

Web Based Training: HSPA Made Simple

Web Based Training Duration:

- app. 2 hours

Web Based Training Description:

- This Web Based Training provides an in-depth analysis of the lately very popular high speed technology revolution of UMTS: High Speed Downlink & Uplink Packet Access - HSPA.
- The Web Based Training starts with the discussion of the targets and characteristics of HSDPA. Here the main features will be discussed.
- Once the basic concepts of HSDPA are explained the operation of HSDPA is discussed: The setup, transmission and retransmission, and finally the serving cell change.
- After that the Web Based Training continues with the enhancement of the UL data rate: HSUPA. HSUPA and HSDPA create then finally HSPA. Here the concept of scheduling power instead of CDMA codes (like HSDPA) to the UE is discussed.
- Since the introduction of HSUPA is going along with the mayor change to have both user plane and control plane on the HSPA resources this has quite some changes in the higher layer protocol stack as a consequence. Hence the setup of an HSPA only RRC connection is and the HSPA protocol stack are discussed in detail.

Some of your questions that will be answered during this Web Based Training:

- What is specific to HSPA and which assets made it so powerful compared to legacy UMTS?
- How does HARQ and AMC operate in downlink and uplink?
- How does a PDP Context Activation with HS-Radio Bearer Setup look like and how does the HS-Serving cell change procedure work?
- What are the new transport and physical channels enabling HS-DSCH and E-DCH operation?
- Why is the downlink scheduling based on CQI and the uplink scheduling on RoT?
- What the HSPA protocol stack is looking like?

Table of Content:

Part 1: HSDPA

- **HSDPA (High Speed Downlink Packet Access) for WCDMA**
 - **HSDPA Targets with Regards to Rel. '99**
 - **HSDPA Characteristics**
 - **Important Changes with HSDPA**
 - **HSDPA Basic Operation**
 - **Introduction to HSDPA Mobility Procedures**
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Part 2: HSUPA

- **The High-Speed Roadmap**
 - **HSUPA Characteristics**
 - **Basic HSUPA Operation**
 - **Achievable Throughput Rates in HSUPA**
 - **HSPA PS Protocol Stack**
 - **HSUPA and DPCH Operation – HSUPA Setup**
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