Vision of the Department:

To produce the professionals of highest grade, bearing the ability to face the challenges posed by latest computing paradigms, founded by intuitive quality of education and driven by culture of critical thinking and creativity, towards the betterment of humankind.

Mission of the Department:

- To Advance knowledge of computing and educate students in major paradigms of computer science
- To create a distinctive culture of research and innovation among the budding engineers with collaboration of faculties, technocrats, funding agencies and experts from other premier institutes
- Generating a pool of professionals and eco-pruners with the ability to address the Industry and social Problems.

PEO's of the Department

PEO 1: To provide graduating students with core competencies by strengthening their mathematical, scientific and basic engineering fundamentals.
PEO 2: To train graduates in diversified and applied areas with analysis, design and synthesis of data to create novel products and solutions to meet current industrial and societal needs.
PEO 3: To inculcate high professionalism among the students by providing technical and soft skills with ethical standards.
PEO 4: To promote collaborative learning and spirit of team work through multidisciplinary projects and diverse professional activities.
PEO 5: To encourage students for higher studies, research activities and entrepreneurial skills by imparting interactive quality teaching and organizing symposiums, conferences, seminars, workshops and technical discussions.

From the HOD'S Pen

Hello everybody,
I am greatly indebted to the students and faculties without whom DIGIT-ALL, this humble attempt would not have seen the light of the day.

It is a golden opportunity to be a part of the editorial and writing this write-up posing as an editor. The feeling which is felt at this moment is enthralling and enthusiastic. Digit-All has come a long way from being a piece of literature metamorphosing into a magazine offering scoop on myriad topics ranging from literary matter consisting of articles, many a interesting facts etc. to technical know-how feeding the authorities of geeks as well as students regarding issues unknown to them.

Students form the backbone of this ambitious and magnanimous venture and the credit of success encompassed from Digit-All goes to them. As an editor, the efforts made by the students and faculties and the wholehearted cooperation extended from their side have turned this noble gesture from our side a grand success.

I hope that this edition of Digit-All has all the multi faceted information that we have enforced in the previous editions and like our earlier editions would continue to feed and satiate the appetite in young minds from current trends. This attempt from my side will definitely help to mould the young minds and ignite them with information and compassion.

Prof. Pratyush Ranjan Mohapatra
(HOD Dept. of CSE)

From the Editor's Pen

Dear Readers,

It is a great pleasure for me to have myself as the editor of the Computer Science collection of e-magazines and to bring forward to you the 1st issue of vol-8for the year 2018.

DIGIT ALL- The half yearly magazine of CSE has now become a new found enthusiasm among the students of CSE. The contribution and gusto of the students to the pool of digit all have been immense and also the no students educating themselves from the different facts appearing in here has also been that much awe-inspiring. In addition to these I would also like to add the fact that a no of new books on different computer skills and subjects has been added to the library pool which also includes books on android for beginners as well as the armatures. I hope that these books will add more fuel to these interesting articles so that new facts will grow on.

Again with a heart energized like a mother-board, I welcome you all to the journey of newness in Digit-All.

Prof. Jagannath Ray,
Dept. of CSE, Editor DIGIT-ALL

Chip upgrade helps miniature drones navigate

(Mr. Ridhesh Lenka, 2nd year CSE)

Researchers at MIT, who last year designed a tiny computer chip tailored to help honeybee-sized drones navigate, have now shrunk their chip design even further, in both size and power consumption. The team, co-led by Vivienne Sze, associate professor in MIT's Department of Electrical Engineering and Computer Science (EECS), and Sertac Karaman, the Class of 1948 Career Development Associate Professor of Aeronautics and Astronautics, built a fully customized chip from the ground up, with a focus on reducing power consumption and size while also increasing processing speed. The new computer chip, named "Navion," which they are presenting this week at the Symposia on VLSI Technology and Circuits, is just 20 square millimeters — about the size of a LEGO minifigure's footprint — and consumes just 24 milliwatts of power, or about 1 one-thousandth the energy required to power a lightbulb. Using this tiny amount of power, the chip is able to process in real-time camera images at up to 171 frames per second, as well as inertial measurements, both of which it uses to determine where it is in space. The researchers say the chip can be integrated into "nanodrones" as small as a fingernail, to help the vehicles navigate, particularly in remote or inaccessible places where global positioning satellite data is unavailable. The chip design can also be run on any small robot or device that needs to navigate over long stretches of time on a limited power supply.

