
December2015
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An e-Magazine of CSE Department of IMSEC Ghaziabad
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ISSUE XVI DECEMBER 2015

Articles

INTOLERANCE

Written By : Mr. Mukesh Kr. Singh & Mr. Vivek Jain
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It was the endeavours of the french people that the concept of liberty, equality and fraternity evolved.After the french revolution France was the first nation who inserted these words in their constitution.Later on, every sovereign, independent and democratic country in the world, implemented these words as the fundamentals of their respective constitution.

The pillars of our constitution have also been constructed,keeping these words in our mind.They are the foundation of our constitution, simultaneously they have been made the basic principle of our sacred constitution that is beyond the concept of removal .Even to amend these words,the consent of supreme court and majority in parliament is necessary.Our constitution envisages freedom of thought ,expression, choice etc under the concept of liberty with some restrictions.This means that in our democratic society these rights are not absolute. It means that at the time of chaos,riots,curfew,war and some other disturbances the government is authorised to impose certain restriction on these rights in the interest of maintaining law & order, peace and tranquillity in our country.

India's diversity is well known. It has multiple religions, linguistic groups and different socio economic groups and they all are living here amicably.But due to vast diversity the faith and belief of the people differ with one another.This creates suspicion in their mind that some particular group of our society is encroaching or attempting to impose their own culture and tradition that leads towards the differences and plays an important role in growing intolerance.

India, being a secular nation, it is not expected that any group ,society or right wing organization hurt the sentiments of any other segments of our society . Hurting sentiments or imposing restriction on these rights either by state or right wing organization is against the core values of our constitution and such type of restrictions can not be tolerated. In such circumstances society must oppose such restrictions.

Now a days, in our country there are intense public debate over growing intolerance. The debate on intolerance got momentum after the assassination of the rationalist Professor M.M. Kalburgi and the lynching of md. Akhlaq by a mob in Dadari, throwing of ink on Sudhindra Kulkarni for organizing the book release of a Pakistani author and this debate culminated after the award wapsi of various writers, movies directors, social activists etc. In our society such instances should not be allowed because people have been given the right to thought freely, express their choices,their views which is provided by our holy constitution to every citizen of our nation . It is the responsibility of the state to provide space for the thinkers, intellectuals,rationalists and even a common man for their choice.

The major problem arises when people don't know about the intolerance.what is intolerance all about, what constitute intolerance and what type of act hurt sentiments of any social group?.what is the definition of intolerance? So, our attention should be on making of a concrete definition of intolerance and acquaint the people wih that.The debate must be on Whether we should follow traditional values of our society or follow logical and scientific approach.Our principles,thoughts must be balanced so that neither it hurt religious feelings of our society nor it should be a hindrance in our development. It must be beneficial for the society. Meanwhile, it must be realized that freedom of expression will continue to remain under seize unless all groups of our society accept that people can have different opinions and beliefs in a country.

TRAI for effective implementation of BharatNet

Telecom regulator TRAI said it was for the effective implementation of BharatNet, for which it had floated a consultation paper whose recommendations will be available by next month.

"BharatNet should not have the same fate as National Optical Fibre Network (NOFN) which did not take off ultimately.

"TRAI has floated a consultation paper and the recommendations are expected by next month," Telecom Regulatory Authority of India (TRAI) chairman RS Sharma told reporters on the sidelines of Infocom seminar here.

He said TRAI favoured a Build-Operate-Transfer (BoT) model for the private sector's involvement in both construction of the network and providing services.

BharatNet envisages connecting every panchayat through a fibre network and offering multiple services online.

The cost for rolling out BharatNet would be USD 70 billion, Sharma said, adding that NOFN failed because no work was done on designing the programme beforehand.

"Design is extremely important, then things succeed. Also, aligning the interest of all stakeholders should be taken care of. TRAI is trying to put these principles in place," Sharma told the seminar.

Regarding Aadhar, he said it was a digital infrastructure which India can be proud of.

Aadhar could be plugged into any system like banking, PDS and others, and has the potential to provide end-to-end digital transactions, Sharma added.

"You don't have to be an IITian to build a good startup"

During an official visits to Singapore in 2012, Kumar Abhishek heard that question first. "Why do Indian shopkeepers give toffees instead of coins?" His Singaporean colleagues were curious. "This doesn't happen anywhere else in the world. Is it because there is a real shortage of coins in India? Or, are they trying to make money of it?"

Abhishek had no answer. But he was determined to find a solution for the coin shortage in India once he returned. He decided to quit his job in Finacle, the core banking technology service of Infosys, and create a startup to solve the problem.

He took his brother-in-law Vivek Kumar Singh — who had just graduated as a chartered accountant along for financial expertise. They met many people in the payment space, but nobody knew the cause for the problem. "The figures we got from RBI were shocking," Singh says. "Every coin that RBI produces is safely kept by customers at home. Everyone takes coins from vendors and doesn't give them back. RBI said they could double or triple the production of coins, but it wouldn't help," recollects Singh.

That's when the duo decided to create a product that would ease the digital transfer of money from one person to another without using external hardware. "Giving electronic data capture (EDC) machines to all the merchants in India is impossible because of the legal constraints. Then came mobile wallet technology. But it has its own limitation, because you have to share your phone number with the vendor and wait for one-time passwords," Singh says.

They knew the answer was the mobile phone. But how to use it effectively was the question. "We knew we had to use a system available in both Apple 6 and Nokia 1100 so that everyone in India could use it. Apparently, speaker and microphone are the only technology shared by all phones worldwide. We realized sound is the solution to our problem," Abhishek recollects.

That was the beginning of ToneTag. Abhishekh worked with sound scientists in the Netherlands to develop the prototypes, while Singh completed the legal formalities with RBI. The company was created in Bengaluru in 2013.

Tone Tag uses sound waves to bring the same convenience of contactless payments to any mobile device, including feature phones, and doesn't require any capital investment in existing infrastructure. For example, a customer can make a payment to the merchant by just making a beep sound from the app. The sound wave creates a virtual handshake between the two phones and transfers the money from the customer's bank account to the merchant's.

"ToneTag enables an EDC machine on phones. The transaction can be completed even without internet access. Even a chai-wala can accept digital payment. And he has no reason to worry when he'll get the money into his bank account," says Singh.

The path to success was no cakewalk for them. First, they had objections from their families. "Kumar had just got married and everyone told him not to take a risk. I was just out of college. My relatives told me to get a job before doing a startup. But my sister supported us. She was then working in a tech firm in the Netherlands. She said her job would help if anything went wrong in our venture," Singh says.

We had challenges while meeting investors too, he recollects. "They were reluctant to see us because we were not from an IIT. But, they were all impressed when we briefed them about our technology. We proved it is not necessary to be an IITian to thrive in the startup space."

At one point of time, the company got almost exhausted financially. "We had nightmares, thinking that could be the last month of ToneTag. But Ram Sellaratnam, Kumar's senior in Infosys, found our venture intriguing. He was heading Infosys' cloud and big data business in Europe then. He quit his job, angel funded our venture and joined us as the chief operating officer," he adds.

