



*ETSI 3GPP LTE UE
Conformance Test Suite
with TestCast*



Cut your software testing expenses

Functional black-box tests automation

Foreword

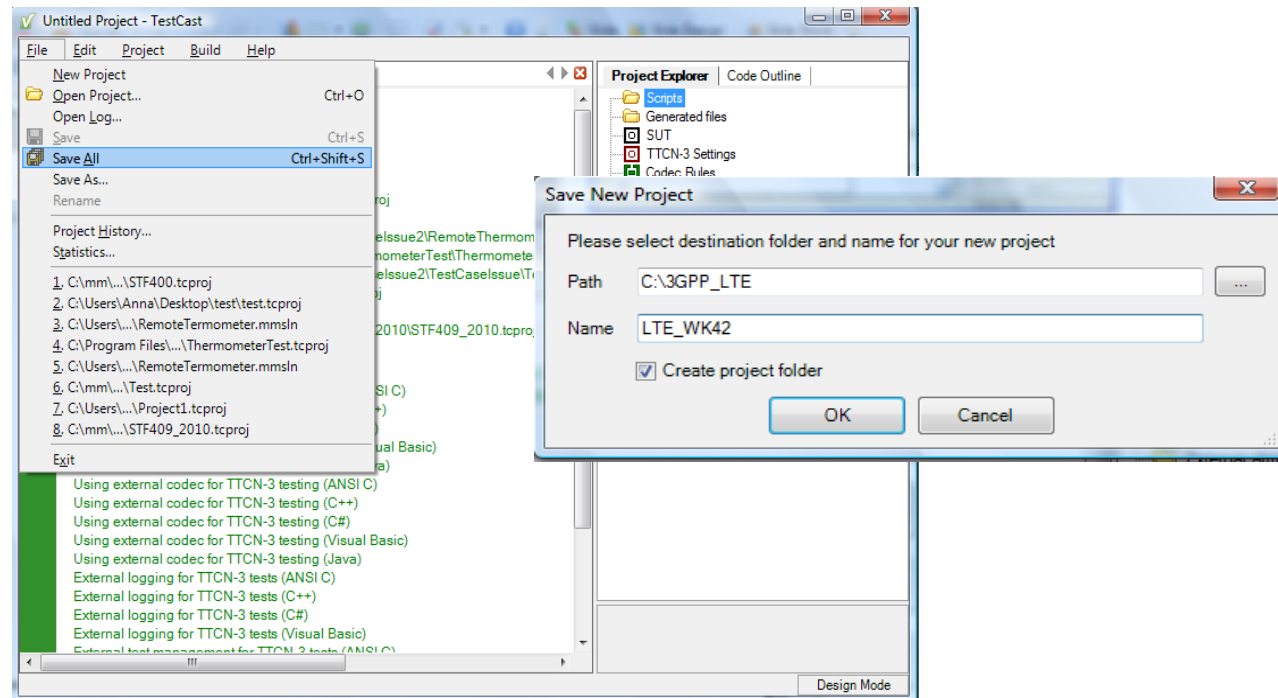
- ▶ *ETSI is developing 3GPP LTE UE conformance test suite*
- ▶ *New version of the test suite is delivered in a regular bases – new version is released in every few weeks*
- ▶ *Present slides give an overview how to use public LTE UE conformance test suite with TestCast tool*

Getting started – necessary steps

- ▶ *Get latest LTE test suite from ftp://ftp.3gpp.org/tsg_ran/WG5_Test_ex-T1/TTCN/Deliveries/LTE_SAE/ and unzip it*
- ▶ *Create new project in TestCast and save it (give some name)*
- ▶ *Import all scripts from 3GPP LTE Test Suite into newly created TestCast project*
- ▶ *Set ASN.1 codec type*
- ▶ *Press Compile All (main menu Build->Compile all, or in scripts context menu in project explorer)*
- ▶ *Test cases are ready to execute*

