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IDEAS · DESIGNS · PRODUCTS WITH A FUTURE

Incombustible houses made of paper, glowing wallpaper, fuel-saving satnavs, power-generating heating systems, a sixth sense 'to go' – we present the ten best products, ideas, or designs with a future. Some of them are already on the market, others are still in the prototype-stage, and a few only exist on paper. Yet all cover issues which concerned us during the past year and which offer, on small or large scale, solutions for the future. Here, technologies find new uses, everyday problems solved innovatively, or global responsibilities are met in novel ways.

HAPTIC READER: READING SUPPORT



Image: IDSA

Globally, more than 300m people are visually impaired, some 45m are blind. Yet the selection of literature translated into Braille remains limited, as are the number of languages in which literature for the blind and visually impaired is published. This might change in the future: The Haptic Reader translates conventional books into Braille – fast and straightforward. Readers place a flat glass screen on the page of a book, the letters are scanned and converted into Braille characters, which dot a touch-screen on the reader’s surface. If you prefer to have the text read to you, turn on the voice system: The Haptic Reader will read out the story instead. First prototypes are scheduled for 2011.

SIXTH SENSE: A BROWSER'S PARADISE



Our sixth, the additional sense, is now wearable. With the help of SixthSense, users may access individually relevant, virtual information anytime, anywhere, and project it onto any surface. Displays are so yesterday: One look at the boarding card, and a movement of your finger will show whether the plane is late. When browsing in a bookshop, SixthSense will call up reviews of any title. If necessary, you can use your own palm as a calculator. Technical equipment consists of a wearable webcam with miniature projector, a mirror, a mobile phone as CPU, and four coloured thimbles which are used as one would have a computer mouse. SixthSense is controlled using gestures and signs. Move your fingers, and the device will know what information you are looking for, or whether a photo is to be taken of a specific part of the scenery. SixthSense is a step into the direction of 3D Internet: This is what future browsing will be like.

AIRNERGY: RECHARGING MIRACLE



The times when we had to keep our cellphone's recharger handy at any time could soon be over: A device which uses WLAN to recharge batteries is to enter the market in 2010. RCA, a subsidiary of Thomson, Inc., presented this gadget at the consumer electronics trade show CES. It relies on WiFi signals to recharge dead batteries. The closer a recharger is to the source of the signal, and the more WLAN networks are available, the faster the charge-up process will be completed. RCA is planning to shrink the technology so it can be build into batteries. The reported sales price for Airnergy is to be only ca. 40 USD.

UTB: THE SILENT CINEMA



The 'subtitle reading glasses' UTB promise barrier-free cinematic pleasure for the hearing impaired. Using wireless LAN, the film's dialogues are superimposed on the lower part of the glasses, with several languages available. A special 3D technology makes it possible for the eye to read the text as if it was on the screen, rather than moving back and forth between the glasses and the big screen. The so-called head-mounted display (HMD) with see-through technology is a joint development of Trivisio and the Fraunhofer Institute in Darmstadt, Germany. Currently, only a single prototype exists. The goal is to get UTB ready for mass production in 2010.

LICHTBLICK: YOUR DOMESTIC POWER STATION



Image: Lichtblick

Innovations are the result of businesses moving beyond their own industry: An exceptional alliance of eco-power provider Lichtblick and automotive company Volkswagen created a concept which offers a highly efficient use of energy and creates not only heat, but also environmentally-friendly electricity – decentralised. Lichtblick provides customers with miniature residential power stations. By contrast to owning one's heating system, customers do not pay for the natural gas used, but only for the heat. Generated electricity is fed into the grid, with homeowners receiving 0.5 ct/kWh. Lichtblick claims that its home-power stations are up to 40 percent more efficient than conventional heat and power generation, with CO₂ emissions dropping by up to 60 percent.

OLED-WALLPAPER: THE GLOWING WALL



Image: Initiative Chemie im Dialog

Decorating, plastering, painting – that is so yesterday. Tomorrow's indoor walls will have OLEDs (Organic Light Emitting Diodes) which change colour on demand and may even be used as screens. Or that's the researchers' vision. The glowing wallpaper is made of ultra-thin layers which emit light when an electric current passes through them. As yet, wallpaper using OLED technology remains a distant dream. The first OLED TV, however, will be marketed this year. Last year, the German Federal Ministry of Research and Technology launched a grants initiative which is to make Germany competitive in the production of light emitting diodes and which will surely provide the necessary momentum for the development of glowing wallpaper.

