

Technology Digest

June/July 2007

The Technology Digest is a compilation of noteworthy events in the technology sector world-wide. While stories cited are from a range of reputable sources, we assume no responsibility for the selection or accuracy of the citations.

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A new feature of Google maps called Street View which offers panoramic views of miles of streets around San Francisco, New York, Las Vegas, Miami and Denver is disturbing privacy advocates. The feature, which lets viewers zoom in to a street level view, often reveals controversial information. Among views publicised online are a picture of two young women sunbathing in their bikinis on the Stanford campus in Palo Alto, one of a man scaling the front gate of an apartment building in San Francisco, and one of a clearly identifiable man standing in front of an establishment offering lap dances. Google said that the images had been captured by vehicles equipped with special cameras and were no different from what any person can readily capture or see walking down the street. **(New York Times 1-Jun-07)**

Tokyo drinkers will soon get to test a new vending machine that charges advertisers rather than customers. The machine, which is owned by Apex Corporation, one of Japan's largest vending-machine operators, will supply complimentary drinks to anyone willing to watch a 30-second advertisement. Sponsors pay around ¥80 (67 cents) to Apex per cup, which also bears the sponsor's advertising. Apex hopes to expand the service to include all of its 35,000 vending machines, throughout Japan, from June. **(Economist 1-Jun-07)**

A study recently published by America's National Academy of Sciences found that worldwide emissions, which had been growing by 1.1% a year in the 1990s, grew by more than 3% a year between 2000 and 2004. That is faster than the most pessimistic projections of the UN's Intergovernmental Panel on Climate Change, a body set up to make authoritative pronouncements on the science of global warming. It is also faster than economic growth, implying that the world is not just consuming more energy, but also making it ever more dirtily. **(Economist 1-Jun-07)**

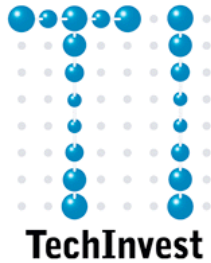
The Japan Science and Technology Agency at Osaka University unveiled a child-sized android with flexible joints and soft skin. The 1.3-meter-tall, 33 kilogram humanoid robot has optical, auditory and tactile sensors. Fifty-one

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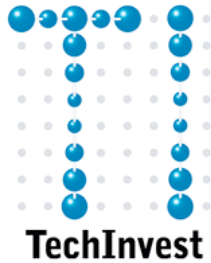
actuators inside its body run on compressed air and enable the robot to make complex movements smoothly. About 200 tactile sensors are embedded in the robot's gray skin, which is made of silicon and other materials. The robot can react to its surroundings by blinking and altering its facial expressions. The robot can turn over and stand up with assistance. **(Daily Yomiuri 2-Jun-07)**

More than 40,000 sets of number plates were stolen in Britain in 2006, a rise of almost 25%, according to police estimates. A record number are being stolen to enable people to commit crime and escape motoring fines. The growing popularity of camera-based enforcement of traffic offences for congestion zones and speed traps, which rely on computer records on who owns which car to identify and fine motorists creates the incentive for thieves. **(BBC 2-Jun-07)**

Brazilian scientists said they have perfected a method of producing cellulosic ethanol that drastically reduces the cost of processing down to the realm of 10 cents to 15 cents per liter (35 cents to 50 cents per gallon). Sugarcane is the easiest crop to turn into ethanol, but corn is only slightly more difficult, so a sugar ethanol breakthrough would be only a few steps ahead of other breakthroughs – such as making cellulosic ethanol from nonfood crops like switchgrass – that would democratize the technology globally. **(Stratfor 6-Jun-07)**

Language lessons have gone online. A new company, Praxis, provides daily lessons in Chinese that include a downloaded mp3 file, a transcript of Chinese characters which arrive along with the podcast, and a conversation with a tutor in Shanghai via Skype. Millions of people in 110 countries now download the free ChinesePod podcasts, about 250,000 listen regularly and several thousand pay for the premium one on one lessons. A second service, SpanishSense, is out, and more will follow. Praxis has 35 employees, all in Shanghai, where it pays about \$500 a month, a good wage by local standards. **(Economist 7-Jun-07)**