Varun, 34, is from Varanasi. He had worked in IBM and Mindtree before joining Infosys. Kumar, 27, is from Bokaro. The team's next mission is to develop an invisible technology so that you don't even have to pick up your phone to pay. The cash will automatically transfer using ultrasonic communication.

Time Person Of The Year

3 Indians Nominated!

BY : ADITYA BAGHEL ·

Prime Minister Narendra Modi, Reliance Industries ChairmanMukesh Ambani and Google's India-born CEO Sundar Pichai are among over 50 global leaders, business chiefs and pop icons named as contenders by Time magazine for its annual 'Person of the Year' honour.

The Time Person of the Year 2015 will be announced next month and the publication said the title will be bestowed on the person who "most influenced the news this year for better or worse."

Time said Modi has "encouraged foreign direct investment in India and is trying to modernise the world's largest democracy", but added that the Indian leader has also "faced controversy over what some see as right-wing extremism".

Modi was a contender for the honour last year also and while he was not chosen the Person of the Year by Time editors, he was named winner of the readers' poll, securing more than 16 per cent of the almost five million votes cast.

On Ambani, Time said the richest person in India is the chairman of Reliance Industries "which owns everything from telecom properties to the world's largest crude oil refinery".

Also among the contenders is Pichai.

"After 11 years at Google, most recently as co-founder Larry Page's right hand, Pichai assumed the tech giant's top job," Time said.

In a separate "Face-off" poll, Modi has been pitted against Jinping, while Ambani has been pitted against Nigerian President Muhammudu Buhari.

Time asked its readers to vote for the individual who they think should get the title of Person of the Year and the winner of the reader's choice poll will be announced next month before Time's editors choose the individual from the 58 candidates as the honouree.

Modi has so far got 1.3 per cent of the votes, the same as Pichai and Russian President Vladimir Putin.

Ambani has garnered a mere 0.2 per cent of the votes cast.

The other candidates in the fray for the Person of the Year title include US PresidentBarack Obama, French President Francois Hollande, Chinese President Xi Jinping, ISIS leader Abu Bakr al-Baghdadi, Democratic Presidential front runner Hillary Clinton, the refugees fleeing conflicts in Syria, Afghanistan and East and West Africa, Pakistani Nobel Peace Prize laureate Malala Yousafzai, Tesla head Elon Musk, AppleCEO Tim Cook and last year's winner Pope Francis.

From Mahatma Gandhi, Adolf Hitler, Elizabeth II to The Computer, Whistleblowers, The American Soldier and The Protester, Time has named a Person of the Year for the past nine decades.

Time said 2015 is filled with newsmakers who have defined the year.

THE BYTE

ISSUE XVI DECEMBER 2015

BY :
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THE BYTE
DEC 2015

Reusable Rocket : Return to Earth

The private spaceflight company Blue Origin just launched itself into the history books by successfully flying and landing a reusable rocket.

Powered by the company's own BE-3 engine, the rocket kicked off the launchpad yesterday (Nov. 23) at 11:21 a.m. Central Time, carrying the New Shepard space vehicle.

Shortly after liftoff, the rocket separated from the vehicle. In the past, a spent rocket would fall back to Earth like a stone, having completed its one and only flight. But Blue Origin's rocket didn't fall aimlessly back to Earth; instead, it was guided toward a landing pad, where it re-ignited its engines, hovered briefly above the ground and finally touched down softly on the pad, remaining upright and intact. This soft landing means the rocket can be used for more flights, which Blue Origin and other companies have said will significantly drive down the cost of spaceflight.

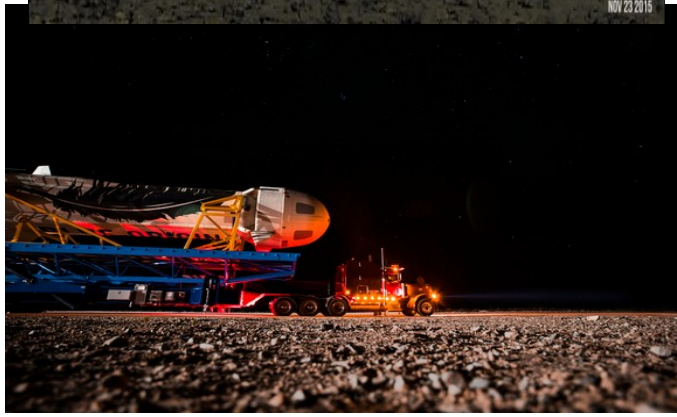
No other agency or company has successfully landed a reusable rocket on the ground after flying the vehicle to space.

"Rockets have always been expendable. Not anymore," stated a blog post on the company's website, written by founder Jeff Bezos, the billionaire who also founded Amazon.com. "Now safely tucked away at our launch site in West Texas is the rarest of beasts, a used rocket. This flight validates our vehicle architecture and design."

Blue Origin's New Shepard capsule reached a maximum altitude of 329,839 feet (100.5 kilometers) and a speed of Mach 3.72, meaning 3.72 times the speed of sound, or about 2,854 mph (4,593 km/h), according a press release

Blue Origin's New Shepard capsule reached a maximum altitude of 329,839 feet (100.5 kilometers) and a speed of Mach 3.72, meaning 3.72 times the speed of sound, or about 2,854 mph (4,593 km/h), according a press release Finally, the BE-3 engine re-ignited "to slow the booster as the landing gear deployed and the vehicle descended the last 100 feet [30 m] at 4.4 mph [7.1 km/h] to touch down on the pad."

The New Shepard crew vehicle also landed safely, guided down to Earth by parachutes.



Blue Origin has been somewhat secretive about the progress of its spaceflight vehicles and rockets; the company typically doesn't announce test flights until they are already completed. Blue Origin intends to use the New Shepard vehicle for suborbital space tourism and as a microgravity science laboratory. (Suborbital means the vehicle can fly only to a lower altitude than is necessary to start orbiting the Earth — it would have to travel higher, and faster, to reach altitudes achieved by orbiting satellites or the International Space Station, for example.)

The company is also working on an orbital vehicle, which has been nicknamed "Very Big Brother."

New Wi-fi technology transmits both energy and Internet from one router

THE BYTE
DEC 2015

These days we're surrounded by Wi-Fi pretty much everywhere we go, but are we leaving a lot of the potential of this technology untapped?

Yes, according to a team of engineers at the University of Washington, who have developed a new system called Power Over Wi-Fi (PoWiFi), which can power devices within a wireless network using the inherent energy of Wi-Fi signals.

"For the first time we've shown that you can use Wi-Fi devices to power the sensors in cameras and other devices," said Vamsi Talla, an electrical engineer and lead author of the study. "We also made a system that can co-exist as a Wi-Fi router and a power source — it doesn't degrade the quality of your Wi-Fi signals while it's powering devices."