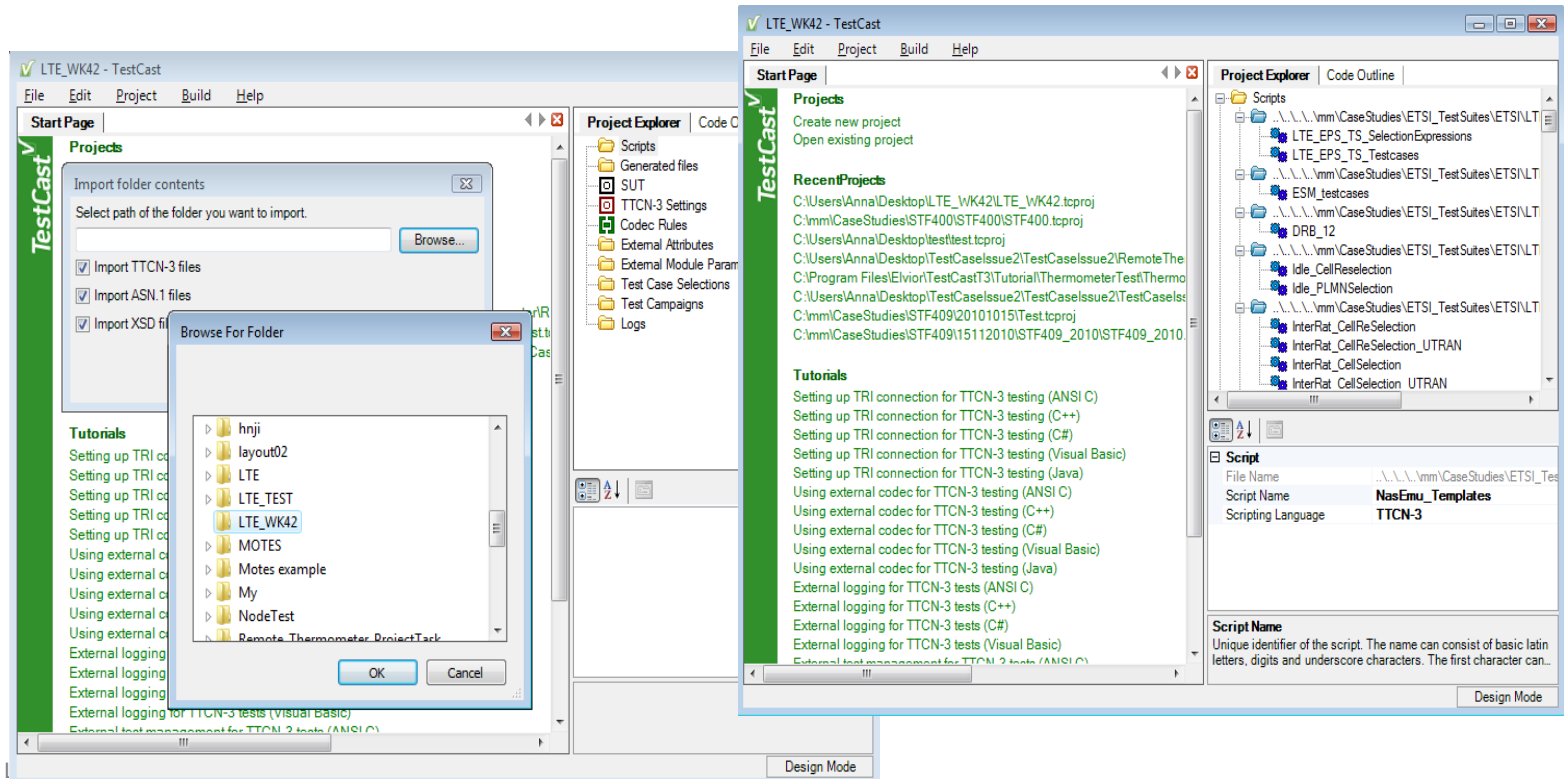
Create new project in TestCast

- ▶ Run TestCast
- ▶ Press File -> Save all
 - ▶ Select the location for the new project (Path)
 - ▶ Give appropriate name to new project (e.g. LTE_WK42)
- ▶ Press OK



Import test suite into TestCast

- ▶ Right click on scripts in solution explorer and select Import Folder
- ▶ Browse to the source folder and press OK
- ▶ Please note that scripts are referred from their original storing place
 - ▶ Import does not move files in your computer's file system



Compile test suite scripts

- ▶ Select ASN.1 codec type for encoding ASN.1 messages (under TTCN-3 Settings in the Project explorer)
- ▶ Press Build->Compile All
- ▶ Compilation succeeds
- ▶ Test cases are ready to execute

