FUNDAMENTALS OF LONG TERM EVOLUTION (LTE) MOBILE COMMUNICATIONS

SAIEE-1328-V : 2 CPD credits : Category 1

OVERVIEW

The course addresses the principles associated with the Long Term Evolution (LTE) mobile communications technology.

The two areas where LTE differs from previous versions of the mobile communications technology, i.e. GSM and HSPA, are in the radio interface and the core network requirements. The course addresses both these areas.

For the radio interface we will look at the wireless channel and system models, resource management and power control, multiple antenna and MIMO systems, space-time codes and decoding algorithms, multiple access techniques and multiple user detection, and OFDM.

For the core network we will look at the Systems Architecture Evolution (SAE) and Evolved Packet Core (EPC) as defined by the 3GPP.

Two additional areas of current interest associated with 4G mobile networks, viz. WiMax and WiFi Data Offload will also be covered.

COURSE OUTLINE :

The course comprises 9 modules addressing the following topics:

Module 1 : The Mobile Arena
Module 2 : Objectives of LTE
Module 3 : The Physical Layer
Module 4 : layer 2
Module 5 : LTE Core Network
Module 6 : Voice over LTE (VoLTE)
Module 7 : WiMax
Module 8 : Heterogeneous Networks
Module 9 : WiFi Data Offload

TARGET AUDIENCE

Engineering and non-engineering personnel with a tertiary qualification in electrical engineering

THE SOUTH AFRICAN INSTITUTE OF ELECTRICAL ENGINEERS

COST : Non-Member R7,500, SAIEE Member R6,000 (incl. teas, lunches and course material)
*Note: If proof of payment is received before commencement of the course, the following rates will apply:
Non-member R6,750 ; SAIEE member R5,400.

COURSE DATE :
10-11 May 2017: Corporate Conference Centre, JHB

Registration : 08:00 – 08:30
Workshop : 08:00 - 17:00

PRESENTER

GEORGE DEBBO Pr. Eng. MSc (Elec. Eng.) Wits, FSAIEE

George Debbo has been involved in the telecommunications industry for over 40 years. He joined the then Department of Posts and Telecommunications (now Telkom SA) in 1973 as a pupil technician and progressively rose through senior and executive management positions until he left to join the vendor community in 2000. His last position within Telkom SA was as the Executive responsible for Network Build. During his tenure with Telkom SA he was responsible for managing the deployment of telecommunications infrastructure required for the first democratic General Election held in South Africa in 1994 as well as the telecommunications infrastructure required for the Rugby World Cup in 1995. Within the vendor community he served as Technical Director for Marconi South Africa from 2000 to 2006 and as Chief Technology Officer for the Major Accounts Business Unit with Ericsson Sub Saharan Africa between 2007 and 2012.

Currently George is a Director of George Debbo Telecoms, a consultancy specializing in Software Defined Networks (SDN) and Network Functions Virtualization (NFV), next generation transmission networks, fixed broadband access networks and mobile backhaul.

George holds a BSc (Electrical Engineering) and MSc (Electrical Engineering) degree from the University of the Witwatersrand. He is a registered Professional Engineer with the Engineering Council of South Africa and a Fellow of the SAIEE.

REGISTRATION : CONTACT DETAILS

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