

## News in Brief

New App Sends Smells  
Via iPhone

The Japanese company Chaku Perfume has developed a new communication service in the way of an iPhone application and device called "Chat Perf," which can send smells across cyberspace.

"Wouldn't it be great to be able to share the scent of a bakery you just walked past with a friend hundreds of miles away? Or capture the smell of autumn? Or be like, 'What is that smell? I'll share it with my friends; maybe they can tell me,'" Popski said.

Except, Chat Perf is not quite going to make that possible. Based on the story's description, it seems that the new app is only capable of releasing, upon a remotely issued command, whatever odor has been stored in the small tank attached to a person's phone.

So, you could potentially purchase a bakery-scented smell tank, give it to a friend, travel hundreds of miles away, instruct your friend to plug their bakery smell tank in, and then "send" the smell to them through the Chat Perf app. Which is, frankly, probably not worth the effort.

Despite our overall disappointment with the new app, it did get us thinking about what it would take to bring real, true, bona fide smell e-presence to fruition.

First, researchers would have to develop a true electronic nose—one capable of analyzing odors in the same way that the human brain does.

Despite over 30 years of research, that achievement is still a long way off. Assuming we're talking about a cellphone app, the electronic nose would have to be at least as small as our real human ones.

Next, the code for the odor would be transmitted from the user's electronic nose to the scent recipient's cellphone. This would be the easy part.

Finally, the scent recipient would need to be carrying a device containing—in an organized fashion—the 10,000 or so odor molecules that humans are capable of smelling. We're not even going to wager a guess as to the size of that contraption, but you can bet it would be clunkier than the clunkiest iPhone device anyone's made yet.

Wind Turbine Moves  
To Where It's Needed

Wind power is one of the few green energy sources that has really caught on, but most wind generators simply dump their power into the existing electricity grid.

But what if you want power in a place that's off the grid? This concept called the Portable Power Center (PPC) from Uprise Energy could provide the answer, Dvice reported.

Most big wind generators are permanently built into the ground, but the PPC has been designed to fit into a single shipping container. Pop open the container open and you'll find a trailer with the fold-open wind turbine built in, and a truck to pull the whole rig.

Once you're on the road, you can drive to the nearest rock festival site or campground that happens to fall off the established power grid, and in less than two hours you can be cranking out 50,000 watts of juice.

In addition to electrical power, Uprise says that they plan to make it so that the generator can churn out hydrogen, but that seems somewhat less realistic considering how tough it still is to find any large-scale hydrogen generators at this point.

Wooden Bike Grows  
With Your Child

The rate at which children grow, especially from being newborn to the age of around six-years-old, is scary.

One day they're a helpless ball of flesh and bones, the next they're walking, talking and starting school, IdeaConnection wrote.

This means that new parents have to continually buy new things for their child that may only last them a matter of months.

While a bicycle may not be top of the agenda at such a young age, for a child to learn to ride means buying several different models over the course of just a few years as they first learn, and then master, the art. Which is what led Noelia Vallano Alvaro to design B'kid: one bike designed to last a child from the age of two right through to the age of six.

Currently, just a concept, B'kid is essentially three bikes in one—a trike, a balance bike, and a pedal bike. Much like the Grow line of bikes previously featured on Gizmag, B'kid is designed to adapt to the needs of a child as he or she grows.

It starts out as a trike, with two wheels at the back and the handlebars and seat set low down to accommodate a toddler. Once the child is ready to lose the training wheel, it is removed, and the seat and handlebars are adjusted to better suit the child's growing frame.

Once the child is ready to revert from scooting along with his or her feet, pedals are added, and the seat and handlebars are once again adjusted upwards.

Cancer Test for Women  
20 Years Early

A simple blood test can indicate a woman's risk of developing breast cancer up to 20 years in advance, doctors believe.

According to Telegraph, they have found that older women who have high levels of particular sex hormones are twice as likely to develop the disease as those with low levels.

Breast cancer kills 12,000 people a year in Britain and most diagnoses are in women over 50.

The scientists found that the women most at risk were those with high levels of oestradiol, which is the main form of oestrogen, testosterone and a hormone produced by the adrenal gland called DHEAS.

The test could be used alongside other factors, including family history, to identify those at high risk, they suggested. Such women could receive extra screening to check for early stage cancer, or preventive treatment.

The researchers from Harvard Medical School and the Brigham and Women's Hospital in Boston, in the United States, came to their conclusions after looking back at the health of almost 800 women diagnosed with breast cancer between 1989 and 2002.

All had been through the menopause by the time the tracking study began in 1989. The volunteers, part of the Nurses Health Study, had all agreed to have their blood taken and analyzed at the start and the end of the two-decade period.

They discovered that women in the top 25 percent of levels for the three hormones were between 50 and 107 percent more likely to have developed breast cancer than those who were in the bottom 25 percent.

Iranian Scholar Wins  
Malaysian Award

Iranian computer specialist Arash Habibi Lashkari has been awarded at the 2012 MSC Malaysia Asia Pacific ICT Awards (APICTA).

Lashkari won an award in the Best of Security category for the project titled "A new graphical password based on rotation and resizing" at this year's APICTA, Prestv said.

The new design of disposable password (single use password) can provide the computer system protection from six popular password attacks.

The best innovations and inventions of the contest have been identified by a jury panel comprising Microsoft engineers and several experts from Malaysia's Cyber Security Organization.

Lashkari also won an award at the 14th Innovation and Technology Exhibition (IN-ATEX 2012) held recently from October 3 to 4 in Malaysia.

He received the Bronze Award for the invention/innovation named "A robust graphical password for mobile applications".

