STF 492: TDL Phase 3

Status Report

Document History

- 2015-06-02: Document submitted for MTS #65

  - long form for TDL Technical Session

  - short form to be submitted for MTS #65

From the Terms of Reference…

TDL Phase 3: Goals

- Provide an open platform as a foundation for custom solutions

  - basic graphical and textual editors, validation facilities

  - semantics refinements and formalisation

- Accelerate adoption of TDL and lower barrier to entry

  - both for users and for tool vendors

  - enable integration in UML-based environments

- Contribute to public launch at UCAAT 2015

TDL Phase 3: Objectives

- Reference implementation of TDL and accompanying TR

    - hosted on an open internet platform serving as a portal for the community

- UML profile for TDL enabling the use of TDL in UML environments

- Adaptation to MM addressing CRs from the implementation

- Adaptation to GR, XF, TO according to the changes in the MM

- Extension of the capabilities of TO

TDL Phase 3: Deliverables

Del.	Work Item Code / Standard Number	Working Title / Scope
D1	RES/ES 203 119-1 V1.3.1	Test Description Language; Meta-Model and Semantics Scope: common concepts, meta-model, semantics
D2	RES/ES 203 119-2 V1.2.1	Test Description Language; Graphical Syntax Scope: TDL graphical concrete syntax for end users
D3	RES/ES 203 119-3 V1.2.1	Test Description Language; Exchange Format Scope: TDL exchange format for tool interoperability
D4	RES/ES 203 119-4 V1.2.1	Test Description Language; Structured Test Objective Specification Scope: TDL extension for structured test objectives
D5	DTR/TR 203 119REF V1.1.1	Test Description Language; Reference Implementation Scope: TDL reference implementation documentation

TDL Phase 3: Organisation of Work

- Start: 06/2015 (+4 months, originally planned for 02/2015)

  - Task 0: Project management (02-12/2015, +4 months)

  - Task 1: Reference implementation (02-12/2015, +4 months)

  - Task 2: UML profile for TDL (02-12/2015, +4 months)

  - Task 3: Adaptation to the MM (06-12/2015, start initial work with Task 1)

  - Task 4: Adaptations to GR, XF, TO (02-05/2014, +4 months)

- End: 03/2016 (+2 months, originally planned for 01/2016)

  - +4 months delay would suggest new end of work in 05/2016

TDL Phase 3: Milestones

- M0: 06/2015 (originally 02/2015, +4 months)

  - Start of work of Tasks 0, 1, 2, 3

- M1: 07/2015

  - (T0) Progress report, work plan and resource allocations, TPT work plan and initial activities

  - (T1) Technology selection, design and implementation plan, initial work

  - (T2) Draft of UML profile

  - (T3) Partial semantics formalisation, addressing urgent changes to MM

- MX: 10/2014

  - Launch event at UCAAT 2015

- Remaining milestones TBD in M1

Preparation

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Task 0: Session Planning

- 1 session planned so far (co-located with MTS#65)

  - start of work June 9, 2015

- 2 sessions per milestone according to ToR

  - 1 preparation / 1 finalising

  - homework and remote coordinated work in between

  - first milestone to involve more homework (delay, summer vacations)

  - more emphasis on homework indicated due to nature of work involved

  - further sessions TBD

Task 0: Current Timeline

- WK24 Jun 09-12 - Session 1 @ETSI

- WK28 Jul 06-10 - Early draft for UML Profile for TDL for SC review

- WK30 Jul 20-24 - Milestone A

  - progress report, resource allocation, work plan, milestones, timescale

  - draft UML Profile for TDL to be endorsed by SG

- WK40 Sep30-Oct 01 - MTS#66 @FOKUS

- WK43 Oct 20-22 - Launch event @UCAAT 2015

Task 0: Session 1

- Goals

Task 0: Clarifications Needed

- Rapporteur roles

  - does the leader take over rapporteurship for all deliverables?

  - or do we stick with the WI assignments?

  - what about rapporteurs that are not part of the STF?

- Timescale

  - new start of work June 2015, (+4 months delay, originally February, 2015)

  - new end of work March 31 2016 (+2 months, originally January 31, 2016)

Task 0: TDL Promotion Team (TPT)

- Role

    - coordinate activities leading to the TDL Launch Event at UCAAT 2015

    - prepare technical material for the launch event

    - prepare Web presence

    - contact interested parties regarding contributions and participation

Task 0: TDL Promotion Team (TPT)

- Call for participation on MTS-GEN

- Leader: Philip Makedonski

- Current members

  - Stephan, Miguel, Martti/Andrus, Finn, Gusztav, Xavier, Andreas

Task 0: TDL Promotion Team (TPT)

- Current activities

  - prep call on May 13

  - OCG slides preparation

    - to be reused for pitching launch event participation and for the launch event itself

  - TDL tutorial submission at UCAAT 2015

  - article preparation for SDL Forum 2015

  - TDL logo

Task 0: TDL Promotion Team (TPT)