The system, which was first announced by the researchers earlier in the year, is set to be presented in a final paper next month at the Association for Computing Machinery's CoNEXT 2015 conference in Germany, with the technology expected to hold considerable appeal for anybody who likes electronic gadgets (that's you) and uses Wi-Fi (also you). While the idea of electricity flowing wirelessly through the air might sound more than a little alarming, the minimal amounts of current generated by PoWiFi offer no cause for concern. They could, however, be ideal for meeting the needs of low-power sensors in small devices like cameras and fitness trackers (but not smartphones and more powerful equipment, which require more juice).

In developing PoWiFi, the researchers found that the peak energy contained in regular Wi-Fi signals is sufficient to charge or run these kinds of low-power gadgets, but due to the way the signals are only sent intermittently, energy leakage inevitably occurs. By optimising a router to send out additional power packets on Wi-Fi channels not currently in use – and integrating sensors into low-power devices such that they can feed on the signals – the team was able to make the signal strong and consistent enough to deliver power effectively.

In testing, the researchers showed that PoWiFi distributed enough charge to wirelessly run a low-power VGA camera from more than 5 metres away. It also recharged the battery of a Jawbone Up24 wearable fitness tracker from no charge to 41 percent in 2.5 hours.

In addition to measuring the system's charging abilities, the researchers also tested the impact of running PoWiFi on the router's regular role: delivering Internet access on a local network. In testing in six homes, users typically didn't notice any slower than usual performance when it came to loading web pages or streaming content from the web (which is good, because that would be a deal-breaker).

"In the future, PoWiFi could leverage technology power scaling to further improve the efficiency of the system to enable operation at larger distances and power numerous more sensors and applications," said Shyam Gollakota, a co-author of the study.

While the relatively meagre amounts of power delivered by PoWiFi means it can't compare with a standard wired power cable, future refinements to the technology – not to mention the sheer convenience of having all your small devices charge wirelessly around you – could see PoWiFi make one heck of an impact if it gets a consumer release. Here's hoping!

WHY YOUR FUTURE INTERNET COULD COME THROUGH YOUR LIGHTBULB

THE BYTE DEC2015

Source : published by The Conversation

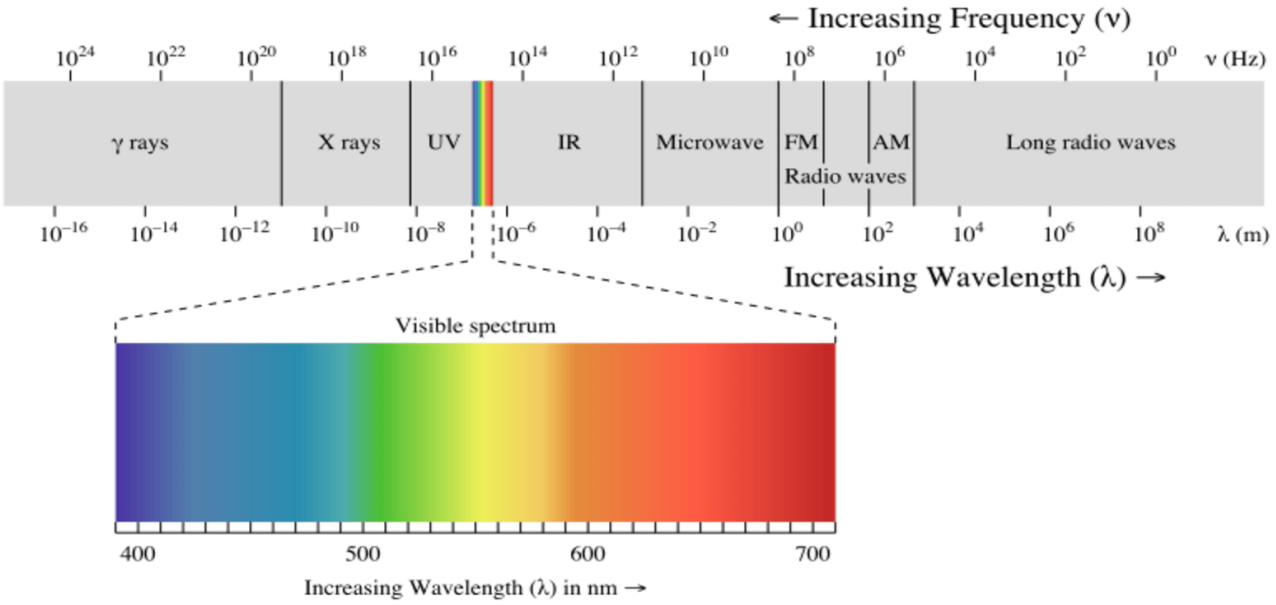
The tungsten lightbulb has served well over the century or so since it was introduced, but its days are numbered now with the arrival of LED lighting, which consume a tenth of the power of incandescent bulbs and have a lifespan 30 times longer. Potential uses of LEDs are not limited to illumination: smart lighting products are emerging that can offer various additional features, including linking your laptop or smartphone to the internet. Move over Wi-Fi, Li-Fi is here.

Wireless communication with visible light is, in fact, not a new idea. Everyone knows about using smoke signals on a desert island to try to capture attention. Perhaps less well known is that in the time of Napoleon much of Europe was covered with optical telegraphs, otherwise known as the semaphore. Alexander Graham Bell, inventor of the telephone, actually regarded the photophone as his most important invention, a device that used a mirror to relay the vibrations caused by speech over a beam of light.

In the same way that interrupting (modulating) a plume of smoke can break it into parts that form an SOS message in Morse code, so visible light communications - Li-Fi - rapidly modulates the intensity of a light to encode data as binary zeros and ones. But this doesn't mean that Li-Fi transceivers will flicker; the modulation will be too fast for the eye to see. Wi-Fi vs Li-Fi

The enormous and growing user demand for wireless data is placing huge pressure on existing Wi-Fi technology, which uses the radio and microwave frequency spectrum. With exponential growth of mobile devices, by 2019 more than ten billion devices are expected to exchange around 35 quintillion (1018) bytes of information each month. This won't be possible using existing wireless technology due to frequency congestion and electromagnetic interference. The problem is most acutely felt in public spaces in urban areas, where many users try to share the limited capacity available from Wi-Fi transmitters or mobile phone network cell towers.

A fundamental communications principle is that the maximum data transfer possible scales with the electromagnetic frequency bandwidth available. The radio frequency spectrum is heavily used and regulated, and there just isn't enough additional space to satisfy the growth in demand. So Li-Fi has the potential to replace radio and microwave frequency Wi-Fi.



