International Telecommunication Union

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SERIES Z: LANGUAGES AND GENERAL SOFTWARE
ASPECTS FOR TELECOMMUNICATION SYSTEMS

Formal description techniques (FDT) – Testing and Test
Control Notation (TTCN)

Testing and test control notation version 3: TTCN-3 language extensions: object-oriented features

Recommendation ITU-T Z.161.7

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Recommendation ITU-T Z.161.7

Testing and test control notation version 3: TTCN-3 language extensions: object-oriented features

Summary

Recommendation ITU-T Z.161.7 defines the support for object-oriented features in 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 OMG CORBA based platforms, application programming interfaces (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.

History

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Control notation, interoperability testing, protocol testing, protocols, service testing, testing, tools, TTCN-3.

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* To access the Recommendation, type the URL http://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID. For example, http://handle.itu.int/11.1002/1000/11830-en.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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Recommendation ITU-T Z.161.7

Testing and test control notation version 3: TTCN-3 language extensions: object-oriented features

1   Scope

Recommendation ITU-T Z.161.7 defines the support for object-oriented features in 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 OMG CORBA based platforms, application programming interfaces (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 the TTCN-3 support for object-oriented features.

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 of and guidelines for this package in combination with other packages is outside the scope of this Recommendation.

2   References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[ETSI ES 203 790 V1.4.1]   ETSI ES 203 790 V1.4.1 (2022-04), *Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; TTCN-3 Language Extensions: Object-Oriented Features*.

3   Definitions

3.1   Terms defined elsewhere

None.

3.2   Terms defined in this Recommendation

None.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

API   Application Programming Interface

CORBA   Common Object Request Broker Architecture

TTCN   Testing and Test Control Notation

5 Conventions

None.

6 Endorsement

[ETSI ES 203 790 V1.4.1] was approved by ITU-T as the basis for Recommendation ITU-T Z.161.7.

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