DON BOSCO GROUP OF INSTITUTIONS –BANGALORE

Seminar / Workshop / Conference Format

Department: TELECOMMUNICATION ENGINEERING College: DON BOSCO INSTITUTE OF TECHNOLOGY

Name of the event : FDP on Rasperry Pi 3 Date, Venue & Time and Duration of Event: 18th to 23rd July 2016, Dr. Abdul Kalam Hall, DBIT , Bangalore

DON BOSCO INSTITUTE OF TECHNOLOGY

(Approved by AICTE, Accredited by NBA, New Delhi; Affiliated to VTU, Belagavi)

Kumbalagodu, Mysore Road, Bengaluru-560074.

DEPARTMENT OF TELECOMMUNICATION ENGINEERING

&

ELECTRICAL & ELECTRONICS ENGINEERING

CORDIALLY INVITES

YOU TO THE INAUGURAL FUNCTION OF

"FACULTY DEVELOPMENT PROGRAMME ON RASPBERRY PI 3"

CHIEF GUEST

Mr. SHIVARAM K R

Assistant Vice President ,

Societe General Global Solution Center, Bengaluru.

KEY NOTE ADDRESS BY

Mr. KUMARSWAMY

Manager,

V V Technologies, Tumkur.

Presented by

"Teleconnect & Spark Aura forums "

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VENUE: Dr. ABDUL KALAM HALL, DBIT.

DATE: 18TH JULY 2016, 9.30 AM.

staff & students: dept: of tce & eee: dbit: bengaluru:

Chief Guest : Mr. Shivaram K R , Assistant Vice President , Societe General Global Solution Center, Bengaluru

A total of ten years of experience in Big Data , Machine Learning, Time series analysis and quantitative model building. He has hands on experience in building robots, IOT devices and 3D printing. He is presently working as Assistant Vice President (AVP), Cross Asset Quantitative Analyst in Societe Generale Global Solution Centre, one of the top investment banks in the world.

Keynote Speaker: Mr. Kumarswamy , Manager, V V Technologies, Tumkur.

V V Technologies is pioneered with fundamental thoughts of software and hardware engineering solutions for our clients ranging from students or interns to the big corporates. It provides engineering products, accelerators and services with excellence and quality to help our customer. It facilitate training and infrastructure to young brains to help them accomplish their academic project needs as well as career needs.

About the Event:

The event mainly focussed introducing the raspberry pi and the programming with it. The objectives of the Faculty development program included Learning Linux Operating system and developing code for the own device, Developing the code for different devices, Understand how raspberry pi applications work and using external resources, Design and develop useful applications with user interfaces by using external tools and devices, Taking the knowledge on VNC networking in Raspberry pi, Internet browsing and learning command set lines on Linux platform, Updating the peripherals using command set lines.

Topics Covered:

- Trends on Embedded System
- Trends in RTOS
- ARM processor
- Problem statements on embedded system and overcome
- Introduction on Raspberry pi and History
- How to install OS
- Directory Description
- Linux Shell and Command Sets
- SSH and VNC Connection
- Introduction on Python Coding
- Programming on GPIO, LED, LCD, Motors, Buzzer, Relay, ADC, UART, Camera, GSM, GPS

Key Learning's:

The Raspberry Pi is a series of credit card-sized single-board computers developed in the United Kingdom by the Raspberry Pi Foundation with the intent to promote the teaching of basic computer science in schools and developing countries. The original Raspberry Pi and Raspberry Pi 2, 3 are manufactured in several board configurations through licensed manufacturing agreements with Newark element14 (Premier Farnell), RS Components and Egoman. The hardware is the same across all manufacturers. The firmware is source. Several generations of Raspberry Pi's have been released. The first generation (Pi 1) was released in February 2012 in basic model A and a higher specification model B. A+ and B+ models were released a year later. Raspberry Pi 2 model B was released in February 2015 and Raspberry Pi 3 model B in February 2016. These boards are priced between 20 and 35 US$. A cut down "compute" model was released in April 2014 and a Pi Zero with smaller footprint and limited IO (GPIO) capabilities released in November 2015 for 5 US$.

