R.M.K COLLEGE OF ENGINEERING AND TECHNOLOGY

RSM NAGAR, PUDUVOYAL 601206

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Webinar on
IOT Architectures & Real-Time Industrial Use-Cases

RESOURCE PERSON

- **Mr.L.Lakshmi Narasimhan,**
  Technical Architect, CISCO SYSTEMS, BANGALORE
- **Mr.Mayank Lalwani,** Project Intern,
  CISCO SYSTEMS BANGALORE

CONVENER

- **Dr. N. Gangatharan,** Head of the Department - ECE
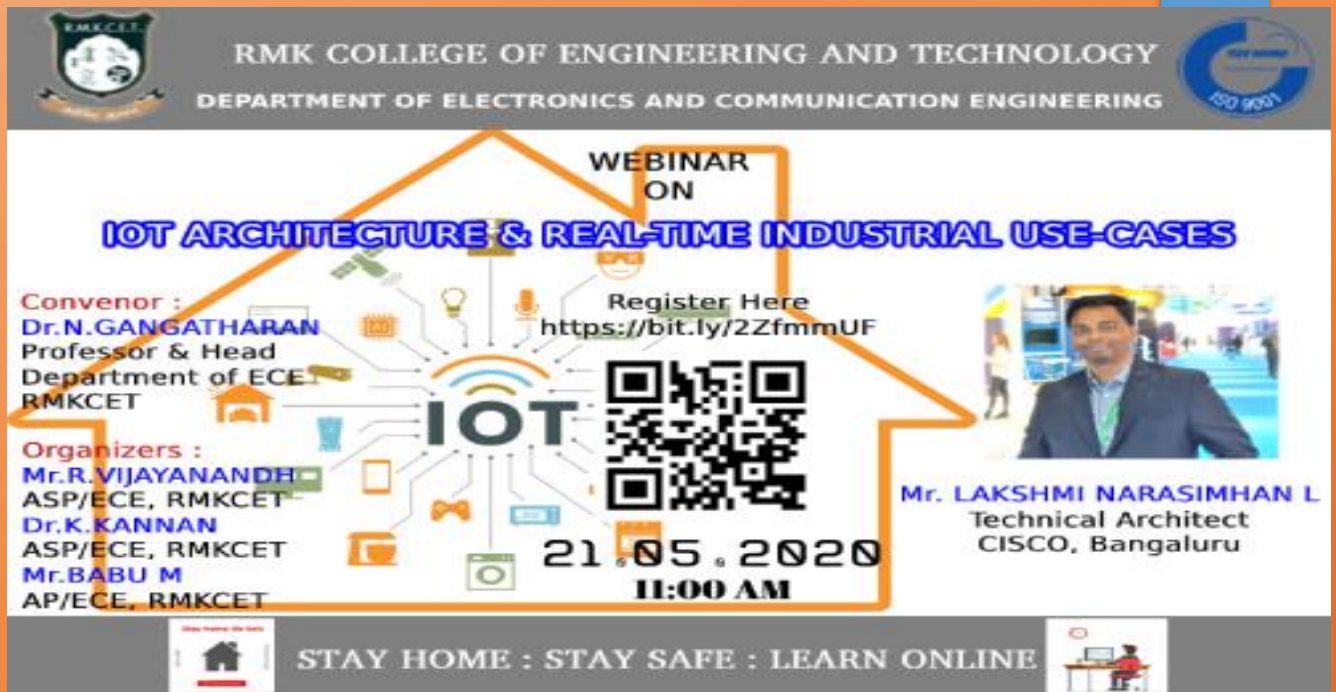
ORGANISERS

- **Mr.R.Vijay Anandh, Associate Professor - ECE**
- **Dr.K.Kannan, Associate Professor – ECE**
- **Mr.M.Babu, Assistant Professor-ECE**

21.05.2020
11.00 AM – 12.30 PM

EVENT POSTER:

RMK COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

WEBINAR ON

IOT ARCHITECTURE & REAL-TIME INDUSTRIAL USE-CASES

Convenor :
Dr.N.GANGATHARAN
Professor & Head
Department of ECE
RMKCET

Organizers :
Mr.R.VIJAYANANDH
ASP/ECE, RMKCET
Dr.K.KANNAN
ASP/ECE, RMKCET
Mr.BABU M
AP/ECE, RMKCET

Register Here
https://bit.ly/2ZfmmUF

21.05.2020
11:00 AM

Mr. LAKSHMI NARASIMHAN L
Technical Architect
CISCO, Bangaluru

STAY HOME : STAY SAFE : LEARN ONLINE

TOPICS COVERED

- ❖ Genesis of IoT
- ❖ IoT Architecture Requirements & Challenges
- ❖ Simplified IoT Architecture
- ❖ WSN Communication Protocol Selection
- ❖ IEEE 802.15.4 Wireless Standards
- ❖ Introducing Cisco Edge Intelligence
- ❖ Challenges to IoT Solution Development & Deployment

SUMMARY

This webinar covered basics of IoT architecture and industrial use cases concepts. Discussed the importance of Internet of things with IT industry and the need for IT / OT Convergence. Explained the IoT World Forum (IoT WF) Reference Model with the simplified IoT architecture. Discussed the various wireless networks like SANETS,WSN and IEEE standards which used for IoT applications. Cisco's Multi-Service Field Area Network, Kinetic Gateway Management Module and Manufacturing – IoT also discussed
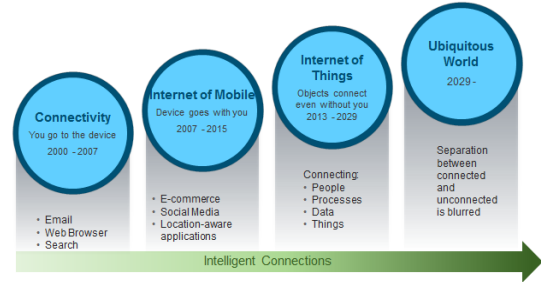
OBJECTIVE

