



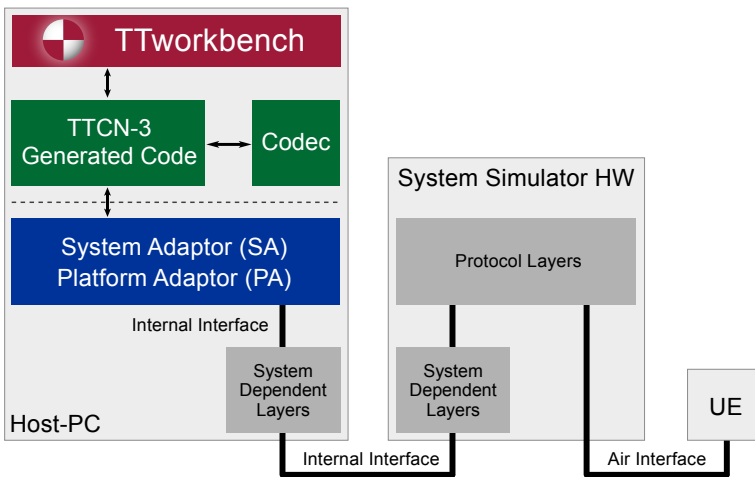
# TTsuite-LTE

## The Test Suite for Testing UEs in Long Term Evolution Networks

### Features

- Full-featured tests for
  - Radio Resource Control Protocol (RRC)
  - UE ↔ E-UTRAN
- Exhaustive set of context parameters
  - For flexible adaptation of LTE tests to the UE (implementation under test)
  - PDCP/RLC/MAC configurations triggered by TTCN-3 Call Transfer
- Platform-independent test execution
  - Executable tests can be ported onto various test devices and test platforms
- Test tracing on different levels of detail

### Test System Architecture E-UTRAN/UE



### Benefits

- Standards-based testing according to 3GPP specifications
- Fast and simple test execution and analysis
- Repeatability of tests and full support of test automation
- Extensible by additional and all upcoming LTE features
- Flexibility through usage of the constantly evolving standardized test notation TTCN-3



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## The Test Suite for Testing UEs in Long Term Evolution Networks

### Standards

- 3GPP TS 32.523-3 V1.1.0, 2009-02
- 3GPP TS 36.331 V8.1.0, 2008-03
- 3GPP TS 36.413 V8.1.0, 2008-03
- 3GPP TS 36.423 V8.1.0, 2008-03
- ETSI ES 201 873-1 TTCN-3 Core Language V3.4.1, 2008-07

### Additional Codec Plugin Support

- RRC (included in test suite)
  - UE ↔ E-UTRAN
  - ASN.1 codec generation
- S1 Application Protocol
  - eNodeB ↔ MME Mobility Management Entity
  - Type System and ASN.1 Codec generation
  - TA SCTP Plugin
- X2 Application Protocol
  - eNodeB ↔ eNodeB
  - Type System and ASN.1 Codec generation
  - TA SCTP Plugin

### Reference Platforms

- Java 5.0 (Sun, IBM or Oracle)
- Microsoft Windows XP, x86-32
- Red Hat Enterprise Linux 5.0, x86-32 and 4.0 update 2, x86-64, GTK
- Fedora 7, x86-32 and x86-64, GTK
- SUSE Linux Enterprise Server 10, x86-32, GTK

### LTE Package

- 300 extendable test cases
  - Available until end of 2009
  - Developed and validated by ETSI using TTworkbench
- Codec package free of charge for Uu, S1, X2 interfaces