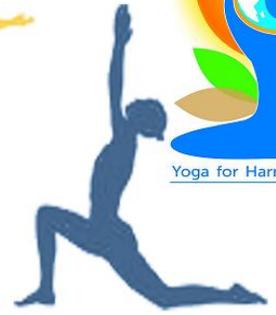


THE



BYTE

*An e-Magazine of CSE Department of IMSEC*

*Ghaziabad*

21st JUNE 2015



*International*

*Yoga Day*



**JULY 2015**

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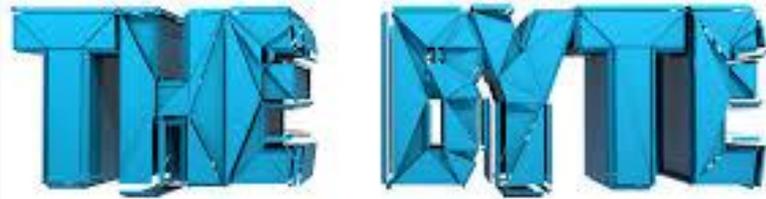
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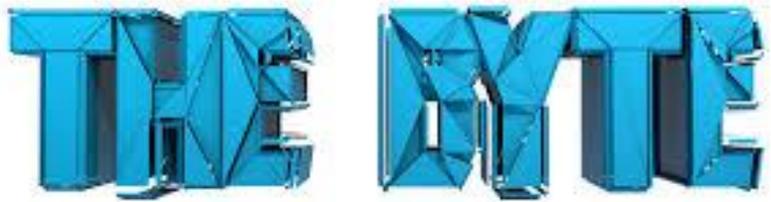
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*Issue XI, JULY 2015*



## Net Neutrality: It's Time TRAI Batted for End Users

Putting in place a regulatory framework for App developers is no solution. TRAI should mandate Net neutrality.

Telephone Service Providers (TSPs) in India continue to violate Net neutrality in the absence of a law mandating it. The latest such instance is the launch of a platform by Airtel where the service provider signs up app developers for a fee and selectively allows free access to users.

Ironically though, this announcement came days after Telecom Regulatory Authority of India (TRAI) released a consultation paper, inviting views from various stakeholders, including Telcos and Internet Service providers, on issues related to Net neutrality.

While the consultation paper took into account various aspects surrounding the issue, it appeared as though the telecom regulator was seeking to appease the TSPs by projecting their viewpoint.

The paper highlighted how TSPs had made substantial investments in infrastructure and paid license fees and other charges, while Over the Top (OTT) players like Skype, WhatsApp and others, who did not come under the purview of the telecom regulatory regime, had caused significant losses to the TSPs and also the government.

It also noted that while the end users were paying data charges, those were not adequate to offset the losses in revenue from texting, telephony and other value added services offered by the TSPs.

The paper however overlooked the fact that licensed TSPs have immensely benefited over the years by having a near monopoly or limited competition in the circles they operate. It also did not take into consideration the inability of these players to anticipate disruption and provide cheaper and more secure VoIP services to their customers when they had the opportunity.

There was also no mention whatsoever, of the recent instances when TSPs flouted the principle of Net neutrality. Instead, TRAI is seeking to explore the feasibility of a framework to regulate OTT Players.

I think a licensing regime or a regulatory mechanism for OTT players, who are essentially app developers, is a bad idea. The wise men in TRAI should instead recognize that Internet is a utility, just like electricity or water, and the people who run the pipes can only charge the consumer for delivering the utility. They can't tell them how to consume it. A TSP selectively allowing app access on the Internet is akin to an electricity distribution company telling the consumer what to use it for.

The Telecom regulator would do well to take a cue from the European Union whose regulations ensure that Internet users get a basic quality of service, or from the United States Federal Communications Commission which has reclassified broadband Internet as a Telecommunication service, thereby preserving Net neutrality.

# JUNE 21 INTERNATIONAL DAY OF YOGA

By : Amit Kumar Gautam

Asst.proff.

Dept of CSE

- ▶ *The United Nations on Thursday declared that June 21 will be International Day of Yoga, adopting a measure proposed by Prime Minister Narendra Modi who said yoga lets people "discover the sense of oneness with yourself, the world and the nature."*
- ▶ *The 193-member U.N. General Assembly approved by consensus a resolution establishing a day to commemorate the ancient practice, which Modi called for in September during his inaugural address to the world body.*
- ▶ *U.N. Secretary-General Ban Ki-moon said the International Day of Yoga would bring attention to yoga's holistic benefits."Yoga can contribute to resilience against non-communicable diseases. Yoga can bring communities together in an inclusive manner that generates respect," Ban said in a statement.*



## Yoga Integrates Body, Mind, and Spirit

Yoga has been around for about 5,000 years, and while many regard it as just another form of exercise—some even see it as a "fad"—it's really a comprehensive practice that integrates mental, physical, and spiritual elements.

With regards to the latter, yoga can be viewed as a form of meditation that demands your full attention as you move from one asana (yoga position) to another. As you learn new ways of moving and responding to your body and mind, other areas of your life tend to shift and change as well.

In a sense, you not only become more physically flexible, but your mind and approach to life may gain some needed flexibility as well. Your body and your health will indeed change as you start implementing the correct lifestyle changes, and yoga has received increased attention lately.

## Improved Heart Health – One of the Benefits of Yoga

A number of studies suggest that regular yoga classes can promote heart health. One such study showed it helps improve atrial fibrillation (irregular heartbeat)—a condition in which the upper chambers of your heart quiver chaotically.

For the first three months of the study, the participants' heart symptoms, blood pressure, heart rate, anxiety and depression levels, and general quality of life were assessed and tracked. During the second phase, the participants took

yoga classes at least twice a week for three months, while still tracking their symptoms.

At the end of the study, the number of times participants reported heart quivering (confirmed by heart monitor), dropped by half. Their average heart rate also fell from an average of 67 beats per minute during the first three months, to 61-62 beats per minute post-yoga. The participants also reported feeling less



anxiety and depression—beneficial mental/emotional side effects that I'll get into below.

Another study, published in the April issue of the *Journal of Alternative and Complementary Medicine*, investigated the effects of Hatha Yoga on blood pressure among seventh-graders, some of whom were pre-hypertensive (had clinical signs of early-stage high blood pressure). Half of the kids took Hatha Yoga classes for three months, while the other half enrolled in either art or music classes. At the end of the three months,

those who took yoga had lower resting blood pressure compared to those who participated in art or music. According to the authors:

*"A school-based Hatha yoga program demonstrated potential to decrease resting BP, particularly among prehypertensive youth. Reduced SNS drive may be an underlying neurohormonal pathway beneficially affected by the program. A large-scale efficacy/effectiveness randomized clinical trial is warranted."*

## How Yoga Affects Fat Metabolism and Weight Loss

Interestingly, research published in 2012 discovered that yoga has a beneficial impact on leptin, a hormone that plays a key role in regulating energy intake and energy expenditure. According to the authors, expert yoga practitioners had 36 percent higher leptin levels compared to novices, leading them to theorize

that regular yoga practice may benefit your health by altering leptin and adiponectin production.

Both insulin and leptin resistance are associated with obesity, and impairment of their ability to transfer the information to receptors is the true foundational core of most all chronic degenerative diseases. Diet and exercise are your top allies when it comes to improving insulin/leptin sensitivity, and yoga, it seems, can do that just as well as other forms of exercise.

## Yoga's Impact on Your Mental Health

Yoga has also been shown to help with a variety of common psychiatric disorders. A meta-analysis of more than 100 studies looking at the effect of yoga on mental health found the practice to have a positive effect on:

Mild depression  
Sleep problems  
Schizophrenia (among patients using medication)  
ADHD (among patients using medication)

Some of the studies suggest yoga can have a similar effect to antidepressants and psychotherapy, by influencing neurotransmitters and boosting serotonin. More recent research has also found that yoga reduces anxiety and aggression among prison inmates. After doing yoga once a week for 10 weeks, participants reported feeling less stressed, and also scored better on tests of executive control, indicating a higher degree of thoughtfulness and attention to their surroundings. As noted by *Scientific American*:

*"Several studies have shown that yoga helps to improve symptoms of anxiety and depression in prisoners, and now a study at the University of Oxford has found that it also increases focus and, crucially, decreases impulsivity—a known factor in much prison violence... 'Attention and impulsivity are very important for this population, which has problems dealing with aggressive impulses,' says Oxford psychologist Miguel Farias, one of the study's authors. With less anxiety and aggression, he notes, prisoners should be better able to reintegrate into society when they are released."*

### Do Yoga Outdoors for Additional Benefits

Have you noticed how much better you feel when you walk barefoot on the ground, whether it's dirt or sand or grass? For most of our evolutionary history, humans have had continuous contact with the earth, but this is certainly not the case

today. We are separated from it by a barrier of asphalt, wood, rugs, plastics, and especially shoes.

### The Mind-Body Connection

A report by the Institute of Science in Society (ISIS) discusses how meditative practices such as yoga, qigong, and many others can alter your genetic expression, *through its beneficial effects on your mind*. Indeed, thousands of genes have been identified that appear to be directly influenced by your subjective mental state.

