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**ITU-T**

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SERIES Z: LANGUAGES AND GENERAL SOFTWARE  
ASPECTS FOR TELECOMMUNICATION SYSTEMS

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

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**Testing and Test Control Notation version 3:  
TTCN-3 language extensions: Behaviour types**

Recommendation ITU-T Z.161.4

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## Recommendation ITU-T Z.161.4

### Testing and Test Control Notation version 3: TTCN-3 language extensions: Behaviour types

#### Summary

Recommendation ITU-T Z.161.4 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 Common Object Request Broker Architecture (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.

#### History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T Z.161.4	2013-07-14	17	<a href="http://handle.itu.int/11.1002/1000/11960">11.1002/1000/11960</a>
2.0	ITU-T Z.161.4	2015-10-29	17	<a href="http://handle.itu.int/11.1002/1000/12609">11.1002/1000/12609</a>
3.0	ITU-T Z.161.4	2017-10-14	17	<a href="http://handle.itu.int/11.1002/1000/13373">11.1002/1000/13373</a>

#### Keywords

Languages, 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>.

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## Recommendation ITU-T Z.161.4

### Testing and Test Control Notation version 3: TTCN-3 language extensions: Behaviour types

#### 1 Scope

Recommendation ITU-T Z.161.4 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 CORBA based platforms, 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 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 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 202 785 V1.5.1] ETSI ES 202 785 V1.5.1 (2017-05), *Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; TTCN-3 Language Extensions: Behaviour Types*.

#### 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 202 785 V1.5.1] was approved by ITU-T as the basis for Recommendation ITU-T Z.161.4.



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