YANTRIK RUTHI

E-newsletter of Mechanical Engineering Department

VOL-1 ISSUE-1 FEB-2013 NHCE

Google Glass

Perhaps *the* gadget to define 2013, Google Glass not only showed the world how smart, desirable and potentially life-changing technology can be, but also how its continued development can polarise opinion. On one side the technology fans were led, for better or for worse, by Robert Scoble - he who took a photo of himself wearing Glass in the shower. They adored Glass' science fiction-made-real ability to beam a head-up display into the wearer's eye; they praised Google for thinking way outside of the box while its rivals held back, and they would probably be queuing up now - if only they knew where or when Glass will even go on sale. And on the other side, there are the critics - those who see Glass as an invasion of privacy, a dangerous distraction for drivers, and another unwanted step away from reality. But isn't that the very point of technology and innovation - to push the boundaries of what's possible and see what happens? Only available to 'Explorers' and developers for now, Google is expected to make a retail version for everyone sometime next year - it'll be cheaper than the current model, but whether it'll be a success remains to be seen.

Smart Watches:

The designer of the Pebble watch realized that a mobile phone is more useful if you don't have to take it out of your pocket.

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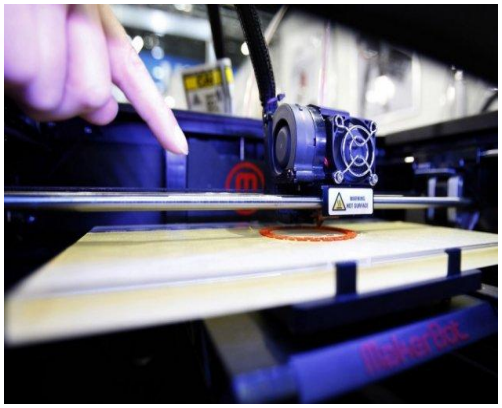
3D printing



Dating back to the 1980s, it's somewhat unfortunate that it took the production of a gun to propel 3D printing into the media spotlight - but thankfully there's much more to this technology than the ability to make a deadly weapon in your living room.
Hailed by some as the second industrial revolution, the potential for 3D printing is simply massive; rather than ship replacement parts from factories to where they are needed, manufacturers can, in theory, print one off and use it on-site.

Nuclear power will help provide the electricity that our growing economy needs without increasing emissions. This is truly an environmentally responsible source of energy.

ELECTRIC CAR

The electric car was always seen as an expensive and flawed alternative to internal combustion, but in its tenth year Tesla seems to have cracked it with the Model S.
Priced to compete in the luxury saloon market with rivals from BMW, Mercedes, Jaguar and Audi, the Model S kicked petrolheads' preconceptions of electric cars to the kerb with a range of almost 300 miles, performance and refinement to match the esteemed competition, and a free charging network covering much of North America's most-used highways.
2013 may not have been a year when new technology was created, but it was a year which saw technology leap from the pages of science fiction and into our everyday lives.

Touch ID-Apple

Another technology that has been with us for years but never had its big break in the consumer market, Apple's Touch ID fingerprint sensor on the iPhone 5s lets users unlock the device and pay for iTunes content without entering their password or PIN. Fingerprint scanners have appeared in consumer tech before - Dell laptops featured them years ago - but if there's a company and a product that can make biometric security mainstream, it's Apple and the iPhone. In a year that saw cyber security dragged to the attention of internet users the world over – users who all too often choose '123456' as their password - Apple's assault on alternatives to traditional digital security may have come at just the right time.

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Advisory Committee: Dr. C P S Prakash (Principal, Dayananda Sagar College of Engineering)
Mr. Deepak Kamath (Technical Head of Continental India Ltd. Bangalore)
New Horizon College of Engineering
Ring Road, Near Marathalli, Bellandur Post - 560 103, Bangalore, Karnataka, India

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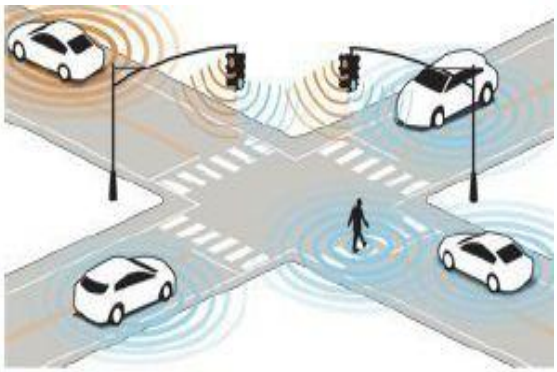
WIRELESS CROSSING GUARD

Some 3000 Ann Arbor, Michigan, motorists are engaged in a Department of Transportation study using wireless car to car connectivity to avoid collisions. Depending on the results, Wi-Fi could be mandatory in car Equipment by 2020. Taking the idea further, GM wants to help drivers avoid mowing down pedestrians. The underlying technology, called Wi-Fi Direct, allows a smart phone in a car to communicate with a phone carried by a pedestrian without routing the dialogue through cell phone towers. The direct connection cuts the time required to identify a risk from eight seconds to one.