The main objective of this webinar is to impart knowledge about the IoT architecture requirements, challenges and how this model used for IoT world forum convergence with IT and various wireless networks with its standards
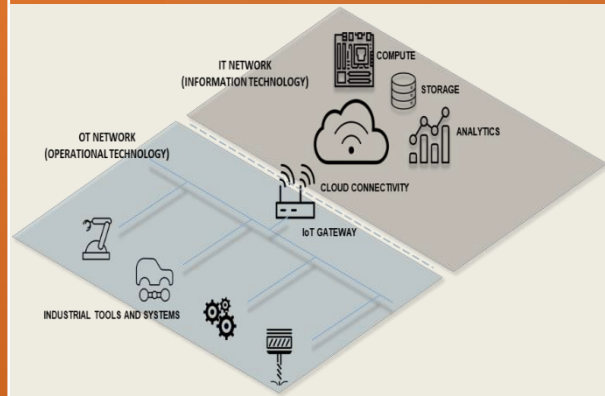
BRIEF REPORT

The term Internet of Things was invented in 1999, initially to promote RFID technology.

The popularity of the term IoT did not accelerate until 2010/2011 and reached mass market in early 2014

M2M or the Industrial internet are not opposing concepts to the Internet of Things. Rather, they are sub-segments.

Genesis of IoT

Digitization: Connecting More Than "Things".

IoT essentially comprises of digitization and integration of vertical and horizontal value chains of Industries, digitization of products and services offerings and help creating innovative digital business models.

IT / OT Convergence

It is the integration of information technology (IT) systems used for data-centric computing with operational technology (OT) systems used to monitor events, processes and devices and make adjustments in enterprise and industrial operations.
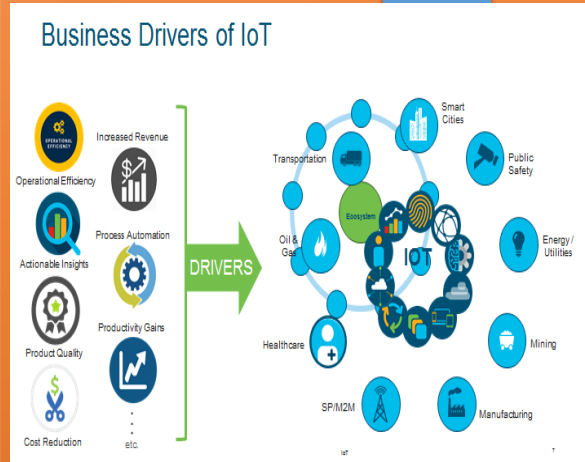

Things – Includes machines, devices, sensors, consumer products, vehicles, etc.

Systems – Include business applications, ERP/CRM/PLM systems, analytics systems, data warehouses, and control systems

BRIEF REPORT

Business Drivers of IoT

IoT device deployment provides the data and insights needed to automate processes, streamline workflows, visualize usage patterns and compete more effectively in the changing business landscape. new business models and many more.
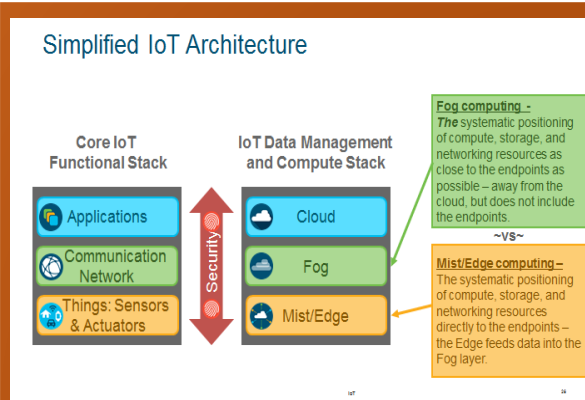

IoT Architecture Requirements & Challenges

It covers Compatibility and Interoperability of Different IoT systems, Identification and Authentication of Technologies, Integration of IoT Products with IoT Platforms, Connectivity, Handling Unstructured Data, Data Capturing Capabilities, Intelligent Analytics, Data Security and Privacy Issues, Consumer Awareness, Delivering Value.

IOT Architecture

It talks the essence, IoT architecture is the system of numerous elements: sensors, protocols, actuators, cloud services, and layers.

RESEARCH DIRECTIONS

The speaker identified and discussed the research areas for IoT architecture.

- ❖ IOT architecture future challenges
- ❖ Wireless sensor network with IoT
- ❖ Sensor and Actuator Networks (SANETs)
- ❖ LTE for IoT – Narrow Band IoT
- ❖ SemtechLoRa (Long Range)
- ❖ Kinetic Gateway Management Module

CONCLUSION:

Speaker explained the detailed concepts of IOT, its architecture and challenges. IoT in various industrial aspects also explained in detailed manner. He gave research ideas to explore the IoT concept in all the sectors like digital banking, digital work place and Manufacturing – IoT.

SAMPLE FEED BACK :

On behalf of aspirants of learning IoT technology, We sincerely thank you for the outstanding webinar through which you delivered valuable information of real time uses cases and applications of IoT and we also request your guidance in learning IoT from scratch and gaining knowledge to develop new ideas and the way to convert ideas into real life working projects.

JASWANTH REDDY PADALA

To be frank this session was little higher in content and delivering the presentation and etc.
I simply loved the session sir.

-**GOWTHAM.C**