## finalthoughts..

### WHATS NEW..?

SEAMLESS VOICE RECOGNITION (CONVERSATION WITH MACHINES)
5G TECHNOLOGY
WHITE COLLAR AUTOMATION
AI PERMEATION

## Cryptocurrency - The Future of World

This introduction explains the most important thing about crypto-currencies. After you've read it, you'll know more about it than most other humans.

Today cryptocurrencies (Buy Crypto) have become a global phenomenon known to most people. While still somehow geeky and not understood by most people, banks, governments and many companies are aware of its importance.

In 2016, you'll have a hard time finding a major bank, a big accounting firm, a prominent software company or a government that did not research cryptocurrencies, publish ar about it or start a so-called block chain-project.

**What is cryptocurrency and how cryptocurrencies emerged as a side product of digital cash,** Few people know, but cryptocurrencies emerged as a side product of another invention. Satoshi Nakamoto, the unknown inventor of Bit coin, the first and still most important cryptocurrency, never intended to invent a currency.

In his announcement of Bit coin in late 2008, Satoshi said he developed "A Peer-to-Peer Electronic Cash System."

His goal was to invent something; many people failed to create before digital cash.

**Ms. Shubhangi Bhosale (TYIF)**

### WORKSHOP

- **Department has organized**

1. 15 days workshop on Android, Python, PHP in collaboration with "Technowings Pvt. Ltd. Solapur" for Second Year & Third Year Students. The main motive while arranging such workshop is to bridge gap between Academics and Industry.

2. 2 Days **Personality Development Program** for Third Year Students.

3. 3 Days **Entrepreneurship Awareness Camp** for Third Year Students .

### UPCOMING EVENTS

MSBTE Sponsored One week Faculty Development Training Program (FDTP) on "***Digitization Of India***"

## 5G Technology

The history of 5G is being made...now. It is being born into a competitive world where mobile network operators, system vendors and regulators will shape what eventually emerges. If all goes well new 5G systems could begin to be rolled out from around 2020 (nearly 30 years after the first GSM systems were rolled out). 5G is a global initiative that will play out in different ways in different countries.

***5G*** is a marketing term for some new mobile technologies. Definitions differ and confusion is common. The ITU IMT-2020 standard provides for speeds up to 20 gigabitsper second and has only been demonstrated with millimeter waves of 15 gigahertz and higher frequency. 5G New Radio can include lower frequencies, from 600 MHz to 6 GHz. However, the speeds in these lower frequencies are only modestly higher than new 4Gsystems, estimated at 15% to 50% faster. At least at the lower frequencies, 5G is evolutionary.5G or 'fifth-generation' is a fast, wireless **broadband technology** that will transcend smartphones and connect anything from cars, machines and home appliances at speeds **50-to-100 times faster than present 4G networks.** It will offer lower lag times when transferring data. Developing India-specific use-cases would be key to the success of 5G in the country, given that the current batch of global apps such as driverless cars are ill -suited locally and more relevant to developed markets.

**Mr. Sudarshan Makar (SYIF)**

## Editorial

It gives us great pleasure to present the First issue of our departmental newsletter - **"TANTRA"**, which gives us the opportunity to see the achievements in our departments .

We are **thankful** for all the students and faculties who have contributed during the preparation of this newsletter. We have tried our best and given positive efforts, expecting creative responses from everyone to continue the flow of knowledge through this newsletter.

**Mr. Pise K. B.**



SVERI's College of Engineering (Polytechnic), Pandharpur
Department of Information Technology
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# TANTRA

Technology Awareness & Knowledge to Rising Associates

*in this issue >>>*



## *Department Vision*

To provide diploma education strengthened with basic knowledge and skill along with professional ethics enabling students to reach higher goals in the field of Information Technology

## *Department Mission*

To provide diploma education strengthened with basic knowledge and skill along with professional ethics enabling students to reach higher goals in the field of Information Technology

