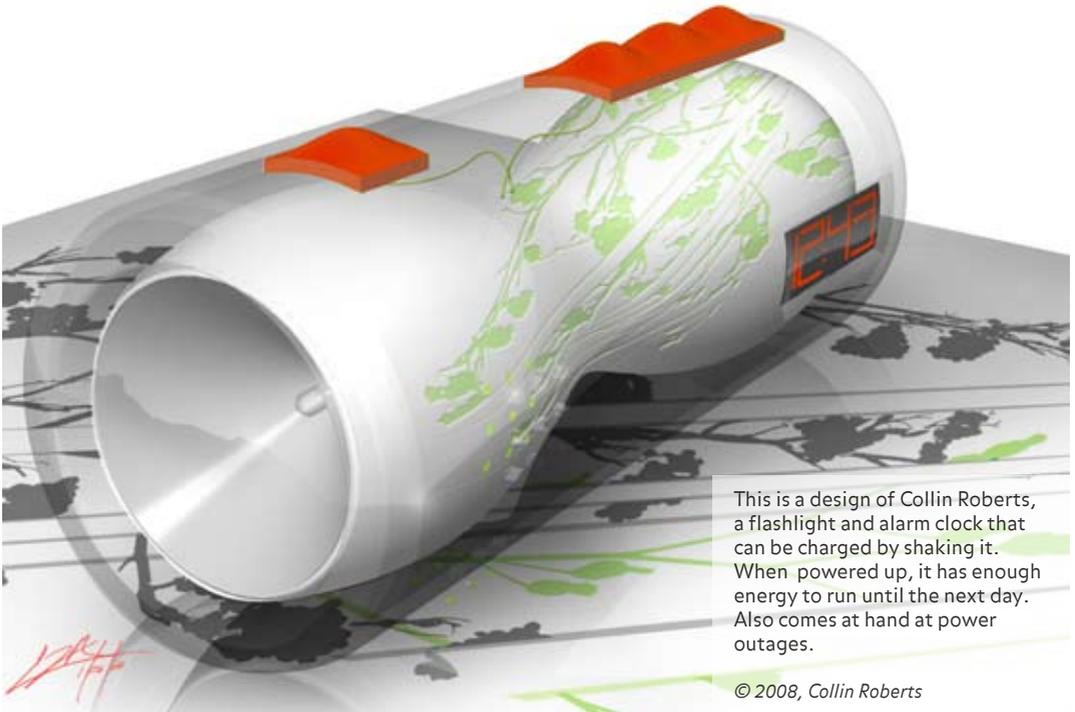
This is a design of Collin Roberts, a flashlight and alarm clock that can be charged by shaking it. When powered up, it has enough energy to run until the next day. Also comes at hand at power outages.

© 2008, Collin Roberts

Solar power
Everlasting source of energy

by Casper Gijzen

Solar shade

(Left) This sun shelter was designed for playgrounds at schools by Büro North. It provides shade as well as solar power.

The generated amount of energy is shown on a display. It is a lightweight construction, that can easily be rotated towards the sun, even by children. On the inside of the panel, a flock of led-lights will light up when it becomes dark. It is complete self-supporting.

© 2008, Büro North

Brought to you by

ECOCOOL

Mobile solar-powered workspace Mobile, modular, autarkic workspace. The sun roof supplies enough energy for notebooks. Connections are provided at the central panel of the desktop; high chairs offer protection against wind and sun. This design by the young designer Mathias Schnyder can be used at campuses, offices, conference spaces or in the garden. Can also be used inside when enough daylight is available, like at exhibitions centers.

© 2008, Mathias Schnyder

Day/night parasol

(Above) In daytime this parasol provides shade, when it gets dark it emits a soft light for reading.

It rather looks like any ordinary beach parasol, but is made of a 'catch-and-release' fabric that in daytime absorbs light on the outside and reflects it on the inside when it gets dark. It is self-contained and the necessary technology to build a prototype is available, but needs to be further optimised.

© 2008, Kaleidoscope

Solar ski jacket
Sportive and sophisticated, for today's men of the world. Exclusive men's clothing brand Zegna brings this first luxurious ski jacket with built-in solar panels. Five hours of outdoor sports will be enough to charge a battery that can be used to recharge mobile appliances. The solar collar and battery can be detached to independently supply energy.

© 2008, Zegna

Games Atelier
Location-based learning tool

The mayor of Amsterdam, Job Cohen, launched Games Atelier in March 2008. Games Atelier is a new educational tool which inspires and meets the expectations of scholars in secondary education.