Matsushita thinks the techniques used for inkjet printing on paper could be used to apply make up to the skin, so it has designed a battery-powered, hand-held device that houses a cartridge of liquid make-up. The device ionises the liquid allowing an electric field to accelerate it through a nozzle to form a jet. The result is a make-up spray that can be turned on and off at the flick of a switch. **(New Scientist 11-Jun-07)**



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The Pentagon has confirmed it once considered building a chemical weapon that could turn enemy soldiers into homosexuals and make them more interested in sex than fighting. Newly declassified documents show the Ohio Air Force lab asked for \$7.5 million in 1994 to develop a so-called "gay bomb." (**DemocracyNow! 12-Jun-07**)

UK-based mobile music company Omnifone is trying to preempt Apple's iPhone launch with MusicStation, an all-you-can-eat full-track mobile music service. MusicStation works on just about any music-capable handset. Users can listen to any tune in the catalog, at any time, paying a weekly fee for the service. Initially, MusicStation service is going to be offered by Telenor in Sweden, where the price will be \$3.55 per week. Omnifone has content deals with Universal Music Group, SONY BMG, EMI Music, Warner Music International and various independent labels. (**TelecomWeb 13-Jun-07**)

The European Union has approved Novartis's seasonal influenza vaccine, Optaflu, putting the Swiss company in a position to become the first to market a flu vaccine grown in cell culture rather than in chicken eggs – a method used since the 1950s. Growing the viruses in cell cultures is seen as much more flexible and somewhat faster than egg-based production, which takes several months. (**CIDRAP News 13-Jun-07**)

A genetically modified strain of rice that expresses a vaccine for cholera has been developed by researchers at the University of Tokyo. Since the rice-based vaccine comes from an edible plant, it's safe and inexpensive to produce in large quantities and can be orally administered. The rice can be stored at room temperature for at least a year and a half, and, once administered, its protein body protects the vaccine from digestive enzymes that would otherwise render it ineffective. (**TechnologyReview 13-Jun-07**)

AWS Ocean Energy has developed an underwater buoy that harnesses wave energy from 50 metres below the surface through the changes in pressure that waves generate. The British company says that because the entire device is underwater, it does not suffer from storms in the way that other wave-power devices do, and will not interfere with shipping. It will be anchoring its first five test buoys to the seabed in a test site off the Scottish coast next year. A town with 55,000 inhabitants would need 100 buoys to power it. (**New Scientist 14-Jun-07**)

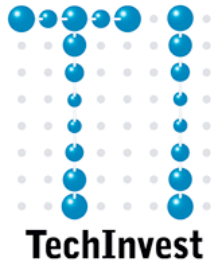
A research team headed by Craig Venter – the first to sequence the genome of a living organism, and the first to publish the genome of an identifiable human being, and the first to produce a truly viable synthetic virus – has applied for a patent on what they say are the 381 genes needed to keep an

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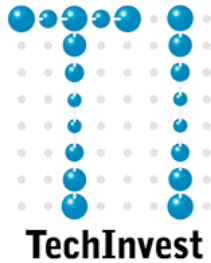
organism alive. The theory — and the claim made by the patent — is that by synthesising a string of DNA that has all 381 of these genes, and then putting it inside a “ghost cell” consisting of a cell membrane, along with the bits and pieces of molecular machinery that are needed to read genes and translate them into proteins, an artificial organism will have been created. The patent also attempts to reserve the right to any method of hydrogen or ethanol production that uses such an organism. **(Economist 14-Jun-07)**

