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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 runtime interface (TRI)**

Recommendation ITU-T Z.165

ITU-T



ITU-T Z-SERIES RECOMMENDATIONS

LANGUAGES AND GENERAL SOFTWARE ASPECTS FOR TELECOMMUNICATION SYSTEMS

<b>FORMAL DESCRIPTION TECHNIQUES (FDT)</b>	
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
<b>Testing and Test Control Notation (TTCN)</b>	<b>Z.160–Z.179</b>
<b>PROGRAMMING LANGUAGES</b>	
CHILL: The ITU-T high level language	Z.200–Z.209
<b>MAN-MACHINE LANGUAGE</b>	
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
<b>QUALITY</b>	
Quality of telecommunication software	Z.400–Z.409
Quality aspects of protocol-related Recommendations	Z.450–Z.459
<b>METHODS</b>	
Methods for validation and testing	Z.500–Z.519
<b>MIDDLEWARE</b>	
Processing environment architectures	Z.600–Z.609

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

# Recommendation ITU-T Z.165

## Testing and test control notation version 3: TTCN-3 runtime interface (TRI)

### Summary

Recommendation ITU-T Z.165 provides the specification of the runtime interface for TTCN-3 (Testing and Test Control Notation 3) test system implementations. The TTCN-3 Runtime Interface (TRI) provides the recommended adaptation for timing and communication of a test system to a particular processing platform and the system under test, respectively. This Recommendation defines the interface as a set of operations independent of target language.

The interface is defined to be compatible with Recommendation ITU-T Z.161. This Recommendation uses the Common Object Request Broker Architecture (CORBA) Interface Definition Language (IDL) to specify the TRI completely. Clauses 6, 7 and 8 of ETSI ES 201 873-5 V4.9.1 specify language mappings of the abstract specification to the target languages Java and ANSI-C. A summary of the IDL-based interface specification is provided in Annex A of ETSI ES 201 873-5 V4.9.1.

This revision of the Recommendation contains amendments, clarifications, corrigenda and editorial corrections.

### History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T Z.144	2006-03-16	17	<a href="http://handle.itu.int/11.1002/1000/8644">11.1002/1000/8644</a>
2.0	ITU-T Z.165	2007-11-13	17	<a href="http://handle.itu.int/11.1002/1000/9281">11.1002/1000/9281</a>
3.0	ITU-T Z.165	2011-03-16	17	<a href="http://handle.itu.int/11.1002/1000/11067">11.1002/1000/11067</a>
4.0	ITU-T Z.165	2012-05-29	17	<a href="http://handle.itu.int/11.1002/1000/11600">11.1002/1000/11600</a>
5.0	ITU-T Z.165	2013-07-14	17	<a href="http://handle.itu.int/11.1002/1000/11961">11.1002/1000/11961</a>
6.0	ITU-T Z.165	2014-11-13	17	<a href="http://handle.itu.int/11.1002/1000/12340">11.1002/1000/12340</a>
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8.0	ITU-T Z.165	2017-10-14	17	<a href="http://handle.itu.int/11.1002/1000/13376">11.1002/1000/13376</a>
9.0	ITU-T Z.165	2022-10-14	17	<a href="http://handle.itu.int/11.1002/1000/15099">11.1002/1000/15099</a>

### Keywords

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>.

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# Recommendation ITU-T Z.165

## Testing and test control notation version 3: TTCN-3 runtime interface (TRI)

### 1 Scope

This Recommendation provides the specification of the runtime interface for Testing and Test Control Notation version 3 (TTCN-3) test system implementations. The TTCN-3 runtime interface (TRI) provides a standardized adaptation for timing and communication of a test system to a particular processing platform and the system under test, respectively. This Recommendation defines the interface as a set of operations independent of target language.

The interface is defined to be compatible with the TTCN-3 standard. This Recommendation uses the CORBA Interface Definition Language (IDL) to specify the TRI completely. Clauses 6, 7 and 8 of [ETSI ES 201 873-5 V4.9.1] present language mappings for this abstract specification to the target languages Java, ANSI C and C++. A summary of the IDL-based interface specification is provided in Annex A of [ETSI ES 201 873-5 V4.9.1].

### 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 201 873-5 V4.9.1] ETSI ES 201 873-5 V4.9.1 (2022-04), *Methods for Testing and Specification (MTS); The Testing and Test Control Notation version 3; Part 5: TTCN-3 Runtime Interface (TRI)*.

### 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:

CORBA	Common Object Request Broker Architecture
IDL	Interface Definition Language
TRI	TTCN-3 Runtime Interface
TTCN	Testing and Test Control Notation

### 5 Conventions

None.

## **6 Endorsement**

[ETSI ES 201 873-5 V4.9.1] was approved by ITU-T as the basis for Recommendation ITU-T Z.165.



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