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| ***TTF T013 - Progress Report for ETSI*** |
| **Presented to ETSI meeting** |  |  | **Author:** | Dr. Philip Makedonski |
|   |   |   | **Date:** | 22/09/2021 |
| **Doc ref** |  |   | **Version** |   |
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| **TTF** | **T013** |   | **TTF leader** | Dr. Philip Makedonski |
| **TB/WG** | **MTS TDL** |   | **TB responsible** | Dr. Andreas Ulrich |
|  |  |   | **Administrator** | Ms. Elodie Rouveroux |
|  |  |  |  |  |  |
| **TTF title:** | TDL and TOP Enhancements for RESTful API Services Testing  |
|  |  |  |  |  |  |
| **Milestone** | **B** |  | **Status** | **Covers the period until (cut-off date)** | 15/05/2021 |
|  **Template** |
| **Objective** | Stable drafts of D1 – D7 and early draft of D8 availableSecond progress report to be approved by TC MTS |
| **Achieved** | Yes |  |
|  |
| **Remarks** |   |
|  |  |  |  |  |  |
| **Achieved dates** |  |  |  |  |  |
| **Template** | **Draft report** | **TB approval** | **ETSI approval** |  |  |
| 01/09/2021 | 22/09/2021 |   |   |   |   |

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# Executive summary

* This progress report covers the work of TTF T013 on reaching Milestone B, done in the period between 30-Apr-2021 and 15-Sep-2021. This period concludes the submission of the deliverables defined for Milestone A.
* The work was done remotely with coordinated homework of the experts and technical discussions with the dedicated working group, which provided further technical guidance, with one working session between 08-Sep-2021 and 14-Sep-2021.
* No changes to the work plan, resource requirements, and STF team are proposed at this point.
* Promotional activities related have been continued to raise awareness for TDL and the work of the TTF.

# Introduction

This progress report covers the work of TTF T013 on Milestone B, done in the period between 30-Apr-2021 and 15-Sep-2021. This period concludes with the submission of the deliverables defined for Milestone B. The work was done remotely with coordinated homework of the experts and technical discussions with the working group, which provided further technical guidance.

# Contractual milestone

Milestone A is defined in the ToR as follows:

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| **Milestone** | **Description** | **Cut-Off Date** |
| **B** | Second progress report to TC MTS | MTS#84 |
| Reference Body Deliverable | Second Progress report to be approved by TC MTSStable drafts for T1Early drafts for T3 |
| ETSI Deliverable | Stable drafts of D1 – D7Early draft of D8 |

The submission this report as well as the early drafts for the requested deliverables for this milestone in the MTS contributions area of the ETSI portal fulfils the criteria for achieving this milestone. Further details are available in the subsequent sections.

# Progress of the work

The original work plan comprises three principal milestones. As agreed during the preparatory meeting, most of the work will be done remotely in order to minimize travelling costs and overhead, and due to the ongoing global pandemic where travel restrictions are still in place. The milestones are primarily prepared during individual and coordinated homework. One working session (12-16-Apr-2021) has been scheduled so far to discuss complex technical challenges during a focus week. Subsequent working sessions will be scheduled as needed for the preparation of the next milestones.

Progress on the following activities has been achieved so far:

**Task 0 – Project Management**

* One TTF working session has been planned and has taken place from 08-Sep-2021 to 14-Sep-2021. Additional working sessions to be scheduled as needed.
* Progress reports for Milestones B (prepared for MTS#84, this document), as well as interim progress reports for the working group have been prepared and submitted.
* TTF members interacted with stakeholders during open meetings on 07-Jul-2021 and 14-Jul-2021 to determine the direction of future TTF efforts on TDL and TOP. TTF members will participate at the upcoming MTS#84.
* The proposal for a presentation at the UCAAT 2021 has been accepted. Members of the TTF prepared corresponding presentation materials to promote TDL and the work of the TTF.
* The TTF leader presented a report on TOP to the ETSI Board SOOS group on 20-May-2021.
* Coordination and preparation of materials for the TDL open-source project.

