BYTE QUEST

Vasavi College Of Engineering

Department Of Computer Science and Engineering

March 31, 2016

Volume 20

Contents:

Bytequest is the article published by the CSE dept of Vasavi college of engineering regarding the latest innovative technologies and software's 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

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THIS DEVICE TRANSFORMS ANY SMARTPHONE INTO A 3D PRINTER

The OLO is a $99 gadget that lets you turn any smartphone into a 3D printer, and uses the light from the touchscreen to process your plastic creations. The whole thing is designed to be super-simple to understand and operate, and is battery-operated and fully portable, weighing just 780 grams and measuring 6.8 x 4.5 x 5.8 inches. It consists of three parts: a reservoir with 400 cubic cm of printing volume, 100-gram bottles of coloured photopolymer resin to build your objects with; and a mechanised lid, under which the build plate and control electronics are tightly arranged. The team behind the technology has also developed an entirely new type of resin to use with the OLO. Called 'daylight resin', it's been specifically designed to react to the white light that our smartphone screens emit.

"Users have the option to create designs that are hard, flexible, fusible, flexy, or elastic, mimicking familiar substances of PMMA, ABS, hard wax, soft PVC, and silicon"."The OLO mobile app calculates the necessary amount of resin required per print in order to minimise/eliminate waste."

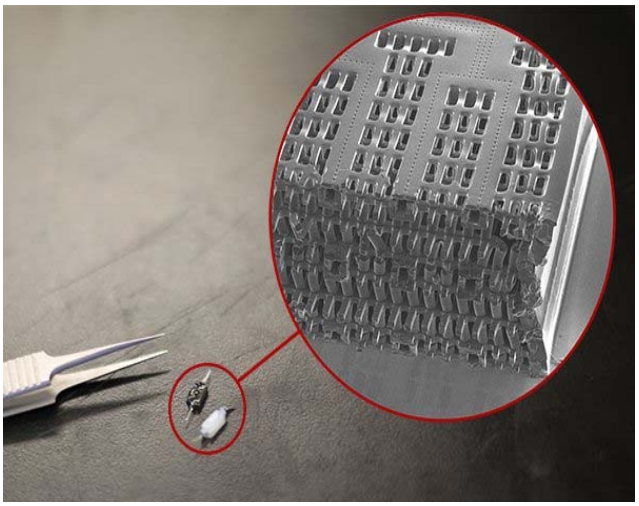
RAMYA (CSE-B 3/4)

THE FASTEST FIBRE OPTIC DATA TRANSFER EVER

A team of engineers has just used a new type of laser-based transmission technology to smash data transfer records, achieving an incredibly speedy 57 gigabits per second at room temperature. To put it in perspective, 57 Gbps is enough to download a whole Blu-ray in just a few seconds. That's the fastest ever data transmission speed over a new type of laser called a vertical-cavity surface-emitting laser (VCSEL), which is used across fibre optic lines. The new VCSEL lasers work by using sharper, more efficient pulses of light. What makes the technology so promising is that it can not only function at room temperature - it can work at higher temperatures too. Speeds of 50 Gbps were recorded at 85 degrees Celsius (185 degrees Fahrenheit), and that could be crucial for various industrial purposes, even if your living room never actually gets that hot.

AMULYA (CSE-A 2/4)

‘PERSON ON A CHIP’ - LIVING HUMAN TISSUES ON A MINI 3D STRUCTURE



Scientists in Canada have developed a new method of growing human tissue outside the body, creating a miniature lattice structure that's capable of providing an external matrix for living cells.

Called AngioChip, the researchers say their 'person on a chip' technology could be a new platform for testing the effects of drugs on human tissue, with the mini 3D scaffold constituting a more realistic environment for growing cells than the flat layout of a petri dish.It's a fully three-dimensional structure complete with internal blood vessels .

Built from a biodegradable and biocompatible polymer called POMaC, the miniature scaffold is constructed from a series of thin layers that resemble microchips, each indented with a pattern of tiny channels measuring between 50 to 100 micrometres wide (about the same diameter as a human hair).

Once stacked and bonded together via UV light, these layers become a 3D structure of synthetic blood vessels. The lattice network is then bathed in a liquid containing living cells.

The cells attach to the structure, and begin growing inside and outside of the tiny channels stamped in the polymer.

The engineers have so far used AngioChip to build small-scale living models of heart and liver tissues that function just like real organs. "Our liver actually produced urea and metabolised drugs .

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HEMANTH (CSE-B 2/4)