AT&T has started quietly offering a broadband Internet service for \$10 a month, cheaper than any advertised plan and slightly hidden on the AT&T Web site. The DSL plan is part of the concessions made by AT&T to the Federal Communications Commission to get its \$86 billion acquisition of BellSouth Corp. approved last December. The agreement with the FCC required the company to offer the plan for at least 2½ years. The service provides download speeds of up to 768 kilobits per second and upload speeds of up to 128 kbps; equivalent to existing plans costing \$15 and \$20. **(Associated Press 18-Jun-07)**

The US National Science Foundation is granting \$100K to Geosemble Technologies to combine high-resolution imagery, property data and other related online data sources to allow targeted direct marketing. This data would be given to marketing companies to provide appropriate leads for everyone from home improvement stores to roofing companies, construction companies, automobile dealers, tree trimmers, landscapers, and pool construction companies. **(Schneier 19-Jun-07)**

Late last year the government of Indonesia withdrew from the 55-year-old system by which flu viruses are passed free of charge to pharmaceutical companies to be commercialized as vaccines. Last month more than 20 countries asserted that they retain the rights to flu isolates from their territories and asked for a guarantee of fair and equitable vaccine distribution as the price of continuing to send isolates to the WHO. **(CIDRAP 19-Jun-07)**

French government security experts have reportedly banned – with mixed success – the use of BlackBerries in ministries and in the presidential palace, for fear that they are vulnerable to snooping by U.S. intelligence. Information sent from BlackBerries goes through servers in the United States and Britain, and France expects that the U.S. National Security Agency would intercept those messages for both political and economic purposes. **(Associated Press 20-Jun-07)**



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The United Nations Environment Programme reported that investment in renewable energy leapt to \$100 billion in 2006, higher than most previous forecasts had suggested. Most of the capital went to America and Europe, but China accounted for 9% of the total. The UN said the figures proved that renewables had shed their “fringe image”. **(Economist 22-Jun-07)**

Electric-vehicle maker Zap says it will come out with an electric sedan that will go about 100 miles on a charge but cost only \$30,000. The high prices of electric cars are largely due to the cost of lithium ion batteries. The sedan will run on motors placed directly on the wheel hubs – a design feature that frees up a lot of space to put batteries in the car. **(CNET News.com 22-Jun-07)**

Dr. Michael Emerman of the Fred Hutchinson Cancer Research Centre says that in evolving protection from an extinct virus known as PtERV1 which was active about a million years after human lineage parted from chimps, humans became susceptible to HIV. Every primate has a TRIM5alpha protein which works against either PtERV1 or HIV or neither — but never against both. **(Economist 24-Jun-07)**

A respiratory tract vaccine may protect against Ebola virus infection. Researchers developed a vaccine incorporating the human parainfluenza virus type 3. Some monkeys were immunized once and others twice, then all were challenged with a highly lethal dose of the Ebola virus. Results showed that a single immunization protected 88% of the animals against severe hemorrhagic fever and death, while all those receiving two doses not only survived but were symptom free and no detectable Ebola virus was found in the bloodstream. **(Medical News Today 24-Jun-07)**

Three SAT tutoring programs from Kaplan Test Prep and Admissions are for sale at iTunes for downloading to iPods with video screens. The three programs, in critical reading, mathematics and writing, correspond to the three graded sections of the exam. The programs cost \$4.99 each and are available in the iPod games section of the iTunes store. **(New York Times 25-Jun-07)**

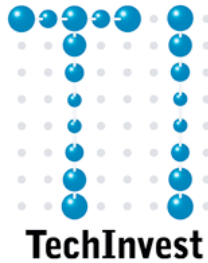
A 10-year collaboration between UCLA, the University of Virginia and the Politecnico de Milano produced Rome Reborn 1.0, a virtual 3D model of the ancient city as it looked on June 21, 320 A.D. The \$2 million simulation is aimed at students, scholars, travelers and anyone else interested in history and urban planning. It can be easily updated to reflect the latest knowledge about the ancient city and viewed in a tool much like Google Earth. **(CNET News.com 25-Jun-07)**