Putting sugar on a cut or wound reduces pain and speed up the healing process.

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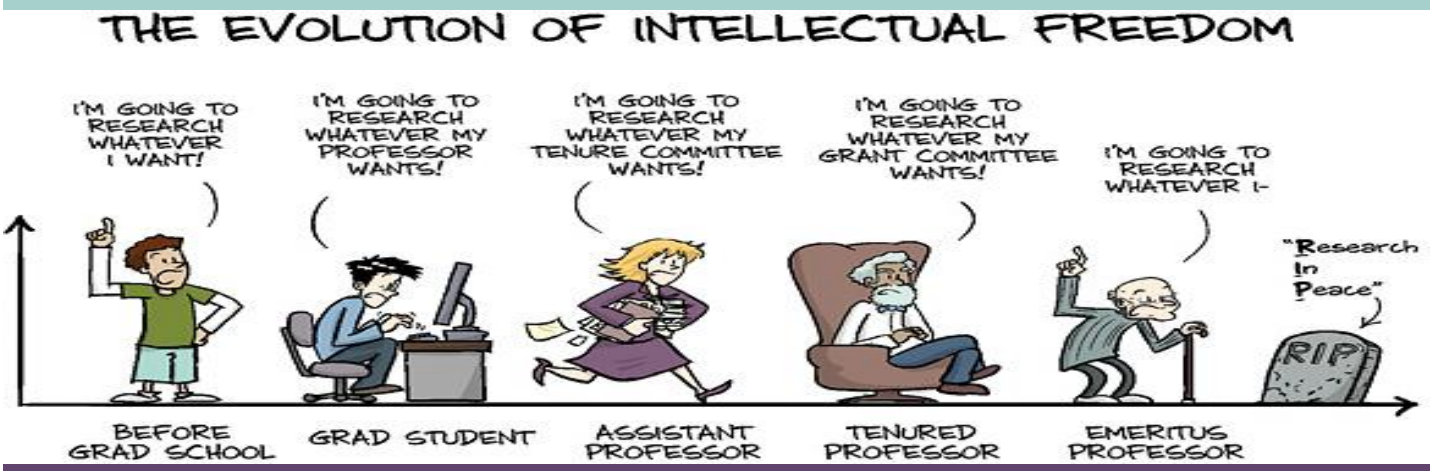
RAIN AND SHINE

Driving through a heavy downpour or snowfall can be agonizing, in part because precipitation can cause light from your headlamps to reflect back at you. To part the curtain of impaired vision, Carnegie Mellon University researchers invented headlamps capable of looking between individual drops or flakes. In sync with a camera tracking the motion of falling particles, multiple LED light sources flash on and off to cut reflection by 70 percent. The flickering is so rapid that the driver perceives a continuous beam of light. At this stage of development, lab systems can vary the illumination 77 times per second, but quicker flashes will be necessary for these headlamps to be effective at highway speeds.

Successful engineering is all about understanding how things break or fail.

SUPER PLASTICS

Now that Carbon fiber composites are gaining ground, suppliers are investigating other hybrid materials capable of improving collision performance and saving weight. BASF, Bekaert, and Voest alpine are collaborating on thermoplastics fortified with steel cord. Bumper beams, body members, and interior trim made of injection molded, steel reinforced plastic combine excellent energy absorption and structural integrity characteristics with low manufacturing complexity and cost. Some clever car maker will surely add the chrome or faux wood grain finishing touch.



DIMENSIONAL DISPLAYS

Now that realistic three dimensional images have leapt from the megapixels screen to the living room television, 3D is bound for automobiles. Using thin film transistor technology, Johnson Controls created an experimental 3D instrument cluster that displays critical information in the foreground with secondary data located deeper in the driver's field of view. This technology could add realism to navigation displays and Action movie thrills to emergency lane changes.

