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| **Title\*:** | **TTCN-3 Guidance** |
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| from **Source**\*: | PQM Consultants |
| Contact: | Steve Randall  |
|  |  |
| input for **Committee**\***:** | MTS |
|  |  |
| Contribution **For\*:** | Decision |  |  |
|  | Discussion | **X** |  |
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| Relevant WI(s), or deliverable(s): |  |
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**ABSTRACT:** *This document makes some proposals for the development of guidelines on the use of TTCN-3 (a styleguide) and the validation of TTCN-3 ATSs using simulation techniques and/or a testbed. The purpose of*

# Background

PQM Consultants have been working with ETSI CTI to specify current best practice regarding interoperability in standards. This involved the study of existing ETSI guidance and "How To" documents related to all stages of the standards development process from requirements capture through base standard development to test specification and validation. In most areas it was easy to find documents from which best practice text could be derived. However, although TC‑MTS has produced many documents related to TTCN-3, we could not find any guidance on the basic aspects of using TTCN-3 in standards or on the practical details of validating a TTCN-3 ATS.

# Points for discussion

## TTCN-3 style guide

When writing standardized test specifications using TTCN-3, as with any language, there are both good and bad ways to approach the task. TC-MTS has produce guidelines on the use of SDL, ASN.1 and UML in the past and it may be worthwhile considering similar guidance for TTCN-3.

It is arguable that different testing projects around ETSI will always wish to use different methods and styles in their TTCN-3 specifications. However, a set of fundamental guidelines which permit such freedom of choice but also ensure that ETSI specifications are recognizable and of a high quality could be attractive. PQM Consultants do not have sufficient expertise in TTCN-3 to make any significant proposals at this stage but we would welcome an open discussion within TC‑MTS to determine:

1. Whether a style guide would be a useful addition to our TTCN-3 documentation set
2. What, if any, aspects of TTCN-3 writing should be included in such a guide.

## Validation of TTCN-3 test suites

Although TTCN-3 test suites produced within ETSI are often validated using test beds and, to a lesser degree, simulation techniques, there is no document guidance on:

1. How to determine the best method of validation of a particular test specification
2. How to set up and manage a test bed
3. How to establish and operate a TTCN-3 simulation environment as a validation tool
4. How to maximise the test coverage in a validation exercise based upon simulation or the use of test beds

Once again, this is not an area in which PQM Consultants can claim any expertise but we would welcome the opportunity to discuss TTCN-3 validation within TC-MTS to determine whether guidelines could and should be developed.