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There will be 1.5 billion people with Internet access in 2011, with the biggest growth in the online population occurring in Brazil, Russia, India and China. Worldwide online population will increase at a compound annual growth rate of 6.6 percent during the next five years. North America will remain on top in terms of the number of people with online access, but China should reach an online penetration rate of 17 percent by 2011 and India should hit 7 percent during the same time frame. **(JupiterResearch 26-Jun-07)**

Jordan's ministry of water and irrigation invited 11 companies to bid to carry out a feasibility study for a canal from the Red Sea to the Dead Sea. The 25 year project will be managed by the World Bank and could also be coupled to desalination plants that would bring much-needed drinking and irrigation water to the region, and could power hydroelectric dams. The canal would flow down-hill: the Dead Sea is 420 metres below sea-level. **(New Scientist 27-Jun-07)**

T-Mobile USA is providing the option to use your Wi-Fi router instead of the cellular network on two new T-Mobile phones. You have the same number, whether you're on Wi-Fi or cellular and the new phones will hand over calls that are already in progress from Wi-Fi to the cellular network. Unlimited free calling on Wi-Fi costs an extra \$10 a month for a single line, or \$20 for a family plan with up to five lines. **(Associated Press 27-Jun-07)**

The Free Software Foundation has released version 3 of the General Public License. The GPL is the most widely used license in the open-source realm, and many projects like Linux were developed under its provisions. Anyone may see, modify or redistribute the underlying source code of a GPL-governed project. However, anyone who changes and redistributes the software must also publish those changes. New provisions in version 3 include automatic patent licensing and provisions requiring hardware sold with GPL software to provide access to it (eg. TiVo). Not included was a requirement for web services using GPL (eg. Google) to publish their code. **(CNET News.com 29-Jun-07)**

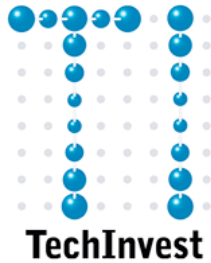
A new class of specially engineered nanoparticles that can target, image, and kill tumor cells could be a potent weapon against cancer. The new nanoengineered system, designed by James Baker and his colleagues at the University of Michigan, contains gold nanoparticles. Once enough of the nanoparticles have gathered inside cancer cells, researchers could kill the tumors by using lasers or infrared light to heat up the gold nestled inside the dendrimers. **(TechnologyReview 2-Jul-07)**

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Microsoft will spend up to \$1.15 billion to repair failing Xbox 360 game machine consoles. The size of the anticipated repair bill suggests that one third to as many as one half of the machines are flawed. The company says the console contains 1,700 components and 500 million transistors. **(New York Times 6-Jul-07)**

Robots of all sizes have descended on the campus of Georgia Tech for the RoboCup, an international contest that pits robotic creations against each other. Saturday's Nano Cup was on a playing field smaller than a grain of rice. Five teams from the U.S., Canada and Switzerland built microscopic robots that competed in a speedy two millimeter dash and a challenging slalom, where the path between the robot and the goal was blocked by defenders about the diameter of two hairs. **(Associated Press 7-Jul-07)**

Universal Music Group has told Apple that it would no longer automatically guarantee iTunes access to its coming releases, in a move that may herald certain albums being offered as exclusives to rival services. 15% of Universal's global sales are online, and Apple controls 80% of that market. Physical album sales decreased by 15 percent over the past six months, while sales of digital tracks, though still a much smaller business, rose 49 percent. **(New York Times 8-Jul-07)**

A new theory offered by an economist, Rick Nevin, is that lead poisoning accounts for much of the variation in violent crime in the United States. What makes Nevin's work persuasive is that he has shown an identical, decades-long association between lead poisoning and crime rates in nine countries. Sixty-five to ninety percent or more of the substantial variation in violent crime in all these countries was explained by lead. His data from multiple countries, which have had different abortion rates, police strategies, demographics and economic conditions, seem to indicate that lead is the only common explanation. Other evidence has accumulated in recent years that lead is a neurotoxin that causes impulsivity and aggression. **(Washington Post 8-Jul-07)**