Born in 1974, Lashkari is a PhD candidate for computer science and information security in Technology University of Malaysia. APICTA aims at recognizing creativity, innovation, and excellence of individuals, students, entrepreneurs, small and medium enterprises and ICT organizations in Malaysia.

Iran to Rank 4th  
In Scientific Publication

By Farzaneh Shokri

By 2018, Iran's ranking will advance from 20th to 4th place in terms of publishing scientific articles.

This was stated by Deputy Health Minister Mostafa Qane'i in an interview with Iran Daily.

Qane'i noted that Iran ranks 20th in the world and 2nd in Middle East in terms of publishing scientific articles in 2012, adding that Iranian researchers have written 4,481 scientific articles in the current year.

"The number of Iranian research articles in the field of medical sciences has increased from 6,460 at the beginning of



Mostafa Qane'i (R) talks to Iran Daily's Farzaneh Shokri. (Photo by Asghar Azad-Del)

2012 to 9,173 and that number shows a 41.9-percent growth," he said.

The deputy minister expressed hope Iran will rank first in scientific growth in the region in

2015. He further said Iran has always played a leading role

in treating people exposed to chemical weapons.

"Victims of chemical attacks throughout the world come to Iran for treatment and medical services," he said, adding that Iranian physicians have gained experience in curing such patients and continues research on new treatment methods.

The deputy minister also said some of those who were exposed to chemical weapons in Iraq's Kurdistan were sent to Iran by experts from the United States and the Netherlands.

Stating that there are only 50 institutes for medical studies in Iran, Qane'i hoped that the number of those institutes will increase threefold.

## High-Carb Diets Raise Alzheimer's Risk

Older people who eat a diet high in carbohydrates are four times more likely to develop mild cognitive impairment—a precursor to Alzheimer's disease.

New research from the prestigious Mayo Clinic in America has found that the risk is also higher with a diet high in sugar, Daily Mail wrote.

On the other hand, proteins and fats appear to offer some protection—people who consumed plenty of them are less likely to suffer cognitive decline.

Not everyone with mild cognitive impairment (MCI) develops Alzheimer's disease, but many do, said lead author Rosebud Roberts, a professor in the Department of Epidemiology at Mayo Clinic.

MCI is defined as memory loss apparent to the individual and those around them, but with an absence of other dementia symptoms such as changes in personality and mood.

There are currently 800,000 people with dementia in the UK and 60,000 deaths a year are directly attributable to it, according to the Alzheimer's Society. It's estimated that around 6 percent of us will develop MCI.

Previous research suggested that 10-15 percent of people with MCI went on to develop dementia every year the research results were followed up.

In community studies and clinical trials, the rates are about half this level, but still represent a significantly increased risk of risk.

That's why it's important to identify people with MCI, as they may be in the very early stages of the disease and more likely to benefit from early treatment in the future.

The Mayo Clinic research tracked 1,230 people ages 70 to 89 and asked them to provide information on what they ate the previous year.

Among that group, only the 940 people who showed no signs of cognitive impairment were asked to return



for follow-ups every 15 months.

By the study's fourth year, 200 of the 940 were beginning to show mild cognitive impairment—problems with memory, language, thinking and judgment.

"If we can stop people from developing MCI, we hope we can stop people from developing dementia. Once you hit the dementia stage, it's irreversible," Professor Roberts told USA Today.

"A high-carbohydrate intake could be bad for you because carbohydrates impact your glucose and insulin metabolism.

"Sugar fuels the brain, so moderate intake is good. However, high levels of sugar may actually prevent the brain from using the sugar—similar to what we see with Type 2 diabetes."

Roberts noted that high glucose levels might affect the brain's blood vessels and play a role in the development of beta amyloid plaques, proteins toxic to brain health that are found in the brains of people with Alzheimer's. It's thought these plaques are a leading cause of the disease.

## Low Calcium, Thyroid Disorder Linked

Having too little calcium in the diet increases women's risk of a hormone condition that can cause bone fractures and kidney stones, scientists suggest.

According to BBC, primary hyperparathyroidism (PHPT) affects around one in 800 people during their lifetime and is most common in post-menopausal women.

Writing in the British Medical Journal, the team suggests increasing calcium intake cuts the risk of the disease.

Adults need around 700 mg of calcium a day.

Milk and other dairy foods, nuts and fish such as sardines and pilchards (where the bones are eaten) are some dietary sources of calcium.

Taking too much could cause stomach pains and diarrhea.

PHPT is caused by overactive parathyroid glands secreting too much parathyroid hormone.

As well as bone and kidney problems, there have

also been suggestions it is linked to an increased risk of high blood pressure, heart attack and stroke.

The US team from Brigham and Women's Hospital looked at 58,300 women who were taking part in a much broader ongoing piece of research called the Nurses' Health Study.

All were aged between 39 and 66 in 1986, when the study began, and had no history of PHPT.

The women have completed food questionnaires to record how frequently they ate particular foods or supplements—including calcium—every four years, with the latest being completed in 2008.



Over that 22-year period, 277 cases of PHPT were confirmed.

The researchers divided all the women into five groups, depending on the calcium intake. They accounted for factors such as age, body mass and ethnicity.

It was found those with the highest intake of dietary calcium had a 44-percent reduced risk of developing PHPT compared with the group with the lowest.

Writing in the journal, the team led by Dr. Julie Paik, said, "Increased calcium intake, including both dietary and supplemental calcium, is independently associated with a reduced risk of developing primary hyperparathyroidism in women."

James Norman, of the Norman Parathyroid Center in Florida, added that daily calcium supplements in "modest doses" were likely to provide "more benefits than risks".

But experts in the UK say people should be able to get the calcium they need from their diets.