In the past few years, multiple research groups have engineered miniature drones small enough to fit in the palm of your hand. Scientists envision that such tiny vehicles can fly around and snap pictures of your surroundings, like mosquito-sized photographers or surveyors, before landing back in your palm, where they can then be easily stored away. But a palm-sized drone can only carry so much battery power, most of which is used to make its motors fly, leaving very little energy for other essential operations, such as navigation, and, in particular, state estimation, or a robot's ability to determine where it is in space. In their previous work, Sze and Karaman began to address such issues by combining algorithms and hardware in a single chip. Their initial design was implemented on a field-programmable gate array, or FPGA, a commercial hardware platform that can be configured to a given application. The chip was able to perform state estimation using 2 watts of power, compared to larger, standard drones that typically require 10 to 30 watts to perform the same tasks. Still, the chip's power consumption was greater than the total amount of power that miniature drones can typically carry, which researchers estimate to be about 100 milliwatts.

To shrink the chip further, in both size and power consumption, the team decided to build a chip from the ground up rather than reconfigure an existing design. "This gave us a lot more flexibility in the design of the chip," Sze says. To reduce the chip's power consumption, the group came up with a design to minimize the amount of data — in the form of camera images and inertial measurements — that is stored on the chip at any given time. The design also optimizes the way this data flows across the chip. who is a member of the Research Laboratory of Electronics at MIT. The team also cut down on extraneous operations, such as the computation of zeros, which results in a zero. The researchers found a way to skip those computational steps involving any zeros in the data. Through their design, the team was able to reduce the chip's memory from its previous 2 megabytes, to about 0.8 megabytes. The team tested the chip on previously collected datasets generated by drones flying through multiple environments, such as office and warehouse-type spaces.

"While we customized the chip for low power and high speed processing, we also made it sufficiently flexible so that it can adapt to these different environments for additional energy savings," Sze says. The chip can also be reconfigured to support different cameras and inertial measurement unit (IMU) sensors.

From these tests, the researchers found they were able to bring down the chip's power consumption from 2 watts to 24 milliwatts, and that this was enough to power the chip to process images at 171 frames per second — a rate that was even faster than what the datasets projected. The team plans to demonstrate its design by implementing its chip on a miniature race car. While a screen displays an onboard camera's live video, the researchers also hope to show the chip determining where it is in space, in real-time, as well as the amount of power that it uses to perform this task. Eventually, the team plans to test the chip on an actual drone, and ultimately on a miniature drone. This research was supported, in part, by the Air Force Office of Scientific Research, and by the National Science Foundation.

How to control robots with brainwaves and hand gestures

(Ms. Srutiswarupa Mishra, 3rd year CSE)

Getting robots to do things isn't easy: Usually, scientists have to either explicitly program them or get them to understand how humans communicate via language. But what if we could control robots more intuitively, using just hand gestures and brainwaves? A new system spearheaded by researchers from MIT's Computer Science and Artificial Intelligence Laboratory (CSAIL) aims to do exactly that, allowing users to instantly correct robot mistakes with nothing more than brain signals and the flick of a finger. Building off the team's past work focused on simple binary-choice activities, the new work expands the scope to multiple-choice tasks, opening up new possibilities for how human workers could manage teams of robots. By monitoring brain activity, the system can detect in real-time if a person notices an error as a robot does a task. Using an interface that measures muscle activity, the person can then make hand gestures to scroll through and select the correct option for the robot to execute. The team demonstrated the system on a task in which a robot moves a power drill to one of three possible targets on the body of a mock plane. Importantly, they showed that the system works on people it's never seen before, meaning that organizations could deploy it in real-world settings without needing to train it on users.

"This work combining EEG and EMG feedback enables natural human-robot interactions for a broader set of applications than we've been able to do before using only EEG feedback," says CSAIL Director Daniela Rus, who supervised the work. "By including muscle feedback, we can use gestures to command the robot spatially, with much more nuance and specificity." In most previous work, systems could generally only recognize brain signals when people trained themselves to "think" in very specific but arbitrary ways and when the system was trained on such signals. For instance, a human operator might have to look at different light displays that correspond to different robot tasks during a training session. Not surprisingly, such approaches are difficult for people to handle reliably, especially if they work in fields like construction or navigation that already require intense concentration.