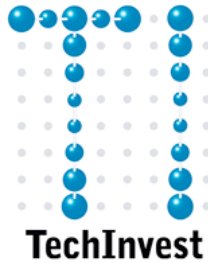
Using a pseudonym John Mackey, the co-founder of Whole Foods Market, typed out more than 1,100 entries on Yahoo Finance's bulletin board over a seven-year period, championing his company's stock and occasionally blasting a rival, Wild Oats Markets which Whole Foods now plans to buy for \$565 million. Mr Mackey's online habits surfaced in a 40-page court document filed by lawyers for the Federal Trade Commission. The Securities and Exchange Commission has begun a formal inquiry into whether Mr. Mackey violated security laws with the posts. **(New York Times 12-Jul-07)**

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A new process for printing plastic solar cells boosts the power generated by this flexible and cheap form of photo-voltaics to a record efficiency of 6.5%. Alan Heeger, who won the 2000 Nobel Prize for his co-discovery of electrically conducting polymers, and his colleagues at UCSB, created the process with a group from South Korea. Heeger expects further efficiency gains as device developers gain experience with the cell's new materials. The roof tile market requires 7% efficiency. **(TechnologyReview 13-Jul-07)**

Scientists at Harvard Medical School, Brown University, and Duke University have engineered safe, permanent, and easily removable tattoo inks, made from tiny microcapsules of natural pigments. These inks are designed to be removed with just one laser treatment to rupture the beads and release the pigments. The Food and Drug Administration does not regulate the tattoo industry, and inks can comprise heavy metals and other chemicals. Rox Anderson has formed a company, Freedom-2, to commercialize the inks, and he hopes to bring the microencapsulated inks to market in the next year. He'll then begin work on a time-limited tattoo, one that would last three years and then disappear, or tattoos that only appear at night. **(TechnologyReview 13-Jul-07)**

Over 3,000 of American movie screens have been converted to digital projectors, nearly two-thirds of them in the past year. Some download films and advertisements via satellite, and others have films delivered on hard drives – which are a lot smaller, lighter and cheaper than big reels of film. Digital film distribution may allow more variety and will certainly lower costs. **(Economist 14-Jul-07)**

The Reaper drone is 36 feet long, with a 66-foot wingspan, powered by a turboprop engine, able to fly at 300 mph and reach 50,000 feet. It's outfitted with infrared, laser and radar targeting, and with a ton and a half of guided bombs and missiles, but its pilot for missions in the Middle East will sit at a video console 7,000 miles away in Nevada. The arrival of these outsized U.S. "hunter-killer" drones is expected in Afghanistan soon, at a cost of \$69 million per set of four aircraft, with ground equipment. (Yahoo News) **(Associated Press 15-Jul-07)**

This summer Zonbu will begin selling a simplified Linux-based PC for \$99 with a \$12.95 monthly subscription charge. The 15-watt PC can also save up to \$10 a month in electricity compared with a standard 200-watt PC. It comes with four gigabytes of flash memory instead of a disk drive, and also lacks a fan, another big energy user. The system will require a keyboard, mouse and monitor, which the company will sell as options. **(New York Times 15-Jul-07)**

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The latest version of the FairUse4M program, which can crack Microsoft's digital rights management system for Windows Media audio and video files, was published online. Microsoft dropped a federal lawsuit against its anonymous authors after failing to identify them. The third version of FairUse4M has a simple drag-and-drop interface. PC users can turn the protected music files they bought online into DRM-free tunes that can be copied and shared at will, or turned into MP3 files that can play on any type of digital music player. **(Associated Press 16-Jul-07)**

U.K.-based mobile-TV specialist ROK Entertainment has streamed a live concert to mobile phones over 2.5G GPRS, a world first. A four-hour concert at Bangkok Hall was streamed over AIS, Thailand's largest cellular operator. AIS had to restrict the number of viewers able to access the stream at any one time to 4,000 people, although the service currently has nearly 80,000 subscribers. **(TelecomWeb 17-Jul-07)**

