

World Class Standards





**Testing & Test Control Notation** 

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**ETSI** 650 Route des Lucioles F-06921 Sophia Antipolis Cedex, France info@etsi.org — www.etsi.org

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# The Global Testing Language

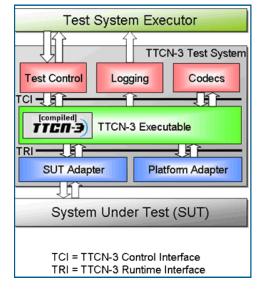




### TTCN-3, the global testing language

The Testing and Test Control Notation version 3 (TTCN-3) is a well established mature testing technology. First published in 2000, the flexibility and adaptability of this internationally standardized language has led to its rapid deployment in the telecommunications domain and beyond, including automotive, transportation, Internet, medical, web-based services, finance, industrial automation, and distributed systems. In addition, its use has expanded from functional conformance testing to include load, performance, and interoperability testing.

TTCN-3 is a multi part ETSI Standard (ES 201 873 series) also published as an ITU-T Recommendation (Z.140 series). In addition, TTCN-3 extension standards have been developed in the ES 202 78x series for new types of applications. All TTCN-3 standards are owned and continuously maintained and developed by ETSI Technical Committee Methods for Testing and Specification (TC MTS).



The language has been specifically designed for expressing tests (test scripts) independent of the actual test platform used. It allows users to concentrate on the aspects of what and how they want to test rather than having to focus on low-level implementation details such as encoding of data. The well-defined syntax and operational semantics of TTCN-3 allow a universal and common understanding of the meaning of the tests that it is used to describe, TTCN-3 has powerful programming constructs specific to testing such as the creation of dynamic test configurations, synchronous and asynchronous communication mechanisms, data matching templates and mechanisms, built-in verdict assignment etc.

The TTCN-3 Runtime Interface (TRI) and

the TTCN-3 Control Interface (TCI) interfaces allow common implementation solutions towards the equipment under test and towards the user in Java, C, C++, and .NET. The benefits of this approach are demonstrated by the wide range of TTCN-3 tools now available. TTCN-3 also interfaces to other languages such as XML, ASN.1 and IDL.

ETSI invites everyone to join its open TTCN-3 mailing list by simply sending a message to <u>listserv@list.etsi.org</u> with the body "Subscribe TTCN3".



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### The Annual International TTCN-3 User Conference (T3UC)

Since 2004 ETSI has been organizing yearly user conferences that bring together testing experts and engineers from industry, research, and academia as well as invited speakers to see how the language is used in both industrial and research environments in refereed tutorials and presentations, to hear about future directions, to see the latest tools and to share experiences. An archive of all past TTCN-3 user conference presentations can be found at: http://www.ttcn-3.org/UCArchives.htm.

TTCN-3 User Conferences including guidelines and deadlines for submissions are announced via ETSI's official TTCN-3 web site <u>www.ttcn-3.org</u>. Each conference is located in a different location and arranged together with a key industrial player from the TTCN-3 community. Conferences have been hosted so far in France, Germany, Sweden, Spain, China and India.

### List of ETSI TTCN-3 standards

ES 201 873-1	TTCN-3: Core Language
ES 201 873-3	TTCN-3: Graphical Presentation Format
ES 201 873-4	TTCN-3: Operational Semantics
ES 201 873-5	TTCN-3: TTCN-3 Runtime Interface
ES 201 873-6	TTCN-3: TTCN-3 Control Interface
ES 201 873-7	TTCN-3: The use of ASN.1
ES 201 873-8	TTCN-3: The IDL to TTCN-3 Mapping
ES 201 873-9	TTCN-3: Using XML schema with TTCN-3
ES 201 873-10	TTCN-3: Documentation Comments
ES 202 781 Extension: Configuration & Deployment Support	
ES 202 782 Extension: Performance and Real Time Testing	
ES 202 784 Extension: Advanced Parameterization	
ES 202 785 Extension: Behaviour Types	

Users can track the change history of these standards via the links provided at: <a href="http://www.ttcn-3.org/StandardSuite.htm">http://www.ttcn-3.org/StandardSuite.htm</a>

#### www.ttcn-3.org