Course ID **LTEHSPAOPT** Course Duration **5-6 days**	Course Title # LTE-HSPA Inter-technology Optimization

Related Courses

This course is designed to complement the 3G and LTE technology and planning courses.

Aimed At

RAN planners, RAN RF tuners, RAN parameter configuration engineers, RAN optimization engineers, and radio optimization personnel in general.

Prerequisites

Those wishing to take this course should be well-versed in UMTS/HSPA and LTE.

Course in a Nutshell

Today's multilayer and multi-technology networks require an in-depth understanding of the inter-technology performance and mobility issues. HSPA and LTE networks, which are among the most prevalent, are the focus of this course. Multilayer cell design is a promising approach for broadband continuity but introduces many restrictions and coverage problems for RAN planners and optimizers. We will help you understand the HSPA/LTE interoperability performance, mobility optimization, and tuning issues and use that understanding to improve Quality of Experience for existing users as well as plan for the future network generations.

Customize It!

We can adapt this course to your own technical environment. If your personnel have a solid understanding of HSPA and LTE, some of the introductory material can be removed, resulting in a 5-day course.

Learn How To

- Describe HSPA and LTE functionality and operability
- Explain HSPA and LTE interoperability issues
- Trouble shoot HSPA and LTE mobility
- Improve your skills in HSPA and LTE network mobility and inter-technology performance through case studies and exercises.

Course Outline

- Day 1: HSPA overview and design
    - HSPA technology overview
    - HSPA cell planning review
    - HSPA optional features (3GPP and vendor specific)

- Day 2: HSPA optimization
    - HSPA capacity optimization (vendor specific)
    - HSPA channel switching optimization
    - HSPA scheduler performance and optimization (vendor specific)

- Day 3: HSPA Mobility optimization

- ◦ HSPA mobility optimization (vendor specific)
- ◦ HSPA → LTE inter-technology mobility optimization
- ◦ **Special Case:** HSPA mobility optimization for smart phones
- ◦ **Exercise:** HSPA planning optimization for IRAT mobility (using Excel spreadsheets)
- ◦ **Case studies:** Log file analysis (using TEMS)

- Day 4: LTE Overview and Design

  - ◦ LTE technology overview
  - ◦ LTE LA-PC-scheduler (3GPP specifications and vendor specific)
  - ◦ LTE optimization: Radio planning review (vendor specific parameter configuration)
  - ◦ **Exercise:** LTE planning optimization for IRAT mobility (using Excel spreadsheets)
  - ◦ **Case studies:** Log file analysis (using TEMS)

- Day 5: LTE Mobility Optimization

  - ◦ LTE Intra-frequency mobility optimization
  - ◦ LTE Inter-frequency mobility optimization
  - ◦ LTE Inter-frequency coverage triggered session continuity
  - ◦ LTE Inter-frequency coverage triggered handover
  - ◦ LTE Inter-frequency load balancing
  - ◦ **Exercise:** LTE X2 and S1 handover signaling flows
  - ◦ **Case studies**: Optimization and troubleshooting problems for LTE mobility

- Day 6: LTE Inter-technology (IRAT) mobility optimization

  - ◦ LTE→HSPA IRAT mobility
  - ◦ LTE → HSPA cell reselection
  - ◦ LTE → WCDMA/HSPA coverage triggered session continuity
  - ◦ LTE → WCDMA coverage triggered handover
  - ◦ **Exercise:** LTE IRAT handover signaling flows
  - ◦ **Case studies:** Optimization and troubleshooting problems for LTE mobility

- Wrap-up

  - ◦ Course recap and Q/A
  - ◦ Evaluations

DCN　　　　　　*NZDL.Ll.f*