*"Yogic meditative practices were shown to have positive effects on the heart rate,*



*blood pressure, and low density lipoprotein cholesterol, and decrease the levels of salivary cortisol, the stress hormone. These findings are consistent with a down regulation of the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system, both of which are known to be over-activated by the stressful western lifestyle. Now, a series of new studies on gene expression profiles in immune cells circulating in the blood are showing that yogic/meditative*

*practices have profound effects at the molecular level."*

Examples of genetic effects obtained through yogic and other meditative practices include the down-regulation of genes associated with the pathway responsible for the breaking down of proteins, and cellular stress response genes. Expression of certain heat shock proteins is increased, and immune function is amped up through a variety of genetic changes. One study investigating genetic changes triggered by the relaxation response (RR) determined that meditative or mindfulness practices affect no less than 2,209 different genes. As noted by ISIS:

*"The type of genes differentially expressed suggested to the authors that gene expression changes in the M [RR practitioners with several years practice] and N2 [healthy controls who took eight weeks of guided relaxation training] groups might indicate a greater capacity to respond to oxidative stress and associated detrimental effects. And it matters little which RR technique is practiced."*

Yoga has a beneficial impact on leptin, a hormone that regulates energy intake and expenditure, leading the researchers to theorize that yoga may benefit your health by altering leptin and adiponectin production



## OLD BUDDIES

By : Utkarsh Mishra

The best one could think of doing on a dull winter morning is to expect the sun to come out and spread the warmth as soon as possible, escaping the murkiness of the dull, gloomy winter night. The sun does come out, but fails to show itself completely, and hence the murkiness continues to hover over the day sky, as well. Literature, movies and TV serials have always regarded winters as a nebulous and gloomy period of time, symbolic of servility, darkness and rise of power of the netherworld, and so did I, until this day, when I thought of doing something that provided me with a lot of self-satisfaction.

It was a usual winter morning and like always, weather was pretty dismal. The cold, heavy air was harsh enough to stifle the walls of my windpipe, when I found myself looking out the window pane, sipping my favorite hot *adrak wali chai*. The thick, moisture laden, ice cold air in the atmosphere surrounded me, shaking almost each and every cell of my body, imbuing me with a strong urge to rush back to my bed and sleep tightly, curling around a thick blanket. Had I been a part of Harry Potter world, I could have had an encounter with *Dementors*, for sure.

Instead of submitting myself to the murkiness, I thought of a notion, and came up with a story, which procured me with the answers to many questions, which were looming in my mind. I found an answer to the questions that my old friends keep on asking me- "*Bhaai? Bhool gaya kya mujhe?*", "*Kahan ho aaj kal? Kabhi yaad kar liya karo. Kahan busy ho?*", "*3 years ho gae, hum mile nahi. Kab miloge? Miloge bhi hai ya nahi?*" Before I jump directly to what I preferred to do on that very day, I wish to share this story, which proved to be a stimulus to my thoughts.

There was a man, who was rowing a boat since a very long time. In order to make the story sound more interesting, I'll name him... Umm... Ross , It was about to turn dark, and he could see a deadly tempest rising in the ocean, at a distance. Moreover, he was starving badly, being completely exhausted. Hardly did he think of giving up to his fate when he saw a populated island at a distance, which appeared out of nowhere to his rescue. He mustered all his courage and rowed the boat towards

the shore of the island. He explained his trouble to the people in the island, who were more than happy to offer him help.

Days passed by, and Ross ended up making innumerable friends in the island. He sang, danced and celebrated life along with them, and finally the time arrived when he had to leave. Ross was extremely grateful to them for everything they did and he wished he could stay there forever, but it wouldn't be a logical decision to take, because he had to reach his destination on time, sacrificing all the fun that life on this island could provide him.

Ross left the island, waving goodbye to his friends. As his boat moved forward in the water, the island began turning smaller and smaller from Ross's point of view, and finally disappeared. He kept on pushing the water back, cherishing the memories of the time, he spent in the island. Will Ross ever come back to visit his friends in the island? Who knows? Its hard to say. Even if he comes, he might not even find his friends where he had left them, because those people might have opted for another path of life for their futures.

We all dwell in the same situation, every second of our lives. We've to sacrifice our sumptuous luxuries, our amazing time with friends and all the fun, in order to move forward, towards a better future. In order to make the boat move forward in water, one needs to push the water back, and so do we need to push our past back in order to move ahead. The sooner one realizes it, the better the life turns out to be. People land in our lives, to help us with various situations. They turn out to be our superb friends, but rarely do they stay with us forever. People need to move forward with their lives, illuminating their future. Friendship never dies as long as it is true, and the distance really doesn't matter. The rule of 'out of sight, out of mind' is not followed in case of friends. Friends might not always be in front of us, but are always present in the emotional dregs of our hearts.

Thanks to social media that I am not in Ross's situation. So, what I preferred to do to answer the questions, incessantly asked by old buddies, was that I traced all my old friends through Facebook and contacted them. Some turned back, and few turned their backs on me, which didn't boggle me at all, because my thoughts are centered on this story. I did what I had to do. It landed me in a beautiful realm of self-satisfaction and relief, and that is how I turned a gloomy winter day into an exciting one, talking to my old mates after a long abscission. To those, who do want to talk, but have their egos coming in between the path, reminding them of some petty altercation happened somewhere in the past that they took very seriously and still can't forget, all I want to say is- **"Help yourselves. I'll welcome you with open arms when you're back."**

# BLOATWARE: WHY COMPUTER MAKERS FILL YOUR PC WITH JUNK, AND HOW TO GET RID OF IT

Bloatware, crapware, shovelware: No matter what you call it, the junk that PC makers dump onto new PCs is nothing short of a mess. The situation was thrust into the spotlight last week when it was revealed that several Lenovo PCs were preloaded with "Superfish" adware that actively left users vulnerable to attack. The software compromised secure HTTPS web connections in a quest to inject ads on the sites you visit... and make Lenovo a few nickels.

There's no doubt about it: Even though the root vulnerability came from Superfish, Lenovo messed up. Hard. This shouldn't have happened, period. But Lenovo didn't toss its users to the wolves out of malice--instead, the Superfish debacle is a natural extension of the entire bloatware epidemic.

Why do hardware vendors knowingly stuff new PCs with junk that makes your experience worse? And what can you do about it? Let's dig in.

Bloatware exists because we're all saving person and rightfully so. Money's tight, and even the cheapest PCs are a major, multi-hundred dollar investment. But good news! Prices are plummeting in the wake of dirt-cheap Chromebooks and Microsoft's resulting counter-attack. The NPD group says that the average selling price of Windows computers fluctuated between just \$415 and \$430 in October 2014--10 percent lower than prices a year earlier, and a new low watermark for PCs.

While that sounds good on paper, deep down it's actually troubling news for the PC industry. Mainstream personal computers are a cut-throat business; prices have been racing to the bottom for years now. PC vendors make little to no money on such slim margins, which is a core part of the reason HP is splitting off its PC division (again), Dell took itself private, and Sony and Samsung have bowed out of the PC industry to varying degrees. There's simply no real money to be made on dirt-cheap hardware.

## Enter bloatware.

PC makers don't really believe that short-lived antivirus trialware is the best security solution for you, or that adding browser toolbars will make your life easier, or that a "visual discovery tool" like Superfish truly adds to the user experience. The developers of bloatware pay hardware makers cold, hard cash to pump your PC full of this crap and get in front of your eyeballs. That extra revenue often makes all the difference for vendors between taking a bath on competitively priced PCs, or eking out a small profit. (There's a reason pricier premium laptops often contain far less bloatware than budget PCs.)

It's a nasty, symbiotic relationship for bloatware developers, PC makers, and everyday users. Bloatware effectively subsidizes PC prices. If it weren't for all that crud, you'd pay more--perhaps much more--for your computer.

## Beat it, bloatware

That doesn't change the fact that bloatware sucks, however. (There's a reason people also call it "crapware.") Even ignoring Superfish's security implications, the sea of junk consumes your PC's precious hardware resources and can significantly slow down boot times, as this since-removed graphic advertising Microsoft's Signature Edition PCs shows.

Fortunately, you can have your cake and eat it, too. There are numerous methods for eradicating or outright avoiding bloatware on your PC.

The easiest way to deal with bloatware is to sidestep it completely. Microsoft--which obviously wants to present Windows in the best possible light--offers bloatware-free "Signature Edition" versions of many popular PCs, from the \$200 HP Stream 13 to the jaw-dropping Dell XPS 13 and even more expensive models. Even better, Microsoft charges little or no premium for its clean computers; the biggest price gap we found between a Signature Edition PC and its crud-filled counterpart was \$30. You can check out the full lineup [here](#).

Microsoft puts its money where its mouth is, too: The company's Surface laptop-like tablets are similarly bloatware-free.

The Signature Edition lineup focuses on notebook and all-in-ones, however. If you want a proper bloatware-free desktop with a bit more firepower, you'll need to build your own machine and install Windows yourself. Don't worry! It's not as difficult as you may think.

Alternatively, boutique system builders like Digital Storm, AVA Direct, and Origin can build you a custom rig with nary a whiff of shovelware installed. Their PCs tend to be a bit pricier and focused on gaming or business-ready workstations, however.

