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| **Title\*:** | STF417 Final Report | | |
|  |  | | |
| **Source\*:** | STF417 | | |
| **Contact:** | Steve Randall | | |
|  |  | | |
| **Committee\*:** | MTS | | |
|  |  | | |
| **Contribution For\*:** | Decision | X |  |
|  | Discussion |  |  |
|  | Information |  |  |
|  |  | | |
| **Submission date\*:** | 2011-09-21 | | |
|  |  | | |
| **Meeting & Allocation:** | **MTS#54** - Session 5: Other ongoing work | | |
| **Relevant WI(s), or deliverable(s):** | REG/MTS-00122 | | |
|  | | | |

**Decision/action requested:** STF Final report requires approval from TC MTS.

ABSTRACT:

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| --- | --- | --- | --- | --- |
| ETSI_logo_Office_Colour_Small | STF – Final Report for ETSI | | | |
|  | | Author: | Steve Randall |
|  |  | Date: | 20 Sept 2011 |
|  |  | Version | R1 |
|  |  | page 1 of 2 | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| STF |  |  | STF leader |  |
| TB/WG |  |  | TB responsible |  |
|  |  |  | STF Assistant |  |

|  |  |
| --- | --- |
| STF title: |  |

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| Milestone |  |  | Status | Covers the period until (cut-off date) | 05-Oct-2011 |
|  |
| Objective | Final Report approved and all deliverables required in the ToR approved for publication by MTS#54 (04-05 October 2011) plenary and accepted by ETSI secretariat (editHelp) for publication. The Final Report and the draft deliverables must be uploaded by the | | | | |
| Achieved |  | Achieved | | | |
| Remarks |  | | | | |

Achieved dates

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Template | Draft report | ETSI approval | TB Approval | |
|  |  |  | Target | Achieved |
| 16-Sep-2011 | 20-Sep-2011 | 20-Sep-2011 | 05-Oct-2011 |  |

# Executive summary

* STF417 established in February 2011 with 2 expert members providing skills in validation techniques, testing and test specification and standards engineering (clauses and )
* The objective of STF417 was to revise the existing Validation Handbook (EG 201 015) by the addition of modern and practical methods for validating ETSI standards (clause )
* The single deliverable (REG/MTS-00122) has been completed within the budget and the schedule planned for STF417 (clauses and )
* The STF has been represented at both meetings of TC-MTS which have occurred during its lifetime (MTS#53 in April 2011 and MTS#54 in October 2011) (clause )
* STF 417 has enjoyed a close working relationship with the ETSI Centre for Testing and Interoperability (clause )
* There are no outstanding technical difficulties to be resolved (clause )

# Introduction

## Scope, major aims of the STF work

In order to monitor and improve the quality of ETSI deliverables it is necessary for them to be validated using a structured method which assesses the extent to which a particular standard meets the requirements of interoperability and market acceptability. ETSI's current Validation Handbook, EG 202 015, is based largely upon the development of SDL simulation models which is time-consuming and costly and also requires modelling skills that are in very limited supply.

The aim of STF417 was, therefore, to bring EG 202 015 completely up to date with a small number of practical validation methods which include the use of the ETSI Plugtests™ service and which can easily be consolidated into the existing standards development processes within ETSI's technical bodies.

## STF activity and expected output

The STF was established on 23rd February 2011 to produce a revision of EG 201 015. Expert sessions have been held and planned throughout 2011 with the finished deliverable available for final approval at the 54th meeting of TC-MTS held in Tallinn, Estonia in October 2011.

## Relation with the reference TB and with other bodies, inside and outside ETSI

STF417 is a Specialist Task Force within the ETSI Technical Committee "Methods for Testing and Specification" (TC-MTS) whose members include stakeholders from software tool manufacturers, testing organizations and companies involved in the standardization of technical requirements for products and technologies. ETSI's Centre for Testing and Interoperability takes an active part in the activities of TC‑MTS and has made a significant contribution to the development of the STF deliverable.

# Overview of the organization of the activity

## Team composition and experts’ qualification

The experts were recruited in accordance with ETSI's rules of secondment. Experts have remained as employees of their own organisations and have met to work in sessions hosted by ETSI at ETSI's premises in Sophia Antipolis, France. The members of STF417 are listed in .

Table 1: STF417 experts

|  |  |  |
| --- | --- | --- |
| Expert name | ETSI Member | Expertise |
| Ina Schieferdecker | FOKUS Fraunhofer (Germany) | Testing and test specification Software modelling |
| Steve Randall (STF417 Leader) | PQM Consultants (UK) | Standards engineering Engineering validation methods |
| Additional Expertise from ETSI Secretariat | | |
| Anthony Wiles | CTI | Standards engineering Testing and test specification Interoperability testing |
| Milan Zoric | CTI | Standards engineering Software modelling |
| Sebastian Müller | CTI | Interoperability testing events Test suite validation |

At the end of October 2011, **52** of the **60** contracted days will have been used by the experts.