- Next steps

  - review and refine existing ideas from MTS#64 / prep call

  - discuss ideas and collect further input at TDL technical session / MTS#65

  - prepare work plan and input for coordination call during first session

  - align the TPT work plan with the work plan for the remaining tasks

  - organise a coordination call in the week after first working session

  - contact interested parties regarding participation and contributions

Task 1: Planning

- Resources: 40 (PM 10, MK 15, FK 5, XZ 10)

- First draft of TR 203 119REF V1.1.1

  - TOC, structured notes regarding the current progress on the items below

- Technology selection based on firm technical basis

  - in the hands of the STF, to be "endorsed" by the SG

- Initial XF implementation

  - report possible limitations in the TR

Task 1: Planning

- Design and implementation plans for GR

  - identification of necessary additional shapes

  - mapping of model objects to shapes

  - strategy for layout of diagrams

    - rely on available facilities

    - port layout algorithms from other platforms

  - distribution of objects among diagrams

Task 1: Planning

- Initial selection for mapping model objects to shapes

  - data use

  - test configuration

  - test behaviour

  - test description

  - interaction

  - loop

  - conditional / alternative / parallel

Task 1: Planning

- Initial selection for mapping model objects to shapes

  - emphasise a feature that is not present in UML

    - highlight the added value of TDL - alternative, exceptional, etc.

    - depending on how complicated it is to realise

  - test objectives

    - extend to structured test objectives?

    - clarify with CTI whether there is any desire for a graphical editor for TO

Task 1: Planning

- Targets for UCAAT 2015

  - GR implementation scope to be determined (by Milestone A)

    - complete behaviour? data? time?

  - UML profile implementation (once mapping defined and agreed upon)

    - scope of UML profile editor to be determined (by Milestone A)

    - focus on features that can be easily mapped to UML first

Task 2: Planning

- Resources: 30 (GA 15, XZ 15)

- Mapping - Excel document, final format to be discussed (CEA)

- Profile implementation

  - Draft for UML Profile for TDL (profile diagram)

  - Formal constraints (integrated in the profile diagram)

- Determine promotion scope for UCAAT 2015 (CEA, Ericsson)

  - poster, demo, etc.

Task 3: Planning

- Resources: 10 (PM 5, MK 5)

- Address necessary changes with respect to Task 1 and Task 2

- OCL constraints covering at least 2 clauses

  - data / configuration / behaviour?

  - to be aligned with work on Task 1

  - potential changes to the MM may introduce further iterations

- Reviewing and addressing outstanding issues in Mantis

Task 4: Planning

- Resources: 25 (PM 10, GA 5, FK 10)

- GR

  - alternative and simplified representations of constructs - parallel, etc.

  - determine what needs to be modified, simplified, extended (Ericsson)

  - will become clearer after work on the reference implementation is started

  - update GR to match changes to MM (after UCAAT)

Task 4: Planning

- XF

  - align with changes to the MM (after UCAAT)

- TO

  - review, discuss, and select outstanding requests from Phase 2

  - collect and discuss further requests (parallel, repeated, etc.)

  - define work plan which will be addressed when

- Overall: content not critical for launch event at UCAAT

Misc: Interested parties

- Bernard Stepien / Daniel Amyot

  - bernard.stepien@sympatico.ca, University of Ottawa

  - ongoing collaboration, integration with jUCM, transformation into TTCN-3, application in Aerospace domain within a research project

- Alberto Marroquin / Stephane Maag

  - amarroquin@galileo.edu, Universidad Galileo, Guatemala / TSP, France

  - ongoing collaboration, testing distributed scenarios of SIP over IMS based on RFC 5359

Misc: Interested parties

- Xavier Zeitoun

  - xavier.ZEITOUN@CEA.FR, CEA (part of STF 492)

  - requested details and prototype

- Benjamin Zeiss

  - T-Systems

  - interest in TO, potentially also TDL

Misc: Interested parties

- Sven Groening

  - sven.Groening@tu-dortmund.de, TU Dortmund

  - discussion during UCAAT, requested demo, interest in TO, potential application in Car2X standardisation at ISO

- Jan Krause

  - jan.krause@ifak.eu, Institut für Automation und Kommunikation, Magdeburg

  - discussion during social event, some interest in TO

Misc: Interested parties

- Juha-Pekka Tolvanen

  - jpt@metacase.com, MetaCase

  - some discussion during UCAAT, potential for tool support

- Gary Downs

  - gary.downs@lmco.com, Lockheed Martin

  - brief discussion after TDL tutorial at UCAAT

- TeDeLos project proposal partners

Any other business?

TDL Use Cases

U	Short Description	Example
A	TDL for documentation (incl. informal parts)	3GPP test specs
B	TDL for generation of tests that can be made executable (i.e. all parts are formal)	Automatic mapping of a TDL spec to partial TTCN-3 code
C	TDL for representation of generated tests (i.e. output from MBT tools)	Test cases generated from system models
D	TDL for representation of test logs	Test execution log of a TTCN-3 tool
E	TDL for test generation (i.e. input to MBT tools)	Test models as activity diagrams
F	TDL for performance testing	On-the-fly testing from a TDL spec
G	TDL for interoperability testing	Use case models, from which tests are derived