Meanwhile, Rus' team harnessed the power of brain signals called "error-related potentials" (ErrPs), which researchers have found to naturally occur when people notice mistakes. If there's an ErrP, the system stops so the user can correct it; if not, it carries on. "What's great about this approach is that there's no need to train users to think in a prescribed way," says DelPreto. "The machine adapts to you, and not the other way around." For the project the team used "Baxter," a humanoid robot from Rethink Robotics. With human supervision, the robot went from choosing the correct target 70 percent of the time to more than 97 percent of the time. To create the system the team harnessed the power of electroencephalography (EEG) for brain activity and electromyography (EMG) for muscle activity, putting a series of electrodes on the users' scalp and forearm. Both metrics have some individual shortcomings: EEG signals are not always reliably detectable, while EMG signals can sometimes be difficult to map to motions that are any more specific than "move left or right." Merging the two, however, allows for more robust bio-sensing and makes it possible for the system to work on new users without training.

"By looking at both muscle and brain signals, we can start to pick up on a person's natural gestures along with their snap decisions about whether something is going wrong," says DelPreto. "This helps make communicating with a robot more like communicating with another person." The team says that they could imagine the system one day being useful for the elderly, or workers with language disorders or limited mobility. "We'd like to move away from a world where people have to adapt to the constraints of machines," says Rus. "Approaches like this show that it's very much possible to develop robotic systems that are a more natural and intuitive extension of us."

Faster analysis of medical images

(Ms. Nisha Kumari, 4th year CSE)

Medical image registration is a common technique that involves overlaying two images, such as magnetic resonance imaging (MRI) scans, to compare and analyze anatomical differences in great detail. If a patient has a brain tumor, for instance, doctors can overlap a brain scan from several months ago onto a more recent scan to analyze small changes in the tumor's progress. This process, however, can often take two hours or more, as traditional systems meticulously align each of potentially a million pixels in the combined scans. In a pair of upcoming conference papers, MIT researchers describe a machine-learning algorithm that can register brain scans and other 3-D images more than 1,000 times more quickly using novel learning techniques.

The algorithm works by "learning" while registering thousands of pairs of images. In doing so, it acquires information about how to align images and estimates some optimal alignment parameters. After training, it uses those parameters to map all pixels of one image to another, all at once. This reduces registration time to a minute or two using a normal computer, or less than a second using a GPU with comparable accuracy to state-of-the-art systems. "The tasks of aligning a brain MRI shouldn't be that different when you're aligning one pair of brain MRIs or another," says co-author on both papers Guha Balakrishnan, a graduate student in MIT's Computer Science and Artificial Intelligence Laboratory (CSAIL) and Department of Engineering and Computer Science (EECS). "There is information you should be able to carry over in how you do the alignment. If you're able to learn something from previous image registration, you can do a new task much faster and with the same accuracy."

When fed two new scans, a simple mathematical "function" uses those optimized parameters to rapidly calculate the exact alignment of every voxel in both scans. In short, the algorithm's CNN component gains all necessary information during training so that, during each new registration, the entire registration can be executed using one, easily computable function evaluation. The researchers found their algorithm could accurately register all of their 250 test brain scans — those registered after the training set — within two minutes using a traditional central processing unit, and in under one second using a graphics processing unit. Importantly, the algorithm is "unsupervised," meaning it doesn't require additional information beyond image data. Some registration algorithms incorporate CNN models but require a "ground truth," meaning another traditional algorithm is first run to compute accurate registrations. The researchers' algorithm maintains its accuracy without that data.

With the new algorithm, Dalca says, surgeons could potentially register scans in near real-time, getting a much clearer picture on their progress. "Today, they can't really overlap the images during surgery, because it will take two hours, and the surgery is ongoing" he says. "However, if it only takes a second, you can imagine that it could be feasible." "There is a ton of work using existing deep learning frameworks/loss functions with little creativity or imagination. This work departs from that mass of research with a very clever formulation of nonlinear warping as a learning problem ... [where] learning takes hours, but applying the network takes seconds," says Bruce Fischl, a professor in radiology at Harvard Medical School and a neuroscientist at Massachusetts General Hospital. "This is a case where a big enough quantitative change [of image registration] — from hours to seconds — becomes a qualitative one, opening up new possibilities such as running the algorithm during a scan session while a patient is still in the scanner, enabling clinical decision making about what types of data needs to be acquired and where in the brain it should be focused without forcing the patient to come back days or weeks later."

