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**Methods for Testing and Specification (MTS);
The Test Description Language (TDL);
Part 4: Structured Test Objective Specification (Extension)**

Reference

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Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Methods for Testing and Specification (MTS).

The present document is part 4 of a multi-part deliverable. Full details of the entire series can be found in part 1 [1].

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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Introduction

Test purposes play an essential role in test specification processes at ETSI. Currently, TDL treats test purposes, and test objectives in general as informal text without any additional structural constraints. This extension package for TDL refines and formalizes test objective specification within TDL by introducing relevant meta-model concepts and a corresponding syntactical notation, both of which are related to TPLan ETSI ES 202 553 [i.1] and TPLan-like notations already established at ETSI. This enables test purpose specification to enter the modelling world and paves the way for improved tool support and better structured test objectives, as well as additional formal verification and validation facilities down the road by integrating and unifying the means for the specification of test purposes and test descriptions, while relying on the same underlying meta-model and benefiting from other related technologies built around this meta-model.

The present document describes the relevant abstract syntax (meta-model) extensions as well as the corresponding concrete syntactical notation.

1 Scope

The present document specifies an extension of the Test Description Language (TDL) enabling the specification of structured test objectives. The extension covers the necessary additional constructs in the abstract syntax, their semantics, as well as the concrete graphical syntactic notation for the added constructs. In addition textual syntax examples of the TDL Structured Test Objectives extensions as well as BNF rules for a textual syntax for TDL with the Structured Test Objectives extensions are provided. The intended use of the present document is to serve both as a foundation for TDL tools implementing support for the specification of structured test objectives, as well as a reference for end users applying the standardized syntax for the specification of structured test objectives with TDL.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are necessary for the application of the present document.

- [1] ETSI ES 203 119-1 (V1.3.1): "Methods for Testing and Specification (MTS); The Test Description Language (TDL); Part 1: Abstract Syntax and Associated Semantics".
- [2] ETSI ES 203 119-2 (V1.2.1): "Methods for Testing and Specification (MTS); The Test Description Language (TDL); Part 2: Graphical Syntax".
- [3] ETSI ES 203 119-3 (V1.2.1): "Methods for Testing and Specification (MTS); The Test Description Language (TDL); Part 3: Exchange Format".

2.2 Informative references

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI ES 202 553 (V1.2.1): "Methods for Testing and Specification (MTS); TPLan: A notation for expressing Test Purposes".
- [i.2] ETSI TS 136 523-1 (V10.2.0): "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification; Part 1: Protocol conformance specification (3GPP TS 36.523-1 version 10.2.0 Release 10)".
- [i.3] ETSI TS 186 011-2: "Core Network and Interoperability Testing (INT); IMS NNI Interoperability Test Specifications (3GPP Release 10); Part 2: Test descriptions for IMS NNI Interoperability".