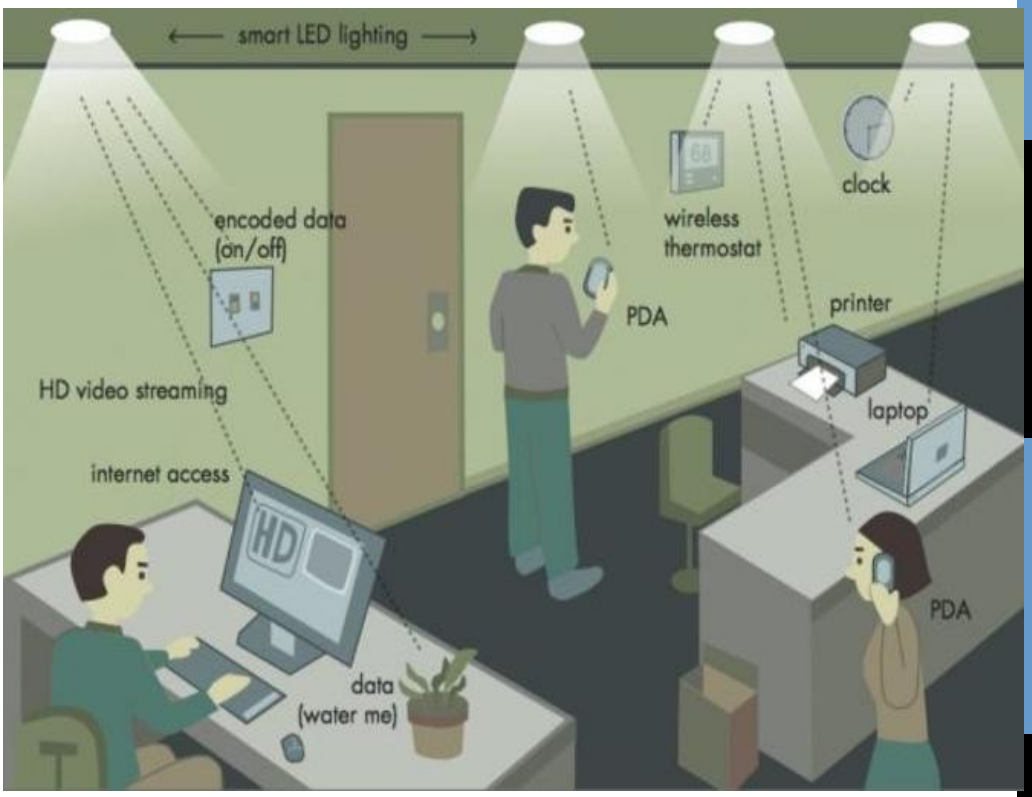
Visible light spectrum has huge, unused and unregulated capacity for communications. The light from LEDs can be modulated very quickly: data rates as high as 3.5Gb/s using a single blue LED or 1.7Gb/s with white light have been demonstrated by researchers in our EPSRC-funded Ultra-Parallel Visible Light Communications programme.

Unlike Wi-Fi transmitters, optical communications are well-confined inside the walls of a room. This confinement might seem to be a limitation for Li-Fi, but it offers the key advantage that it is very secure: if the curtains are drawn then nobody outside the room can eavesdrop. An array of light sources in the ceiling could send different signals to different users. The transmitter power can be localised, more efficiently used and won't interfere with adjacent Li-Fi sources. Indeed the lack of radio frequency interference is another advantage over Wi-Fi. Visible light communications is intrinsically safe, and could end the need for travellers to switch devices to flight mode.

A further advantage of Li-Fi is that it can use existing power lines as LED lighting so no new infrastructure is needed.The Internet of things is an ambitious vision of a hyper-connected world of objects autonomously communicating with each other. For example, your fridge might inform your smartphone that you have run out of milk, and even order it for you. Sensors in your car will directly alert you though your smartphone that your tyres are too worn or have low pressure.

Given the number of 'things' that can be fitted with sensors and controllers then network-enabled and connected, the bandwidth needed for all these devices to communicate is vast. Industry monitor Gartner predicts that 25 billion such devices will be connected by 2020, but given that most of this information needs only to be transferred a short distance, Li-Fi is an attractive - and perhaps the only - solution to making this a reality.

Several companies are already offering products for visible light communica-



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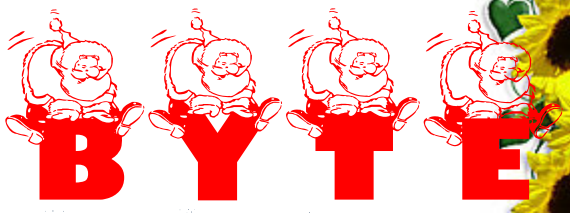


ISSUE XVI DECEMBER 2015

LITERARY

CLEAN INDIA GREEN INDIA

BY : AMISHA TOMER
3RD YR CS1

As the name itself suggests, a clean and healthy INDIA which is free from all pollutions, dust, waste and garbage. An INDIA which is full of greenery is the desire of all of us although it seems quite impossible for us to attain that if we look at the current scenario. In the rapid rat race for development, we have forgotten that it is our duty to give back to the nature twice as much as we take. A single tree suffices so many of our needs but how many of us realise that **one fine day when this resource of trees finish their self less service to us, we will be left empty handed staring into a blank future.**

If we look at the cleanliness and greenery of the other developed countries, we find that in those countries such as Japan, Australia etc., the credit for a pollution free environment goes not only to the government but also to the residents of the nation. It is the combined effort of the people and the government in making those countries green and clean but in India what usually is practised is grilling the government again and again and criticizing the system but we Indians never admit that it is we who are responsible for the unhygienic conditions prevailing all around us. Progress is very much needed for the evolution of mankind but what we need to look into is the pace of this progress. Being fast is indeed a necessity to keep yourself abreast with changing times but fighting a major issue like Global Warming by taking small steps like planting trees and raising awareness is also equally important.

Major issues like deforestation, Urbanization, industrialization and overpopulation, all are adversely affecting to destroy the greenery and to make our surroundings unclean.

It is because of the overpopulation, lack of family planning that more and more space is needed for accommodation which is resulting in the establishment of Chawls and Basti, slum areas which are creating Unhygienic conditions. Also land needs to be cleared to meet up the demands for more houses, educational institutes, industries and factories which results in the loss of forest cover area of the country because of which major issues like greenhouse effect and global warming is caused. They are constantly increasing temperature of the surroundings and also keeping the atmosphere polluted.