The screenshot displays the LTE_WK42 - TestCast IDE interface. The main window shows a log of compilation activities, including the successful compilation of various scripts such as RRC_ConnRel, RRC_ConnRel_UTRAN, RRC_ConnRel_UTRAN, RRC_Handover, EUTRA_Measurement_Templates, RRC_Handover, RRC_Measurement, EUTRA_Measurement_Specific_Templates, RRC_Measurement, RRC_Others, RRC_Paging, RRC_RadioLinkFailure, and LTE_EPS_TS_Testcases. The Project Explorer on the right shows the project structure, including the Scripts folder and the ASN.1 Settings panel. The ASN.1 Settings panel is expanded, showing the Default ASN.1 encoding set to Aligned PER. The Design Mode button is visible at the bottom right.

Build Log:

Time	Data
14:43:44.255	Script "...
14:43:44.743	Script "...
14:43:44.744	Starting
14:43:45.045	Script "..."
14:43:45.045	Starting
14:43:45.156	Script "..."
14:43:45.157	Starting
14:43:45.293	Script "..."
14:43:45.295	Starting compilation of the RRC_ConnRel script...
14:43:45.403	Script "RRC_ConnRel" compiled successfully. 0 errors, 0 warnings.
14:43:45.405	Starting compilation of the RRC_ConnRel_UTRAN script...
14:43:45.495	Script "RRC_ConnRel_UTRAN" compiled successfully. 0 errors, 0 warnings.
14:43:45.496	Starting compilation of the RRC_Handover script...
14:43:45.536	Starting compilation of the EUTRA_Measurement_Templates script...
14:43:45.597	Script "EUTRA_Measurement_Templates" compiled successfully. 0 errors, 0 warnings.
14:43:45.803	Script "RRC_Handover" compiled successfully. 0 errors, 0 warnings.
14:43:45.806	Starting compilation of the RRC_Measurement script...
14:43:45.867	Starting compilation of the EUTRA_Measurement_Specific_Templates script...
14:43:45.995	Script "EUTRA_Measurement_Specific_Templates" compiled successfully.
14:43:46.513	Script "RRC_Measurement" compiled successfully. 0 errors, 0 warnings.
14:43:46.514	Starting compilation of the RRC_Others script...
14:43:46.645	Script "RRC_Others" compiled successfully. 0 errors, 0 warnings.
14:43:46.646	Starting compilation of the RRC_Paging script...
14:43:46.713	Script "RRC_Paging" compiled successfully. 0 errors, 0 warnings.
14:43:46.714	Starting compilation of the RRC_RadioLinkFailure script...
14:43:46.789	Script "RRC_RadioLinkFailure" compiled successfully. 0 errors, 0 warnings.
14:43:48.294	Script "LTE_EPS_TS_Testcases" compiled successfully. 0 errors, 0 warnings.

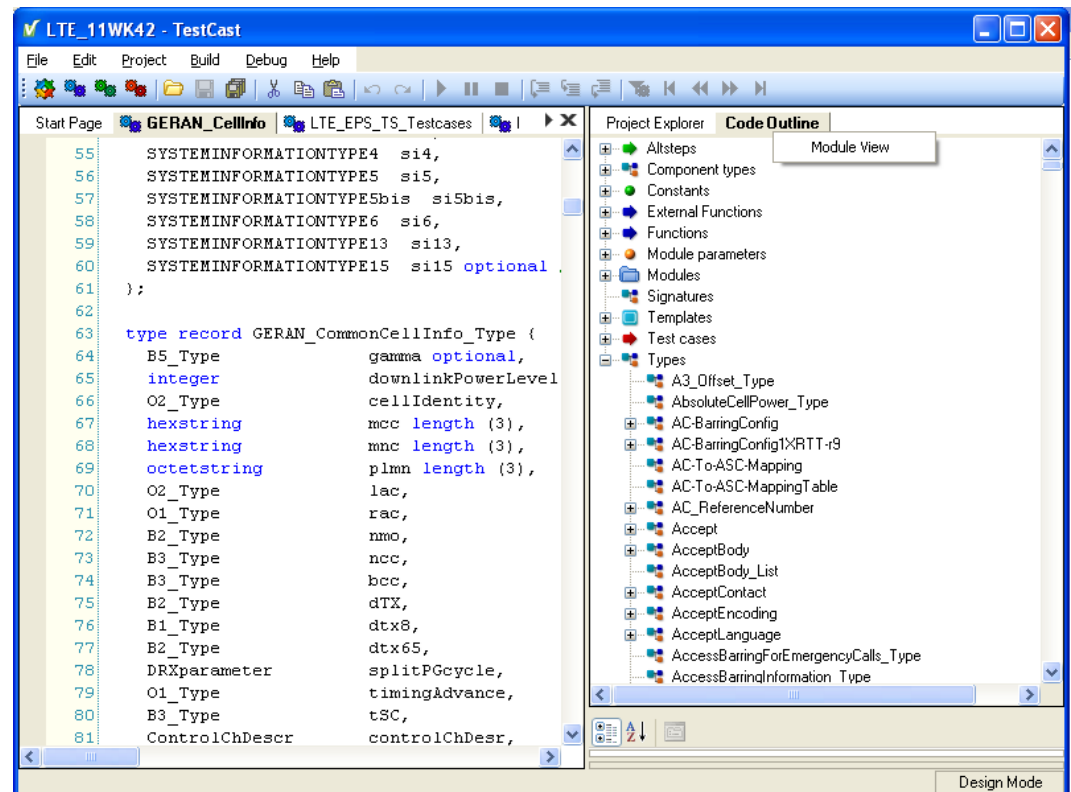
ASN.1 Settings:

