



The Institution of Engineers (India)

95 years of Relentless Journey towards
Engineering Advancement for nation Building



All India Seminar on Internet of Things - Trends that affect lives

22nd - 23rd January 2016

Organised by

The Institution of Engineers (India)
GUJARAT STATE CENTRE

Under the Aegis of Computer Engineering Division Board, IEI

In association with

NASSCOM



Department of Information Technology
Ministry of Communications & IT
Government of India



Supported By



Computer Society of India
Ahmedabad Chapter



Venue

Bhaikaka Bhavan, Law College Road, Ahmedabad-380 006

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About the Seminar

These days, it's hard to escape the Internet. It seems like everything from ones coffee machine to your eyeglasses are connected to the Web. While there's been a lot of discussion about whether the Internet makes us dumb, we will explore how companies and municipalities deploying so-called smart technologies can improve our lives rather than turn us into bleary-eyed dummies. The use of machine-to-machine (M2M) technology is bringing "The Internet of Things" alive. But while M2M may only conjure up thoughts of buzzing servers in a cavernous room, it has many real-world applications that affect your everyday life, from the connected home to the connected city. "The Internet of Things" includes everything from smartphone apps that control your home's lights and temperature from afar to real-time analytics that help ease traffic congestion and city parking woes, etc.

In one of the surveys conducted, 85 percent of IT decision makers (ITDMs) think that M2M is a natural technological evolution and will advance the "consumerization of IT" trend. Eighty-two percent think that M2M interaction enables businesses to respond to real-world events and 89 percent think the availability of LTE (Long term evolution) and 4G will be crucial to M2M growth. Sixty-five percent of ITDMs think increased workforce mobility is the biggest opportunity for M2M, while another 65 percent think the major challenge in M2M is managing and analyzing the real-time data. Soon, people will interact with devices that in turn interact with data to deliver personalized products and services directly to the customer in real time. By year's end, it is estimated that, mobile devices will outnumber the human population, data volume will reach 4 billion terabytes, and 90 percent of consumer-connected devices will have access to some personal cloud. It is also estimated by the Gartner's report, that by the end of 2020, there will be 24 billion connected devices and by 2015, 35 percent of mid-to-large organizations will adopt in-memory computing.

All India Seminar on Internet of Things is one of the most comprehensive IoT event - with over 350 attendees and many exhibitors. With a focus on monetizing the IoT revolution through bringing together ecosystem wide attendees, stakeholders and investors. 2014 was an important year for IoT with huge opportunities of this technology firmly being realized. Large Global giants in their report predicts that 69% of consumers plan to buy an in-home device by 2019, reaffirming that consumer adoption of connected technology is on the rise. In 2015, the tremendous excitement around IoT is now bearing fruit in terms of concrete products and services. Now is the time to bring together the entire ecosystem in order to assess the commercial opportunities, to highlight the key challenges hindering IoT and to assess the range of solutions available to create a sustainable future for IoT.

Pervasive connectivity, smart devices and demand for data testify to an Internet of Things that will continue to grow by leaps and bounds. Computing power is dropping in price while new sensors are being developed and incorporated into everyday objects, and as people buy into Internet of Things technology, economies of scale lend themselves to the creation of ever more data-centric businesses. Instrumenting and connecting devices has massive potential to deliver value, but there is need for a coordinated effort when rolling out the next generation of self-reporting paradigms. The All India Seminar on the Internet of Things - (AIS-IoT 2015), the premier forum for such efforts, to share, discuss and witness cutting edge research in all areas of development for the Internet of Things.

AIS-IoT 2015 is seeking original, high impact research papers on all topics related to the development of the Internet of Things. Papers are selected on the basis of novelty, technical merit, presentation effectiveness and impact of results. Accepted papers will be published in IEI All India Seminar Proceedings.

Sub Themes



Mobile IoT: Novel applications of smartphone technology for generating and consuming big data. Examples include interesting new applications of on-board sensors, making use of crowd sourced data, promoting e-commerce or enabling B2B, B2C and C2C connectedness.

IoT device or circuit design: novel hardware that enables field intelligence and data generation, innovative concepts that enable pervasive sensing.