## Cleaning up the mess

All's not lost if you buy a standard bloatware-filled PC, however. Wiping run-of-the-mill crapware off your PC is fairly straightforward, assuming it doesn't sneak in deeper, more dangerous hooks like Superfish did. (Lenovo's Superfish appears to be a unique situation, however--at least for preloaded bloatware. PCWorld's guide to Superfish removal can help you kill it with

fire if you've recently purchased a new Lenovo PC.)

Deleting bloatware in the form of Windows Store apps couldn't be easier: Just right-click on its Tile, then select Uninstall. Boom! Done. Likewise, sifting through the list of software in the Control Panel's "Uninstall a Program" section (Control Panel > Programs > Uninstall a program) will let you see all and eliminate all the crapware that takes the form of traditional desktop software.

Automated tools like PC Decrapifier can speed up the process. Should I Remove It does the same, while also providing recommendations about whether to remove specific programs. For more in-depth instructions, check out PCWorld's guide to blasting bloatware off your PC.

Remember to reactivate Windows Defender or install some security software if you remove trialware antivirus from your PC. You don't want to head into the wilds of the Web unprotected.

If manual labor isn't your thing, a clean installation of Windows can give you the proper like-new experience that Microsoft intended, though novice PC users probably shouldn't muck around with reinstalling their operating system.

But wait! You don't want to rely on Windows 8's Refresh and Reset feature or your PC maker's recovery images (if your PC maker even includes those). Sly system manufacturers have begun sneaking bloatware into their system images, meaning that if you reinstall Windows with the provided tools, you'll also be reinstalling the preloaded crapware--pretty much the opposite of a fresh install, really.

To perform a truly clean install you'll need fresh Windows installation media and the product key for your PC's Windows license. PCWorld's guide to reinstalling Windows like a pro can walk you through the entire process, step-by-step. You may need to download some hardware drivers again when you're done.

Phew! That was a lot of work, but now you should be staring at the pinnacle of computing: A new PC with a cleanly installed operating system. What now? It's time to start filling it with more useful software, of course. We've got your back here, too. Check out our guides to the 22 free programs your new PC needs and 20 obscure, yet powerful free programs that ease your daily tasks for a slew of suggestions.

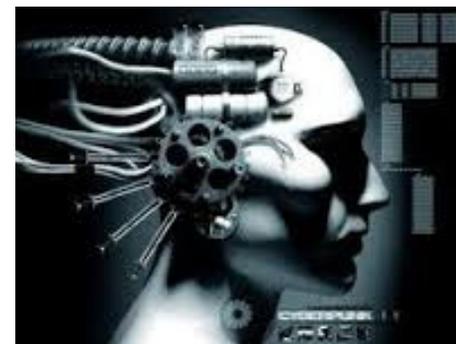
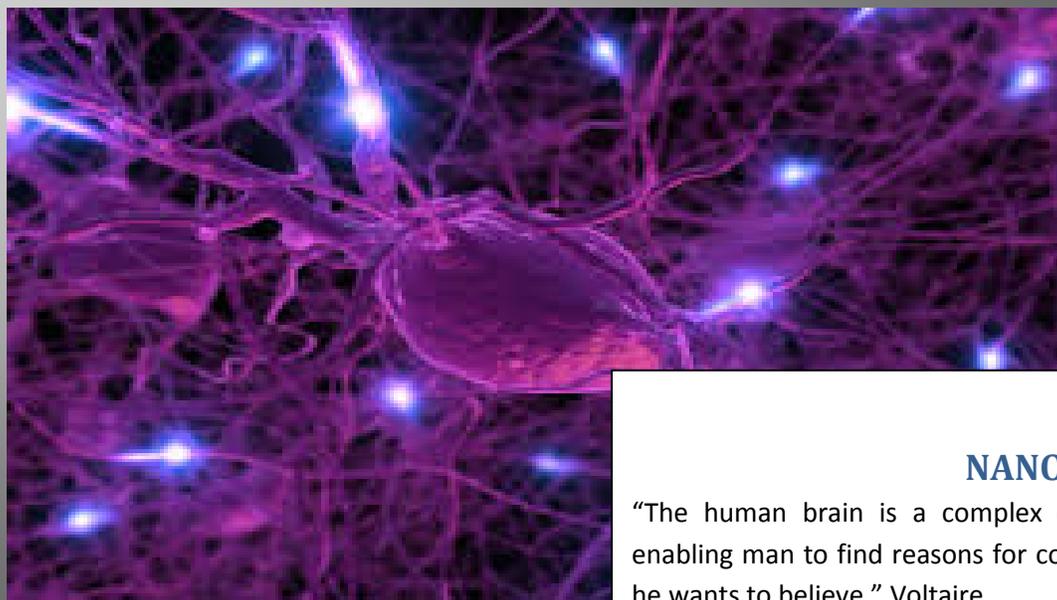
Just be sure to mind those options while you're installing new software--you don't want to leave a rogue checkbox filled in and stuff your fresh PC with all-new bloatware!



# Latest Technologies

The text 'THE BYTE' is rendered in a 3D, blue, geometric font. Each letter is composed of multiple flat, triangular and quadrilateral faces, giving it a faceted, crystalline appearance. The letters are set against a white background within a black-bordered box.

*Issue XI, JULY 2015*



-Rishi Mohan Awasthi  
CS2-2<sup>nd</sup> yr

## NANO BRAIN

“The human brain is a complex organ with the wonderful power of enabling man to find reasons for continuing to believe whatever it is that he wants to believe.” Voltaire

Nature is flooded with examples of seemingly effortless complex computations. Plants perform heavy computing in their leaves, animals develop collective intelligence in groups apart from their own individual intelligence, and the cells in our bodies pulsate with massive computations.

The human brain is constantly performing pattern-based computations through heavy parallel processing. Millions of neurons process signals simultaneously, allowing us to carry out actions and make decisions. This natural complexity has triggered research into a number of bio-inspired avenues such as genetic algorithms, cellular automata, artificial neural networks, and machine intelligence.

In 2008, Anirban Bandhopadhyay from the National Institute of Materials Science in Japan established the nano brain, a conceptual device that can provide molecular machines with intelligent decisions. Inspired by the information processing capabilities in our brains, the nano brain is a massive parallel processor that generates patterns to make intelligent decisions.

The conceptual device makes use of the quantum brain model, which describes the functioning of the brain through quantum mechanics. Most quantum mechanical brain models satisfy experimental results in neurology, and are therefore no longer categorized under ‘metaphysics’.

At the heart of the model lies the belief that a single neuron is not as powerful isolated as when it belongs to an interconnected collection of neurons. The brain is believed to be a global quantum device that performs pattern-based computations.

Bandhopadhyay’s original paper describes a machine assembly using 17 identical molecules of 2,3,5,6-tetramethyl-1-4-benzoquinone (DRQ) that can execute 16 instructions at a time. Each of the molecules acts as a logic machine, and can generate instructions by rotating its alkyl groups.



The molecules are interconnected, and influence each other in parallel through hydrogen-bond channels. Instructions can be sent to the central molecule of this arrangement via the tip of a scanning tunneling microscope. The central molecule can then influence the decisions of 16 molecular machines around it. Note just how powerful this model is; today’s fastest processors are still serial. They execute a single instruction at a time.

The nano brain will essentially make decisions based on external stimuli and communicate those decisions to its environment, much like our central nervous system.

The vision for the nano brain includes applications in medicine, nanotech assembly, and nano-computing. The field of medicine can be revolutionized by using the nano brain as a decision-maker for nano bots performing surgeries. A nanotech assembler can ideally be used to assemble any machine.

# Robotic Technology Ready to Revolutionize Surgeries in India



Ushering in an era of surgical precision, robotic surgeries are gaining acceptance pushing the skill levels of surgeons to the optimum

By : Shubham Dixit  
CS2 3<sup>rd</sup> year

His feet are on the pedals, his hands are on the controls, his head is inside a console, and he is peering into a three-dimensional camera. This what a skilled surgeon in the operating room of the Manipal Hospital looks like while performing a robotic surgery.

High tech, yes. Frayed nerves, no.

Nandkishor Dhomne, VP-IT and CIO, Manipal Health Enterprises, is one of the very few in India who has got first-hand experience in understanding and implementing robotics. "Surgeons become exhausted and can experience hand tremors during long surgeries. The robot takes over the complexities of the surgery, reducing physical exertion and stress levels of the doctor," he says.



The hospital has conducted surgeon-controlled robotic surgeries since 2011 and the results have been exceptional.

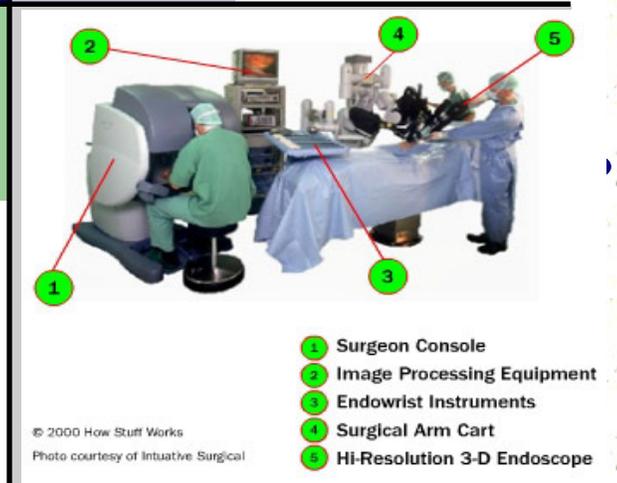
"The surgeon uses a computer console to manipulate the instruments attached to multiple robot arms. The computer deciphers the surgeon's movements, which are carried out on the patient by the robot. These machines follow the movements of the surgeon with precision, without any scope for trembling or shaking," Dhomne says.