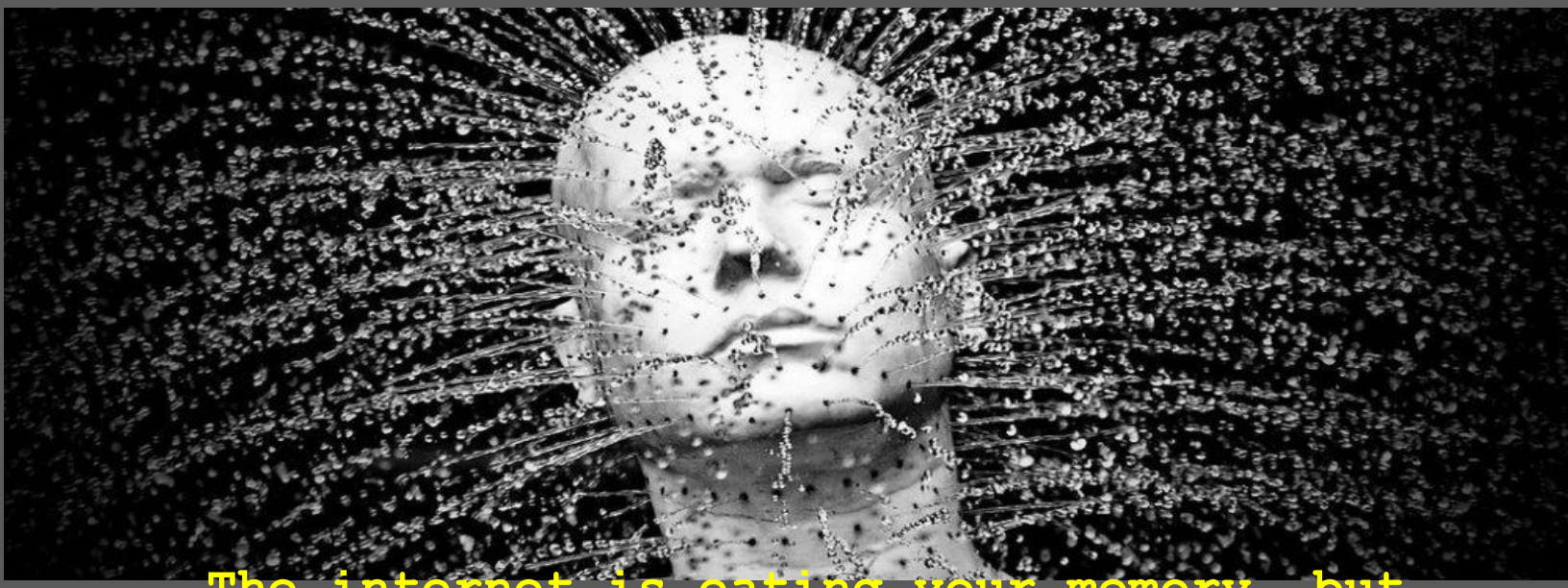
Wastes from factories and industries, be it solid or liquid waste is being dumped on land and water bodies creating pollution.lot of paper is being wasted daily to generate which many trees are being cut out .dumping of the household wastes near road side is also contributing to unclean surroundings. People walking on the road do not use dustbins and litter here and there causing pollution. And there are endless list of reasons of pollution we human beings are causing.

So instead of blaming it all on the government, we need to take an initiative on our own. ONE MAN CAN BRING A CHANGE and its live example is Mr. Narendra Modi SWACCHA BHARAT ABHYAAN. If each one of us will contribute a bit then days are not far when India will be a clean and a green country. We need to be self aware and make others aware too. Study of environmental education, implementation of 4 R's, recycling of waste, waste segregation, Deforestation and reforestation can be the small steps from our side. To conclude with, I would like to say that to make a clean and green India, people are required to join hands with the government, only government cannot do anything. Government is trying their bit , we need to help and cooperate, there are rules, regulations and acts by the government but their good implementation is a must. We people need to maintain hygiene and cleanliness in our surroundings then only a change will occur in the nation.

CURSING THE FOOT, FOR THE PATH TAKEN

BY: RISHABH PRABHU SRIVASTAVA
B.Tech 2nd YEAR
CS-3

cursing the foot, for the path taken,
holding the hands, that went shaken,
unseen, horrible face, the way has shown,
every timid smile, every hope has blown.
how to rise up, i dont know,
but there is some path, still to show,
walking as in a deadly dream, i crawl,
closing my ears, as the nature enchants growl.
boosting my steps, I take a leap.
racing are my heartbeats, but the tiniest hope i keep,
may or may not I will be out of this place,
as the road seems to somehow displace,
I struggle, strive, whack my legs on the road,
and the way keep on mocking with an evil load.



The internet is eating your memory, but something better is taking its place

Source : This article was written originally published by The Conversation.

In the years since the world started going digital, one of the big changes has been that we don't need to remember very much. Why risk forgetting a partner's birthday or a dinner date with a close friend when you can commit the details to your computer, laptop, smartphone or tablet and get a reminder at the appropriate time?

Paul McCartney gave a useful insight into this in an interview over the summer. He claimed that back in the 1960s *The Beatles* may have written dozens of songs that were never released because he and John Lennon would forget the songs the following morning.

"We would write a song and just have to remember it. And there was always the risk that we'd just forget it. If the next morning you couldn't remember it - it was gone."How different to the way he records now then, when he can "form the thing, have it all finished, remember it all, go in pretty quickly and record it".

With technology now well ingratiated into our everyday life, researchers have been investigating the lasting impact that it is having on the way that we learn and remember information. Some research has suggested that our reliance on technology and the internet is leading to "digital amnesia", where individuals are no longer able to retain information as a result of storing information on a digital device.

In one study, for example, 1,000 consumers aged 16 and over were asked about their use of technology. It found that 91 percent of them depended on the internet and digital devices as a tool for remembering. In another survey of 6000 people, the same study found that 71 percent of people could not remember their children's phone numbers and 57 percent could not remember their work phone number. This suggests that relying on digital devices to remember information is impairing our own memory systems.

The upgrade

But before we mourn this apparent loss of memory, more recent studies suggest that we may be adapting. One such study from 2011 conducted a series of experiments looking at how our memories rely on computers. In one of them, participants were asked to type a series of statements, such as "an ostrich's eye is bigger than its brain".

Half of them were told that their documents would be saved, and half were told that they would not. Everyone was then tested to see if they could remember what they had typed. Those who had been told their work would be saved were significantly poorer at remembering the information.

In another experiment, participants were asked to type a series of statements that would be saved in specific folders. They were then asked to recall the statements and the folders in which the files were located. Overall, they were better at recalling the file locations than the statements. The conclusion from the two experiments? Technology has changed the way we organize information so that we only remember details which are no longer available, and prioritise the location of information over the content itself.

Group mind

This idea that individuals prioritise where information is located has led some researchers to propose that digital devices and the internet have become a form of transitive memory. This idea, which dates back to the 1980s, refers to a group memory that is superior to that of any individual. According to this account, individuals can collectively store and distribute information using a shared store of knowledge. This store of knowledge means that individuals can access details that they may not know themselves by knowing that another individual remembers it, thus enhancing what information is available to them by communicating with other people. In the same way, individuals a transitive memory with the internet and rely on it for information by focusing on where details are located rather than the details themselves.

More recent research has extended this line of work and found that saving information on a computer not only changes how our brains interact with it, but also makes it easier to learn new information. In a study published last year, the participants were presented with two files that each contained a list of words. They were asked to memorize both lists. Half of the participants were asked to save the first file before moving on to the next list, while the others had to close it without saving.

The experiment revealed that the participants recalled significantly more information from the second file if they had saved the previous file. This suggests that by saving or 'offloading' information on to a computer, we are freeing up cognitive resources that enable us to memories and recall new information instead.

In sum, anyone worrying that technology is wrecking one of our most important abilities should take some reassurance from these findings. It doesn't necessarily mean that there is no cause for concern: for instance McCartney said in the same interview that the songs in the 1960s that did make it to the recording studio were the most memorable ones. So it is possible that the lack of technology made *The Beatles* better songwriters. But it may be that just as oral storytelling was usurped by the written word, having digital devices to outsource our memories means that it is no longer necessary for us to try to remember everything. And if we can now remember more with a little help from our technology friends, that is arguably a great step forward. Rather than worrying about what we have lost, perhaps we need to focus on what we have gained.

