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AEROFLEX
A passion for performance.

LTE Capacity Test Quick Fact sheet

EAST500

Introduction

While Long Term Evolution (LTE) technology is becoming functionally more robust, there remains one significant challenge prior to commercial network rollout:

Ensuring the complete LTE infrastructure performs under loaded conditions and delivers an optimum experience to the wireless subscriber.

Why does this matter? There have been several well-publicized cases of 3G networks straining under the load of data-hungry devices to the extent that the devices cease to function. In such situations, operators are seeking for reassurance that the network can at the very least manage the requested load without failure.

Historically, such testing has been performed in labs using real handset UEs for end to end testing via RF or by replacing the base station with a simulated load. The use of real handsets becomes difficult to coordinate when hundreds or more are required. The simplification of the LTE Network architecture over previous generations requires LTE load simulators to interface to the base station eNode-B rather than deeper in the network.

LTE Capacity Test

The EAST500 provides true end to end LTE load testing over an RF connection to an LTE eNode-B (eNB). A scalable number of connected UEs are provided that can simulate from hundreds to thousands of active wireless subscribers per cell.

The EAST500 consists of the proven Nethawk EAST load simulation solution fully integrated with Aeroflex LTE RF technology. The use of Aeroflex's LTE RF solution provides access to the most widely deployed UE RF test solution worldwide that reduces EAST500 integration time from months to days.

Applications

EAST500 is a highly flexible test platform that can be used for:

- eNB and LTE network load test
- eNB and LTE network regression test
- LTE end to end quality of service measurement
- eNB scheduler testing under high UE load conditions

Real LTE data bearer services such as VoIP calls, FTP data, web browsing and video broadcasts can be verified by using sophisticated application data generation features of the EAST500. This enables end-user quality of experience measurements to be made based upon real data application traffic.

Quick Facts

1. *Supports true LTE load testing over the RF interface in FDD and TDD environments*
2. *Simulates from hundreds to thousands of LTE UEs over one to multiple cells*
3. *Comprehensive measurements for trouble-shooting from Layer 1 to NAS*
4. *Generate different traffic profiles using real data services and applications*
5. *Supports remote access and multiple users*
6. *Capable of simulating a user plane load exceeding the capacity of an eNode-B*
7. *Based on a high-performance hardware platform ready for 4x4 MIMO and extendable for LTE-A*