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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: Support of interfaces with continuous signals

Recommendation ITU-T Z.161.1

ITU-T Z-SERIES RECOMMENDATIONS
LANGUAGES AND GENERAL SOFTWARE ASPECTS FOR TELECOMMUNICATION SYSTEMS

FORMAL DESCRIPTION TECHNIQUES (FDT)	
Specification and Description Language (SDL)	Z.100–Z.109
Application of formal description techniques	Z.110–Z.119
Message Sequence Chart (MSC)	Z.120–Z.129
User Requirements Notation (URN)	Z.150–Z.159
Testing and Test Control Notation (TTCN)	Z.160–Z.179
PROGRAMMING LANGUAGES	
CHILL: The ITU-T high level language	Z.200–Z.209
MAN-MACHINE LANGUAGE	
General principles	Z.300–Z.309
Basic syntax and dialogue procedures	Z.310–Z.319
Extended MML for visual display terminals	Z.320–Z.329
Specification of the man-machine interface	Z.330–Z.349
Data-oriented human-machine interfaces	Z.350–Z.359
Human-machine interfaces for the management of telecommunications networks	Z.360–Z.379
QUALITY	
Quality of telecommunication software	Z.400–Z.409
Quality aspects of protocol-related Recommendations	Z.450–Z.459
METHODS	
Methods for validation and testing	Z.500–Z.519
MIDDLEWARE	
Processing environment architectures	Z.600–Z.609

For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T Z.161.1

Testing and Test Control Notation version 3: TTCN-3 language extensions: Support of interfaces with continuous signals

Summary

Recommendation ITU-T Z.161.1 defines the "continuous signal support" 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 Common Object Request Broker Architecture (CORBA) based platforms, testing of 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 this Recommendation.

History

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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.161.1

Testing and Test Control Notation version 3: TTCN-3 language extensions: Support of interfaces with continuous signals

1 Scope

This Recommendation defines the "continuous signal support" 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 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 this Recommendation.

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 concepts for testing systems using continuous signals, as opposed to discrete messages, and the characterization of the progression of such signals by use of streams.

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 202 786 V1.5.1] ETSI ES 202 786 V1.5.1 (2022-04), *Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; TTCN-3 Language Extensions: Support of interfaces with continuous signals*.

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
TTCN-3	Testing and Test Control Notation 3

5 Conventions

None.

6 Endorsement

[ETSI ES 202 786 V1.5.1] was approved by ITU-T as the basis for Recommendation ITU-T Z.161.1.

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