The surgeons at Manipal Hospital underwent a training program to understand the technicalities of the robot and get a hang of operating it.

Dhomne and his team played the crucial role of ensuring that IT is ready to support the implementation of robotics and that the ongoing technical support platform is up and running with optimum performance and is available 24\*7. The IT team also ensured that the systems were integrated with the existing environment and strong connectivity and bandwidth to the database was provided.

Robotic hands can maneuver 360 degrees and are suitable for surgeries requiring high skill and precision. These surgeries involve minimum invasion. Other benefits of robotic surgeries include a shorter hospital stay, fewer complications, less blood loss, reduced pain and discomfort, minimal scarring, and faster return to normalcy.

In 2008, the first robotic surgery in India was conducted at the All India Institute of Medical Sciences (AIIMS) and since then other major hospitals like Manipal, Apollo, Fortis, and Medanta Medicity have followed suit. The Kokilaben Hospital claims that it had already performed 200 robotic surgeries.



ies within 12 months of its launch.

At Manipal Hospital, the cost of surgery is around Rs 75,000 more than the cost of the conventional surgery.

## CLOAKING MATERIAL MAKES OBJECTS IMPERCEPTIBLE TO TOUCH

In the popular folktale, “The Princess and the Pea,” a young girl proves her princess-like sensitivity after a pea, inserted beneath 20 mattresses and 20 featherbeds, ruins her night of sleep. But if she had slept atop a thin sheet of scientists’ new touch-cloaking nanomaterial, she would have slept like a rock.

Researchers at the Karlsruhe Institute of Technology have created a material that sounds like something from a fictional tale: an elasto-mechanical unfeelability cloak. The polymer-based, scaffold-like structure can mask the presence of an object so it’s imperceptible to the human touch.

If you, for example, stepped on a large enough rock, the rubber and foam in your shoe would deform and result in a noticeable bulge. If your shoes were made of the cloaking material, it would disperse the pressure in such a way that you wouldn’t notice the rock beneath your foot.

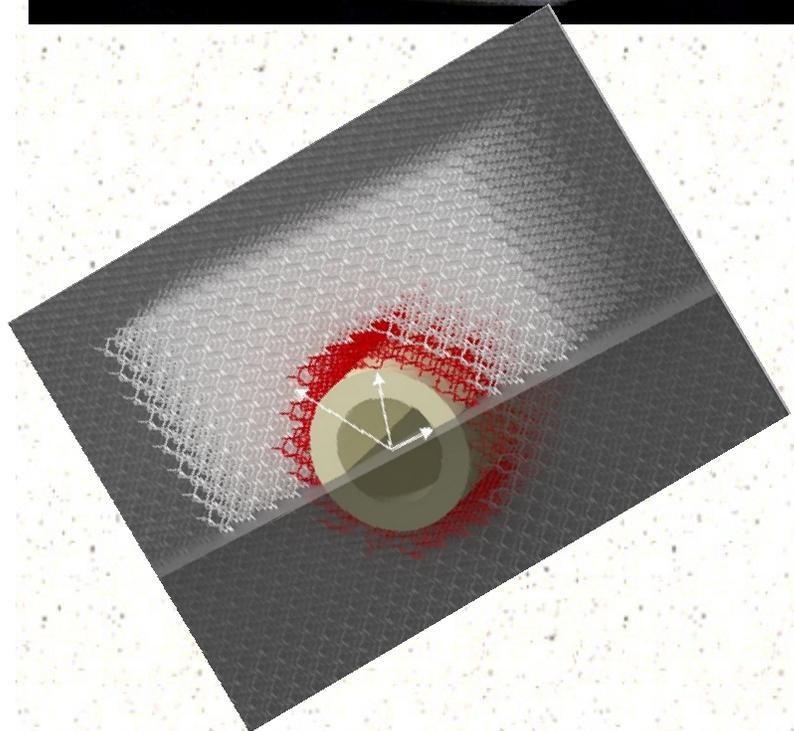
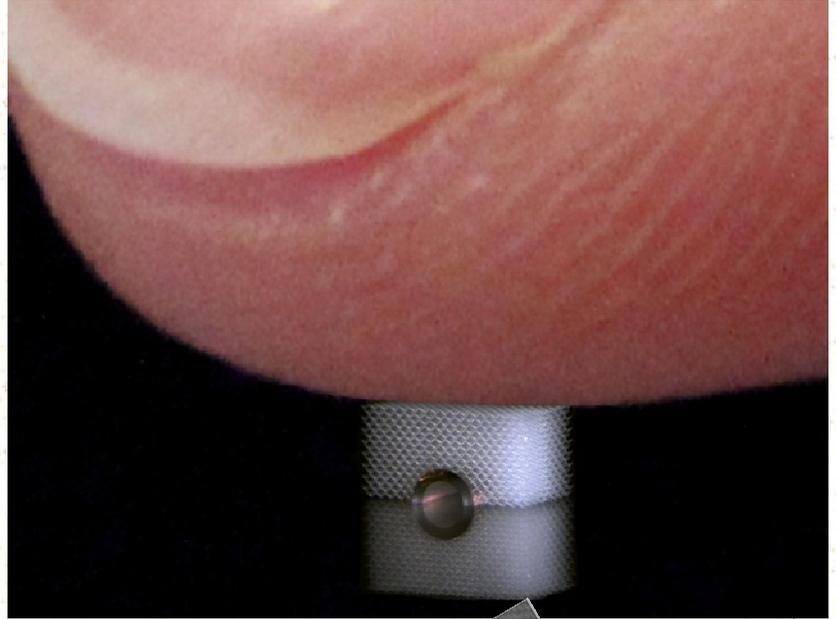
### How Does It Work?

Researchers produced their metamaterial using 3-D laser lithography to cut and shape needle-shaped cones whose tips meet. These elements were assembled into something that looks like a tiny brick with a honeycomb structure. The size and contact points where the tips meet vary depending on their location, so that objects within the material are imperceptible.

The KIT team tested their material by building a millimeter-sized cloak around a tube in their lab. The laser-cut cones in the cloak closer to the tube had different strengths as compared to cones nearer to the surface, which masked the tube’s presence. They published their findings in the journal *Nature Communications*.

### Future Applications

The tiny test cloak in the KIT team’s lab is purely for research at this point. However, researchers say their metamaterial could be used to make sleeping bags that make disguise the pebbly earth underneath, or rugs that hide the cords beneath them.



# EYE TRACKING IS COMING SOON TO A COMPUTER NEAR YOU

Eye tracking devices sound a lot more like expensive pieces of scientific research equipment than joysticks – yet if the latest announcements about the latest Assassin's Creed game are anything to go by, eye tracking will become a commonplace feature of how we interact with computers, and particularly games.

Eye trackers provide computers with a user's gaze position in real time by tracking the position of their pupils. The trackers can either be worn directly on the user's face, like glasses, or placed in front of them, such as beneath a computer monitor for example.

Eye trackers are usually composed of cameras and infrared lights to illuminate the eyes. Although it's invisible to the human eye, the cameras can use infrared light to generate a grayscale image in which the pupil is easily recognizable. From the position of the pupil in the image, the eye tracker's software can work out where the user's gaze is directed – whether that's on a computer screen or looking out into the world.

But what's the use? Well, our eyes can reveal a lot about a person's intentions, thoughts and actions, as they are good indicators of what we're interested in. In our interactions with others we often subconsciously pick up on cues that the eyes give away. So it's possible to gather this

unconscious information and use it in order to get a better understanding of what the user is thinking, their interests and habits, or to enhance the interaction between them and the computer they're using.

## Beyond the Lab

There are lots of useful applications. For example, in marketing and usability studies, eye trackers are commonly used to study the impact of an advertising campaign or the design of a website. For people who cannot use their arms or are completely paralyzed, eye tracking can be used to operate a computer or speech synthesizer: eye-based applications allow them to move a mouse cursor and spell out sentences using only their eyes.

Other more futuristic-sounding applications have been explored, such as appliances that listen to your commands when you look at them: imagine speaking "on" and "off" commands to your lamp, your hi-fi system or your television, which until you looked at them had been in standby. Other examples include automatic scrolling when you have reached the bottom of a screen of text, or automatic pausing of a movie if you look away.

While there are uses for eye tracking in industry and among researchers, firms are now looking seriously at how to make them useful for the

general public. Tobii – the same firm that brought us pizza ordering by mind control – recently launched a consumer-priced remote eye tracker, the Tobii EyeX (\$139) with the aim of encouraging games developers to build eye tracking support into their products. For comparison, research lab-grade eye trackers cost around \$20,000.

Another large eye tracking company, SMI, has announced a partnership with Sony to integrate eye-tracking into games for the PlayStation 4.

## Eye Tracking Games

There's a lot of potential for eye tracking in video games. For example, in the popular first-person view ("3-D shooter") style of games, eye tracking can be used to automatically pan the screen to where the player is looking, replacing a task usually performed by the mouse. The eyes can be used to target weapons, too.