THE BYTE

ISSUE XVI DECEMBER 2015

HOW TO SECURE YOUR LAPTOP ????

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Your laptop is probably the most expensive portable device you own. What makes it even more valuable is the data personal and official that you store on it. But, if you carry your notebook PC on work trips and holidays, there's a chance that you might misplace it or worse, it could get stolen. Thankfully, there's useful antitheft technology that could not only prevent someone from stealing it, but could even help you track your laptop if it's stolen and also keep your sensitive data safe from prying eyes.

KENSINGTON LOCK

If you look at the side of your laptop, you might find a little slot that's called the Kensington Lock (usually marked with a padlock sign). This slot is a metalreinforced hole using which you can tether your laptop to a table or other immovable furniture.

To do this, you will require the Kensington Lock, which can be bought from online stores for as less as `200. The lock comprises a metal anchor attached to a metal cable with a loop at the end.

To secure your laptop, all you have to do is loop the cable around a heavy or immovable object like a table leg, and push the metal anchor into the laptop's slot. This anchor can then be locked into place with a key or a combination lock.

The Kensington Lock is useful when it comes to protecting your device from thefts at locations like airports, public libraries, hotel lobbies and coffee shops.It is the first step in protecting your gear when you leave it unattended.

TRACK YOUR LAPTOP

In the event that your laptop is stolen or misplaced, it would help if you had a `tracking' software installed on your computer. And the cheapest way to do this is to install Prey a free tool from the Prey Project.

First, go to preyproject.com, download and install the software on your laptop. This utility is available for Windows, Mac OS X, and even UbuntuDebian machines.

After installation, the software will require you to create a free account by registering with an email address and password.

Once you've logged in, Prey will immediately be up and running on your computer.

Now, in case you've lost or misplaced this machine, simply go to preyproject.com from another PC,and log in with your account details.

You will be taken to a web page that displays your lost laptop's location on a map (see screenshot). From this page, you can indicate that your laptop is missing and Prey automatically generates reports on its whereabouts. The dashboard even lets you trigger a 30second alarm on your device (provided its volume control is on); send a message to the person using your laptop asking them to return it to you (if it has been misplaced), and even remotely lock the laptop with a password.

A free account lets you register and track up to three devices, but if you opt for a paid Pro account, Prey lets you track anything between 10 to 500 devices (ideal for corporates). It also promises you accelerated tracking, priority support, as well as the option to delete files remotely. It should be noted, that in order for your laptop to be tracked, it will need to be switched on and connected to the internet.

Alternatively , you could visit http:www.lockittight.com and try the free tool that's available for laptops running Windows XP, Vista, Win 7 and 8. Its installation procedure is similar to Prey and while its user interface is not as intuitive, it packs in extra features such as letting you remotely use your laptop's camera to shoot a picture of the person using the device, capture a screenshot of what it is displaying, access browser history , and more from its Settings option.

ENCRYPTING DATA

Tracking your stolen laptop is one thing, protecting the data stored on it is quite another. File encryption to the rescue. To safeguard your sensitive data, you should make it a practice to encrypt all your important files on the laptop.This will make it tougher for an intruder to gain access to the data on the hard drive.

The simplest way to encrypt files and folders is with the Encrypting File System (EFS) in Windows. You will be able use this feature if your laptop runs on Windows XP7 Professional, Vista Business, or Windows 88.110 Pro. This encryption technology is linked to your computer login, so anyone with access to your computer's password will have access to the encrypted files. It is therefore advised that you create a guest account for other users who might be using your machine if you don't want them to access your confidential information.

To encrypt...

Rightclick

the file or folder you want to protect and click Properties. In the dialog box that appears. Select the General tab, and click on the Advanced button. This will open the Advanced Attributes dialog box. Here, select the Encrypt contents to secure data check box.

Click OK twice to return to the file folder you have just encrypted. You will now be presented with the Confirm Attribute Changes dialog box. Choose between Apply changes to this folder only or Apply changes to this folder, subfolders and files. The latter is selected by default.

Click OK.

Windows will start encrypting the file or the folder con tents. This will take some time as it depends on the amount of data it has to encrypt. The file or folder name will now be displayed in green, so you know the contents are protected. Adding new files into an encrypted folder is a simple drag and drop affair. The contents will only be accessible when you login to Windows with your user name and password. Alternatively, you can use the free VeraCrypt tool available for Windows, Mac OS X and Linux platforms from veracrypt.codeplex.com.

For a step by step

guide on how to use the tool, go to veracrypt.codeplex.com documentation and click on Beginner's Tutorial.Note: Before your encrypt something important, do a trial run of this tool with dummy files. This will help you understand the process better. If you're going to use this tool with official files, please seek the help of your office system administrator. That said, the documentation for VeraCrypt complete with screenshots is extensive, and very simple to follow.

Also, after adding files to an encrypted VeraCrypt volume, the original unencrypted files should be moved to an external hard drive or deleted altogether. When you use Windows EFS to protect your files, an "encryption certificate" and a key will be created in the system. You should save a copy of these credentials in case you have to reinstall Windows.To know how, visit:

windows.microsoft.comeninwindowsbackupefscertificate

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NIELIT JoB

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Closing Date 14.01.2016

VACANCIES TO BE FILLED UP ON DIRECT RECRUITMENT /ABSORPTION

National Institute of Electronics and Information Technology (NIELIT) (erstwhile DOEACC Society) is a Scientific Society with Department of Electronics and Information Technology (DeitY), Ministry of Communications and Information Technology, Govt. of India, engaged in human resource development and related activities like skill development, capacity building, project execution in the areas of Information Technology y, Electronics, ESDM, e-Governance, cyber crime etc. It is engaged in formal and non-formal education in the above areas beside project execution. It is also one of the National Examination bodies, which accredits institutions / organizations for conducting courses in IT and Electronics in non-formal sector.

NIELIT is growing at a fast pace and at present has Centres at 31 locations in Agartala, Aizawl, Ajmer, Aurangabad, Calicut, Chandigarh, Chennai, Chuchuyimlang, Churachandpur, Delhi, Gangtok, Gorakhpur, Guwahati, Itanagar, Patna, Srinagar, Imphal, Jammu, Jorhat, Kohima, Kolkata, Leh, Lucknow, Lunglei, Tezpur, Ranchi, Senapati, Shillong, Shimla and Silchar with the Headquarters at Delhi; and is also coming up with new Centres in Ropar, Srikakulam, Tezu, Passighat , Tura, Dibrugarh Muzaffarpur , Buxar and Daman.