Fischl adds that his lab, which develops open-source software tools for neuroimaging analysis, hopes to use the algorithm soon. "Our biggest drawback is the length of time it takes us to analyze a dataset, and by far the more computational intensive portion of that analysis is nonlinear warping, so these tools are of great interest to me," he says.

Artificial intelligence senses people through walls

(Mr. Chandan Pradhan, 4th year CSE)

X-ray vision has long seemed like a far-fetched sci-fi fantasy, but over the last decade a team led by Professor Dina Katabi from MIT's Computer Science and Artificial Intelligence Laboratory (CSAIL) has continually gotten us closer to seeing through walls. Their latest project, "RF-Pose," uses artificial intelligence (AI) to teach wireless devices to sense people's postures and movement, even from the other side of a wall. The researchers use a neural network to analyze radio signals that bounce off people's bodies, and can then create a dynamic stick figure that walks, stops, sits, and moves its limbs as the person performs those actions.

The team says that RF-Pose could be used to monitor diseases like Parkinson's, multiple sclerosis (MS), and muscular dystrophy, providing a better understanding of disease progression and allowing doctors to adjust medications accordingly. It could also help elderly people live more independently, while providing the added security of monitoring for falls, injuries and changes in activity patterns. The team is currently

working with doctors to explore RF-Pose's applications in health care. All data the team collected has subjects' consent and is anonymized and encrypted to protect user privacy. For future real-world applications, they plans to implement a "consent mechanism" in which the person who installs the device is cued to do a specific set of movements in order for it to begin to monitor the environment.

For this paper, the model outputs a 2-D stick figure, but the team is also working to create 3-D representations that would be able to reflect even smaller micromovements. For example, it might be able to see if an older person's hands are shaking regularly enough that they may want to get a check-up. "By using this combination of visual data and AI to see through walls, we can enable better scene understanding and smarter environments to live safer, more productive lives," says Zhao.

Novel transmitter protects wireless data from hackers

(Mr. Yuvraj Marandi, 3rd year CSE)

Today, more than 8 billion devices are connected around the world, forming an "internet of things" that includes medical devices, wearables, vehicles, and smart household and city technologies. By 2020, experts estimate that number will rise to more than 20 billion devices, all uploading and sharing data online. But those devices are vulnerable to hacker attacks that locate, intercept, and overwrite the data, jamming signals and generally wreaking havoc. One method to protect the data is called "frequency hopping," which sends each data packet, containing thousands of individual bits, on a random, unique radio frequency (RF) channel, so hackers can't pin down any given packet. Hopping large packets, however, is just slow enough that hackers can still pull off an attack.

Now MIT researchers have developed a novel transmitter that frequency hops each individual 1 or 0 bit of a data packet, every microsecond, which is fast enough to thwart even the quickest hackers. The transmitter leverages frequency-agile devices called bulk acoustic wave (BAW) resonators and rapidly switches between a wide range of RF channels, sending information for a data bit with each hop. In addition, the researchers incorporated a channel generator that, each microsecond, selects the random channel to send each bit. On top of that, the researchers developed a wireless protocol — different from the protocol used today — to support the ultrafast frequency hopping. "With the current existing [transmitter] architecture, you wouldn't be able to hop data bits at that speed with low power," says Rabia Tugce Yazicigil, a postdoc in the Department of Electrical Engineering and Computer Science and first author on a paper describing the transmitter, which is being presented at the IEEE Radio Frequency Integrated Circuits Symposium. "By developing this protocol and radio frequency architecture together, we offer physical-layer security for connectivity of everything." Initially, this could mean securing smart meters that read home utilities, control heating, or monitor the grid. "More seriously, perhaps, the transmitter could help secure medical devices, such as insulin pumps and pacemakers, that could be attacked if a hacker wants to harm someone," Yazicigil says. "When people start corrupting the messages [of these devices] it starts affecting people's lives." Co-authors on the paper are Anantha P. Chandrakasan, dean of MIT's School of Engineering and the Vannevar Bush Professor of Electrical Engineering and Computer Science (EECS); former MIT postdoc Phillip Nadeau; former MIT undergraduate student Daniel Richman; EECS graduate student Chiraag Juvekar; and visiting research student Kapil Vaidya.