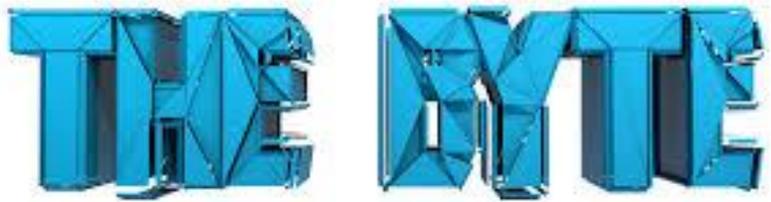
One of the most interesting applications is interaction with game characters. When using eye tracking video game characters can be made to react to the player's gaze the same way a human would. Imagine entering a shop and letting your eyes rest on a sword you find interesting: the merchant could tell you directly about this item, making the interaction that bit more real. Or a character might get upset if, instead of looking at him while he's talking, your eyes rest on his wife. The eyes are

very powerful means of nonverbal communication. Implementing human-like reactions in virtual characters could mean a whole new level of immersion in video games.

Beyond games, there is another range of applications where eye tracking is becoming a hot topic: smart glasses. Because of its shape, a lot of people think Google Glass also tracks the eyes, but it doesn't. But it wouldn't be surprising to see the next generation of smart glasses including eye tracking capabilities. This could provide further ways of interacting with the head-up display projected onto the glasses, adding automatic scrolling and navigation that leaves the wearer's hands free instead of having to use the manual control.

There's already an eye tracking upgrade for the Oculus Rift virtual reality headset. If users are willing to wear something on their heads, why not add an eye tracker too and enhance interaction using all that information that's being given away by the eyes? Using the eyes as a tool opens up the possibility for more natural, subtle interaction.

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*Issue XI, JULY 2015*

# I AM A PAIR OF OLD SHOES

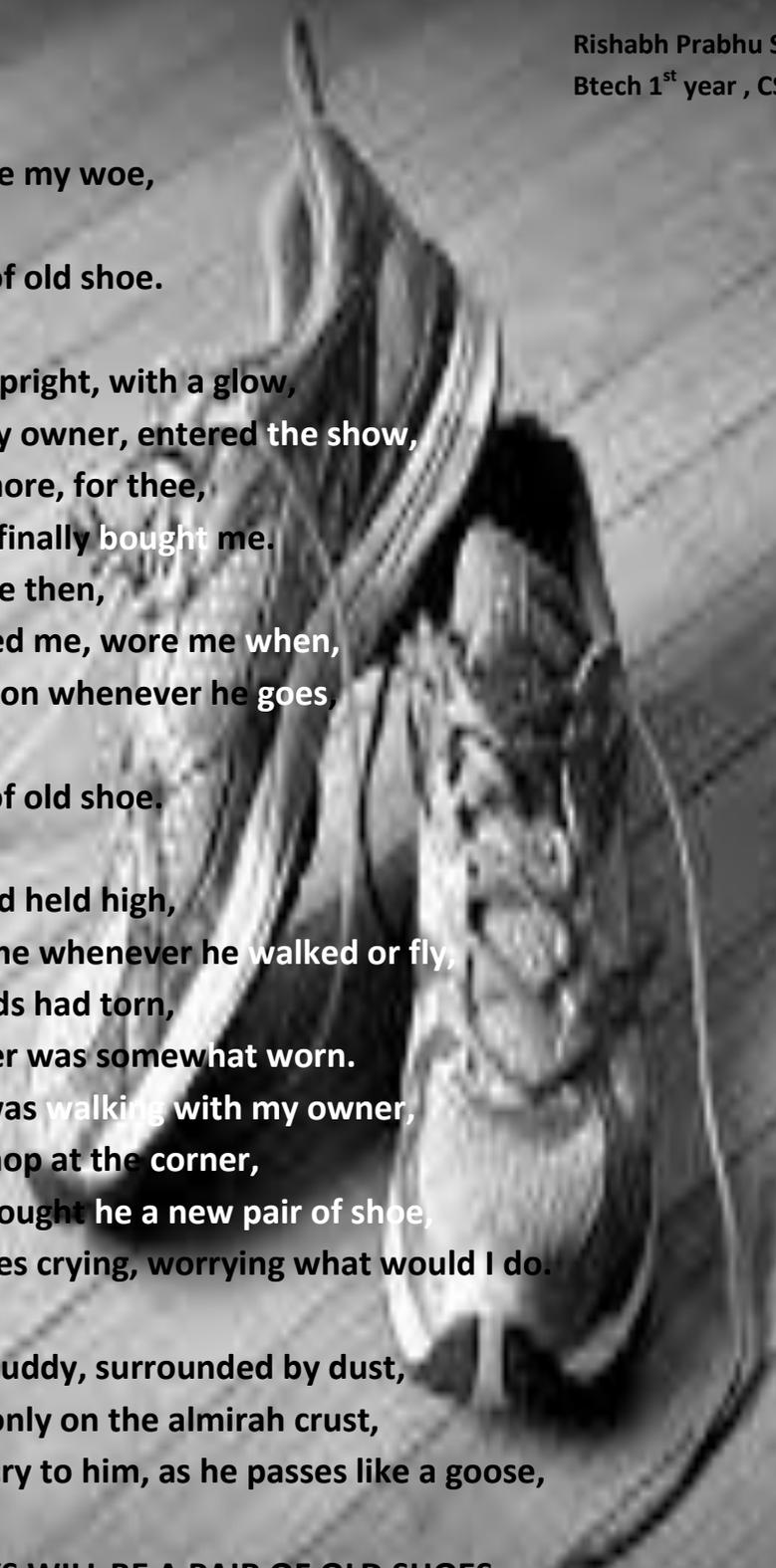
Rishabh Prabhu Srivastava  
Btech 1<sup>st</sup> year , CS3

Sparkling I was,  
At the shop beside my woe,  
But now,  
Alas! I am a pair of old shoe.

I stood brightly, upright, with a glow,  
It was then he, my owner, entered the show,  
I glowed a little more, for thee,  
And yipiiee!!! He finally bought me.  
I was a proud shoe then,  
My owner polished me, wore me when,  
I was his companion whenever he goes  
But now,  
Alas! I am a pair of old shoe.

Walking with head held high,  
My owner wore me whenever he walked or fly,  
Though my threads had torn,  
Though my leather was somewhat worn.  
One day when I was walking with my owner,  
He entered the shop at the corner,  
Enquired, tried, bought he a new pair of shoe,  
And I stood besides crying, worrying what would I do.

Now I am dark, muddy, surrounded by dust,  
As I hold a place only on the almirah crust,  
I plead, request, cry to him, as he passes like a goose,  
But alas! Now  
I AM AND ALWAYS WILL BE A PAIR OF OLD SHOES.



Chandan Pandey  
CS2 2<sup>nd</sup> yr

# ECHOED...

I'm feeling echoed,  
Things aren't going as it seems to be,  
And I find it rather strange to find myself  
In this deep corner of nowhere land.

Feeling exhausted, I am now  
As I am searching for a drink of some cool stream,  
Green trees,rain drizzling, fresh roses and lilies  
And all that is around me,I could find no pleasure,  
Nor could I find gratification in them.  
Then I finally came to this space amidst the darkness,  
I certainly didn't know what to do.

Suddenly,in that calm and still moment ,  
Something broke the silence!  
A narrow light struck me down,I became as white as snow.  
Pleasant and strengthening as it was, I became stronger,  
Enriched! Like fair daisies blooming in the summer air.  
And every bit of the experience gave me  
A realisation of how special I was made,  
And that's when I knew the purpose life has enfolded for me.

Enlightened and light as a feather but still feeling echoed,  
I turned back and walked and walked and walked,  
In that journey of Never Ending Land to a New Beginning.

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DON'T EVER GIVE UP ON  
WHAT'S IN YOUR HEART  
DON'T EVER LET GO OF  
WHAT IT IS YOU BELIEVE IN  
DON'T EVER SAY THE ROAD IS TOO TOUGH  
AND THAT ITS BETTER TO QUIT

DON'T EVER THINK THAT YOU DON'T MATTER;  
BECAUSE YOU'RE IMPORTANT TO ME  
DON'T EVER LET ANYONE TELL YOU  
THAT YOU CAN'T FOLLOW YOUR DREAMS

DON'T EVER THINK THAT THE WORLD  
DOESN'T NEED SOMEONE LIKE YOU;  
YOU'VE TOUCHED MY HEART AND MY LIFE  
JUST BY BEING WHO YOU ARE  
AND THE THINGS YOU DO.

THERE'S A MAGIC IN YOU  
THAT NO OTHER COULD POSSESS.  
A QUALITY, WARMTH, A SPARKLE  
THAT WILL CARRY YOU THROUGH LIFE'S TESTS

THERE'S A MAGIC IN YOU  
THAT MAKES YOU SPECIAL TO ME.

- Shahzaib Khan

# Human emotions-a story of changing weather

-Pranjali Aggarwal



Love ,Hate,Peace- three emotion made ply of human life.

***Human- ek insaan... ek vyakti... !!!!!  
Emotions – Bhavna...jajbaat!!!!***

The emotion “WINTER” signifies peace and calmness... ‘calmness and peace’ are actually themselves stating human’s emotions...

Emotion ‘AUTUMN’ arises,we start blooming and when emotion “WINTER” arises, the emotion “cold/numb” of human being replaces the bloom.

