BYTE QUEST

Vasavi College Of Engineering

Department Of Computer Science and Engineering

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Byte Quest is the article published by the CSE dept 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 XPOINT - NEW MEMORY TECHNOLOGY IS 1,000 TIMES FASTER.

Intel Corporation and Micron Technology Inc. have unveiled 3D XPoint technology, a non-volatile memory that has the potential to revolutionise any device, application or service that benefits from fast access to large sets of data. Now in production, 3D XPoint technology is a major breakthrough in memory process technology and the first new memory category since the introduction of NAND flash in 1989. The explosion of connected devices and digital services is generating massive amounts of new data. To make this data useful, it can be stored and analysed very quickly, creating challenges for service providers and system builders who must balance cost, power and performance trade-offs when they design memory and storage solutions.
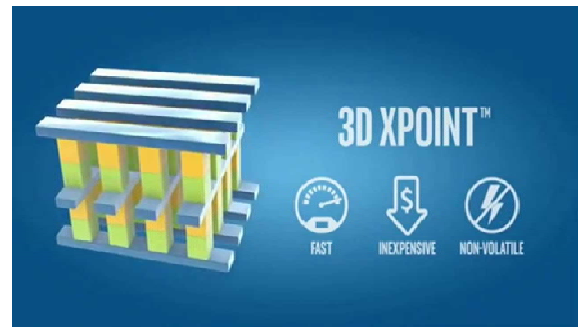
The performance benefits of 3D XPoint technology could also enhance the PC experience, allowing consumers to enjoy faster interactive social media and collaboration as well as more immersive gaming experiences.

C.REVANTH(CSE B 2/4)

NEW GOLDEN NANO-GRID COULD LEAD TO CLEARER, MORE SENSTIVE TOUCHSCREENS
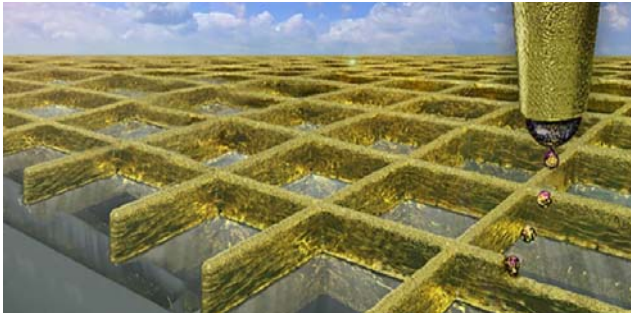
New touchscreen technology that has the potential to improve display transparency and sensitivity has been developed by researchers in Switzerland, with specialized microscopic 3D printing technique. This new printing technique is called Nanodrip, and it uses a system similar to those in household inkjet printers to push out grids of electrohydrodynamic ink. The nanowalls of electrodes are made with gold or silver to substantially improve the overall conductivity of the material, while making it more transparent. The droplets produced by the Nanodrip process are about 10 times smaller than the aperture itself, pushing out microscopic metal nanoparticles in a solvent mixture. As the solvent evaporates, the three-dimensional gold or silver structure remains. By balancing the composition of the metallic ink with the charge of the electromagnetic field used to draw it out of the printing device, it was able to create incredibly small droplets, said the researchers.

SAI KRISHNA(CSE A 2/4)

THE US MILITARY IS WORKING ON TECH THAT COULD TURN SOLDIERS INTO CYBORGS

The new program, which aims to achieve dramatically enhanced data-transfer connections between the brain and the digital world, falls under the wing of President Obama's BRAIN Initiative (Brain Research through Advancing Innovative Neurotechnologies).

The Defence Advanced Research Projects Agency (DARPA) says that the interface, which it envisions as a bio-compatible device measuring no larger than 1 cubic centimetre, would act as a translator that converts between the "electrochemical language used by neurons in the brain and the ones and zeros that constitute the language of information technology".

The ambitious scheme, called the Neural Engineering System Design (NESD) program, seeks to boost the abilities of existing brain interfaces that can link mind and machine. DARPA intends to develop a system that can communicate with up to 1 million neurons at a time.

The possibilities could be the development of cyborg soldiers with battle capabilities enhanced by digital systems, but the potential for such a neural interface is far beyond military applications.

According to DARPA, the device could provide a foundation for new health therapies, digitally compensating for "deficits in sight or hearing by feeding digital auditory or visual information into the brain at a resolution and experiential quality far higher than is possible with current technology".

To achieve this goal, new advancements are expected to be made across several fields including neuroscience, synthetic biology, and low-power electronics. There's also the software side of the equation, with new neuro-computation techniques required that can accurately transcode and compress high-definition sensory information between digital hardware and the brain on the fly, and all without significant losses in fidelity.

HARINI(CSE B 3/4)