E-UTRAN/LTE SON

Who Should Attend?

This course is intended for experienced network engineers, network tuning staff, E-UTRAN developers and anyone with network experience who needs to develop technical knowledge on the functionality, capabilities, limitations and commercial availability of Self-Organising Network features.

Course Scope

1. Introduction.
2. NAS, RRC & MAC protocol essentials.
3. M2M load control.
4. RLF and other failures.
5. RACH Optimisation.
6. Mobility Robustness Optimisation (MRO) intra-LTE and inter-RAT.
7. Minimisation of Drive Tests (MDT) intra-LTE & inter-RAT.
8. eNB self-configuration.
9. Automatic Neighbour Relation (ANR) intra-LTE & inter-RAT.
10. Inter-Cell Interference Coordination (ICIC) for homogenous and heterogeneous networks.
11. Mobility Load Balancing (MLB) intra-LTE & inter-RAT.
12. Energy Saving.
13. Coverage & Capacity Optimisation (CCO).
14. Cell Outage Compensation (COC).

Course Objectives

Over the past decade, cellular radio networks have evolved into multi-band, multi-RAT heterogeneous systems which consist of tens of thousands of cells with hundreds of settings in each of them. Meanwhile, the mobile telecommunications industry has gone through a cost-reduction process resulting in significant job cuts. This means that efficient network management is extremely challenging and has to be done by fewer staff than ever before.

In these circumstances, without proper tools, even the most skilled engineers must focus on vital matters, leaving undone many important tasks. As a result, many experienced LTE networks operate solely on the basis of default configuration -- and those default parameter settings might not always be optimal.

This E-UTRAN/LTE SON (R8-R12) training introduces Self-Organising Network (SON) features as the proper tool to address these problems. All aspects of SON, including self-configuration, self-optimisation, and self-healing are described as defined in different releases of LTE standard (R8-R12).

Prerequisites

Knowledge of E-UTRAN/LTE is required. Completion of E-UTRAN/LTE Signalling course (or equivalent) is highly recommended.

Training Structure

Two-day training divided into logical sessions.

Methodology

Instructor-led training. Lectures and multimedia presentations.