

IP Multimedia Subsystem (IMS)

Course 1094 – 8 Hours

Overview

IMS is the cornerstone of the future IP based cellular networks. It was designed to support the most advanced data services from day one. IMS offers built-in mechanisms for IP-based charging (postpaid and prepaid) as well as quality of service and high level of security .

The IMS framework supports: Network level, personal and group communications; Rich multimedia and IP based applications; End-to-end QoS through control plane and media plane
By combining existing voice, video, data and messaging services over a single IP network, IMS will bring the full potential of Internet technology to mobile users while allowing the creation of a new business cycle for wireless operators.

On Completion, Delegates will be able to

- להבין את עקרונות ארכיטקטורת המולטימדיה מעל רשתות IP
- להבין את הפרוטוקולים המרכיבים את IMS
- להבין את דרך פעולת ה-IMS
- להכיר את השירותים השונים אותם מספק ה-IMS
- להכיר את יישומי ה-IMS בארכיטקטורות הסלולאריות הנפוצות

Who Should Attend

- מתכננים
- מפתחים
- אנשי הנדסה וסיוע טכני

Prerequisites

- ידע בסיסי ב- TCP/IP וב-SIP
- ידע בסיסי ברשתות סלולאריות

Course Contents

Brief Introduction to IMS

- Why IMS was developed
- Standard Bodies
- IMS in a FMC concept
- Services Examples

IMS Architecture

- IMS Architecture for MM Sessions
- Network Entities functionality
 - CSCF
 - HSS
 - MRFC
 - Application Server
- IMS Interfaces

IMS Interfaces and Protocols

- SIP
- SDP
- Offer-Answer Model with SDP
- RTP
- DIAMETER
- GPRS

IMS Concepts

- Registration
- Session Initiation
- Identification
- Security
- Bearer traffic Control
- Charging
- User Profile
- Service Provisioning

PSTN/PLMN and IMS users connectivity

- IMS and PSTN connectivity architecture
- IMS and SS7 Call Control Messages Mapping
- IMS originated session with user in the CS Network
- CS originated session toward a IMS user

WLAN and IMS users connectivity

- IMS and WLAN connectivity architecture
- Interworking scenarios

IMS Session examples

IMS Services

- Presence
- Conferencing
- Messaging

Conclusion

- Major vendors offering IMS solutions
- Future implementations