Wireless Access

The WiMAX standard defines a system for wireless broadband that will compete with Wi-Fi hotspots and cellular broadband systems like UMTS. The standard gives a capacity of 70Mbps in a 40km radius. With high capacity and low cost for base station installations the WiMAX technology is very interesting.

Mobile WiMAX Signalling

OBJECTIVES

Understanding Mobile WiMAX..
- signalling & messages structure
- OFDMA modulation
- session flows end-to-end
- Mobility Management handling
- QoS solutions
- security

INTENDED FOR

an audience of people working in system or product design, system or network support, engineering etc.

PRECONDITION

The Mobile WiMAX course or equivalent knowledge.

Advanced - 2 days

Content day1

¤ **WiMAX System Overview**
· Reference model
· End-to-end Network Systems architecture
· Integration 3G nw's
· ASN profiles
· Air i/f protocols

* **OFDMA**
· Subcarriers
· Carrier subsets
· Robustness; fading, cochannel interference
· TDD Frame Structure

¤ **Signalling Components**
· Symbol structure
· Identities
· Channels, messages and functionallity

¤ **MAC management messages**
· Broadcast
· Initial Ranging
· Primary Management
· Basic

¤ **Header types**
· Generic, type 1, type 2
· Header fields
· Encryption
· Bandwidth Request types
· Extended Subheaders UL/DL
· Fast Feedback

¤ **System Acquisition**
· Aquisition
· Ranging
· Access
. Idle mode

¤ **Connection Establishment**
· Network Entry
· Negotiation of Capabilities
· UL & DL Resources

Content day 2

¤ **Connection Establishment (cont)**
· Connection Setup
· End-to-end Connection Overview
· IP routing IPv4 and IPv6

¤ **Mobility Management & HandOver Cases**
· Power Control
· Resource management
· Scheduling aspects
· Adaptive coding
· ARQ anf H-ARQ characteristics
· Hard and Macro diversity Handover

¤ **Mobility Management & IP handling**
· Mobile IP, HA & FA
· CMIP & PMIP

¤ **QoS Solutions**
· Operatio Principles and Classes
· Service flow Creation and Management
· Management of Classes

¤ **Security Procedures**
· AAA Procedures
· Authentication Protocols

¤ **Accounting**
· Parameters, protocols and procedures

¤ **Interworking 3GPP**
· Interfaces
· Gateways
· Security

Related Courses

¤ **WiMAX Technology (1 days)**
· Low Technical view on WiMAX
· Brief understanding
· Bass words explained

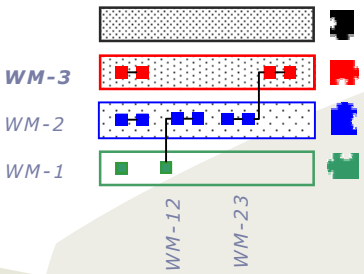
¤ **Mobile WiMAX (2 days)**
· In deept description of interfaces and protocols
· Interworking with other networks

WiMAX Products

WM-1:WiMAX Technology (1d)
WM-2:Mobile WiMAX (2d)
WM-3:Mobile WiMAX Signalling (2d)

Product Combinations

WM-12:WM-1+2 (3 days)
WM-23:WM-2+3 (4 days)



Please call for more information ▶ ▶ ▶

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