Flash memory chips bound for Apple's iPods and iPhones will account for 25 percent of the world's total flash output in the third quarter. Apple's share of the MP3 player market means it gets priority with flash makers, notably Samsung, to secure all the chips it thinks it will need. **(DRAMeXchange 18-Jul-07)**

Casio Computer announced that it has developed its first digital camera fitted with software that can upload clips to YouTube with a single click. The cameras will be released worldwide, starting in the US in August and to be followed by Europe and Asia. **(FinanceAsia 18-Jul-07)**

A Palo Alto startup with \$27 million in venture capital backing is selling a \$399 device that provides free, unlimited domestic phone calls for homes with broadband Internet service. Ooma will also offer a free second line, conference calling, voice mail service and voice mail in an e-mail format. Unlike Skype, where free calls require the caller and recipient to talk through their computers, Ooma uses standard home phones plugged into their adaptor. **(TechnologyReview 19-Jul-07)**

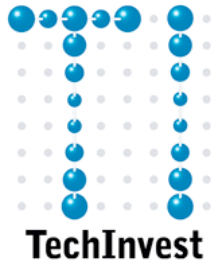
75-year-old Sigbritt Lothberg is now cruising the Internet with a 40 gigabits-per-second fiber-optic connection, believed to be the fastest residential uplink in the world. In less than 2 seconds, Lothberg can download a full-length movie to her home computer. Hafsteinn Jonsson, head of the Karlstad, Sweden city network, and Lothberg's son, Peter, worked together to install the connection to demonstrate new modulation technology. His mother only uses it to read Web-based newspapers. **(Associated Press 19-Jul-07)**

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A life-size, robotic fly has taken flight at Harvard University. Weighing only 60 milligrams, with a wingspan of three centimeters, the tiny robot's movements are modeled on those of a real fly. Made of carbon-polymer pieces and electroactive polymers, which change shape when exposed to voltage, Wood's fly is powered by a tether that also keeps it moving in a straight, upward direction. The researchers are working on a flight controller so that the robot can move in different directions, and an onboard power source. **(TechnologyReview 19-Jul-07)**

A computer program named Chinook vanquished its human competitors at tournaments more than a decade ago but now the scientists at the University of Alberta who developed the program say that they have proved that Chinook, in a slightly improved version, cannot ever lose. Any opponent, human or computer, no matter how skilled, can at best achieve a draw. Checkers is the most complex game that has been solved in this way, with some 500 billion billion possible board positions, compared with the 765 possibilities in tic-tac-toe. **(New York Times 20-Jul-07)**

Digg Labs, which celebrates its one-year anniversary this week, has provided one of the Web's most prominent experiments with data visualization using the data from Digg, the net's most popular news ranking site. The tools provide a way to see how stories get filed, and then gain or lose popularity in real-time. Access them on <http://labs.digg.com/stack/>. Other tools are on tabs across the top. **(TechnologyReview 23-Jul-07)**

Researchers working for Independent Security Evaluators, a company that tests computer security, said that they could take control of iPhones through a WiFi connection or by tricking users into going to a Web site that contains malicious code. Hackers around the world have been trying to unveil the secrets of the iPhone since its release last month. **(New York Times 23-Jul-07)**

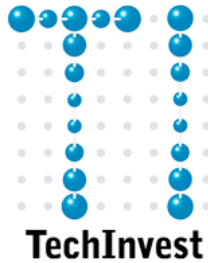
Ocean City, New Jersey plans to deliver a variety of public services to beachgoers next summer using radio-frequency identification chips and Wi-Fi wireless technology. Visitors will wear wristbands that automatically debit their bank accounts or credit cards to pay for beach access, food and parking. Garbage cans will e-mail cleanup crews when they are ready to be emptied. Beach checkers will scan the sands with handheld devices and instantly know who didn't pay. A mother going to the beach with three small children could also have her bracelet linked to those of her children and receive a text message if they leave the beach. The beach access fees – \$5 per day, \$10 for a week, or \$20 for the entire summer – will remain the same. **(TechnologyReview 25-Jul-07)**