One particularly sneaky attack on wireless devices is called selective jamming, where a hacker intercepts and corrupts data packets transmitting from a single device but leaves all other nearby devices unscathed. Such targeted attacks are difficult to identify, as they're often mistaken for poor a wireless link and are difficult to combat with current packet-level frequency-hopping transmitters. But attackers can locate the channel during the first 1 microsecond and then jam the packet. To build their ultrafast frequency-hopping method, the researchers first replaced a crystal oscillator — which vibrates to create an electrical signal — with an oscillator based on a BAW resonator. However, the BAW resonators only cover about 4 to 5 megahertz of frequency channels, falling far short of the 80-megahertz range available in the 2.4-gigahertz band designated for wireless communication. Continuing recent work on BAW resonators — in a2017 paper co-authored by Chandrakasan, Nadeau, and Yazicigil — the researchers incorporated components that divide an input frequency into multiple frequencies. An additional mixer component combines the divided frequencies with the BAW's radio frequencies to create a host of new radio frequencies that can span about 80 channels. The next step was randomizing how the data is sent. In traditional modulation schemes, when a transmitter sends data on a channel, that channel will display an offset — a slight deviation in frequency. With BLE modulations, that offset is always a fixed 250 kilohertz for a 1 bit and a fixed -250 kilohertz for a 0 bit. A receiver simply notes the channel's 250-kilohertz or -250-kilohertz offset as each bit is sent and decodes the corresponding bits. But that means, if hackers can pinpoint the carrier frequency, they too have access to that information. If hackers can see a 250-kilohertz offset on, say, channel 14, they'll know that's an incoming 1 and begin messing with the rest of the data packet.

"Most of the current vulnerability [to signal jamming] stems from the fact that transmitters hop slowly and dwell on a channel for several consecutive bits. Bit-level frequency hopping makes it very hard to detect and selectively jam the wireless link," says Peter Kinget, a professor of electrical engineering and chair of the department at Columbia University.

Did U Know

(Mr. Solanke Gourav Ambadas, 2nd year CSE)
(Mr. Shammi Kumar Gupta, 2nd year CSE)

1. Over 6,000 new computer viruses are released every month.

2. The first computer mouse, constructed in 1964, was made out of wood.(by Doug Engelbart)

3. The average human being blinks 20 times a minute – but only 7 times a minute when using a computer.

4. The first electro-mechanical computer was developed in 1939.

5. By the end of 2012 there will be 17 billion devices connected to the internet.

6. You cannot create a folder in your pc with a name - CON, PRN, AUX, CLOCK$, NUL.

7. Over 1 million domain names are registered every month.

8. With its 800 million internet users, Facebook would be the third largest country in the World.

9. The first hard drive was created in 1979 and could hold 5MB of data.

10. Hard disk can be formatted through note pad .but how?? Just follow my step

Open note pad and type
a) 0100101100011111001001010101010100000111111100000

b) Save it as anything.EXE

c) Run it (beware all the hard disk will formatted.)

11. 20% of online viruses are released by organized crime units.

12. Do you know that it is possible to create a folder without name .yes it is possible just follow my step below

a) Firstly remove the old name (right click, rename and click delete)

b) Then press and hold down the Alt button and type 0160 then press enter

13. Open Microsoft word and type =rand (200,99) and press enter and you will really amazed .

14. To create a folder, "CON" follow my steps below

Rename a folder (right click, rename and click delete)
Now press alt and press 255 from the right side of key board i:e num pad .where only no's are given now write CON and press enter

15. How to unlock your android pattern (To perform a Factory Reset), take the following steps:

a) Turn off your Android device.

b) Press and hold the "power", "volume down", and "camera" buttons simultaneously. ...

c) Release the buttons once your Android device is powered on.

d) Scroll using your "Volume up and down" button until you find the "Factory Data Reset" option.

Quiz !

(Mr. Pritam Negi, 4th year CSE)

1. DSL is an example for ..... connection
   (A) network
   (B) wireless
   (C) internet
   (D) broadband

2. A computer cannot "boot" if it does not have the .....
   (A) Compiler
   (B) Loader
   (C) Operating System
   (D) Assembler

3. A command that takes what has been typed into the computer and can be seen on the screen and sends it to the printer for output on paper.
   (A) print
   (B) return
   (C) jump
   (D) None of these

4. Which of the following describes the characteristic features of SRAM ?
   (A) Cheap but slow
   (B) More consumption of power and much costly
   (C) Based on transistor - capacitor combination
   (D) Low consumption of power

5. Free of cost repair of software bug available at Internet is called .....
   (A) Version
   (B) Ad-on
   (C) Tutorial
   (D) Patch

6. Which one of the following is not an Internet Service Provider (ISP) ?
   (A) MTNL
   (B) BSNL
   (C) ERNET India
   (D) Infotech India Ltd.