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New Horizon College of Engineering

Ring Road, Near Marathalli, Bellandur Post - 560 103, Bangalore, Karnataka, India

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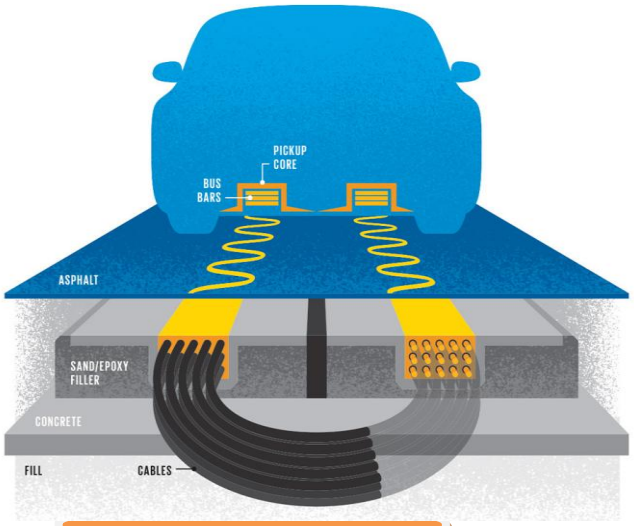
On-Line Electric Vehicles (OLEV)

Wireless technology can now deliver electric power to moving vehicles. In next-generation electric cars, pick-up coil sets under the vehicle floor receive power remotely via an electromagnetic field broadcast from cables installed under the road. The current also charges an onboard battery used to power the vehicle when it is out of range. As electricity is supplied externally, these vehicles need only a fifth of the battery capacity of a standard electric car, and can achieve transmission efficiencies of over 80%. Online electric vehicles are currently undergoing road tests in Seoul, South Korea.



Riddle: It's so strong, it does not break, it's so powerful, it penetrates a lake; sometimes it's weak as a twig left out in the sun, and it's so wonderful it gives us the power to have fun. What is it?

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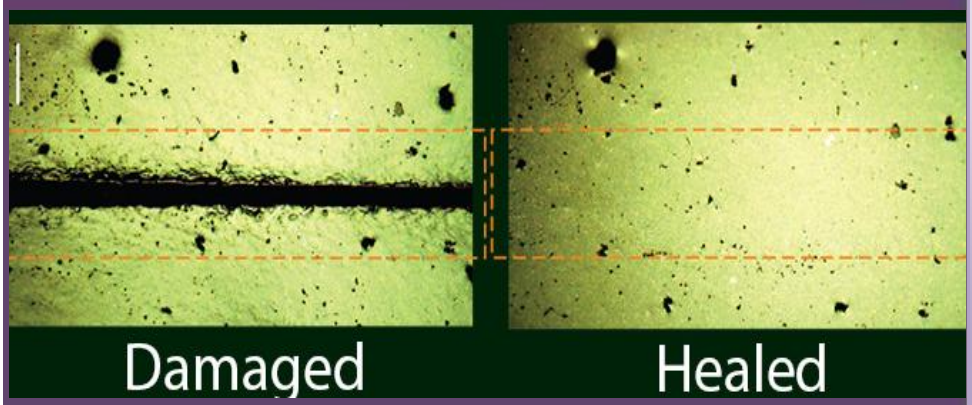
SELF-HEALING MATERIALS

