BYTE QUEST

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Byte Quest is the article published by CSE department of Vasavi College Of Engineering regarding the latest innovative Technologies and Software that have been emerged in the competitive world. The motto of this article is to update the people regarding the improvement in Technology. The article is designed by the active participation of students under the guidance of faculty coordinators.

- Good ,bad or indifferent if you are not investing in new Technology, You are going to be left behind.

  -Philip Green.

- Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.

  -Stewart Brand.

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3D PEN TECHNOLOGY

What is the significance of the 3D pen? Well, in our estimation, it is indicative of the trend towards people being able to customize things exactly how they want them. Perhaps in the future, we will all have 3D pens and printers of our own. Like SHIGO (a company), one we might decide morning to design a shirt for ourselves. If we are thinking big picture, it wouldn't be totally out there to say that 3D pens and 3D printing in general are setting the stage for something even bigger.

Why stop at dresses and small products? Perhaps one day we will be printing cars, planes, TV's you name it. 3D printing will become even more impactful than it is now once we figure out a way to use it on a much larger scale. The benefits of a 3D printer that prints cars, would be enormous. Not only would it cut down on production times, but it would reduce manufacturing mishaps since there would be far fewer moving parts involved.

- N.Ravali (CSE-B 3/4)

ENCRYPTED DATA FOR SMART PHONES

The billions of credit card transactions each year in the United States rely on secure cryptographic keys based on random numbers . Now, European physicists have shown how smartphones like the one in your pocket can reliably produce random numbers based on the laws of quantum mechanics.
Modern smartphone cameras are sensitive enough to detect variations in light by just few photons . Researchers at The University of Geneva exploited this sensitivity to help produce random numbers. The exact number of photons emitted by a source at any instant is fundamentally unpredictable. Bruno and his team used an 8-megapixel camera to take a picture of a light-emitting diode. The camera's image sensor recorded the number of photons hitting each pixel, recovering a slightly different number each time due to quantum uncertainties. The scientists then turned these

inherently random photon counts into strings of random numbers suitable for creating cryptographic keys. After one of the random strings of digits is created on the phone, the digits would be sent to the other partner involved in the transaction. The digits would function just like the encrypted numbers used today in credit card transactions .

- S.Jagan (CSE-B 3/4)

THIS NEW SMARTPHONE ANTENNA COULD DO WONDERS FOR BATTERY LIFE.

Smartphone technology more advanced and more awesome with every passing year, but there's one problem that always seems to dig the latest and greatest handsets: battery life. As we reach the limits of lithium-ion technology and phones continue to offer bigger and brighter screens (not to mention more powerful processors), finding a phone that lasts beyond a day is as much of a challenge as it ever was. The best short-term solution could be to reduce the power draw of the other internal components . That's the thought behind the

SmarTune Antenna from technical start-up Cavendish Kinetics - the device's party trick is being able to reduce the time a phone's components spend searching for a signal and making a connection, and its makers say that could lead to an energy saving up to 45 percent.

It's all down to the 3dB antenna gain that the Cavendish Kinetics engineers have managed to put inside the SmarTune Antenna. That translates to a stronger signal and a faster lock, which means your phone spends less time hunting around and trying to grab weak connections .

- K. Sowmya (CSE-A 2/4)

NEW YORK'S GARBAGE CANS TURN INTO WI-FI HOTSPOTS

Garbage Cans are the latest previously objects to become WiFi enabled.

Waste management company Bigbelly equipped two of its smart bins with wireless internet in downtown Manhattan last winter, providing 50 to 75 megabits per second.

That's fast enough to download an HD movie in nine minutes ,or to upload 200 photos in about 27 seconds. The company now wants to turn more of its several hundreds and recycling bins in New York City into Wi Fi Spots. Other North Americans cities , will soon have their own ireless trash cans too. Bigbelly's bins were already pretty Smart, they are solar powered ,have sensors to detect how full and smelly

they are notify trash collectors when it's time to empty them, and some can automatically compact the trash when they are getting full.

- M.Karthik (CSE-B 3/4)

NOD RING – BEAUTIFUL, TOUCHLESS, INTERACTION

A smart ring with high resolution movement sensors to track various gestures that you make with your fingers for everything, including gaming and virtual keyboards. These devices have speech recognition systems.

Nod is a unified input device. It is a lightweight ring that looks quite chunky, and houses 80 components, which include two CPU's. All of these are kept safe with a waterproof covering.

It also has touch sensors and buttons and syncs itself with your phone or any other device via Bluetooth. Once you wear it, and move your hand around, you can easily control the pointer on your screen, the various menus in your TV (it supports all LG television sets manufactured from 2012), your Smartphone, and your tablet. You can also operate a virtual keyboard. There are other gestures for better control of various instruments – from your thermostat to your gesture controlled lights.

The sensors have the capacity for controlling a resolution of 32,000 dpi (dots per inch). This makes it extremely sensitive to browse through the menu on your TV, but quite suitable for games involving shooting.

You can use it to unlock your handset when you are near it and to relock it when you are away. The ring has the ability to pair up with multiple devices simultaneously, giving each device the impression that it is enjoying a dedicated pairing.

- M.Swathi(CSE-B 3/4)