The emotion “IRRITATED AND FRUSTATED” is just like the emotion “SUMMER” of weather’s life’ due to its burning sunrays....

“SADNESS” is an emotion that causes a person to cry while emotion “SURPRISE” is an emotion that causes a person to sign and raise their eyebrows...

The emotion “THUNDER AND STORM” of weather’s life is just like the emotion “ANGRY” in human’s life. A person gets angry if the things are not in control by them just the weather gets out of control due to increase in pressure and temperature from lightening.

## “BUT NOTHING LASTS FOREVER”

There comes a emotion “RAINBOW” in a weathers life which signifies emotion ‘HAPPINESS’ in human’s life too. As the rainbow sparkles its colors all over , in the same way a happy

person have the capability to make its surrounding more enthusiastic, more colourfull and cheerfull.

Happiness can change anyone’s state of mind. The feeling hatred gets faded due to this an undefined emotion that is “HAPPINESS”.

Emotion “SPRING” is sign of “LOVE”. As different flowers have their own fragrance just like love has its own fragrance “MEHAK” . Mehak can change anyone’s mood ,his presence of mind.

## *SUMMARY*

Q

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THE Q&A

*Issue XI, JULY 2015*

## Five Precautions for Avoiding Malware when you Download and Install Software



Downloading a program--especially one from an obscure publisher without a positive reputation--is something of a leap of faith. It's a bit like letting a total stranger into your home.

But if you follow these five steps, you should be okay.

### 1. Do your research

Read up on the type of program you're looking for, and on the particular programs you're considering. Use your favorite search engine to see what people are saying about them. Check out major download sites such as Major Geeks, FileHippo, and Softpedia.

### 2. Download from the publisher's site

Yes, I just told you check out the download sites, but you don't have to stay there. The publisher's own site will probably have the cleanest, most recent version of the program. If the publisher's site sends you to another download site, you can safely assume that it has the preferred version.

### 3. Scan before installing

Your regular antivirus will scan the file as it downloads, but just to be safe, manually tell your AV program to scan the file again. Then use another malware scanner, such as Malwarebytes Anti-Malware, to get a second opinion.

### 4. Consider that you may have a false positive

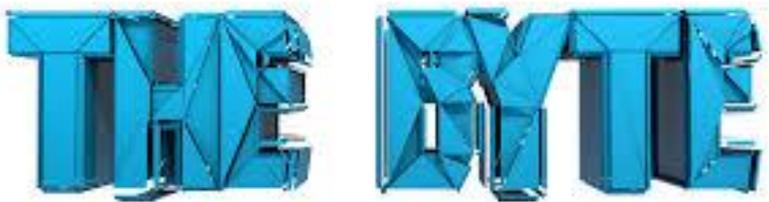
Antivirus programs aren't perfect. Sometimes they see malware when it doesn't really exist. If both scans identify malware, assume it's real. But if one of them gives it a clean bill of health, try other on-demand scanners, such as SUPERAntiSpyware and the Emsisoft Emergency Kit, to get a better view. Another consideration: When any of these programs finds malware, it tells you what it found. Use a search tool like Google or Bing to learn more about it. You may find out that it's cropping up a lot as a false positive.

### 5. Watch out for PUPs

If your antivirus warns you that a download includes potentially unwanted programs (PUPs), you can safely install it --but only if you're careful. In fact, you should always watch out for PUPs when installing software

*Departmental*

*Events*

The text 'THE MTE' is rendered in a 3D, blue, geometric font. Each letter is composed of multiple flat, triangular and quadrilateral faces, giving it a faceted, crystalline appearance. The letters are set against a plain white background within a black-bordered box.

*Issue XI, JULY 2015*

# Departmental Events

THE BYTE  
JULY 2015

## Summer Industrial Training Program for BTech 3rd year students

Summer Industrial Training program was organised by the Department of Computer Science & Engineering for Btech 3rd year students.

The summer training organized by the Department of Computer Science & Engineering of IMSEC is with an effort to understand the current challenges and trends of the industry thereby molding the students competitiveness and employability. The Objectives of the program are as follows:



- To promote & share industrial expertise .
- Hands on experience with the latest IT trends and technologies.
- Developing our students to best fit in the actual career world.
- Interaction with the other professional and non professional groups.



The following were the courses in the training program:

<u>S.No.</u>	Course	Industry
1	CMAP Automation	Indian Testing Board
2	Network Management	NetCamp

## CMAP AUTOMATION

### Course Contents:

- Mobile App Test Automation
- Selenium Web Driver & JUnit
- Selendroid Open Source.
- Components and Additional Features of Selendroid.
- Automation of Web-Based, Native & Hybrid applications.
- Gaps in Open Source Tools.
- Data Driven Testing.
- Introduction to iOS Test Development.
- Introduction to Proprietary Platforms and Frameworks.
- Solutions and Practices for Closing Open Source Gaps.
- Extending Selendroid Automation with a Framework.
- Mobile Testing in Continuous Integration.
- Mobile Test Automation Best Practices.



## NETWORK MANAGEMENT

### Course Contents:

- Introduction to Network Management
- Information Security and Hacking Counter measures
- Cyber Crime
- Web Development
- Live Implementation
- Final Project using secured programming along with PHP, HTML, MySQL, CSS, JavaScript, Linux, PHP mail and PHP ftp.



## FEATURES OF THE TRAINING PROGRAM

- Training program will be held in the college campus at the Department of Computer Science laboratories.
- Students will get a chance to work on domain specific industry based projects offered by the industry experts.
- After completion of the training program students will be awarded course completion certificates.
- This training will be equivalent to the industrial training of six weeks which is mandatory for the 6th semester students as per their course curriculum.
- The continuous monitoring and evaluation of the student's work will be done by the trainers from the industry.
- Practical workshops, case study analysis and modular assignments will be a part of the training.
- Nominal training fee to be charged for the conduction of the training program.

## Summer Industrial Training







## *Summer Industrial Training Program on Android for BTech 2nd year students*

Department of Computer Science & Engineering has organised a summer training program for B. Tech. (CSE/IT) 2nd year students on Android Application Development. This training was delivered by Mr. Abrar Ahmad Khan (Assistant Professor - CSE). In this to make aware students technologies that are dominant in the market and fast app development technologies exist OS and Windows-OS android powered devices 78% market share. The development using Android Studio, Java and XML. After development testing on physical device so that student feels confidence.



training the main focus was about the mobile technology in the market due to its sell-off. There are other mobile in the market like iOS, RIM with Android-OS. But Android is dominant by acquiring main focus was on the core Android Studio, Java and XML. Testing has been done on the

Content that is discussed in brief:

1. Fundamentals of Java (1.8)
2. Android Studio IDE
3. Android-SDK main features
4. Android Application Directory Structure
5. Different Application Components
6. Activity, Service, BroadcastReceiver, Content-Provider and its usability.



lots of things during the development process.

Sixty Seven (67) students participated in the training program from 27<sup>th</sup> May to 12<sup>th</sup> of June 2015. There are certain projects also assigned to the students so that they can develop and learn

### PROJECTS NAME:

- |                |             |
|----------------|-------------|
| 1. iATTENDANCE | 6. iShare   |
| 2. iSMS        | 7. CSETouch |
| 3. iLeave      | 8. IMSW     |
| 4. NotifyP     | 9. iEvent   |
| 5. PaymentG    | 10. FLeave  |





## Inaugural of Test Lab in collaboration with Indian Testing Board on 6th June 2015

Test lab in collaboration with Indian Testing Board was inaugurated in the Department of Computer Science and Engineering on 6th June 2015. Eminent Speakers from industry were invited as guests in the ceremony.

The following is the list of delegates and the guests:

1. Mr. Raja Babu Singh, IG provisioning, IPS Officer.
2. Mr. Vipul Koacher, President Indian Testing Board.
3. Mr. Ayush Agarwal- CEO of Trinity Mobile App Lab pvt ltd.
4. Mr. Rajeev – Marketing Head Trinity Mobile App Lab pvt ltd.
5. Ms Rimy Obeoi Founder & CEO of OysterConnect.com.



*Mr. Raja Babu Singh is 94 batch IPS officer. He got promoted as IG on 25th Sep 14, initially working as IG Training and presently as IG Provisioning, been awarded President Police medal for meritorious services and Police Medal for Gallantry. He attended international seminar like Seminar for Foreign Senior Police Officers in Tokyo in 2014. He talked about the role of youths in the current world of technology. He motivated the students for their skill development to face the competitive world.*

*Mr. Ayush Agarwal was Head IT Innovation & Operations at Bharti Infratel Ltd and presently CEO of Trinity Mobile App Lab Pvt Ltd. He is a Visionary IT leader with vast experience that covers transforming IT drive business growth, leading and managing technology function, relationship management with senior level executive, designing and implementing IT strategy and solutions. He discussed about the importance of testing the field of IT industry. The skill required to be a better tester. He also focussed on the latest IT trends and technologies.*





*Ms. Rimy Obeoi is the Founder & CEO of OysterConnect.com.. She has 17+ years of experience. She is an HR Professional who has worked in varied Industries such as FMCG, IT Products and IT Services. She is currently an entrepreneur who runs a unique portal called OysterConnect.com which provides work skilling projects and Virtual Internships to students of Management and Undergraduate programs. She discussed about the skills the students should have to get recruited to MNC's. She focused on the level of competencies required to be a better professional.*

*Mr. Vipul Kocher is a Co-founder of SALT and the President of the Indian Testing Board (ITB), a member of ISTQB. He represented India in the effort for creation of new ISTQB syllabus as well as the glossary of testing terms which has been adopted as British Standard. He has been extensively involved contributing to the Testing Boards of several countries including India. He is highly popular as a speaker in the testing community. His talk focused on testing as a Career Option in today's IT World. He discussed about the current opportunities the steers have in the market and the skills required being a better tester.*



After the talk from the various delegates and guests the inaugural of the test lab took place in Lab-1 C Block by Mr. Raja Babu Singh. Students undergoing training program under ITB gave their presentations regarding their learning and experiences in the program related to testing area.