NIELIT is looking for qualified, experienced and dynamic personnel well versed with latest technology for various positions in its Headquarters and different Centres/Extension Centres spread all over the country. The vacancies are in NIELIT Centres / Extension Centres at different location like Delhi, Kolkata (West Bengal), Aurangabad (Maharashtra) Ajmer (Rajasthan), Chennai (Tamilnadu), Patna (Bihar), Gorakhpur (Uttar Pradesh), Jammu & Srinagar (Jammu & Kashmir), Chandigarh (UT), Calicut (Kerela), Aizawl & Lunglei (Mizoram), Imphal (Manipur), Guwahati/Tezpur(Assam), Shillong (Meghalaya), Agartala (Tripura), Itanagar (Arunachal Pradesh) Gangtok (Sikkim) and Kohima (Nagaland). However, the incumbents selected may be posted in any of the Centres /Exetension Centres of NIELIT across India as per the requirement and decision of the management. Applications are invited from eligible and qualified Persons for the positions listed below:

Sl. No	Name of the post	No. of Posts	Scale of Pay	Educational/Professional Qualifications and Experience for Direct Recruitment	Educational/Professional Qualification and Experience for Permanent Absorption	Upper Age Limit for Direct Recruitment	Mode of Recruitment
17	Scientist 'B' GROUP -A	Total=20 (UR=14 SC=01 OBC=05)	PB3: 15600-39100 GP: 5400	**Essential Qualification:** a) Regular BE/ B.Tech in Computer Science or Computer Engg./Information Technology/ Electrical and Electronics Engg/ Electronics &Instrumentation /Electronics/ Electronics & Communications or equivalent with First Class from a recognized University/Institution **OR** b)M.Sc (Electronics/ Applied Electronics /Physics) with First Class from a recognized University/ Institution **Experience:** Post qualification experience in relevant field Nil for a 1 year for (b)	**Essential Qualifications:** BE/B.Tech. in Computer Science or Computer Engg./Information Technology/Electrical and Electronics Engg/ Electronics &Instrumentation/ Electronics/ Electronics & Communications /M.Sc (Electronics/ Applied Electronics /Physics) or Equivalent* and having experience in the relevant field Employees of Central /State Govts. their attached /Subordinate/ Statutory offices /PSUs/Autonomous Bodies: i) holding analogous post on regular basis; **OR** ii) holding post on regular basis in the following Grade Pay: i)Grade Pay Rs. 4800/- : 02 years ii)Grade Pay Rs. 4600/-:03 years	Upto 30 Years (Relaxation as per GOI Rules)	Direct Recruitment / Absorption

Indian ARMY JoB

Indian Army jobs for SSC (Technical) in Anywhere in India. Last Date to apply: 08 Jan 2016
SSC (Technical)
Date of posting: 30 Nov 15
Eligibility : MSc (http://www.freshersworld.com/jobs/courses/msc-job-opportunities)(CS, Electronics), **BE/B.Tech (http://www.freshersworld.com/jobs/courses/be-btech-job-opportunities)**(Aero, Auto, Civil, CSE, ECE, Mechanical Engineering, Electrical, Electronics & Instrumentation)

Location : Anywhere in India

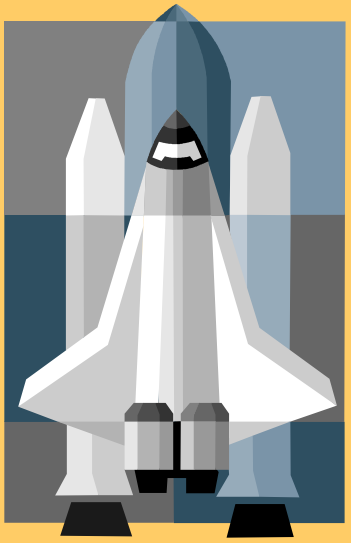
Last Date : 08 Jan 2016

Hiring Process : Written-test

Engineering Streams : Computer Sc & Engg/Computer Tech /InfoTech/ M.Sc(Computer Sc)

Equivalent Stream (AICTE Appd) : Computer Engg, Computer Science, Computer Science Engg, Computer, Science & Engg, Information Science & Engg



Current Affairs

Indian Railways has launched Vikalp scheme

Indian Railways has launched Vikalp scheme to facilitate waitlisted passengers to get an alternative train accommodation. The scheme has been launched on pilot basis in trains running on Delhi-Lucknow and Delhi-Jammu sectors for 6 months and option will be limited to Mail and Express trains. With this scheme, Indian Railways aim to achieve the twin objectives Providing confirmed accommodation to waitlisted passengers. Ensure optimal utilisation of available accommodation for these passengers. Under this scheme Waitlisted passengers will get confirmed accommodation in next alternative train if they opt for it while booking their tickets online. Once they opt for it passengers will get SMS alert on their mobile phone about getting confirmed accommodation in alternative train. No extra charges will be paid passenger to avail this scheme or any refund provided for the difference of fare. In the alternative train, the name of passenger who has been provided accommodation will not figure in the waitlisted charts of their original train. A separate list of passengers transferred in alternative train will be pasted along with the confirmed and waitlist charts.

Sania Mirza (India) and Martina Hingis (Switerzerland) has won the 2015 BNP Paribas WTA Finals Women's double category.

In the final match played in Singapore, the Indo-Swiss duo defeated Spanish pair of Garbine Muguruza and Carla Suarez Navarro by 6-0, 6-3 score. It overall ninth World Tennis Association (WTA) doubles titles won by the Indo-Swiss pair together in 2015 season so far. The duo earlier had won the Indian Wells Open, Miami Open, Charleston Opem, Wimbledon, US Open, Guangzhou Open, Wuhan Open and China Open. They also have secured 2015's WTA Year-End world number one ranking in Women's double category.

India was placed at 7th position in world's most valuable nation brands

India was placed at 7th position in world's most valuable nation brands report among the 100 assessed nations. It was revealed in recently released annual report compiled by Brand Finance.

Roger Federer wins 2015 Swiss Indoors Basel Title of Tennis

Roger Federer of Switzerland has won 2015 Swiss Indoors Basel Title of Tennis in men's single category played at Basel. In the final match, he defeated his old foe Rafael Nadal of Spain by 6-3, 5-7, 6-3 score. With this victory, Federer ended his three-and-a-half year drought against Nadal. It is Federer's seventh Basel trophy and overall 88th title of his career at the tour-level.

BrahMos missile successfully test-fired from INS Kochi

BrahMos supersonic cruise missile was successfully test fired from on board of recently inducted guided missile destroyer INS Kochi off the western coast. Test: It was overall 49th trial of the BrahMos missile. It successfully hit decommissioned target ship "Alleppey" which was stationed 290 km away after performing high-level and complex manoeuvres.

Ruling AKP wins 2015 general election of Turkey

Ruling Justice and Development Party (AKP) founded by President Recep Tayyip Erdogan has won a critical 2015 Parliamentary Election of Turkey. In this election AKP won 316 seats of total 550 members of the Grand National Assembly of the Parliament by securing 49.4 per cent of the votes. Main opposition Republican People's Party (CHP) won 134 by securing 25.4 per cent votes.

Tropical Cyclone Chapala hits Yemen triggering heavy floods

A rare tropical Cyclone Chapala has slammed into Yemen triggering heavy flooding and causing damage in coastal region of the war racked country. The cyclone made landfall in the south eastern provinces of Hadramawt and Shabwa along the Gulf of Aden coast of Yemen in Arabian Sea bringing winds of speed more than 100 kms per hour.