IoT applications and services: embedded field intelligence applications that challenge the state of the art in fields such as agriculture, automotive, civil & industrial Infrastructure monitoring, health care and retailing.

Architecture and systems design: reliability, sustainability, scalability, profitability and scope for interoperability of an IoT ecosystem; novel business models and services enabled by IoT.

Cloud computing and semantic web technologies: data security, storage and access, communication protocols, linked data and web semantics for interoperability among users and devices.

Interface and control systems: adaptive user interface design, data-informed actuation, and the interplay between the two

IoT analytics: innovative algorithms and data analysis techniques for extracting meaning and value from the Internet of Things

IoT solution challenge

A key aspect of this challenge is sharing knowledge with the community and therefore, we want participants to document and discuss their experience when building their IoT solution. So we expect them demonstrate about things like selection process for your hardware, architecture decisions

The solutions will be judged on the following criteria:

- Innovation of the solution and applicability to the application domain
- Completeness of solution
- Use of open standards and open source technology
- Amount of community discussion from the participants when they built their solution

Accommodation

There are various hotels available for accommodation. Participants are requested to book on their own or ask for Assistance to the organizing secretary.

Important Dates

Register paper by: January 5th 2016
Email pdf document by: January 10th 2016
Notification of paper acceptances: January 15th 2016
Final versions of papers due: January 17th 2016
All India Seminar : 22nd - 23rd January 2016

Who can participate

The seminar with this theme will be of interest with wide walk of life and hence the likely participation will be from:

- Government Agencies
- Retail spaces like super markets etc
- Consultants, Automation experts,
- Security and Marketing based organizations
- People from Tourism domain
- People from Home and office automation
- People from Industrial automation, White good manufacturers & Machine designers
- Academicians and students
- Research organization

We look forward to have such an excellent opportunity to share the knowledge, learning and experiences and also get as an outcome of the seminar, newer trends to be used by the organizations in the society in general and also the government bodies.

Registration Fees

Non Members	:	Rs. 2,000/-
Research Scholars / Students	:	Rs. 750/-
Sponsored Delegates	:	Rs. 5,000/-
Student / Members of (IEI, CSI, IETE, ACM)	:	Rs. 500/-

Payments

"All payments are to be made through crossed Demand Draft / Cheque, drawn in favour of "The Institution of Engineers (India), Gujarat State Centre", payable at Ahmedabad."

Sponsorship

- Sponsorship of Rs. 50,000/- will be eligible with 10 free delegates.
- Industry, Government and Semi Government Organizations, Manufacturers are requested to sponsor various activities of the Seminar.

All India Seminar on
Internet of Things - Trends that affect lives

Registration Form

Name _____

Designation _____

Organization/Institution _____

Mailing Address _____

Phone _____ Fax _____

E-mail _____

Registration Fee Rs. _____ Paid in

Cash/ Cheque/D.D.No. _____ Dt. _____

of Bank _____

Category:

- Member of The Institution of Engineer (India)
- Non-Members/ NGO
- Authors
- Students Member/ Technicians

Date:

Place:

Signature

- Xerox copy of registration form may be used.

Address for Communication

Mr. Bharat S. Patel, FIE, Past Chairman IEI-GSC

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HOW THE

INTERNET OF THINGS

IS RAISING YOUR IQ

CONNECTED HOME

Overnight change in calendar automatically updates alarm clock and turns on coffee machine timer

Lights & temperature power down as you leave home

Monitor & optimize energy consumption with smart meters & appliances

CONNECTED CITY

Optimize parking resources, reduce pollution & street congestion via connected parking & lighting systems

Maximize resource utilization & plan for future parking locations with real-time analytics

CONNECTED CAR

Find an open parking spot or electric charging station using maps

Reserve a spot & pay with mobile wallet

© Connected world is enabled by convergence of Mobile, Big Data and Cloud. © Smart sensors of 700-17 million nodes in the US, UK, Germany, China, India and Brazil present the following insights...