## VISIT BY EMINENT ACADEMICIANS & INDUSTRY EXPERTS

### PROF. (DR.) S. N. SINGH, PROFESSOR, IIT KANPUR

He talked about how the conference plays important role and helped the researchers in writing the quality research



### PROF. (DR.) PHANGUNI GUPTA, DIRECTOR NITTTR KOLKATA

He talked about Latest IT Advancement, Its role and importance in various walks of life also in various other branches/areas.

His focus was mostly on security, biometrics, pattern recognition and human behavior recognition for authentication.

### MR. L. V. SUBRAMANIAM IBM, INDIA

He talked about Latest Advancements in the field of cloud computing. The various applications and its services.



### PROF. (DR.) EKRAM KHAN , AMU, ALIGARH

He talked about the importance of IEEE conference. He gave useful suggestions regarding writing quality research paper.



## VISIT BY EMINENT ACADEMICIANS & INDUSTRY EXPERTS

### **PROF. (DR.) NARENDRA KOHLI, DEPT. OF COMPUTER SC. & ENGG., HBTI KANPUR**

He talked about the Individual Green Computing i.e. practice of using computing resources efficiently by the individuals or computer users to save energy.



### **PROF. (DR.) D.K LOBIYAL, JNU DELHI**

He talked about Efficient and robust wavelet based image/video coding techniques.

His area of specialization include Telecommunication and Information Systems .

### **PROF. (DR.) K. K. SHUKLA, IIT-BHU, INDIA**

He talked about Latest Advancements in the field Artificial Intelligence. His area of specialization includes Neural



### **PROF. (DR.) S.A.M. RIZVI, JMI ,DELHI**

He talked about the Emerging technology (GRAIN) in India's National Development. His focuses on the future of technology ie, the future of communication, Input/output, and Computing. GRAIN stands for Genetic Engineering, Robotics, Artificial Intelligence, Information Technology and Nano technology.



## VISIT BY EMINENT ACADEMICIANS & INDUSTRY EXPERTS

### **PROF. (DR.) D.P. VIDYARTHI, JNU, NEW DELHI**

He discussed about the Research issues in cloud computing, various projects that are going on also research areas in this field.



### **PROF. (DR.) S. CHAKRAVERTY, NSIT, DELHI**

She talked about the Nature driven heuristics for hardware and software Co-design. Firstly she focuses on the hardware and software co design i.e. exploring the design space. She also gave emphasis on learning from nature and solving the computational problems i.e., using Nature driven heuristic

### **Mr. Vipul Kocher, President Indian Testing Board**

Importance of Software testing and its career opportunities in the testing field.



### **Mr. Mohnish Bakshi, Sr.Manager Indian Testing Board**

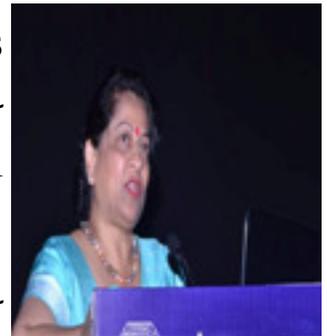
He talked about CMAP fundamentals and CMAP Automation mobile testing.



## VISIT BY EMINENT ACADEMICIANS & INDUSTRY EXPERTS

### **H.E Janice Darbari, The Counsel General of Montenegro**

She spoke about the Importance of computers in various fields Emphasized on the use of technologies for the betterment of mankind Also talked about the combination of technology, science and mind that lead to the new era. She appreciated and motivated the students for their ef-



### **Wassfi Hassan El Sreihin - Secretary General of African-Asian Rural Development Organization**

He spoke about rural development through technologies like remote sensing, forecast etc. He also talked about innovation, knowledge and best practices.

### **Dr. R. K. Khandal, Vice Chancellor , UPTU**

He talked about the anti-disciplinary studies importance of CSE in various fields. He highly appreciated the institute for organizing conference and welcomed the guest and the delegates.





## VISIT BY CHINESE DELEGATES FROM HUNAN UNIVERSITY

A Chinese Delegation of academicians representing Hunan University from China visited IMS Engineering College Campus on 14th May 2015 to facilitate Learning & Research through participation in various Academic & Professional activities including collaborative skill development programs, joint conferences, workshops, Faculty development programs, seminars etc through common exchange programs.

The Director, Prof. S.P Pandey represented IMS Engineering College in this meeting; Prof. J.P Mani, HoD, Mechanical Engineering Department and Prof. Pankaj Agarwal, HoD, Department of Computer Science & Engineering were also present during this interaction.

**The members of the Chinese delegation included**

- **Cao Yijia, Vice President, Hunan University**
- **Yu Dejie ,Professor,  
College of Mechanical and Automobile Engineering, Hunan University .**
- **Luo Jiawei , Professor,  
College of Computer Science and Electronic Engineering, Hunan University**
- **Xie Jun, Director ,  
Centre of International Studies, Hunan University**
- **Zhou Kai , Section Head,  
Centre of International Studies, Hunan University**



## PLACEMENT NEWS

### INDIAN SPACE RESEARCH ORGANISATION (ISRO) JOBS FOR SCIENTIST/ ENGINEER IN BELGAUM

#### Scientist/ Engineer

##### Eligibility :

BE/B.Tech(CSE, Mechanical Engineering, Electrical)

**Location :** Belgaum

**Last Date :** 09 Jul 2015

**Hiring Process :** Written-test

**Eligibility :** BE/B.Tech or equivalent in First Class with an aggregate minimum of 65% (average of all semesters for which results are available). Candidates who are slated to complete the BE/B.Tech course in the academic year 2014-15 are also eligible to apply provided final Degree is available by 30/9/2015.

**Scientist/Engineer 'SC' [Electronics]/ Post Code : BE 001**

No. of Vacancies : 49

**Scientist/Engineer 'SC' [Mechanical]/ Post Code : BE 002**

No. of Vacancies : 34

**Scientist/Engineer 'SC' [Computer Science]/ Post Code : BE 003**

No. of Vacancies : 26

**Pay Band :** Rs. 15,600-39,100/-

**Age Limit :** 35 years as on 09.07.2015

#### Application

**Fee :** There will be an Application Fee of **Rs. 100/-**

ters, Antariksh Bhavan, New BEL Road, Bengaluru - 560 094 by Ordinary Post only superscribing in the envelope "ICRB -Recruitment of Scientist/Engineer 'SC' " within 7 days of filing of application and in any case not later than 17.07.2015.

#### Selection Process :

Written Test. The call letters for the written test to the short-listed candidates will be sent only by e-mail during last week of September 2015. Based on the performance in the Written Test, candidates will be short-listed for interview, the schedule and venue of which will be notified. Written test is only a first level screening and written test score will not be considered for final selection process. Final selection will be based on the performance of the candidates in the Interview and those who secure minimum 60% marks in the interview will be eligible for consideration for empanelment in the selection pane

LOOK UP  
INSIDE

ISRO

IBPS

UPSC

#### IMPORTANT DATES:

Last date for Apply Online : **09.07.2015.**

Last date for receiving Application Fee : **10.07.2015**

The written test will be conducted on **11.10.2015**

#### How to apply:

The application for online registration will be hosted in the ISRO website between 19.06.2015 and 09.07.2015. Out of the two challan parts, the candidate has to send one part of the challan form [ I S R O c o p y ] to Administrative Officer (ICRB), ISRO Headquar-

## UNION PUBLIC SERVICE COMMISSION (UPSC) JOBS FOR ASSISTANT PROVIDENT FUND COMMISSIONERS

**Vacancy No.**  
: 15065201720

**No. of Vacancies** : SC-24, ST-14, OBC-54 & UR-78

**Qualifications** : Degree of a recognized University or equivalent.

**Desirable** : Diploma in Company Law/ Labour Laws / Public Administration.

**Pay Scale** : Rs.15,600 - 39,100 (PB-3) + Rs. 5,400 (Grade Pay) (T.E. Rs. 44,730/- Approx.) + TA and HRA as admissible. Group 'A', NonMinisterial.

**Probation** : One year

**Application Fee** : Candidates are required to pay

a fee of **Rs. 25/-** (Rupees Twenty five) only either by remitting the **MONEY** in any branch of the SBI by cash or by using net banking facility of the SBI or by using visa/master credit/debit card.

**Selection Procedure** : Selection is made only by interview



**Important Dates:**  
**Last date for Online Submission:**  
**9th July 15.**

## IBPS JOBS FOR OFFICE ASSISTANT/OFFICER

Online examination for the Common Recruitment Process for RRBs (RRBs- CWE-IV) for recruitment of **Group "A"-Officers (Scale-I, II & III) and Group "B"-Office Assistants (Multipurpose)** will be conducted online by the Institute of Banking Personnel Selection (IBPS) tentatively in September 2015.