## Blue Eyes Technology - Monitoring Human Operator and Intelligence sensing System

Blue Eyes is a technology conducted by the research team of IBM at its Almaden Research Center (ARC) in San Jose, California since 1997. Blue eyes technology makes a computer to understand and sense human feelings and behavior and also enables the computer to react according to the sensed emotional levels. The aim of the blue eyes technology is to give human power or abilities to a computer, so that the machine can naturally interact with human beings as we interact with each other. Blue eyes technology aims at creating a computer that have the abilities to understand the perceptual powers of human being by recognizing their facial expressions and react accordingly to them. Imagine, a beautiful world, where humans collaborate with computers!! .The computer can talk, listen or screech aloud!! .With the help of speech recognition and facial recognition systems, computers gathers information from the users and starts interacting with them according to their mood variations. Computer recognizes your emotional levels by a simple touch on the mouse and it can interact with us as an intimate partner. The machine feels your presence; verifies your identity and starts interacting with you and even it will dial and call to your home at any urgent situations. This all is happening with this "Blue Eyes" technology."The main objective of Blue eyes technology is to develop a computational machine having sensory and perceptual ability like those of humans. The Blue Eyes technology system is a combination of a set of hardware and software systems. The aim of this Blue Eyes technology is to provide a machine or system having sensory and perceptual abilities like human beings thus it will support healthy stress free surroundings where the computers and humans can work together as intimate partners.

**Blue eyes technology consist of,**
-Mobile measuring device or Data Ac Acquisition Unit (DAU)
-Central System Unit (CSU)
-The Hardware.

**Ms. Sumera Shaikh (TYIF)**

*Celebrating 72nd Independence day*

## Message of HOD

It is our pleasure to present 1st Issue of News Letter **"TANTRA"** of our department to all students. This News Letter is the one of the ways in which we can disseminate the information about department. It covers various technological articles, departmental activities, achievements of students and staff members..

**Mr. Bhise A. S.**

## Diamond battery through nuclear waste

Scientists from the University of Bristol Cabot Institute are hitting two birds with one stone, thanks to their lab-made diamond that can generate electricity and is made from upcycled radioactive waste. In nuclear power plants, radioactive uranium is split in a process called nuclear fission. When the atoms are split, heat is generated, and that heat then vaporizes water into steam that turns electricity-generating turbines. A severe downside of this process is the creation of dangerous radioactive waste, which ultimately deposits in the graphite core that it is housed in. Today, this nuclear contamination is safely stored away until it stops being radioactive...and with a half-life of 5,730 years, that takes quite a while.

When these diamonds are placed near a radioactive field, they generate a small electrical current. The developers enclosed the diamond battery in another non-radioactive diamond to absorb the harmful emissions, which in turn allowed for the generation of even more electricity, making the battery nearly 100 percent efficient. The nuclear diamond battery has an incredible lifetime, and will only be half used up by the year 7746. This makes it an ideal power solution for "situations where it is not feasible to charge or replace conventional batteries," said Tom Scott, a materials science professor at Cabot Institute.

Supplying the Earth with electricity is a daunting task even without a focus on sustainability. It's almost like the holy grail of electricity generation, or as Scott puts it, "no emissions generated and no maintenance required, just direct electricity generation."

Mr. Amar Chabukswar (TYIF)

## Natural User Interface (NUI)

In 1990,Steve Mann developed a number of user interface strategies using natural interaction with the real world as an alternative to Command Line Interface (CLI) or Graphical User Interface (GUI). In 2006.Christian Moore established an open research community with the goal to expand discussion and development related to Natural User Interface (NUI) technology. In 2010 Daniel Wigdor and Dennis Wixom provided an operationalization of building NUI in the book.

The NUI is an electronic input system that is either invisible to the user or quickly naturalized so that it is perceived as invisible. NUI is effectively indivisible and remains visible as the user continuously learns increasingly complex interaction. The word natural is used because most computer interfaces uses artificial control devices hose operation has to be learned. An NUI relies on a user being able to quickly change from beginner to expert. While the interface required learning, that learning is eased through design which gives the user feeling that they are instantly and continuously successful. Thus "natural" refers to a goal in the user experience-that the interaction comes naturally, while interacting with the technology , rather than that the interface itself is natural. This is constructed with the idea of an intuitive interface, referring to one that can be used without previous learning. Several design strategies have been meet this goal to varying degree of success. One strategy is the use of a "reality user interface" (RUI) , also known as "reality based interface" (RBI) method.