There will be **24,000,000,000** connected devices by 2020

82%

Think Machine-to-Machine interaction enables businesses to respond to real-world events*

MOBILE BIG DATA CLOUD

Mobile devices will outnumber **HUMAN POPULATION** in 2013

66% think **BUSINESS & CONSUMER TECHNOLOGY** will converge in 3-5 years*

89% think availability of **LTE & 4G** will be instrumental in **M2M growth***

65% think increased **WORKFORCE MOBILITY** is the #1 opportunity for **M2M****

In 2013, **DATA VOLUME** will reach **4,000,000,000** terabytes

65% think biggest challenge in **M2M** is managing & analyzing the resulting **REAL-TIME DATA****

By 2015, **35%** of mid-to-large organizations will adopt **IN-MEMORY** computing

In 2013, **90%** of consumer-connected devices will have access to some **PERSONAL CLOUD**

75% think **EMPLOYEES'** personal use of mobile devices & apps influences business's use of cloud

Cloud provides scalability & standardized interfaces to **CONNECT DATA** from sensors & machines

85% think **M2M** is part of the natural evolution of the **"CONSUMERIZATION OF IT"** trend*

RUN CONNECTED

ABOUT THE INSTITUTION OF ENGINEERS (INDIA)

The Institution of Engineers (India) or IEI is the largest multidisciplinary professional body that encompasses 15 engineering disciplines and gives engineers a global platform from which to share professional interest. IEI has membership strength of more than 0.7 million. Established in 1920, with its headquarters at 8 Gokhale Road, Kolkata - 700020, IEI has served the engineering fraternity for over nine decades. In this period of time it has been inextricably linked with the history of modern-day engineering.

In 1935, IEI was incorporated by Royal Charter and remains the only professional body in India to be accorded this honour. Today, its quest for professional excellence has given it a place of pride in almost every prestigious and relevant organization across the globe. IEI functions among professional engineers, academicians and research workers. It provides a vast array of technical, professional and supporting services to the Government, Industries, Academia and the Engineering fraternity, operating from 105 Centres located across the country. The Institution has established R&D centres at various locations in the country and also provides grant-in-aid to its members to conduct research and development on engineering subjects.

IEI conducts Section A & B Examinations in different Engineering disciplines, the successful completion of which is recognized as equivalent to Degree in appropriate field of Engineering of recognized Universities of India by the Ministry of Human Resources Development, Govt. of India. Every year as many as 90000 candidates appear for these exams. For details, please see: www.ieindia.org

The Gujarat State Centre

The Institution of Engineers (India) Bombay State Centre opened a Local Centre at Ahmedabad in the year 1959 after which this was established as Gujarat State in the year 1960. This Centre is one of the most vibrant State centres of IEI. The foundation stone of building was laid by Hon'ble Governor of Gujarat K. K. Vishwanathan & the inauguration of the building was done by Shri Babubhai Jashbhai Patel, the then Chief Minister, Govt. of Gujarat. State Centre building bears the name of the building as 'Bhaikaka Bhavan', after the eminent engineer of Gujarat Shri Bhailalbhai Patel. Enriched with an excellent infrastructure in with library with 15000 books associated with small AC conference hall of 50 audience, AC board room with a capacity of 30 people with full audio-visual aids. Sitting capacity of hall is approximately 375 people. With Dias/Stage to accommodate 15 dignitaries. The Gujarat State Centre acts as a centrally located, state of art platform to justify the aims of IEI to serve a total corporate members strength of approximately 6000.

About Ahmedabad

Ahmedabad the biggest city of Gujarat, lies on 23.03o North Latitude and 72.58 East Longitude on the bank of River of Sabarmati. The city is well connected by rail, roads and airways with all the important cities of the country. It is Seventh largest city of the Country. Ahmedabad is now a district head quarter and many state-level and district-level offices are located in the city. City of Ahmedabad is unique even for India, for it bleeds harmoniously as ancient heritage with a vibrant present. A model city in terms of its ideals and aspirations, what is remarkable about Ahmedabad in it's harmony between art and industry between a reverence to the past and a vision for the future. Dubbed as the Manchester of India in the days of yore. Ahmedabad is again at the crossroads in the history of its existence. Change came in the form of an announcement of Finance Minister declaring Ahmedabad as one of the mega cities of India. The path to the mega city status is fraught with challenges but keeping in mind the entrepreneurial nature of the citizens of Ahmedabad the city is bearing up to take up the challenge and truly acquire the status of MEGACITY.



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