- Decode omit as default: False
- Default ASN.1 encoding: **Aligned PER**
- Force default value encoding: Aligned PER
- Default Encoding Settings: BER
- Logging Settings: External
- TCI Settings: Unaligned PER
- TCPIP Settings
- TRI Settings
- TTCN-3 Settings

Default ASN.1 encoding: This setting will be used for encoding ASN.1 based data. The setting can be overridden in TTCN-3 scripts using the attribute m...

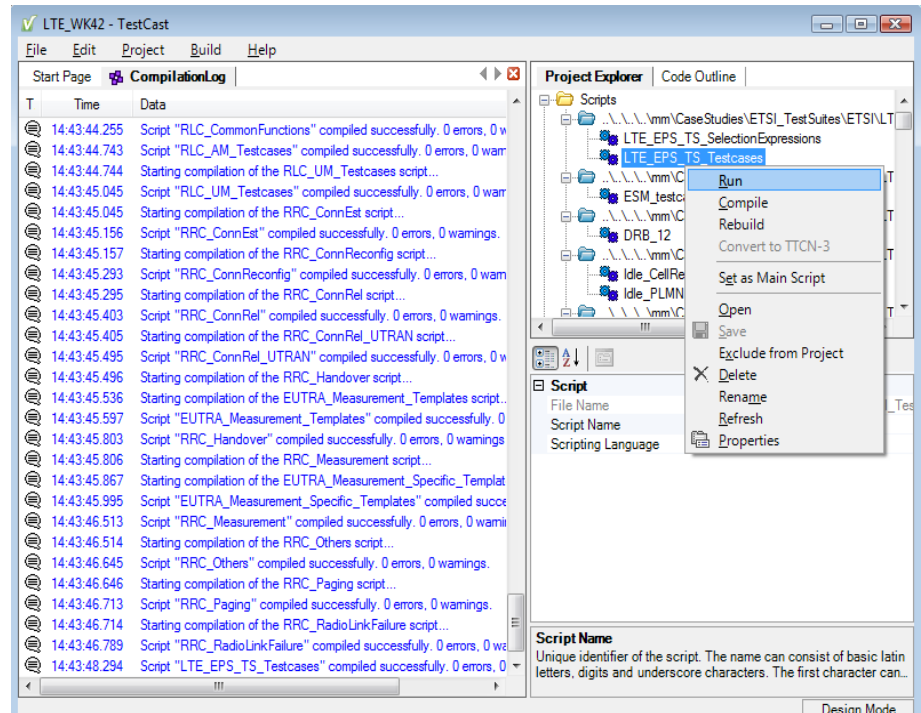
Explore 3GPP LTE test suite

- ▶ Use code outline tab in project explorer window to explore the test suite
- ▶ Hint: you can switch between module and global view using tab context menu



Executing test cases

- ▶ Test environment for execution of test cases includes always System Adapter (SA); SA is SUT specific
 - ▶ Hint: TestCast includes framework for building SA in C, C++, C#, VB and Java
- ▶ For executing test cases on TestCast
 - ▶ Simply press Run in the script context menu or
 - ▶ Use TestCast built in test management features



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