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| ETSI_logo_Office_Colour_Small | ***STF 492 – Progress Report for ETSI*** |
| **Presented to ETSI meeting** | **Author:**  | Philip Makedonski  |
|   |   | **Date:**  | 23/07/2015  |
|   |   | **Version** |  1.0 |
| **Doc ref** |   | page 1 of 4 |

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| **STF** | **492** |  | **STF leader** |  Philip Makedonski |
| **TB/WG** | **MTS** |  | **TB responsible** |  Emmanuelle Chaulot-Talmon |
|  |  |  | **STF Assistant** |  Elodie Rouveroux |

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| **STF title:** |  TDL for Test Generation - Phase 3 A Reference Implementation |

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| **Milestone** | **A** |  | **Status** | **Covers the period until (cut-off date)** | 31/07/2015 |
|  **Template** |
| **Objective** | Progress Report#1: work plan with the resources allocation for the continuation of the project, a draft of the UML Profile for TDL, first draft of OCL semantics in TDL Meta Model, as well as design and implementation plans for TDL viewer, XF implementation and the Papyrus based TDL editor. The Progress Report and these deliverables will be provided by the STF Leader to the Steering Committee before 24-July-2015 and must be endorsed by the Steering Committee and accepted by the ETSI Secretariat. |
| **Achieved** | Yes/No |  |
| **Remarks** |  Submitted on 24-Jul-2015 |

**Achieved dates**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Template** | **Draft report** | **TB approval** | **ETSI approval** | **Sent to EC** | **EC approval** |
| 10/07/2015  |  24-Jul-2015 |   |   |   |   |

# Executive summary

* This progress report covers the work of STF 492 on reaching Milestone A, done in the period between 09-Jun-2015 and 24-Jul-2015. This period concludes the submission of the completed deliverables defined for Milestone A.
* The work was done during one working session, accompanied by coordinated homework of the experts and two technical discussions with the established steering group, which provided technical guidance.
* The STF work plan has been adapted to accommodate a delay with the start of work. No changes to the resource requirements and STF team are proposed at this point.
* A dedicated promotion team has been assembled to coordinate promotion activities related to the planned public TDL launch at UCAAT 2015. The STF members have contributed a proposal for a tutorial at UCAAT 2015 as part of these activities to promote and communicate the work of the STF.

# Introduction

This progress report covers the work of STF 492 on Milestone A, done in the period between 09-Jun-2015 and 24-Jul-2015. This period concludes with the submission of the deliverables defined for Milestone A. The work was done primarily during one working sessions at ETSI, accompanied by coordinated homework among the experts and two technical discussions with the established steering group.

# Contractual milestone

During the preparatory meeting Milestone A needed to be adjusted to accommodate the delay with the start of work. As a consequence, Milestone A comprises

* Work plan with the resources allocation for the continuation of the project
* A draft of the UML Profile for TDL
* First draft of OCL semantics in TDL Meta Model
* Design and implementation plans for TDL viewer, XF implementation, and the Papyrus-based TDL editor.

All requested deliverables have been uploaded in the MTS contributions area of the ETSI portal on 24-Jul-2015 to be endorsed by the Steering Committee and accepted by the ETSI Secretariat.

# Progress of the work

The original work plan comprises three principal milestones and an additional milestone for the public launch. The milestones are primarily prepared during six working sessions, with individual and coordinated homework in between. Two working sessions had been original allocated for each milestone – one for reviewing feedback on the previous milestone and starting preparation of the next milestone, and one for finalizing the next milestone. Tasks for homework are allocated at the end of each session, progress on which is discussed during coordinated remote homework and results are reviewed at the beginning of the next session.