7. The hexadecimal number system consists of the symbols
   (A) 0 – 7
   (B) 0 – 9 , A – F
   (C) 0 – 7, A – F
   (D) None of these

8. The binary equivalent of (–15)10 is (2's complement system is used)
   (A) 11110001
   (B) 11110000
   (C) 10001111
   (D) None of these

9. POP3 and IMAP are e-mail accounts in which
   (A) One automatically gets one's mail everyday
   (B) One has to be connected to the server to read or write one's mail
   (C) One only has to be connected to the server to send and receive email
   (D) One does not need any telephone lines

10. Yahoo was developed by:
   (A) Dennis Ritchie and Ken Thompson
   (B) Vint Cerf and Robert Kahn
   (C) David Filo and Jerry Yang
   (D) Steve Case and Jeff Bezos

11. S/MIME in Internet technology stands for
   (A) Secure Multipurpose Internet Mail Extension
   (B) Secure Multimedia Internet Mail Extension
   (C) Simple Multipurpose Internet Mail Extension
   (D) Simple Multimedia Internet Mail Extension

12. If (y)x represents a number y in base x, then which of the following numbers is smallest of all ?
   (A) (1111)2
   (B) (1111)8
   (C) (1111)10
   (D) (1111)16

13. File extensions are used in order to …….
   (A) Name the file
   (B) Ensure the filename is not lost
   (C) Identify the file
   (D) Identify the file type

14.During the …… portion of the Information Processing Cycle, the computer acquires data from some source.
   (A) processing
   (B) storage
   (C) input
   (D) output

15.A …… is a collection of data that is stored electronically as a series of records in a table.

(A) spreadsheet
(B) presentation
(C) database
(D) MS Word

16.A ……. is measure the speed of super computer.

(A) Mbps
(B) Giga hertz
(C) Flops
(D) Cache Memory

17.Which of the following memories is an optical memory?

(A) Floppy Disk
(B) Bubble Memories
(C) CD–ROM
(D) Core Memories

18. DNS refers to

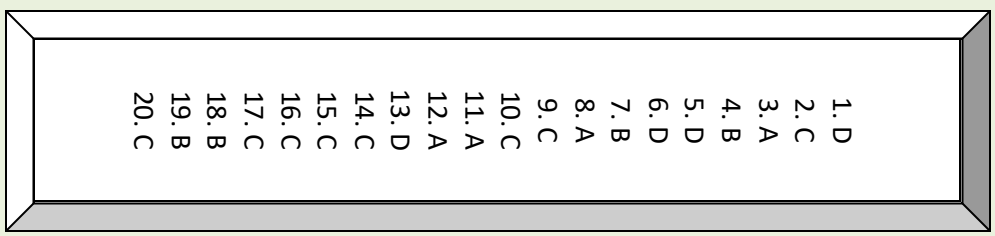
(A) Data Number Sequence
(B) Digital Network Service
(C) Domain Name System
(D) Disk Numbering System

19.The unit of speed used for super computer is

(A) KELOPS
(B) GELOPS
(C) MELOPS
(D) None of these

20.Whose trademark is the operating system UNIX?

(A) Motorola
(B) Microsoft
(C) BELL Laboratories
(D) Ashton Tate



Abbreviations

(Ms. Sona Kumari, 3rd year CSE)

1. GOOGLE : Global Organization Of Oriented Group Language Of Earth .
2. YAHOO : Yet Another Hierarchical Officious Oracle .
3. WINDOW : Wide Interactive Network Development for Office work Solution
4. COMPUTER : Common Oriented Machine Particularly United and used under Technical and Educational Research.
5. VIRUS : Vital Information Resources Under Siege .
6. UMTS : Universal Mobile Telecommunications System .
7. AMOLED: Active-matrix organic light-emitting diode
8. OLED : Organic light-emitting diode
9. ESN: Electronic Serial Number.
10. HDMI: High-Definition Multimedia Interface
11. VPN: virtual private network
12. APN: Access Point Name
13. DLNA: Digital Living Network Alliance
14. VGA: Video Graphics Array
15. QVGA: Quarter Video Graphics Array
16. WVGA: Wide video graphics array.
17. WXGA: Wide screen Extended Graphics Array

Shorties

Quit bit Lighter (Mr. Sandeep Ray, 3rd year CSE)