Surojit Chatterjee appointed as Senior Vice President of Flipkart

Homegrown e-commerce giant Flipkart has appointed Google's executive Surojit Chatterjee as Senior Vice President and Head of Consumer Experience and Growth. In the new role, he will be responsible for all Flipkart's consumer experience across desktop as well as mobile and will directly report to Chief Product Officer (CPO) of company Punit Soni. Prior to this appointment, Chatterjee for last 8 years was working at Google and his most recent post was the global head of Mobile Search Advertising and AdSense for Search (AFS).

Next Chief Justice of India: Justice T.S. Thakur

Justice T S Thakur (63) will be next Chief Justice of India. His name has been recommended by current CJI Justice Dattu. Current CJI Justice Dattu will retire on December 2, 2015. Presently, Justice Thakur is the senior most judge of the Supreme Court. He would be the 43rd CJI.

PM Narendra Modi ranks 9th in 2015 Forbes' World's Most Powerful Person

Indian Prime Minister Narendra Modi has emerged as World's ninth Most Powerful Person in the Forbes annual ranking of 73 persons list of 2015. The list gives the annual ranking of the World's 72 Most Powerful People on the basis of their financial resources, scope and use of power and the number of people they impact.

Union Government launches Three Gold Schemes

Prime Minister Narendra Modi launched three gold related scheme viz Gold Monetization Scheme (GMS), Sovereign Gold Bond Scheme (SGBS) and Indian Gold Coins (IGC). These ambitious schemes were launched to reduce the physical demand for gold and fish out 20,000 tonnes of the precious metal lying idle with households and institutions.

Scientists develop 3-D printing method to make embryonic stem cells

Scientists from China and United States have developed a 3-D printing method to produce highly uniform 'blocks' of embryonic stem cells. The method was developed by the researchers from Beijing based Tsinghua University (China) and Philadelphia based Drexel University (US). The new method used extrusion-deposition based 3-D printing technology to produce a grid-like 3-D (three dimensional) cell structure to grow embryoid body.

10 November: World Science Day

Every year 10 November is being observed as World Science Day (WSD) for Peace and Development to demonstrate the importance of science in our daily life The theme of 2015 WSD is Science for a Sustainable Future which has been chosen in line with 2030 Agenda for Sustainable Development approved by the United Nations (UN).

Communication satellite GSAT-15 successfully launched from French Guiana

ndigenously developed Communication satellite GSAT-15 of Indian Space Research Organisation was successfully launched from the spaceport of Kourou in French Guiana. It was launched by Ariane-5 VA-227 rocket (launch vehicle) of Arianespace into a Geosynchronous Transfer Orbit (GTO) along with Arabsat-6B (BADR-7) satellite of Airbus Defence and Space.

Nuclear capable Agni-IV successfully test-fired

Nuclear capable surface-to-surface Agni-IV missile was successfully test-fired by the Indian Army's Strategic Forces Command (SFC). This was overall the fifth test of the Agni IV missile and earlier it had undergone 1 failed and 4 successful tests over the past five years. The last successful test was conducted in December 2014.

Philippines to host 2015 Asia-Pacific Economic Cooperation Summit

Philippines is going to host 2015 Asia-Pacific Economic Cooperation (APEC) summit from 18–19 November 2015 in its capital city Manila for the first time in nearly two decades. It is second time Philippines hosting the Asia-Pacific region's most high-level business event i.e. APEC summit and had previously hosted it in 1996. For first time Philippines had hosted the APEC summit under the leadership of then-President Fidel Ramos who had vowed to help develop an action plan on facilitating free trade in the region. Theme of 2015 APEC Summit: "Building Inclusive Economies, Building a Better World".

G-20 to combat terrorism, tackle uneven global economic growth unitedly

G-20 leaders have decided to tackle global uneven economic growth and reaffirmed their commitment to fight terrorism unitedly. In this regard, G-20 leaders have released a communiqué at the end of the two-day 2015 G-20 summit held at Antalya in Turkey.

Tianhe-2: World's powerful Supercomputer for the sixth consecutive time

China's Tianhe-2 supercomputer has emerged as the world's most powerful supercomputer system for the sixth consecutive time. It was unveiled in 46th edition of Top500 list of supercomputers.

50 districts in Uttar Pradesh declared drought-hit

50 districts out of total 75 in Uttar Pradesh have been declared drought-hit by the state government led by Chief Minister Akhilesh Yadav. Decision in this regard was taken by state government on the recommendation of a natural calamity committee.

Nitish Kumar sworn in as the Chief Minister of Bihar for 5th time

Senior Janta Dal United (JDU) leader Nitish Kumar has sworn in as the Chief Minister (CM) of Bihar for the record fiftth time. He was administered the oath of office and secrecy by Bihar Governor Ramnath Kovind at oath taking ceremony held at the Gandhi Maidan in Patna.

Novak Djokovic wins ATP World Tour Finals for 4th consecutive time

World number one Novak Djokovic from Serbia has become the first tennis player to win the ATP World Tour Finals for record fourth consecutive time. In the final match played in London (England), Djokovic defeated third seed Roger Federer of Switzerland by 6-3, 6-4 score.

Francois Hollande to be Chief Guest at 2016 Republic Day celebrations

French President Francois Hollande will be the Chief Guest at the 67th Republic Day parade of January 26, 2016.

China building world's largest animal cloning factory

China is building the world's biggest animal cloning factory to recreate sniffer dogs, racehorses, pets and beef cattle. In this regard, Chinese scientists have signed a deal to create a commercial animal cloning centre in Tianjin, north-eastern China.

26 November: National Milk Day

Every year 26 November is being observed as National Milk Day (NMD) to mark birth anniversary Father of the White Revolution Dr.Verghese Kurien.

Nuclear capable Prithvi II missile successfully test fired

Indigenously developed nuclear capable Prithvi-II surface-to-surface missile was successfully test-fired by the Indian Army. The missile test was carried out by Strategic Force Command (SFC) from a mobile launcher at launch complex-3 from the Integrated Test Range (ITR) at Chandipur in Odisha.

NHAI approves pilot project for developing greenbelts along National highways

National Highways Authorities of India (NHAI) has approved a pilot project for undertaking scientific studies on designing greenbelts along national highways. Proposal in this regard was submitted by Nagpur based National Environmental Engineering Research Institute (NEERI).

Great Britain wins 2015 Davis Cup of Tennis

Andy Murray led Great Britain have won the 2015 Davis Cup for first time since 1936 and for the 10th time in the competition's 115-year history. Great Britain tennis team defeated Belgium team by 3-1 score in the finals to win the 104th edition of the competition.

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ISSUE XVI DECEMBER 2015

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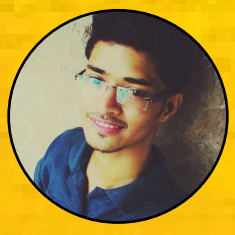

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