All models feature a Broadcom system on a chip (SOC), which includes an ARM compatible CPU and an on chip graphics processing unit GPU (a VideoCore IV). CPU speed ranges from 700 MHz to 1.2 GHz for the Pi 3 and on board memory range from 256 MB to 1 GB RAM. Secure Digital SD cards are used to store the operating system and program memory in either the SDHC or MicroSDHC sizes. Most boards have between one and four USB slots, HDMI and composite video output, and a 3.5 mm phono jack for audio. Lower level output is provided by a number of GPIO pins which support common protocols like I2C. Some models have an 8P8C Ethernet port and the Pi 3 has on board WiFi 802.11n and Bluetooth. The Foundation provides Debian and Arch Linux ARM distributions for download, and promotes Python as the main programming language, with support for BBC BASIC (via the RISC OS image or the Brandy Basic clone for Linux), Python, C, C++, PHP, Java, Perl, Ruby, Squeak Smalltalk and more also available. The Raspberry Pi hardware has evolved through several versions that feature variations in memory capacity and peripheral-device support.

Attendees View Point (Pros & Cons, Opportunities, Threat):

The attendees applauded the efforts of the department in organising the workshop on Raspberry pi 3. With ever raising connectivity of the devises to the internet , the event shed the light on the emergence of IoT and it's paramount importance.


DON BOSCO
INSTITUTE OF TECHNOLOGY
Faculty Devolopment Program on
Raspberry pi 3
Raspberry Pi 3
Model B
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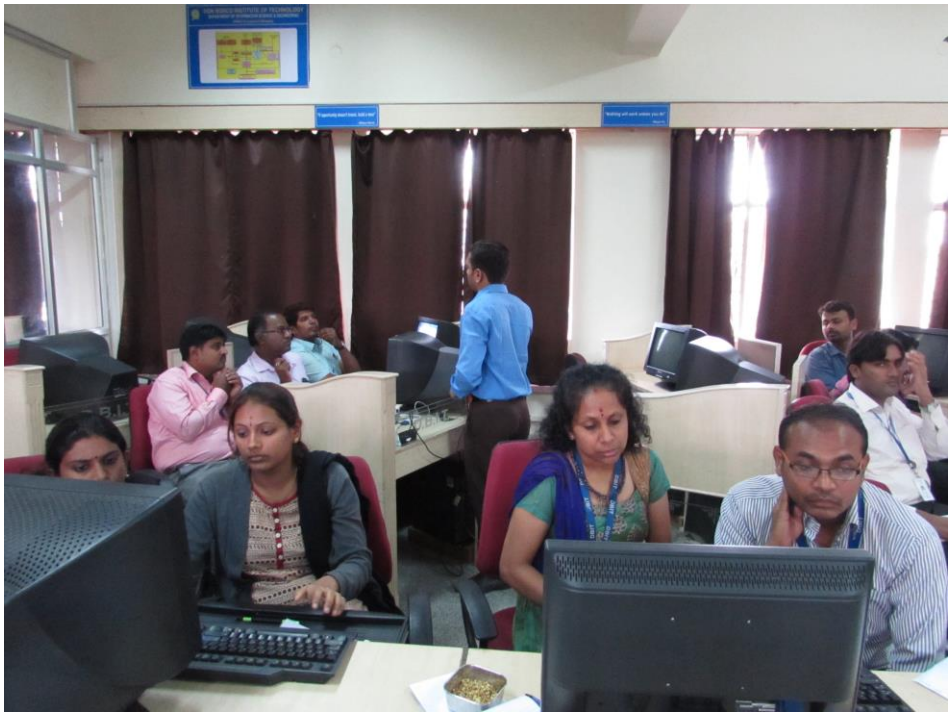
"Raspberry Pi 3"


"What is certain is that the world is changing faster than anytime in human history"
- Philip Stephens
Years to Double GDP per Person
19th Century
20th Century
21st Century
US
China
India
Soon there will be 3 Billion middle class people
Asian economy will be bigger than NA and EU combined
60% of population will live in cities
People will live longer than ever
*World is Changing Fast

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