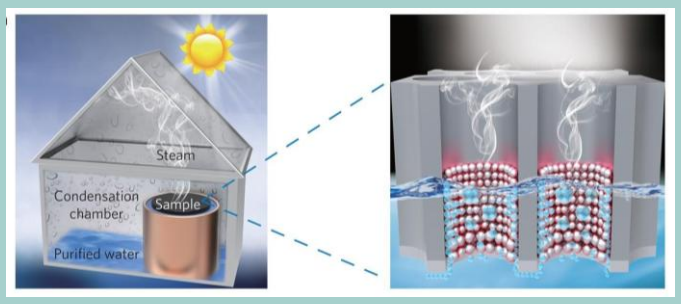


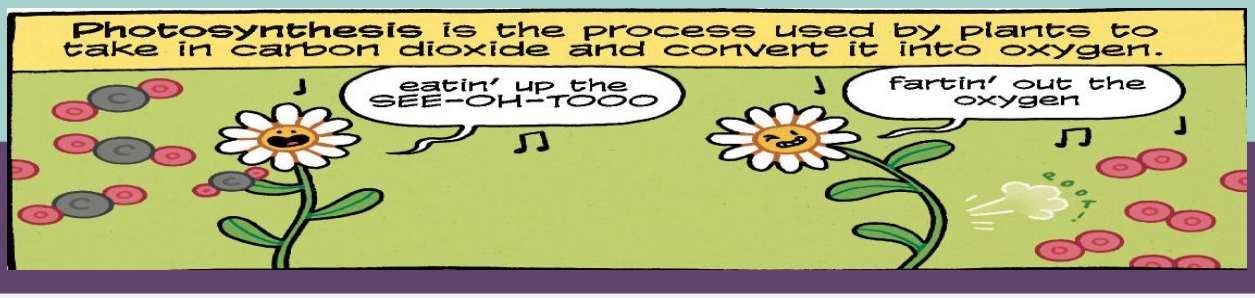
One of the defining characteristics of living organisms is their inherent ability to repair physical damage. A growing trend in biomimicry is the creation of non-living structural materials that also have the capacity to heal themselves when cut, torn or cracked. Self-healing materials which can repair damage without external human intervention could give manufactured goods longer lifetimes and reduce the demand for raw materials, as well as improving the inherent safety of materials used in construction or to form the bodies of aircraft.

In order to succeed, we must first believe that we can.

Water scarcity is a worsening ecological problem in many parts of the world due to competing demands from agriculture, cities and other human uses. Where freshwater systems are over-used or exhausted, desalination from the sea offers near-unlimited water but a considerable use of energy – mostly from fossil fuels – to drive evaporation or reverse-osmosis systems. Emerging technologies offer the potential for significantly higher energy efficiency in desalination or purification of waste water, potentially reducing energy consumption by 50% or more. Techniques

Energy-efficient water





Carbon dioxide (CO_2) conversion and use

Long-promised technologies for the capture and underground sequestration of carbon dioxide have yet to be proven commercially viable, even at the scale of a single large power station. New technologies that convert the unwanted CO into saleable goods can potentially address both the economic and energetic shortcomings of conventional CCS strategies. One of the most promising approaches uses biologically engineered photosynthetic bacteria to turn waste CO into liquid fuels or chemicals, in low-cost, modular solar converter systems. Individual systems are expected to reach hundreds of acres within two years. Being 10 to 100 times as productive per unit of land area, these systems address one of the main environmental constraints on biofuels from agricultural or algal feedstock, and could supply lower carbon fuels for automobiles, aviation or other big liquid-fuel users.

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NUIA eye Charm

Improve your workplace environment by using advanced technologies. This new NUIA eye Charm will control your computer with your eyes, it will simplify the way you command various features on your computers, it is a very interesting workplace technology. All you have to do, is to look at a feature you want to use on your computer, and your computer will respond instantly. Technology is made to simplify the way we do things, so this NUIA eye Charm will completely change the way we use our computers at work. You should try out this eye charm gadget; it will make your computer experience more comfortable.

Riddle: I can fly without wings. And cry without eyes. What am I?

Go Kart
AKHURATH

MiiPC – Power to the Parents

Parents have always complained about the safety of their children online, internet is very open, and our kids use it on a daily basis for entertainment and educational purposes while at home, this MiiPC technology helps parents control the usage of internet at home, it comes with a parental control app which you can use to block harmful websites. It is time you control what your kids see online. MiiPC is a personal computing device which runs on an Android operating system, all you have to do, is to connect MiiPC to a computer and start controlling what your kids do online. Use its mobile app for real-time monitoring.

Keep your eyes on the stars, and your feet on the ground.

Smart Herb Garden

Creative idea developed by Click & Grow, technology is advancing every day, now this Smart Herb Garden high tech will help us create smart gardens in our homes and offices. I just love planting small gardens in my office, so this Smart Herb Garden just makes the all process very simple and fabulous. With this Smart Herb Garden, you can be in position to grow all types of herbs without worrying about things like water, nutrients or light. All you have to do is to plug it into the wall then add enough water, then the device will handle the rest. Some of the herbs you can plant in this Smart Herb Garden include, Mini Tomato, Chili Pepper, Garden Sage, Coriander, Basil and Lemon Balm. But you don't have to be limited , you can try out other plants with this Smart Herb Garden.

Sensor mirror

Women spend more time in-front of mirrors more than men, because looks matter to them, so this Sensor Mirror is just a miracle, it lights up automatically as your face gets close, it uses full natural sunlight which will enable you see your face clearly. I know women are not tech friendly, but this mirror is cordless and it takes a small space in your bathroom or vanity.

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