**Task 1 – TDL Evolution**

* A working proposal for the standardized textual syntax for TDL included in the draft of Part 8, and parts of the corresponding extension in Part 4.
* Updated XMI schema in Part 3.
* Ongoing discussion with regard to other open CRs with initial proposals for potential resolution.
* New CRs submitted based on user feedback and other sources.

**Task 2 – TOP Maintenance and Support for RESTful API Services**

* Prototypical implementation for the validation of the standardized textual syntax in Part 8.
* Prototypical implementation for the transformation of structured test objectives into TDL data, configurations, and behaviours.
* Prototypical implementation for the transformation of ASN.1 data type specifications into TDL data.
* Prototypical implementation for the transformation of OpenAPI data type specifications into TDL data.
* Prototypical implementation of interpreter and code generator for executing tests for RESTful API services.

**Task 3 – TDL Methodology**

* A working proposal for the transformation of data from structured test objectives to TDL data included in TR 103 119. Additional work on the derivation of test configurations and test behaviour.
* A working proposal for the transformation of data types from ASN.1 to TDL data included in TR 103 119.

# Assessment of technical risk, difficulties encountered/expected, unresolved issues

The progress of the work of the TTF may be negatively affected by the following risks:

**Task (inter-) dependencies may create bottlenecks for the work of the TTF**

Due to the parallel and distributed work on multiple deliverables across multiple experts, dependencies among individual activities may create hindrances for the progress of the TTF.

Severity: Medium, Likelihood: Low

Mitigation strategies:

* Limit dependencies between activities where possible.
* Make dependencies explicit where these are inevitable in order to raise awareness, as well as monitor and control potential implications.
* Ensure communication and collaboration among experts working on inter-dependent tasks.
* Reassign experts where applicable in order to accelerate progress of delayed activities and eliminate bottlenecks in a timely manner.

**Misunderstandings and communication barriers hinder progress**

Misunderstandings and communication issues during discussions and individual work may negatively impact the progress of the TTF work.

Severity: Medium, Likelihood: Medium

Mitigation strategies:

* Moderation and awareness – recognize and differentiate between misunderstandings, where clarification is needed, and technical disagreements, where different solutions are proposed.
* Emphasis on facts, substantiated and illustrated with examples, and written input and output of discussions, which describes ideas, problems, and solutions in sufficient detail, and can be referenced to in subsequent discussions.
* Identify fundamental differences in alternative proposals and their impact in order to establish a baseline for discussions, rather focusing discussions on superficial and non-essential differences.
* Communicate and resolve persistent issues and disagreements with the help of the steering group.

**Misalignment of expectations towards the TTF and the output of the TTF**

Due to potentially unrealistic or misaligned expectations towards the TTF from different stakeholders, the output of the TTF may not be able to meet these expectations.

Severity: Medium, Likelihood: Medium

Mitigation strategies:

* A steering group has been established to provide technical guidance and mediate technical disagreements.
* Frequent reporting and technical discussions with the steering group and TC MTS ensure that the work of the TTF is aligned with its expectations. The TTF has an opportunity to communicate any expectations that are perceived to be unrealistic back to the steering group and TC MTS.
* Concrete examples are prepared to support technical discussions and ensure alignment of expectations

**Complex technological landscape may slow down progress on TOP maintenance**

Due to the complex and constantly evolving technological landscape surrounding the platform on which the TOP is based, unforeseen challenges may slow down the progress of the TTF. Conversely, unforeseen benefits may also speed up the progress of the TTF.

Severity: Medium, Likelihood: Medium

Mitigation strategies:

* Limiting the dependencies on third-party components.
* Keeping up with the latest developments so that maintenance is performed in smaller increments as the risks tend to increase with time.

# Proposed changes in the STF work plan

No changes in the TTF work plan are proposed at this point.

# Resources requirements

No changes in the TTF resource requirements are proposed at this point.

# Changes in the STF Team

No changes in the TTF team are proposed at this point in time.

# Meetings/events attended on behalf of the STF

As the work of the STF has started only recently, only one open meeting on behalf of the TTF has been attended by the experts so far.

