

HSPA+ (R7 & R8) Made Simple

Web Based Training Duration:

- app. 2 hours

Web Based Training Description:

- This Web Based Training addresses the needs of engineers who need to get familiar with advanced developments in the field of HSPA+/eHSPA.
- In the beginning of the Web Based Training HSDPA and HSUPA are compared to HSPA+.
- The Web Based Training continues with the elaboration of background and implementation of important release 7 key technologies like MIMO, higher order modulation schemes (4-PAM, 16-QAM, and 64-QAM), Continuous Packet Connectivity (CPC), layer 2 improvements, and RRC state operation enhancements.
- The next part looks into release 8 HSPA+ and works on features like 64-QAM together with MIMO and DL IC.
- The final chapter is dedicated to selected important scenarios of HSPA+ RRC state operation enhancements.

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

- What are the differences in-between HSPA and HSPA+?
- How do higher level modulation schemes impact the mobile radio network's performance?
- What is MIMO and what makes it that important for tomorrow's mobile radio standards?
- How MIMO is introduced in HSPA+ and what needs to be changed in terms of signaling and protocols?
- What is Continuous Packet Connectivity and what needs to be done in order to efficiently implement it in HSPA+?
- How does the new generation of L1 signaling look like in HSPA+?
- How do MAC, RLC, and RRC protocols change for HSPA+?
- When and how MIMO can be combined with 64-QAM?
- How can DL interference cancellation be implemented in the UE?
- What other advanced receiver technologies are standardized for HSPA?

Table of Content:

Part 1: Introduction to HSPA+

- HSPA+ in the HSPA Roadmap
 - Feature Review of HSDPA
 - Feature Review of HSUPA
 - HSDPA+ UE Categories
 - Optional and Mandatory Features in Rel. 7
 - HSPA+ Protocol Stack
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Part 2: HSPA+ in Release 7

- Higher Order Modulation Schemes
 - MIMO
 - Continuous Packet Connectivity (CPC)
 - Upgraded L1 Signaling
 - MAC-ehs Entity
 - Flexible RLC PDU Sizes
 - RRC State Operation Enhancements
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Part 3: HSPA+ enhancements in Release 8

- Overview of HSPA+ Related Work Items in R8
 - MIMO combined with 64-QAM
 - Dual Branch Interference Cancellation
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Part 4: RRC State Operation Enhancements Scenarios

- Operation in the CELL_FACH state
- Operation in the CELL_FACH state – Cell Update
- RRC Idle to transient CELL_FACH
- Operation in the URA_PCH or CELL_PCH state