UMA/GAN Essentials (0.5 day)

FMC

Unlicensed Mobile Access or UMA, is the commercial name of the 3GPP Generic Access Network, or GAN standard. GAN is a telecommunication system which extends mobile services voice and data applications over IP access networks using WiFi. This course provides a good understanding of UMA/GAN history, technology, protocols, architecture and services. A good knowledge of fixed and wireless networks would be beneficial for anyone attending this course.

Who Should Attend

This is beginner level course and suitable for telecom professionals & students who have little or no understanding of UMA/GAN Technology.

Objective

After completing this course, the audience will be able to:

- Understand UMA/GAN Overview & Architecture
- Describe Function of UMA/GAN nodes/protocols
- Define UMA/GAN Interfaces
- Define Protocol Architecture
- Explain Messages & Signaling Scenarios

Course Contents

UMA/GAN Overview

- What is UMA/GAN?
- Advantage for carriers
- Advantage for subscribers

UMA/GAN Architecture

- UMA/GAN Functional Architecture
- UMA/GAN Features
- Access Point
- GANC/UNC
- Security Gateway
- Mobile Station

UMA/GAN Protocols & Interfaces

- UMA/GAN – Reused Protocols
- CS/PS Control Plane
- CS/PS User Plane
- Generic Access Resource Control
- Generic Access Circuit Switched Resources
- Generic Access Packet Switched Resources
- MS - Mode of operation

UMA/GAN Signaling

- EAP-SIM Authentication
- Discovery Procedure
- Registration procedure
- GA-CSR Connection Establishment
- GA-CSR Connection Release
- Mobile Originated Call
- Mobile Terminated Call
- Handover
- GA-PSR GPRS Signalling Procedures

UMA-3G Interworking

- Overview
- EAP-AKA
- Handover