Femtocell Essentials (1 day)

FMC

Femtocell devices are used to improve mobile network coverage in small areas. Femtocells connect locally to mobile phones and similar devices through their normal GSM, UMTS or LTE air interface to provide quality coverage. This course provides a good understanding of Femtocell concepts, 3GPP Femtocell architecture, protocol and services. A good knowledge of Internet Protocol & UMTS 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 Femtocell technology.

Objective

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

- Understand Femto/HNB overview & architecture
- Functions of 3GPP HNB nodes/protocols
- Define 3GPP HNB Interfaces
- Describe SCTP/HNBAP/RUA protocols
- Explain 3GPP HNB signaling procedures

Course Contents

Femtocell/HNB Overview

- What is Femtocell ?
- Femto cell advantage
- 3GPP Femtocell
- High level requirements
- Goals

Femto/HNB Architecture & Nodes

- 3GPP Iu-Based HNB Architecture
- 3GPP HNB Interfaces

3GPP Femto logical entities details

- Home Node B (HNB)
- Security Gateway (SeGW)
- HNB Management System (HMS)
- HNB Gateway (HNB-GW)

Femto/HNB Protocols

- **3GPP HNB Control Plane**
- **Iuh interface protocol stacks**
- **SCTP explained**
- Home Node B Application Part
- RANAP User Adaption
- O&M for HNB Provisioning Procedure

Femto/HNB Signaling

- HNB Registration
- HNB Deregistration
- UE Registration
- Direct Transfer
- Connectionless Transfer
- Disconnect HNB
- UE De-Registration

Femto/HNB Interworking

Femto/HNB QoS & Security

Next generation LTE Femtocell (HeNB)

Femto/HNB Commercial Availability