1€-SNEAKERS: PROTECTION FROM INFECTION

The Adidas Group logo is displayed in a light gray font. It features the word "adidas" in a bold, lowercase sans-serif typeface, with a registered trademark symbol (®) to its upper right. A thin horizontal line is positioned directly below "adidas". Underneath this line, the word "GROUP" is written in a smaller, all-caps, spaced-out sans-serif font.

adidas®
GROUP

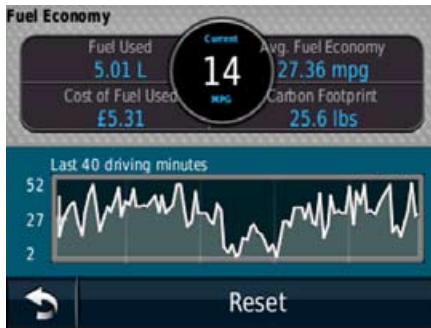
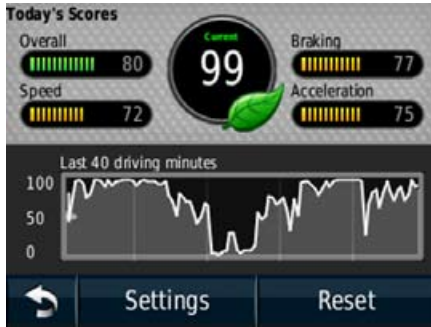
Inspired by a concept of Muhammad Yunus, Nobel Peace Prize laureate, Adidas plans to launch a social business model in Bangladesh in 2010: The 1-euro sneaker is to protect the poor parts of the local population from widespread worm infections. As the parasites enter the human body through the sole of the foot, shoes offer adequate protection. Development, marketing, and sales are not geared towards maximising profit, but to solving social problems. But the focus is also on sustainability: All profits will be reinvested, and local populations will be integrated into the business process. It is not yet clear what the 1-euro shoe will look like and how it will be branded, but it is to become a reality in 2010.

SWISSCELL: HOMES MADE FROM PAPER



So far, walls made of paper have not enjoyed an excellent reputation. We might be in for a change: Swiss-Cell is a honeycomb building material – light as paper, but with a strength comparable to wood – which may be used for a wide range of solutions, from shipbuilding to airframe design. Even homes are possible. So far, however, the target group are not home builders in western industrial nations. For slum dwellers and victims of natural disasters, the miracle material offers a real opportunity to get a safe roof over their heads: The material is affordable, water and fire-resistant, protects from heat and cold, and will last for generations. It is manufactured by coating cellulose fibres in a special resin and processing them under high temperatures into an unusual building substance. Gerd Niemöller invented this construction technology. Collaborating with architects of the Weimar Bauhaus University, he designed the so-called AfrikaHaus, which may be built worldwide in the future. His innovative homes are already touted as a mid to long-term solution for the crisis situation in Haiti.

ECOROUTE: THE ECO-COPILOT



EcoRoute is an intelligent co-pilot that helps drivers to improve their driving style and save fuel and money. This free software for one maker's satnav, made available last year, shows fuel costs on the display prior to the start of the journey, gives detailed reports on fuel usage and CO₂-emissions, and provides tips for a more fuel-efficient driving style. Fuel usage is estimated using the vehicles acceleration and deceleration values. While cars still run on gas, this a useful helper in road traffic.

DNA: THE FUTURE MATERIAL



Image: dna4u.de

In 1990, it began as a large-scale project costing billions. Today, private companies offer it for a few hundred euros. Businesses such as 23andMe, Navigenics, or Decode Genetics decode human gene for 500 to 1000 US dollars, and (in theory) make it possible for everyone to find out which risks or special characteristics he might have. The history of DNA-decoding over the past fifteen years can be compared to the triumph of the PC. Once the hobby of a few high specialised scientists, the genome has now become a product for everyone, and can even be worn as jewellery around the neck. Even if people are more genetically different than it was long assumed, researchers begin to be more successful at finding how physical attributes are linked to genes. Should they succeed, the face of medicine and health care, and hence our lives, will change completely.

LINKS IDEAS · DESIGNS · PRODUCTS WITH A FUTURE

HAPTIC READER

http://www.idsa.org/IDEA2009/gallery/award_details.asp?ID=146

SIXTH SENSE

http://www.ted.com/talks/pattie_maes_demos_the_sixth_sense.html

AIRNERGY

<http://www.spiegel.de/netzwelt/gadgets/0,1518,671056-2,00.html>

UTB READING GLASSES FOR SUBTITLES

<http://en.barrierfree-films.net>

DOMESTIC POWER STATION

http://www.volkswagenag.com/vwag/vwcorp/info_center/en/news/2009/09/volkswagen_energy_partnership.html

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OLED WALLPAPER

<http://www.bmbf.de/en/10413.php>

1€-SNEAKERS

<http://www.spiegel.de/wirtschaft/unternehmen/0,1518,661601,00.html>

SWISSCELL

<http://www.the-wall.ch> and <http://consido-ag.com>

ECOROUTE

<http://www.garmin.com/garmin/cms/site/us/services/ecoRoute> - fragment-1

DNA

<http://www.sueddeutsche.de/wissen/537/490909/text>

<http://www.dna4u.de>

<http://www.23andme.com>

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