Due to a delay with the start of work, the work plan has been adjusted to accommodate the changed timescale of the project. With regard to the first milestone, only one working session has been allocated due to the short timeframe between start of work and Milestone A. This has been compensated in part through more resources spent on coordinated homework. As a result, progress on the following activities has been achieved:

**Task 0 – Project Management**

* All STF working sessions have been planned and allocated. Locations for Sessions 4 and 5 will be confirmed shortly.
* Progress report for Milestone A (this document) and interim progress reports for the steering group have been prepared and submitted in a timely manner.
* STF members participated actively in steering group, MTS, and promotion team meetings.
* Proposal for a tutorial at UCAAT has been prepared, submitted and accepted.
* TDL materials for the OCG meeting have been prepared and presented together with TC MTS.
* Coordination and preparation of materials for the launch event is ongoing.

**Task 1 – Reference Implementation**

* Scope and focus of the reference implementation has been refined in discussions with the SG.
* Different technology options have been evaluated. Proposed technology has been endorsed by the SG.
* Design and implementation plans for the reference implementation have been prepared and discussed with the SG.
* An implementation of the XF based on existing technologies has been prepared.
* An initial implementation of the UML profile for TDL as a UML profile diagram has been prepared as part of the work on the UML profile for TDL.

**Task 2 – UML Profile for TDL**

* Analysis and specification of a mapping from the TDL meta-model to TDL stereotypes and UML meta-classes in a semi-formal manner
* Specification of the TDL UML profile abstract syntax according to the mapping in the form of UML profile diagram
* Specification of a trace model describing the relationships between the TDL meta-model and the UML profile for TDL

**Task 3 – Adaptations to the Meta-model (MM)**

* Feedback on the meta-model as well as other parts of the standard has been collected from third parties working on implementing TDL.
* The need for further changes based on the ongoing work on the reference implementation has been evaluated.

**Task 4 – Adaptations to the Graphical Syntax (GR), Exchange Format (XF), Test Objectives (TO)**

* Discussions with CTI regarding additional features for TO.
* Identification of potential early adopters and prioritization for the implementation of TO in order to accelerate its adoption at ETSI.

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

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

**Technological challenges may affect the progress of the STF**

Due to the intrinsic complexity of the individual technologies involved and their integration, potential challenges related to particular aspects of the reference implementation realization may arise.

Severity: Medium, Likelihood: Medium

Mitigation strategies:

* Limit dependencies to non-essential technologies.
* Consider and select technologies to be used very carefully.
* Rely on established and open-source technologies with active communities.

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

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 STF.

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 STF 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 STF and the output of the STF**

Due to potentially unrealistic or misaligned expectations towards the STF from different stakeholders, the output of the STF 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 STF is aligned with its expectations. The STF 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.

# Proposed changes in the STF work plan

The STF work plan has been adjusted to accommodate the delay with the start of work as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| N | Task / Milestone / Deliverable | From | To | Funded experts (days) | CTI experts (days) |
| M1 | Start of work | 09-Jun-2015 |  |  |  |
|  T0 | Project management | 09-Jun-2015 | 31-Mar-2016 | 11 |  |
|  T1 | Task 1: Reference implementation | 09-Jun-2015 | 31-Mar-2016 | 96 | 10 |
|  T2 | Task 2: UML profile for TDL | 09-Jun-2015 | 31-Mar-2016 | 48 | 5 |
|  T3 | Task 3: Adaptations to the MM | 09-Jun-2015 | 31-Mar-2016 | 40 | 5 |
|  T4 | Task 4: Adaptations to GR, XF, TO | 09-Jun-2015 | 31-Mar-2016 | 40 | 5 |
| M2 | Early (P1, TR) drafts for review | 24-Jul-2015 |  |  |  |
| M3 | Launch event | 20-Oct-2015 |  |  |  |
| M4 | Stable (P1, P3. TR) and early (P2, P4) drafts for review | 18-Dec-2015 |  |  |  |
| M5 | Stable (P2, P4) drafts for review | 01-Mar-2016 |  |  |  |
| M6 | Final drafts for TB approval & final report | 30-Mar-2016 |  |  |  |
| M7 | End of work | 31-Mar-2016 |  |  |  |
| M8 | Publication | 31-May-2016 |  |  |  |

# Resources requirements

There are no changes in the STF resource requirements up to this point. A proposal for allocating the available contingency of 125 working days after the initial allocation and contracts established during the preparatory meeting has been submitted as part of Milestone A, as agreed during the preparatory meeting.

