Understanding

LTE Core Network

SAE - Systems Architecture Evolution

Course Description

The goal of the LTE SAE from the 3GPP is to achieve a high-data-rate, low-latency, packet-optimized system that supports multiple access technologies.

Long Term Evolution, as defined in the 3GPP Release 8 standards, has described both an evolved Radio Access Network (E-UTRAN) and a new core network strategy termed SAE - System Architecture Evolution.

This is a specialized two day course which covers the major area of LTEs (Long Term Evolution) evolved core network called SAE (Systems Architecture Evolution).

The main part of SAE is the Evolved Packet Core (EPC), otherwise known as the SAE Core.

The new core network is key to achieving the level of performance that LTE must deliver with the sort of low delay across the network that has been hitherto unachievable with GPRS and UMTS.

Target Audience

Anyone needing an in-depth understanding of LTE Core Networks SAE - Systems Architecture Evolution should attend this course.

Course Outline

Module I: Course Introduction

Why change the UMTS Core?

Overview of SAE

Major Change Items

Implications of all this.

Relationship to the Core of the LTE eNodeB

Module II: Evolved Packet Core

Structure

Main Components

MME (Mobility Management Entity):

SAE Gateway or SGW (Serving Gateway)

PGW (PDN Packet Data Network Gateway)

HSS (The Home Subscriber Server)

Module III: Reference Points and Interfaces

Interfaces between EPC and the Access Network

..... S1: Signalling between Evolved NodeBs and the Core

EPC Internal Interfaces

Module IV: CAMEL

Role and Relationship to Rest of Core

Module V: **IMS**

Functional architecture for IMS services

IM Subsystem Entities

Interfaces to Core

Module VI: **Additional Features of SAE**

Interworking with UMTS

Interworking with WLANs

Presence Service

MBMS

Delivery Method

Instructor-Led with numerous case-studies and exercises.

Equipment Requirements

(This apply's to our hands-on courses only)

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

Course Length

2 Days