BYTE QUEST

Vasavi College Of Engineering

Department Of Computer Science and Engineering

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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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HOLOLENS

There is a new component of the OS called Windows Holographic, which you can interact with using the Microsoft HoloLens headset. It's a visor that covers your entire field of vision, but instead of taking over everything you see like the Oculus Rift, it overlays images on the real world — it's less virtual reality and more augmented reality. HoloLens is a completely standalone device with its own CPU and GPU. There's also a special dedicated processor to handle the holographic overla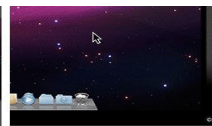y. Microsoft insists on calling this a "Holographic Processing Unit," or HPU. Microsoft envisions uses for HoloLens like virtual presence, gaming, and education. You could, for example, learn how to complete a task by having instructions and visual cues overlaid on your vision in real time. After all, how often do you need a 3D model floating in your field of vision. Augmented reality makes the most sense when it can provide contextual information about the world, but that also means you have to wear it around a lot. The HoloLens is less of a wearable device and more of a dedicated computer that happens to be attached to your face. Microsoft says the HoloLens will be available alongside Windows 10 this year, but pricing is unknown.

V.KRISHNA SINDHURI(3/4 CSE-B)

A MOUSE FOR YOUR FINGER

With three buttons and a scroll capability, you'll be able to move your cursor without taking your hands away from your keyboard. The Mycestro Wearable Mouse really is as awesome as it sounds. Sure, it takes a little practice. It's lightweight and ergonomic - controlling your cursor using natural gestures and holding your arm in any comfortable position. Perfect for planes, conferences, living rooms, server labs, and other places lacking horizontal surfaces. It's great for presentations too (and you'll look magical using it). Product Specifications Includes:

o   One Mycestro dongle.

o   Charges via USB cable.

(one 2.5 hour charge should last 8 continuous hours of use).

o   Bendy finger grip fits a wide range of finger circumferences.

o   Works with Windows XP, Vista, 7, and 8; Apple OS X, Linux.

o   Range: 30 feet.

o   Weight 0.5 Ounce.

NIKITHA RACHUR (3/4 CSE-A)

Apple Patches One Security Hole, Leaves Open Another

Apple fixed a major security flaw in its mobile operating system on 6th March 2015. Researchers at Crowd Strike reverse engineered Apple's emergency SSL (Security Socket Layer) security update for iOS 7.0.6.To analyze what has become known as the "Gotofail" bug. They found that an attacker could exploit the earlier hole to bypass the standard " SSL/TLS " security verification protocols.This enables an adversary to masquerade as coming from a trusted remote endpoint, such as your favorite webmail provider, and perform full interception of encrypted traffic between you and the destination server, as well as give them a capability to modify the data in flight (such as deliver exploits to take control of your system). But Apple's patch only covered its mobile operating system, iOS , while its standard OS X operating system is also vulnerable, according to Crowd Strike. Various researchers and reporters have found that Apple's Safari browser and Mail application could be susceptible. Apple said another patch is on the way. "We are aware of this issue and already have a software fix that will be released very soon".

D.Krishna Chaithanya (2/4 CSE-B)

Screenless Display

One of the more frustrating aspects of modern communications technology is that as devices have miniaturized, they have become more difficult to interact. Full-sized keyboards can already be projected onto a surface for users to interact with, without concern over whether it will fit into their pocket Screenless Display may also be achieved by projecting images directly onto a person's retina, not only avoiding the need for weighty Hardware. Weighty hardware, but also promising to safeguard privacy by allowing people to interact with computers without others sharing the same view. By January 2014, one start-up company the aim of commercializing a personal gaming and cinema device using retinal

display. In the longer term, technology may allow synaptic interfaces that bypass the eye altogether, transmitting "visual" information directly to the brain. Various companies have made significant breakthroughs in the field, including virtual reality headsets, bionic contact lenses, the development of mobile phones for the elderly and partially blind.

GOWTHAMI RATHOD(2/4 CSE-A)

THE INCREDIBLE CHAMELEON
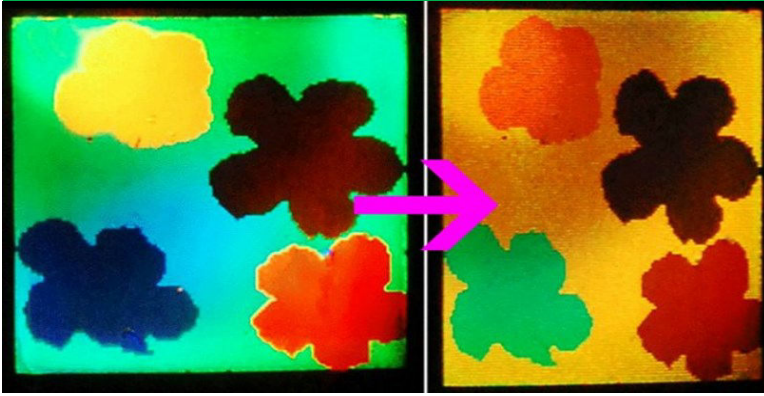
The 'artificial' skin was inspired by chameleons, and doesn't involve any dyes or pigments. Instead, the material has thousands of tiny features etched into its surface, which physically changes the way light is reflected depending on how it's bent. Created by engineers from the University of California, Berkeley in the US, the material's most obvious application is in creating adaptable camouflages. But it could also be used to create vivid new displays, such as billboards that change colour. When light strikes the surface of these objects, certain wavelengths of light are observed by their unique chemical composition, leaving only select wavelengths to be reflected back to our eyes. When shorter wavelengths are reflected back we see things as having a blue hue, and when longer wavelengths are reflected back we see a red hue. To create the new material, the researchers mimicked this approach by etching tiny ridges, smaller than the wavelength of light, onto a silicon film just 120 nanometers thick - one thousand times thinner than a human hair. Depending on how the spaces of these ridges are "tuned", the researchers were able to control which wavelengths of light." You can change its properties and how it interacts with light by changing its dimensions" explained Connie J. Chang-Hasnain, who worked on the project in a press release. So far, the researchers have only created a one-centimeter square layer of colour-shifting silicon, but they're now working on producing larger materials that could be used for commercial applications.

A.SRIHITH (1/4 CSE-A)

BRAIN COMPUTER INTERFACE

Brain Computer Interfaces, where computers can read and interpret signals directly from the brain, have already achieved clinical success in allowing quadriplegics, those suffering "locked-in syndrome" or people who have had a stroke to move their own wheelchairs or even drink coffee from a cup by controlling the action of a robotic arm with their brain waves. In addition, direct brain implants have helped restore partial vision to people who have lost their sight. Recent research has focused on the possibility of using Brain Computer Interfaces to connect different brains together directly. Researchers last year reported successfully connecting the brains of two mice over the Internet (where mice in different countries

were able to cooperate to perform simple tasks to generate a reward Also in 2013, scientists at Harvard University reported that they were able to establish a functional link between the brains of a rat and a human with a non-invasive, computer-to-brain interface.

AMREEN KOUSAR(2/4 CSE-A)