
International Journal on Software Tools for Technology Transfer (STTT)
Special Section

Past, Present and Future of TTCN-3 -
A Decade of Testing with a Standardized Test Technology

Important Dates:

Submission of full papers:	18 November 2011
Notification of acceptance:	20 January 2012
Submission of revised papers:	17 February 2012
Second round of reviews completed:	16 March 2012
Submission of camera ready papers:	13 April 2012

Scope and Objectives:

In 2011, the Testing and Test Control Notation, version 3 (TTCN-3) celebrated its 10th anniversary: Since the publication of the first standard in 2001, TTCN-3 has become a standardized and widely established test automation language in industry, with deployments in telecommunication, transportation, the medical domain, Internet technologies, and others. Its versatility ensures its effective role in functional testing, conformance and interoperability testing, real-time, performance, load and stress testing, and security testing.

Identifying future challenges of testing is and has always been a key concern to keep TTCN-3 a modern and innovative testing technology and thereby protecting existing investments in test automation. During its lifespan, TTCN-3 has been constantly improved to cope with upcoming requirements and new demands from application domains. Recent shifts in the technology to develop complex systems, the way how development and test projects are organized, and coverage of new application areas will have further impacts on the TTCN-3 language itself and its use.

This STTT Special Section on "Past, Present and Future of TTCN-3 -- A Decade of Testing with a Standardized Test Technology" reviews the TTCN-3 success story and addresses the challenges imposed on TTCN-3 that lie ahead. We invite presenters of all TTCN-3 User Conferences to submit original papers explaining the motivation, results and technical details of their work being presented. The papers may comprise further developments and experiences gained from the author's work since then. In addition, we invite the TTCN-3 community, including test managers, testers, tool providers, consultants and researchers, to submit original articles describing their experiences with TTCN-3 in their daily work.

Topics of interest include (but are not limited to):

- Practical experiences of using TTCN-3 in industry
 - o Experiences from applying TTCN-3 to various kinds of testing such as conformance, interoperability, performance, load, stress, and security testing;
 - o Practical results from integrating TTCN-3 into existing test frameworks, test platforms and test devices;
 - o Achievements in using TTCN-3 in integrated software design and testing;
 - o Development of test frameworks and test patterns using TTCN-3;
 - o Evaluations of TTCN-3 based testing solutions, also in comparison with other testing technologies;

- o Experiences in training and educating in TTCN-3.
- Achievements from different application domains such as
 - o Mobile and broadband telecommunication, telematics;
 - o Intelligent Transport Systems (e.g. vehicle-to-vehicle and vehicle-to-roadside communication, toll collection);
 - o Transportation (e.g. automotive, aerospace, rail);
 - o Medical systems and eHealth;
 - o IT systems (e.g. Web services, cloud computing).
- Current and future challenges of testing with TTCN-3, e.g.
 - o New testing requirements from emerging technologies and new application areas;
 - o New development paradigms (e.g. model-driven engineering);
 - o Examples of good business cases for the use of TTCN-3;
 - o Usage of TTCN-3 in new development processes (e.g. agile processes, open source development);
 - o Use of TTCN-3 for validating security aspects (e.g. security goal evaluation, vulnerability testing).

Submission Details:

All submissions should follow the instruction guidelines given at <http://sttt.cs.uni-dortmund.de/for-authors.html>

We ask for original industrial experience reports of 8 to 10 pages length and research papers of 16 to 20 pages length.

Guest editors of the special section:

- Jens Grabowski, University of Goettingen
- Ina Schieferdecker, FU Berlin/Fraunhofer FOKUS
- Andreas Ulrich, Siemens AG, Munich

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