

News in Brief

MIT Digitizes Post-It Note

Those clever chaps at MIT Media Lab have taken that old office favorite, the Post-it note, and stuck it in the 21st Century.

The "Quickies" concept uses those sticky pads we all have buried in the detritus pile on our desks and adds a digital pen and special pad, the Guardian reported.

You can then scrawl a note onto your Post-it as per usual, and the message will simultaneously be saved onto a computer.

Software on your PC then "uses its understanding of the user's intentions, content, and the context of the notes to provide the user with reminders, alerts, messages, and just-in-time information", explain the inventors.

The database can also store location information, so if you stick a note to, for example, a book, you can then find it later using the radio-frequency identification (RFID) tag embedded on the note.



Shape-Shifting Bicycle Designed

Shape shifting designs that provide convenient portability and storage options and push the boundaries of people's accepted ideas of the bike came to the fore at the recent International Bicycle Design Competition (IBDC).

According to Gizmag, the standout example was the third placed the Everglide concept, an innovative multi-purpose design that integrates a bicycle with a backpack.

Everglide, from Australian designer Frag Woodall, can be folded down into its rear carry-case meaning it can be wheeled, backpacked or cycled.

The integrated solution satisfies all kinds of needs for short-distance cyclists and is able to be carried on other forms of public transport such as trams, trains and buses. Everglide represents a holistic and sustainable approach to individual transport, offering the user speed and storage-based mobility into one lightweight unit.

The intelligent design of this bike makes it extremely practical, particularly because of its collapsing central bottom bracket. Releasing the central locking lever simultaneously effects three actions: the frame splits so that the bicycle folds, the shaft-drive gears disengage so that it can freewheel and the pedals disengage folding into the pack.



New Polymer Product From Soy Oil

Hair-care products, wound-care dressings and drug encapsulation are among the potential uses of new, soy-oil-based polymers known as "hydrogels," developed by Agricultural Research Service (ARS) scientists in Peoria, Ill.

ARS chemists Sevim Erhan and Zengshe Liu developed the soy-oil-based hydrogels as a biodegradable alternative to the synthetic polymers now used, including polyacrylic acid and polyacrylamide, ScienceDaily wrote.

Soy oil is an appealing raw material to use because it is chemically versatile, abundant and renewable—meaning the crop can be replanted each year to renew the supply. In 2006, US farmers planted 76 million acres of soybeans, equal to about 38 percent of the world's total oilseed production, notes Erhan. She and Liu both work at ARS' National Center for Agricultural Utilization Research in Peoria.

They first began investigating soy-oil-based hydrogels in 1999 as part of the Peoria center's mission of exploring new, value-added uses for corn, soybeans and other Midwest crops. Using a two-step process—ring-opening polymerization and hydrolysis—they created a squishy but durable hydrogel polymer that expands and contracts in response to changes in temperature and acidity levels.



Progress in Developing Dengue Vaccine

A group of Brazilian researchers said they have obtained a protein that could help block the transmission of the dengue virus in animals.

According to Xinhua, the research, carried out by scientists in the State of Ceara University's (UECE) Human Biochemistry Laboratory, holds great promise for the prevention of four different kinds of dengue, UECE's Dengue Virus Project Coordinator Maria Izabel Florindo Guedes said.

"In animals the protein triggers the production of antibodies that block, at least in the lab, the dengue virus," said Guedes.

"If we had support, we would be able to produce the vaccine in five years or less."

Guedes added that the university needs 300,000 US dollars to have an adequately equipped lab to develop the vaccine.



Highest Internet Cafe Open

The world's highest Internet cafe, at elevation of 5,200 meters, has been built in Mount Everest by China Mobile.

According to reports, the Internet cafe is aiming to effectively protect the Olympic torch relay teams' communications needs at Mount Qomolangma in Tibet, People's Daily reported.

China Mobile has built a business office and Internet cafe at an altitude of 5,200 meters at Mount Qomolangma base camp to provide mobile services and Internet services to government officials, mountain climbing members and journalists. It is reported that this is currently the world's highest Internet cafe and business office, and China Mobile is the sole operator to provide communications support for the Olympic torch across Mount Qomolangma.

China Mobile business office at Mount Qomolangma base camp provides remote payment, SIM change service and other basic services, in addition to free films, vending machines and new business experience. Currently, about 40 to 50 people go to the office and Internet cafe every day to experience the services.

To meet staff's demand for internet at the headquarter base, especially transmission needs of the media, on the basis of the existing network, China Mobile expanded bandwidth to guarantee smooth communications at the base camp of Mount Qomolangma.

Insulin Pumps Linked To Injuries, Deaths

Insulin pumps are used by tens of thousands of teenagers worldwide with Type 1 diabetes, but they can be risky and have been linked to injuries and even deaths, a review by federal regulators finds.

Parents should be vigilant in watching their children's use of the pumps, researchers from the Food and Drug Administration wrote. They didn't advise against using the devices. But they called for more study to address safety concerns in teens and even younger children who use the popular pumps, AP wrote.

The federal review of use by young people over a decade found 13 deaths and more than 1,500 injuries connected with the pumps. At times, the devices malfunctioned, but other times, teens were careless or took risks, the study authors wrote.

Some teens didn't know how to use the pumps correctly, dropped them or didn't take good care of them. There were two possible suicide attempts by teens who gave themselves too much insulin, according to the analysis.



Plants Text Message Farmers When Thirsty

Beginning this crop season, farmers will be able to receive text messages on their cell phones from their plants saying whether they are thirsty or not.

Accent Engineering, Inc., of Lubbock, Tex., developed the SmartCrop™ automated drought monitoring system based on a patent held by the Agricultural Research Service (ARS). They are offering it for sale in time for this growing season, ScienceDaily said.

Battery-operated infrared thermometers placed in irrigated fields monitor leaf temperatures and relay that information to a computerized base station.

A cell phone modem can be hooked up to the base station to download data to a personal computer. This modem can also send text messages to a farmer's cell phone.

ARS plant physiologist James Mahan at the ARS Plant Stress and Germplasm Development Research Unit in Lubbock is one of the original theorists of the idea behind SmartCrop™. Each plant species has a fairly narrow range of internal temperatures it prefers for best growth.

When leaf temperature goes above the upper limit or threshold of that range for too long, the plant needs water, as much for cooling down as to quench its thirst.

In the Texas High Plains area, for example, Mahan found that cotton begins to suffer from drought if cotton plant leaves stay above 82 degrees Fahrenheit for more than 6-1/2 hours.

Farmers can choose the time-temperature threshold at which they would like to receive an alert, and adjust it at any time.



An automated infrared sensor system tells farmers when plants are thirsty or hotter than their ideal growing temperature and need cooling off with irrigation water.