Photos: Evert Elzinga & Marco Baiwir

Games Atelier can be used in addition to existing materials and formats. Scholars use mobile phones and the internet to create, play, share and evaluate games as a group activity.

**gamesatelier.nl
7scenes.com**

Creative Learning Lab
Creative technology in education

The Creative Learning Lab, which recently opened a new space for training at Pakhuis de Zwijger, is a meeting place for everyone involved with teaching, creativity and new technology.

Henk van Zeijts in an earlier interview stated: "Educational innovation is increasingly the work of the cultural and creative sector. However, you have to do more than just simply make schools aware of this.

The creative developers, the educational field, the cultural sector, the educational market and – most especially – the publishers must have a better mutual understanding and know how to find each other so as to implement creative innovation in education on a structural level."

"One of the Creative Learning Lab's roles is that of development laboratory. At this lab, staff members work intensively with pupils and teachers.

This role presents us with the opportunity of showing schools what creativity and the new technologies can offer education. There is a real need for this. Schools still don't do much in practice. But they become extremely interested once they see what's possible and what the results are like."
The complete programme of activities and projects of the Creative Learning lab can be found at:
creativelearninglab.org

Sustainable transport systems
Reducing emissions

by Casper Gijzen

Portable electric bike

(Right) Going short distances, you could use this electric city bike for transport, a vehicle that you can wear like a suit.

You can travel in an upright position at walking or cycling speed, or, to go faster, you lean forward, assuming a normal bike position. The outward skeleton will adjust itself automatically. This vehicle does not need much parking space and has a zero carbon dioxide emission when in use. Drive up to one hour, then recharge for a quarter of an hour (using green electricity, of course).

© 2008, Jake Loniak

Parking is recharging –
Juan de Serva invented this concept for SunRed. Drive through town to your appointment. You park your scooter and solar panels will cover it and will recharge the fuel cells. A prototype is to follow soon.

Kinetic energy
Energy from movement

by Casper Gijzen

E-paper bracelet
Electronic bracelet with watch, imageviewer or possible GPS navigation. Concept by the French agency Chocolate (based in China). All neccesary energy will be delivered by the person wearing the bracelet, from the movement of the arm.

Revolution Door

(Above) Kinetic energy (or motion energy) is all around us. Just like with solar energy, the problem lies in efficiently harvesting and transporting it.

The New York designers of Fluxxlab came up with the Revolution Door. The energy the movement supplies can be used for built-in lighting, turning of the door for people not capable of doing so themselves or the adjacent automatic doors.

© 2008, Fluxxlab

© 2007, Chocolate Agency

E-Paper
Series

Brought to you by

ECOCOOL

Media Guild
Creative business incubator

By Leendert Ullersma

The Media Guild is a place that new businesses can turn to for help and advice: a Creative Business Incubator. Auke Ferwerda is Screening & Scouting Manager at the Media Guild. He is well aware of what is needed to start up your own company.

"With the guidance provided by an incubator such as the Media Guild, you will be able to avoid pitfalls that you may not see coming," explains Auke. "Creative Business Incubator really says it all: we facilitate young businesses with assistance from a large international network and offer help in transforming an idea into an appealing commercial plan. We focus primarily on companies with a creative bent. The idea in question must be innovative and ambitious."

The new entrepreneurs are also expected to make a contribution. An idea must have the potential to develop into a product or service that will find a niche in the market. A sound portfolio and a marketing plan are therefore vital.

The Media Guild is located in Pakhuis de Zwijger, a beautifully renovated building on the IJ in Amsterdam, which was used in the past for the refrigerated storage of products transported to the Amsterdam ports from all over the world. This former warehouse offers the Media Guild room for around 28 people. This means that, in practice, about eight teams can work there simultaneously. The major advantage is that these teams can also learn a lot from one another

Auke Ferwerda of the Media Guild

and make use of each other's networks.

The teams consist of a mixed group of recent graduates, as well as people with many years of work experience who are taking the first step to start their own company. "This type of combination is actually necessary. Recent graduates are often ambitious and creatively impulsive, but lack the practical experience that is very useful when setting up a company," states Auke. "That's why we try to create teams of people with as many different perspectives as possible. For example, if a team consisting solely of designers comes to us, we advise them to first find someone with management experience. Needless to say, we can help them find the right people by

consulting our network, and we can even combine teams if desired."