Mr. Sohel Mulani (TYIF)

## BrainGate Technology

BrainGate is a brain implant system developed by the bio-tech company. The computer chip, which is implanted into the brain, monitors brain activity in the patient and converts the intention of the user into computer commands. Currently, the chip uses about 100 hair-thin electrodes that sense the electro-magnetic signature of neurons firing in specific areas of the brain. The activity is translated into electrically charged signals and is then sent and decoded using a program, which can move a robotic arm, a computer cursor, or even a wheelchair.

The Brain Gate Neural Device is a Proiporty brain computer that consists of an neural signal sensor and external processor. The sensor consist of tiny chip containing 100 microscopic electrodes that detect brain cell electric activity. The chip is implanted on the surface of brain in motor cortex area that controls movement.

Mr. Atharv Ligade (TYIF)

## High Power Wireless Charging

Wireless charging, up until now, usually means charging via a pad, rather than via wires and cables. But if you ask the team from the Korea Advanced Institute of Science and Technology wireless charging can also be done a distance away.

here's no word yet on how soon we'll be seeing this technology in the real world, but in the mean time you can check out Coat, a somewhat similar wireless charging technology that's coming soon.

The team recently demonstrated a prototype of a new Dipole Coil Resonant System (DCRS) that can wirelessly power devices up to 15 feet away. The DCRS system achieves this using a magnetic field, and is apparently powerful enough to charge up to 40 mobile phones, and can even power larger devices, like a TV. Several wireless charging methods are under development or available as an aftermarket option in the light-duty automotive market.

Sushant Katkar (TYIF)

## Departmental Result for A.Y. 2017-18

| Sr. No. | Name of Student | Marks % | Class |
|---|---|---|---|
| 1 | MS. SAYYAD GAUSIYA AYUB | 94.65% | 1st Year |
| 2 | MR. BAHIRAT AJINKYA ATUL | 90.10% | 1st Year |
| 3 | MR. BHOSALE OMKAR RAJENDRA | 88.71% | 1st Year |
| 4 | MS. LONDHE AKSHARA SHASHIKANT | 87.49% | 2nd Year |
| 5 | MS. PATIL UJWALA UTTAM | 85.03% | 2nd Year |
| 6 | MS. SHELKE NAMRATA ARJUN | 83.71% | 2nd Year |
| 7 | Ms. TAUR SAYALI SHUKRACHARYA | 93.00% | 3rd Year |
| 8 | Ms. DESHMUKH SAMRUDDHI SANJAY | 90.29% | 3rd Year |
| 9 | Mr. GAIKWAD SURAJ MAHADEV | 89.24% | 3rd Year |

**Ms. TAUR SAYALI SHUKRACHARYA OF THIRD YEAR INFORMATION TECHNOLOGY STOOD FIRST IN COLLEGE WITH 93.00% PERCENTAGE**

## Blockchain


A blockchain is a digitized, decentralized, public ledger of all cryptocurrency transactions. Constantly growing as 'completed' blocks are recorded and added to it in chronological order, it allows market participants to keep track of digital currency transactions without central recordkeeping. Each node (a computer connected to the network) gets a copy of the blockchain, which is downloaded automatically. Originally developed as the accounting method for the virtual currency Bitcoin, blockchains which use what's known as distributed ledger technology (DLT) are appearing in a variety of commercial applications today. Currently, the technology is primarily used to verify transactions, within digital currencies though it is possible to digitize, code and insert practically any document into the blockchain. A block is the 'current' part of a blockchain, which records some or all of the recent transactions. Once completed, a block goes into the blockchain as a permanent database. Each time a block gets completed, a new one is generated.

There is a countless number of such blocks in the blockchain, connected to each other (like links in a chain) in proper linear, chronological order. Every block contains a hash of the previous block. The blockchain has complete information about different user addresses and their balances right from the genesis block to the most recently completed

Ms. Amruta Lugade (TYIF)

### Entrepreneurship Awareness Camp

### Personality Development Program


TANTRA Dept. Of Information Technology