

The Internet of Everything

Course Introduction

The Internet has already revolutionized the computer and telecommunications world like nothing before. The invention of the telegraph, telephone, radio and computer set the stage for this unprecedented integration of capabilities.

The internet has become at once a world-wide broadcasting capability, a mechanism for information dissemination and a medium for collaboration and interaction between individuals and their computing devices without regard for geographical location.

The 'Internet of Everything' (IoE) is the concept that describes how future internet connections will NOT be restricted to these computing devices. We are already starting to witness the impact of the creation of a 'connected world' – whereby people, animals and objects are connected to the internet. The rapid growth of wearables, connected home appliances, medical and fitness monitoring are some early M2M examples of this phenomenon.

The 'Internet of Everything' is changing how & what devices are connecting into business systems via the internet and driving efficiencies, harnessing intelligence, improving operations and customer satisfaction.



Course Objectives

After attending the training, participants will be able to

- Understand the background concepts, building blocks and systems that comprise the Internet
- Appreciate the individual components involved – from devices and terminals to access and core networks to the heart of the Internet itself
- Be aware of the concept of the 'Internet of Things' and how its introduction will change our world once more

Who should attend?

Telecommunications professionals who are involved with, or wish to have an understanding of, the concept of the internet – specifically the ‘Internet of Everything’

Front line Telecommunications Sales and Customer Service Staff

Non – Telecommunications people who have a professional interest in the ‘Internet of Everything’

Course Duration

Two (2) day training event featuring Overhead Presentations, Case Studies and Scenarios, Interactive Sessions, Multi-Media Clips, Quizzes and Practical Workshops



COURSE OUTLINE

MODULE ONE: The Birth of the Internet

Module 1 looks back at some of the early concepts, technical breakthroughs and building blocks associated with the design and construction of the Internet.

- What is ‘The Internet of Everything’ and why is it important?
- Pioneers of the Internet
- Galactic Network concept
- ARPANET
- Early Inter-netting concepts
- Packet switching and TCP/IP
- Wide Area Networks (WAN)
- Domain Name System (DNS)
- Timeline

MODULE TWO: Internet Infrastructure Components

Module 2. Focusses on the Devices, Architectures, Networks and Systems that make up the Internet of today

- Devices
- Wireline Access

- Wireless Access
- Small Cell Access
- Short Range Radio Systems
- Local ISP's
- Backbone Networks
- Global ISP's
- The Internet
- How the Internet has been changing our lives

MODULE THREE: Sensor Networks and Big Data

Module 3 examines the new devices, networks and systems which will comprise the 'Internet of Everything' – before going on to consider the impact and challenges of 'Big Data'.

- Basic Function and Architecture of a Sensor
- Development of Sensor Networks
- A little about Tags and Actuators
- Some Common IoE Applications
- What is Big Data and why is it important?
- Big Data and the 4 V's
- Open API's
- Big Data Trends and Forecasts
- A Disruptive Technology?

MODULE FOUR: The Future of the 'Internet of Everything'

Module 4 looks to the future – specifically the IoE road-map plus an examination of how IoE will affect key industry segments

- 'Internet of Everything' Road-Map
- Business Opportunities
- Customer Service
- Telecommunications
- Transportation
- Manufacturing

PRACTICAL WORKSHOPS

- Workshop 1: Internet of Everything & Innovations in the Animal World
- Workshop 2: Internet of Everything and the Safety of Mankind
- Workshop 3: Internet of Everything and 'Killer Wearables'
- Workshop 4: Smart City