## STF teamwork, distribution of tasks, working methods

Responsibility for drafting text on the various validation methods included in the deliverable was distributed according to expertise and experience as follows:

* Ina Schieferdecker
* Model-based validation methods;
* Validation of test specifications
* Steve Randall
* Peer-review methods
* Product-based methods (in cooperation with CTI experts)
* Implicit validation:
* Test specification
* Requirements Cataloguing
* Product development

The experts (both from the STF and from CTI) have been able to work in close cooperation through joint sessions in Sophia Antipolis, conference calls and email. The clear distribution of tasks also made it possible for much of the work to be carried out at the experts' home offices.

## Liaison with the reference TB and/or the Steering Group

The members of STF417 met with TC-MTS early in the project and this enabled them to gain approval for the contents of the document and the general direction to be taken. Since then, intermediate drafts of the deliverable have been made available to MTS members on the "Latest Drafts" folder on the ETSI portal. The final draft of EG 201 015 was presented for approval to TC-MTS at its October 2011 meeting.

## Meetings attended on behalf of the STF with the reference TB and other ETSI TBs

The STF leader attended MTS#53 on 12th-13th April in Sophia Antipolis to present and discuss the initial progress of the STF. He was supported by Ina Schieferdecker who attended this meeting at the expense of her employer.

The STF leader also attended MTS#54 on 4th-5th October 2011 in Tallinn, Estonia to present the results of the STF and the final draft of the deliverable for approval.

## STF communications, presentations, promotion, inside and outside ETSI, WEB pages etc

The STF has produced a summary of the goals and constitution of STF417 as a web page within the ETSI portal at:

<http://portal.etsi.org/STFs/STF_HomePages/STF417/STF417.asp>

# Final status of the activity

## Overview of the STF work

The deliverable (a revision of EG 201 015) has been completed within the budget and schedule of the STF and has been presented to TC‑MTS for approval. This ETSI Guide updates the previous edition by:

* removing most of the guidelines related to the validation of SDL-based specifications by means of state‑space exploration techniques (which are expensive and impractical without the availability of up-to-date software tools);
* adding guidance on the use of:
* peer-review methods
* interoperability events such as ETSI Plugtests™
* implicit methods such as test suite development and requirements cataloguing
* defining levels of validation

## Technical risk, difficulties encountered and corrective actions taken

Some concern was raised from within the ETSI Secretariat regarding the status of the STF417 deliverable, REG/MTS-00122. It was felt that revising (and, thus, replacing the existing Validation Handbook, EG 201 015) might be detrimental as some useful guidance on model-based validation techniques could be lost. This concern was resolved by the inclusion of references to ETR 184 "An overview of validation techniques for European telecommunications standards containing SDL".

Although it was possible to identify and describe a number of model-based validation techniques, it was less easy to find methods that would be acceptable to rapporteurs and TB chairs and which could easily be consolidated into the ETSI standards engineering process. Through research and consultation, the STF was able to identify a small number of methods that have the potential to be both practical and attractive in the near future but which currently lack the support of standards and software tools. These have been described in the deliverable with the proviso that full use within ETSI will have to wait for the necessary support to be available.

## Recommendations for future activities in related domains

TC-MTS currently has an open Work Item (MI/MTS-00077[3]-MBS) for the revision of the Making Better Standards web site. This revision should include an update of the guidance on validation methods to reflect the contents of the STF417 deliverable.

# ETSI deliverable

summarizes the current status of the DEG/MTS-00122 (EG 201 015).

Table 2: Status of STF417 deliverable

|  |  |  |  |
| --- | --- | --- | --- |
| **Work Item** | **Status** | **Date** | |
| **Target** | **Achieved** |
| REG/MTS-00122 ValidHandB EG 201 015  Validation methods for standards writers  <http://docbox.etsi.org/MTS/MTS/07-Drafts/00122_StdEngProcHandB/00122_ValidHandBv004.doc> | Creation of WI by WG/TB | 2008-10-08 | 2008-10-08 |
| TB adoption of WI | 2008-10-08 | 2008-10-08 |
| Start of work | 2011-01-25 | 2011-03-08 |
| Early draft | 2011-04-13 | 2011-03-16 |
| Stable draft | 2011-07-29 | 2011-08-23 |
| Final draft for approval | 2011-08-22 | 2011-09-15 |
| TB approval | 2011-10-04 |  |
| Draft receipt by ETSI Secretariat | 2011-10-18 |  |

# Resources allocated and spent

## Summary of resources allocated and spent (real cost)

The following tables present the summary of the activities carried out by the STF.

Table 3: Time spent by experts (remunerated)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Company / ETSI Member** | **Expert** | **Work days** | **Rate** | **Cost**  **(EUR)** |
| Fraunhofer FOKUS | Ina Schieferdecker | 12 | 600 | 7200 |
| PQM Consultants | Steve Randall | 40 | 420 | 16800 |
| **Total** |  | **52** |  | **24000** |

Table 4: Travels

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Expert** | **Event** | **Place** | **Date**  **from** | **Dur. days** | **Cost**  **(EUR)** | **Notes** |
| Steve Randall | TC-MTS#54 | Tallinn, EST | 4-10-2011 | 3 | 1000€ (est) |  |
| **Total** |  |  |  |  | **1000€ (est)** |  |