LTE Advanced

Course No. 1434

Course Overview:
The course dives into specifics of the LTE-Advanced PHY layer. A discussion of the main differences between LTE and LTE-Advanced is presented, followed by an in-depth discussion of the various implications of MIMO schemes and carrier aggregation on the downlink and uplink channels and signals within LTE-Advanced. The course ends with a review of the challenging problem of high-dimensionality MIMO detection which is highly important in LTE-Advanced.

Who should attend
The seminar is built for Technical, Marketing and Business Development people of the Telecom Service Providers as well as Manufacturers of LTE-Advanced equipment.

Prerequisite
Basic knowledge of telecommunications is expected from the participants, as well as familiarity with LTE.

Lecturers: Baruch Cyzs
Mr. Cyzs is a senior lecturer at LOGTEL he has an extensive experience in the fields of communications in all its layers with deep emphasis on modem design, adaptive signal processing and smart antennas. In the past, Mr. Cyzs had in the past several senior system engineering positions at Rafael, Elbit and Hewlett Packard. He was awarded several patents and has published scientific papers.
Mr. Cyzs was a co-founder and CTO of Witcom. During these years, Mr. Cyzs has led and was deeply involved with a challenging microwave MIMO project that has enable delivering of ultra high capacity/spectral efficiency. Mr. Cyzs is also serving as freelancer consultant in the field of LTE, WiMAX, OFDM-MIMO implementation and modem design. The consulting has been given to several companies in the field of LTE, WiMAX, modem design, communication system Military communication and general DSP topics.
In the recent years Mr. Cyzs has been involved in founding of a startup company - Ubiquam, which deals with self and foreign interference reduction in cellular networks (LTE and WCDMA). As a part of its Ubiquam activities, Mr. Cyzs has also has participated in the recent years in the standardization process of IEEE802.16 and 3GPP.

Course Content:

1. Introduction to LTE-Advanced
   - Overview of Release 8 LTE
   - Introduction & Requirements
   - Overview of the Main Features of LTE-Advanced
   - Backward Compatibility
   - Deployment Aspects
   - UE Categories of LTE-Advanced

2. Carrier Aggregation
   - Introduction
   - Protocols for Carrier Aggregation
   - Physical Layer aspects
   - UE Transmitter and Receiver Aspects

3. Multiple Antenna Techniques for LTE-Advanced
   - Downlink Reference Signals
   - Uplink Reference Signals
   - Downlink MIMO Enhancements
   - Uplink Multiple Antenna Transmission
   - Coordinated Multipoint (CoMP) Transmission and Reception

4. Relaying
   - Introduction
   - Theoretical analysis of Relaying
   - Relay Nodes in LTE Advanced

5. Summary

Date: 10-11/04/13
Location: LOGTEL
Price: 2,120 NIS + V.A.T