The teams must also be able make it on their own financially. They need to be as independent as possible early on in order to survive. Media Guild facilitates and provides guidance where necessary, in return for a share in the start-up company. This flexible construction costs the starting entrepreneurs nothing at all initially, and it is in the interest of both the new company and Media Guild that the venture will be a success. In addition to the location, the network and the support in developing the business plan, the Media Guild also offers pitch training sessions, among other things, where the newcomers can learn to sell their products.

Different roles exist within the Media Guild: internal guild members, external guild members, guild masters and guests of the Media Guild. Internal guild members are new entrepreneurs with a permanent work place at the Media Guild. External guild members are talented and creative media professionals who are not based at the warehouse, but who do maintain close ties with the Media Guild. Guild masters are professionals who are associated with the Media Guild in order to share their knowledge and experience with the guild members.

Guests of the Media Guild work temporarily at the Media Guild on projects that tie in with the Guild's objectives and professional area.
At present, six teams are active in the Media Guild: Postmachina, Iconomical, Djools, 7scenes, Driftig and Pars.
mediaguild.com

Developed at the Media Guild by Postmachina is a first prototype of 'E', aimed at physically joining people to an online social network. A short touch or tap on the device, that holds information of the owner, by another 'E' will suffice to exchange personal information stored.
The 'E' can then be connected to a computer, and every person met that day can be joined automatically to your account at social networks like LinkedIn. A first use might be at big events where many people meet and exchange information.

Wind energy
## New wind turbines
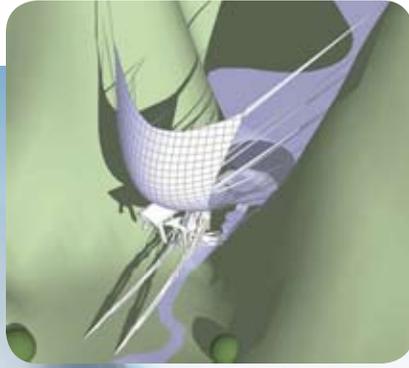
by Casper Gijzen

The Wind Tunnel Foot Bridge is a new covered bridge for the 21st century; a design proposal for a new kind of wind activated footbridge made of steel and aluminum. As the wind blows, the five wind turbine wheels turn at different speeds around the people who are walking through to reach the other side. Three of the five wheels turn in one direction while the other two turn in the opposite direction. As the wind driven wheels turn in different directions and at different speeds, they can produce different electronic corresponding sounds. The Wind tunnel Footbridge was designed to be constructed in various types of public venues as an architectural attraction. The wheels also produce and store electrical energy much like a windmill.

Greener cell phones
Recyclable or without batteries

by Casper Gijzen
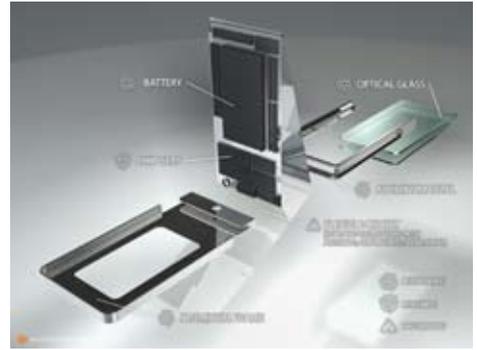
Linc: Lifecycle phone

(Above) After a year of use, a new, up-to-date phone will be send to you. When activated, all data from your old phone will be synchronized on your new copy. You return the old one.

The Linc phone can be dismantled easily, using a heat wave. All materials that can be recycled will be used again, while toxic waste is disposed off in a responsible way. A concept by Caleidoscope.

© 2008, Caleidoscope

Kinetic mobile
French telephone designers Modelabs made concept phones that are working on solar and kinetic energy. This example, called the U-turn, is a kind of foldable mini boomerang and uses the energy produced by the folding process.

© 2007, Modelabs Group

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This edition of Waag Society magazine has especially been edited for PICNIC 08, the crossmedia event at the end of September in Amsterdam. It provides a selection of articles from recent magazines and an overview of Waag Society´s activities.

PICNIC

Waag Society is an institute for Technology and Culture, using creative technology for social and cultural innovation.

Last mile charger

Cycling that last mile from the train or subway to work, and at the same time let the built-in magnetic dynamo charge your mobile phone, iPod or other energy consuming gadgets. It can also be used as a backpack or suitcase, with or without wheels. A simple sustainable transport concept from the Australian Frag Woodall.