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| **Date** | **Place** | **TB/Orga** | **Event description** | **Reason to attend** | **Expert(s)** |
| 10-Mar-2021 | Online | MTS,MTS-TDL | TDL TTF Open Meeting | Discuss directions and wishes with different stakeholders | Philip Makedonski,Martti Käärik,Finn Kristoffersen,Konrad Schaupp  |
| 10-11-May-2021 | Online | MTS | MTS#83, MTS-TDL#5 | Present and discuss achievements of the TTF up to that point, co-located working session. | Philip Makedonski,Martti Käärik,Finn Kristoffersen,Konrad Schaupp |
| 20-May-2021 | Online | ETSI Board SOOS | BOARDSOOS#004 | Present and discuss the TOP project in the context of other OSS activities at and around ETSI. | Philip Makedonski |
| 07-Jul-2021 | Online | MTS,MTS-TDL | TDL TTF Open Meeting | Discuss directions for future TTF activities | Philip Makedonski,Martti Käärik,Finn Kristoffersen,Konrad Schaupp  |
| 14-Jul-2021 | Online | MTS,MTS-TDL | TDL TTF Open Meeting | Discuss directions for future TTF activities | Philip Makedonski,Martti Käärik,Finn Kristoffersen,Konrad Schaupp  |
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# Meetings/events planned to be attended

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| **Date** | **Place** | **TB/Orga** | **Event description** | **Reason to attend** | **Expert(s)** |
| Sept-2021 | Online | MTS | MTS#84, MTS-TDL#6 | Present and discuss achievements of the TTF up to that point, co-located working session. | Philip Makedonski,Martti Käärik,Finn Kristoffersen,Konrad Schaupp |
| 19-21-Oct-2021 | Online | MTS,ETSI,Siemens | UCAAT2021 | Presentation on TDL | Philip Makedonski,Martti Käärik |
| Jan-2022 | TBA | MTS | MTS#85, MTS-TDL#7 | Present and discuss achievements of the TTF up to that point, co-located working session. | TBA |

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

The following activities related to the communication, presentation, and promotion of the work of the TTF have been considered, planned, and/or performed:

* Members of the TTF have submitted a proposal for a presentation at the UCAAT 2021 to promote TDL and the work of the TTF. The proposal has been accepted and members of the TTF have prepared the corresponding materials for the presentation.
* An open meeting was setup by the MTS-TDL working group at the start of the TTF to discuss directions and wishes with different stakeholders.
* Two open meetings were setup by the MTS-TDL working group to determine possible directions for future TTF activities with different stakeholders.
* The TTF leader presented a report on TOP to the ETSI Board SOOS group on 20-May-2021.
* Ongoing dissemination activities from TTF members from research institutions include raising awareness and promoting TDL on their respective websites and within teaching and research activities.
* A website for the TTF has been submitted for publication on the ETSI portal.
* The official TDL website aggregating all resources related to TDL and its implementation is being updated and extended with new information. It is available at: <https://tdl.etsi.org>
* A dedicated project is established on the online issue reporting portal for ETSI (“ETSI’s Bug Tracker”) where change requests for TDL can be submitted and managed in an open and transparent manner. Change requests can be submitted at: <http://oldforge.etsi.org/mantis/view_all_bug_page.php>

# Technical advice required from the reference Technical Body

A working group (MTS-TDL) has been assembled by TC MTS to provide technical guidance and expert advice during technical sessions with the TTF and dedicated working group meetings. Up to this point, the working group and the TB have been supporting the work of the TTF very well, with technical discussions and advice regarding any open questions or unresolved disagreements. An open meeting was setup at the start of the TTF to discuss wishes from different stakeholders.

# Status of the deliverables

Milestone B is comprised of the following deliverables:

* A draft of ES 203 119-1 v1.6.1.
* A draft of ES 203 119-2 v1.5.1.
* A draft of ES 203 119-3 v1.5.1.
* A draft of ES 203 119-4 v1.5.1.
* A draft of ES 203 119-6 v1.3.1
* A draft of ES 203 119-7 v1.3.1 (not affected by CRs so far, will be updated with extension to Part 8)
* A draft of TR 103 119 v1.3.1

# Next report

The next report is scheduled for: 15-Jan-2022.

# Any other business

None.