### **IBPS Recruitment - Office Assistant (Multipurpose)**

**Qualification** : Degree in any discipline from a recognized University or its equivalent  
(a) **Essential**: Proficiency in local language as prescribed by the participating RRB/s. **Desirable**: Knowledge of Computer skills.

**Age** : Between 18 years and 28 years i.e. candidates should have not been born earlier than 02.07.1987 and later than 01.07.1997 (both dates inclusive)

### **Officer Scale-I**

**Qualification** : Degree in any discipline from a recognized University or its equivalent  
**Preference** will be given to the candidates having degree in Agriculture, Horticulture, Forestry, Animal Husbandry, Veterinary Science, Agricultural Engineering, Pisciculture, Agricultural Marketing and Cooperation, Information Technology, Management, Law, Economics and Accountancy;. Proficiency in local language as prescribed by the participating RRB/s  
iii Computer knowledge or awareness will be an added qualification

**Fee** : Officer (Scale I, II & III) - Rs. 100/- for SC/ST/PWD candidates. - Rs. 600/- for

**Fee :** Officer (Scale I, II & III) - Rs. 100/- for SC/ST/PWD candidates. - Rs. 600/- for all others Office Assistant (Multipurpose) - Rs. 100/- for SC/ST/PWD/EXSM candidates. - Rs. 600/- for all others

**Examination Centres :** Examination will be conducted online in venues across many centres in India.

**Mode of Payment :** Candidates can make the payment of requisite fees/ intimation charges through the ONLINE mode only

**Interview :** Candidates who have been shortlisted in the examination for CWE- RRBs -IV will subsequently be called for an Interview to be conducted with the help of the designated Nodal Regional Rural Bank in each State/UT and coordinated by IBPS in consultation with the appropriate authority. Interviews will be conducted at select centres.

Candidate should apply IBPS **Online** latest by **28.07.2015**

**Important Dates :**

On-line registration including Edit/Modification of Application by candidates : 08.07.2015 to 28.07.2015

Payment of Application Fees/Intimation Charges (Online) : 08.07.2015 to 28.07.2015

Download of call letters for Pre- Exam Training for Officer Scale-I : After 17.08.2015

Conduct of Pre-Exam Training for Officer Scale-I : 24.08.2015 to 29.08.2015

Download of call letters for Pre- Exam Training for Office Assistant : After 24.08.2015

Conduct of Pre-Exam Training for Office Assistant : 31.08.2015 to 05.09.2015

Download of call letters for online examination : After 19.08.2015

Online Examination : September, 2015

Declaration of Result : October 2015

Download of call letters for interview : November 2015

Conduct of interview : November/December 2015

Provisional Allotment : January 2016



## Bulletin Today: Current Affairs July

### ***C.N.R. Rao conferred with Japan's highest civilian award 'Order of the Rising Sun, Gold and Silver Star'***

Eminent scientist and Bharat Ratna awardee C.N.R. Rao was conferred with Japan's highest civilian award the Order of the Rising Sun, GOLD and Silver Star. He was presented with the award by Japanese Ambassador to India, Takeshi Yagi for his outstanding contributions to

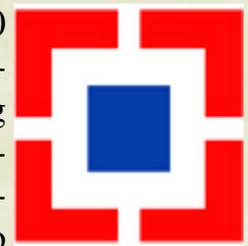


### ***ISRO's GAGAN to provide navigational support to Indian Railways***

ISRO has announced to provide navigational support to Indian Railways through GPS Aided Geo Augmented Navigation (GAGAN) system. The navigational support along with space technology-based tools will be provided to Indian Railways for unmanned level crossings safety.

### ***HDFC Bank launches 10-second paperless instant loan Scheme***

HDFC Bank, India's second-largest private sector lender has launched a 10-second paperless instant loan Scheme for its existing customers. The 10-second loan Scheme was launched as part of HDFC Bank's digital banking platform GoDigital. With this, HDFC bank became first banking institution to completely automate the entire process of loan approval and disbursement. Under this scheme, bank will now disburse personal loans to its customers in just 10 seconds and a pre-approved loan amount will be



### ***Union Cabinet gives nod to introduction of Bureau of Indian Standards Bill, 2015***

Union Cabinet meeting chaired by Prime Minister Narendra Modi has approved introduction of Bureau of Indian Standards Bill, 2015 in coming session of Parliament. The new bill seeks to replace the existing Bureau of Indian Standards (BIS) Act, 1986 with an aim to bring in more products under the mandatory standard regime and end the inspector raj.

### ***President gives assent to Negotiable Instruments (Amendment) Ordinance, 2015***

President Pranab Mukherjee gave his assent to Negotiable Instruments (Amendment) Ordinance, 2015. The ordinance amends Negotiable Instruments Act, 1881. Earlier in June 2015, Union Cabinet had recommended promulgation of this ordinance to the President. The ordinance will help to tackle issues related to cheque bounce cases and allow filing of cheque bounce case at the place where the cheque was presented for clearance and not at the place of issue. It will benefit around 18 lakh people facing cheque bounce cases across the country.



### ***Sunil Chhetri becomes first Indian footballer to score 50 international goals***



Sunil Chhetri has become the first Indian footballer to score 50 international goals. He achieved this feat in his 87th match i.e. during 2018 World Cup qualifying match between India and Guam. However, India lost this match to Guam by 1-2 goals. It was India's second successive defeat in the preliminary joint qualification second round. Earlier India had lost their first match against Oman

### ***Snapdeal acquires mobility solutions company Letsgomo Labs***

Domestic e-commerce giant Snapdeal has acquired Gurgaon based mobility solutions company Letsgomo Labs. With this acquisition Letsgomo team will become part of Snapdeal. It will help to strengthen Snapdeal position in the m-commerce domain by further strengthen its mobile technology capabilities.



### ***India loses poultry case against United States at WTO***



India has lost a poultry case against United States at World Trade Organization (WTO) after WTO's Dispute Settlement Board (DSB) ruled that India's ban on import of poultry meat, eggs and live pigs from US is inconsistent with the international norms.

## ***Finance Minister Arun Jaitley inaugurates New Bank Note Paper Line unit in Hoshangabad, Madhya Pradesh***

Union FINANCE Minister Arun Jaitley inaugurated the New Bank Note Paper Line unit of 6000 metric ton capacity at Security Paper Mill in Hoshangabad in Madhya Pradesh. He also flagged off the first consignment of one thousand rupee bank notes made indigenously from this paper mill to the CURRENCY Note Press Nasik.

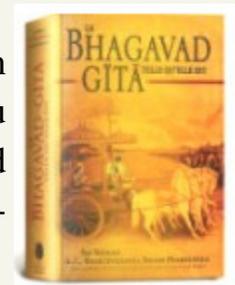
## ***RBI lowers repo rate to 7.25 per cent***



Reserve Bank of India (RBI) has reduced the policy repo rate under the liquidity adjustment facility (LAF) by 25 basis points from 7.5 per cent to 7.25 per cent with immediate effect.

## ***First translated version of Hindu scripture Bhagavad Gita released in China***

Translated Chinese version of Bhagavad Gita, a sacred ancient Indian scripture was released in China. This is the first a well-known Hindu ancient religious text was published in China. The book was released by Indian Ambassador to China Ashok K Kantha during an international yoga conference.



## ***Case lodged against Nestle India in UP on its product Maggi***



A case was lodged in Barabanki court in Uttar Pradesh against Nestle India over inadequate safety standards of its product Maggi. Earlier, Uttar Pradesh Food Safety and Drug Administration (UP FDA) had asked Nestle India to withdraw a batch of Maggi noodles from the MARKET after they had found that it contained high level of lead and Monosodium glutamate (MSG), a taste enhancer.

**THE BYTE**

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**JAVA**

JAVA with **ANDROID**  
JAVA on **CLOUD**



**.NET** with **CLOUD**

**PHP**

PHP on **CLOUD**

**Embedded** SYSTEM  
**EMBDROID**  
(Integrating-Embedded & Android)

**VLSI**  
**TECHNOLOGY**

**ROBOTICS**

**SQT**

WITH QTP, QC, LR  
DATABASE TESTING

**MATLAB**

**ORACLE**

10g Developer / 10g DBA  
Oracle Apps R12

**ANDROID**  
**IPHONE**



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AMIT KR. GAUTAM,  
FACULTY, CSE

*FROM THE EDITORS  
DESK.....*



LIPIKA GOEL  
FACULTY, CSE



*Dear Readers,*

*It gives us great pride to present to you all the ninth edition of our departmental magazine, THE BYTE. It is good to see that students have utilized this opportunity and showcased their talent.*

*THE BYTE is not only a literary outlet but is means to capture and commemorate the technical ,placement , current news & excitement that we have had at IMSEC and specifically in our department during the course of this month. The magazine is all about students from all over the CSE department coming together as a team.*

*Our deepest gratitude goes to every individual who guided us throughout this wonderful journey. We would also like to thank our entire team who work diligently every step of the way to ensure that THE BYTE becomes a reality. We hope, that you, or reader have delightful experience perusing through every page and would greatly appreciate your feedback.*

*.....From the Editors*