# Changes in the STF Team

There are no foreseen changes in the STF team.

# Meetings/events attended on behalf of the STF

Experts from the STF attended MTS#65 and associated Technical Session on TDL at ETSI. During the Technical Session the planning, scope, and focus of the STF were discussed with the SG and TC MTS. The experts also participated in preparatory discussions for this STF and the alignment of the work of this STF to other activities within TC MTS.

Achievements of the STF leading up to the launch event at UCAAT in October 2015 will be presented and discussed at MTS#66 and an associated Technical Session in Berlin on 30-Sep/01-Oct-2015. Philip Makedonski (STF leader) will attend in person, while the remaining experts will attend remotely.

Members of the STF will host a public launch event for TDL at UCAAT 2015 with a keynote session, TDL tutorial, and a dedicated booth. Philip Makedonski and Gusztav Adamis will attend in person. Other experts may join in.

One remote interim technical discussion with the SG was attended by the STF members, where progress of the STF and outstanding questions and clarifications were discussed and aligned with the SG.

# Meetings/events planned to be attended

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Date** | **Place** | **TB/Orga** | **Event description** | **Reason to attend** | **Expert(s)** |
| 30-Sep/01-Oct-2015 | Berlin | MTS | MTS#66, Technical Session on TDL | Present and discuss achievements of the STF up to that point | Philip Makedonski (in person) |
| 20-22-Oct-2015 | Sophia-Antipolis | MTS, ETSI | User Conference on Advanced Automated Testing (UCAAT) and associated events. | Present a tutorial on TDL, Host the public launch of TDL, tend to TDL booth. | Philip Makedonski (in person), Gusztav Adamis (in person), TBA |
| Jan-2016 | TBA | MTS | MTS#67, Technical Session on TDL | Present and discuss achievements of the STF up to that point | 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 STF have been considered, planned, and/or performed:

* The STF has submitted a proposal for a tutorial session on TDL at the UCAAT 2015 which has been accepted. During an associated keynote session, the STF and TC MTS will host the public launch of TDL accompanied by a booth presence at UCAAT 2015.
* Ongoing dissemination activities from STF members from research institutions include raising awareness and promoting TDL on their respective websites and within teaching and research activities.
* A website for the STF will be published shortly upon agreement within the STF and TC MTS.
* An official website for TDL aggregating all resources related to TDL and its implementation will be prepared and officially launched during UCAAT 2015.
* 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.

# Technical advice required from the reference Technical Body

A steering group has been assembled by TC MTS to provide technical guidance and expert advice during technical sessions with the STF. Up to this point, the steering group has been supporting the work of the STF very well, with technical sessions arranged between working sessions of the STF to discuss the progress of the STF and any open questions or unresolved disagreements.

# Status of the deliverables

Milestone A is comprised of the following deliverables:

* Work plan with the resources allocation for the continuation of the project, including updated milestone timeline and project timescale. Available at:
ftp://docbox.etsi.org:21/STF/STF492\_MTS\_TDL/Public/drafts/WorkPlanAndResourceAllocation.pdf
* A draft of ES 203119-1 v1.3.1 including the UML Profile for TDL defined as Annex C and OCL semantics for the TDL Meta-model. Available at: ftp://docbox.etsi.org:21/STF/STF492\_MTS\_TDL/Public/drafts/es\_20311901v010301m.docx
* Design and implementation plans for TDL viewer, XF implementation, and the Papyrus-based TDL editor including effort estimations and task prioritisation. Available at:
ftp://docbox.etsi.org:21/STF/STF492\_MTS\_TDL/Public/drafts/DesignAndImplementationPlans.pdf

# Next report

The next report is scheduled for 18-Dec-2015, together with the deliverables for Milestone B for MTS#67.

# Any other business

None.