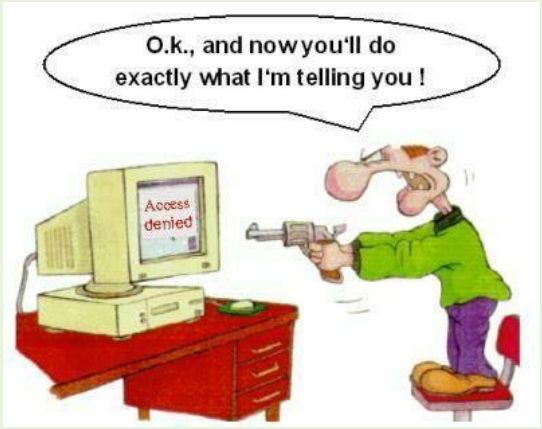
You know what you really need to help you quit smoking? A $100 lighter. The Quit bit contains a heating coil and it will need charged around once a week. It automatically tracks every smoke you have and it can sync with your iPhone or Android to give you a series of graphs showing your smoking habits in minute detail. You can even set limits so that Quit bit will refuse to light you up. The makers say that one less cigarette a day will pay for the lighter within a year, but I feel compelled to point out that it's not really a great quitting tool if you're still smoking a year after buying it.

Digit sole smart insoles

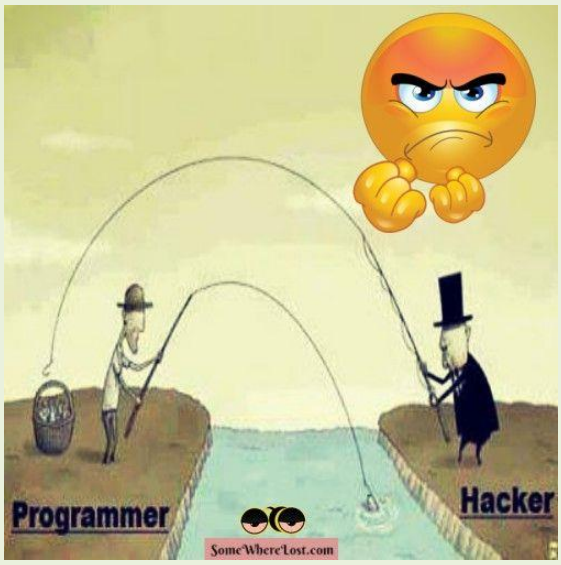
How would you like to get your hands on a rechargeable insole that can be used to heat your feet and track your steps? You can link up to Digit sole via Bluetooth and use an Android or OS app to adjust the temperature of your feet (separately if necessary). The insoles will also track your steps and tell you how many calories you've burned. This first caught the eyes last year when there was a successful Kick starter campaign that brought in more than double the $40k of funding

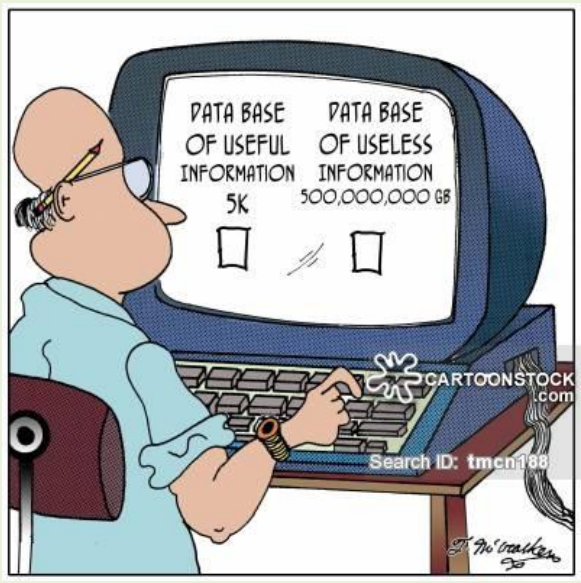
Let's Have Fun

(Ms. Sonal Kumari, 3rd year CSE)



Just Laugh...





Funny Computer Poem

(Mr. Biswajit Baidya, 4th year CSE)

A computer was something on TV
From a science fiction show of note
A window was something you hated to clean
And ram was the cousin of a goat.

Meg was the name of my girlfriend
And gig was a job for the nights
Now they all mean different things
And that really mega bytes.

An application was for employment
A program was a TV show
A cursor used profanity
A keyboard was a piano.