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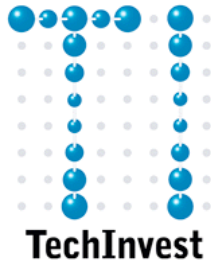
A study published in The New England Journal of Medicine concluded that people were most likely to become obese when a friend became obese. There was no effect when a neighbor gained or lost weight, however, and family members had less influence than friends. It did not even matter if the friend was hundreds of miles away, the influence remained. Between close mutual friends, if one became obese, the other had a 171 percent increased chance of becoming obese, too. The study involved a detailed analysis of a large social network of 12,067 people who had been closely followed for 32 years, from 1971 to 2003. The investigators concluded that instead of transmitting germs or viruses, people infected each other with their perceptions of weight. **(New York Times 26-Jul-07)**

Houston-based Trulite is developing a portable silent hydrogen-powered generator, the KH4. Pour water into the unit, and it will crank out 150 watts of power, and 200 watts at its peak – enough to recharge power tools or a laptop or run a small appliance. Trulite hopes to start selling the KH4 next year for a cost of about \$2,000. **(CNET News.com 27-Jul-07)**

Google announced that it intends to bid at least \$4.6 billion in the FCC's auction of the 700-MHz band being reclaimed in 2009 from analog television – meeting the government's reserve price – provided that: 1) users are able to use any software on their communication devices; 2) users are able to use any communication device that meets the technical requirements; 3) resellers are able to buy wholesale bandwidth from auction winners, and; 4) other networks are able to connect. These would effectively make the spectrum into a wireless internet, but the major wireless carriers have no desire to open up this network or any other. **(Cringely 27-Jul-07)**

CBS Sports, the august home of the Masters and March Madness, will become the first broadcast network in the United States to cover a video game tournament as a sporting event. Contestants will play Guitar Hero II, Fight Night Round 3, and World of Warcraft. Advertisers include KFC, Intel and the Marines. In South Korea, video games are one of the dominant pop-culture pastimes and there are at least three full-time video game television networks akin to ESPN. **(New York Times 28-Jul-07)**

A state-sanctioned team of computer hackers was able to break into virtually every model of California's voting machines and change results or take control of some of the systems' electronic functions. **(San Francisco Chronicle 30-Jul-07)**



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Acambis, a British biotechnology company, announced a phase 1 clinical trial of an influenza vaccine designed to provide a shield against both seasonal and pandemic flu strains and eliminate the need to renew the flu vaccine each year. Frequent minor changes in flu viruses involve two surface proteins, hemagglutinin and neuraminidase, represented by the H and N in virus names, such as H3N2. Acambis's vaccine involves a more stable viral protein called M2, the ion channel protein. **(CIDRAP 30-Jul-07)**

Toshiba announced its decision to recall about 10,000 laptop computer batteries released in Japan and other countries because the Sony-made batteries are likely to cause fire as a result of overheating. The company said the batteries to be recalled this time are different from those recalled in 2006. **(FinanceAsia 31-Jul-07)**

Copies of thousands of historic films and videotapes will be available from Amazon under an agreement with the U.S. National Archives. The non-exclusive arrangement allows Amazon and CustomFlix Labs to make some footage available in DVD form. The Archives will initially make its collection of Universal Newsreels, dating from 1920 to 1967, available for purchase. Thousands of other public domain and government films will be made available later. **(TechnologyReview 31-Jul-07)**

A new Rutgers University study based on laboratory mice suggests that drinking low to moderate amounts of caffeine (equivalent to a human drinking one or two cups of coffee a day) and exercising regularly protects the skin from damaging ultraviolet rays known to cause skin cancer. The caffeine and exercise appear to work together to kill off precancerous skin cells whose DNA has been damaged by ultraviolet B (UVB) rays. The discovery is yet to be tested in humans. **(Medical News Today 31-Jul-07)**