



**Methods for Testing and Specification (MTS);
The Testing and Test Control Notation version 3;
TTCN-3 Language Extensions: Behaviour Types**

Document Preview

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Foreword

This final draft ETSI Standard (ES) has been produced by ETSI Technical Committee Methods for Testing and Specification (MTS), and is now submitted for the ETSI Membership Approval Procedure.

The use of underline (additional text) highlights the differences between base document and extended documents.

The present document relates to the multi-part standard ETSI ES 201 873 covering the Testing and Test Control Notation version 3, as identified in ETSI ES 201 873-1 [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).

"must" and **"must not"** are **NOT** allowed in ETSI deliverables except when used in direct citation.

1 Scope

The present document defines the Behaviour Types package of TTCN-3. TTCN-3 can be used for the specification of all types of reactive system tests over a variety of communication ports. Typical areas of application are protocol testing (including mobile and Internet protocols), service testing (including supplementary services), module testing, testing of APIs, etc. TTCN-3 is not restricted to conformance testing and can be used for many other kinds of testing including interoperability, robustness, regression, system and integration testing. The specification of test suites for physical layer protocols is outside the scope of the present document.

TTCN-3 packages are intended to define additional TTCN-3 concepts, which are not mandatory as concepts in the TTCN-3 core language, but which are optional as part of a package which is suited for dedicated applications and/or usages of TTCN-3.

This package defines types for behaviour definitions in TTCN-3.

While the design of TTCN-3 package has taken into account the consistency of a combined usage of the core language with a number of packages, the concrete usages and guidelines for this package in combination with other packages is outside the scope of the present document.

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.

Referenced documents which are not found to be publicly available in the expected location might be found in the [ETSI docbox](#).

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

- [1] [ETSI ES 201 873-1](#): "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 1: TTCN-3 Core Language".
- [2] [ETSI ES 201 873-4](#): "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 4: TTCN-3 Operational Semantics".
- [3] [ETSI ES 201 873-5](#): "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 5: TTCN-3 Runtime Interface (TRI)".
- [4] [ETSI ES 201 873-6](#): "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 6: TTCN-3 Control Interface (TCI)".
- [5] [ISO/IEC 9646-1](#): "Information technology -- Open Systems Interconnection -- Conformance testing methodology and framework; Part 1: General concepts".
- [6] [ETSI ES 202 784](#): "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; TTCN-3 Language Extensions: Advanced Parameterization".
- [7] [ETSI ES 201 873-10](#): "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 10: TTCN-3 Documentation Comment Specification".

2.2 Informative references

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The following referenced documents may be useful in implementing an ETSI deliverable or add to the reader's understanding, but are not required for conformance to the present document.

- [i.1] ETSI ES 201 873-7: "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 7: Using ASN.1 with TTCN-3".
- [i.2] ETSI ES 201 873-8: "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 8: The IDL to TTCN-3 Mapping".
- [i.3] ETSI ES 201 873-9: "Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 9: Using XML schema with TTCN-3".

3 Definition of terms, symbols and abbreviations

3.1 Terms

For the purposes of the present document, the terms given in ETSI ES 201 873-1 [1], ETSI ES 201 873-4 [2], ETSI ES 201 873-5 [3], ETSI ES 201 873-6 [4], ISO/IEC 9646-1 [5] and the following apply:

behaviour definition: definition of an altstep, function, or testcase that can be called explicitly

NOTE: A control part is not considered a behaviour definition, because it cannot be called explicitly.

behaviour type: type of behaviour definitions

NOTE: Behaviour types are of kind altstep, function, or testcase.

3.2 Symbols

Void.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in ETSI ES 201 873-1 [1], ETSI ES 201 873-4 [2], ETSI ES 201 873-5 [3], ETSI ES 201 873-6 [4] and ISO/IEC 9646-1 [5] apply.

4 Package conformance and compatibility

The package presented in the present document is identified by the package tag:

"TTCN-3:2009 Behaviour Types" - *to be used with modules complying with the present document*

For an implementation claiming to conform to this package version, all features specified in the present document shall be implemented consistently with the requirements given in the present document; in ETSI ES 201 873-1 [1] and ETSI ES 201 873-4 [2]. All features marked [AdvancedParameterization] have to be implemented only in case that this package is used together with the Advanced Parameterization package [6].