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| **Title\*:** | Minutes of the TDL SG meetings |
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| from **Source**\*: | TDL SG chairperson |
| Contact: | György Réthy  |
|  |  |
| input for **Committee**\***:** | MTS |
|  |  |
| Contribution **For\*:** | Decision |  |  |
|  | Discussion |  |  |
|  | Information | **X** |  |
|  |  |
| Submission date**\***: |  |
|  |  |
| Meeting & Allocation: |  -  |
| Relevant WI(s), or deliverable(s): |   |
|  |

**ABSTRACT:***This TD contains the collection of the TDL Steering Group meeting minutes. It is updated continuously with the reports of the subsequent meetings.*

# TDL SG#1

Date: 31. Jan. 2013 14:00-15:00, GoToMeeting and phone

Participants:

            Anthony Wiles (AW)

            Andres Kull (AK)

            Andrus Lehtmets (AL)

            Steve Randall (SR)

            Jens Grabowski (JG)

            Stephan Schulz (STS)

            Andrej Pietschker (AP)

            György Réthy (GR)

Discussion

1. Agenda approved:

            1) The project plan and time schedule agreed at the kick-off of STF 454

            2) Intermediate documents / preliminary drafts and TDL SG discussion/decision points

            3) AOB

1. STS suggested adding Ericson submission not discussed in MTS#58 to list of input docs to the STF. GR agreed.
2. AW will collect more 3GPP TDs for input to STF. Try to cover a diverse area of usage.
3. STS suggested that the information, background, and drafts uploaded to past HLTD working meetings could also be input to the STF.
4. GR suggested STF creates a matrix identifying the main features/concepts of TDL be listed. Based on the UCs and in the context of TDL position between TPs and TTCN-3. Kind of a mapping document (high-level), like:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Language feature | UC1 | UC2 | UC3 | ... |
| feature 1 | X | O(ptional) |  |  |
| feature 2 | O(ptional) | X | X |  |
| feature 2 |  | X | X |  |
| ... |  |  | X |  |

        UCs agreed up to now in MTS:
        (a) fully manual TC development: TP <-> (manual mapping) TDL <-> (manual mapping) TTCN-3;
        (b) "semi-automated" TC development: TP <-> (manual mapping) TDL <-> (generated) TTCN-3 [this may cover more UCs depending of the level of protocol knowledge required in the test harness];
        (c) model <-> (generated) TDL and TPs <-> (generated) TTCN-3;
        (d) ... TDL <-> (generated) TTCN-3 <-> TCs (executed) -> TDL (graphical log representation) <-> TDL (derived new test cases)
                        as discussed in MTS earlier, this UC may be covered in a later stage;
        \*This will be a key doc for setting the language concepts.\*

1. All participants agreed to be members of the SG. AW will represent CTI and act as a ‘bridge’ between STF and SG. The SG is open, any other MTS member but STF members can apply to be member of the SG.
2. STF leader will be invited to the next call
3. Much discussion on session plan and timing of SG ‘intervention/follow-up’. SG must be proactive. If asked for, guidance needs a quick response. Should have SG call v. soon after each STF session.
4. STF leader should produce complete session plan up to MTS#59 (during first sessions week 7)
5. PRELIMINARY date of the next call 19th Feb. 2013 14:00 (to be confirmed!)
6. Noticed that GA is not given any days in the first week’s session (week 7). Probably a typo, so 2,5 days needs to be moved from ‘Other’ to GA

# TDL SGL SG#2

Date: 31. Jan. 2013 14:00-15:00, GoToMeeting and phone

Participants:

            Anthony Wiles (AW)

            Andres Kull (AK)

            Steve Randall (SR)

            Jens Grabowski (JG)

            Stephan Schulz (STS)

            György Réthy (GR)

            Emmanuelle Chaulot-Talmon(E)

            Laurent Vreck (LV)

Discussion

1. Agenda approved; in fact the discussion has taken place during presenting the STF report/session plan.

            1) STF454 report and session plan (Andreas)

            2) Discussion, recommendations (all)

            3) AOB

1. The report was discussed in detail. Use cases are generally accepted with minor clarifications where needed. Use Case A was considered to be a basic UC to be covered by the STF as minimum. It was agreed that at the next STF session (w10, Budapest) the 5 UCs should be distributed to STF members for feature analysis.
TDL feature “datasheet” format has been discussed; the idea was accepted and the concrete datasheet format (items and their names) reviewed and agreed.
Agenda for the 2nd STF session and the STF session plan were discussed and agreed.
Sources of examples to collect the needed features for the different use cases (at least): 3GPP TDs (already available), IMS (to be provided by Ericsson), IPv6, STF 442 outcome (HL test cases generated by MBT tools) , HLTD materials
See the updated report, containing the output of the above discussions here: <public link to be added! The file is available in docbox: <https://docbox.etsi.org/STF/STF454_MTS_TDL/Public/STF454-status.pptx>
2. AOB: it was raised that terminology used in other languages – especially in languages of similar abstraction level – should not be re-defined (re-used with a different meaning or semantics).
3. Date for the SG#3 meeting: 18th March, 10:00-11:30 CET

# TDL SG#3

**Date**: 18th March 2013 10:00-11:30, GoToMeeting and phone

**Participants**:

            Anthony Wiles (AW)

            Andreas Ulrich (AU)

            Jens Grabowski (JG)

            György Réthy (GR)

            Emmanuelle Chaulot-Talmon(E)

            Laurent Vreck (LV)

**Discussion**

1. Agenda approved

            1) STF454 report and session plan (Andreas)

            2) Discussion, recommendations (all)

            3) AOB

1. Andreas reported the status, see <https://docbox.etsi.org/STF/STF454_MTS_TDL/Public/STF454-status.pptx>.

It was noted that it seems to be too ambitious to write the text of the draft at the next session. The SG would prefer a clear understanding and description of the concept and the features at MTS#59. The features and their relation to the use cases has not been discussed, it was decided that this needs a separate REVIEW meeting; the next SG meeting will be dedicated to the detailed review of the features. List of proposed features can be found at:
[https://docbox.etsi.org/STF/STF454\_MTS\_TDL/Public/tdl\_features (copy).xlsx](https://docbox.etsi.org/STF/STF454_MTS_TDL/Public/tdl_features%20%28copy%29.xlsx)

It has been discussed if distinction of test cases and test steps is appropriate at this abstraction level. Though  no final decision has been taken, generally it has been agreed that test description (behavior) and extra information for test case generation shall be separated and the latter may be a tool internal issue.

The technique of specifying the metamodel (abstract syntax) was also a question, however it was felt to be early to start discussion on this.
2. AOB: none
3. Preliminary date for the SG#4 (TDL features review) meeting: w14 (01-05 April), see [AP SG#3-1]

# TDL SG#4

**Date**: 4th April 2013 14:00-16:30, GoToMeeting and phone

**Participants:**

            Anthony Wiles (AW)

            Andreas Ulrich (AU)

            Jens Grabowski (JG)

                        Steve Randall (SR)

                        Stephan Schulz (STS)

            György Réthy (GR)

            Emmanuelle Chaulot-Talmon(E)

            Laurent Vreck (LV)

**Discussion**

1. Review of the proposed TDL features has taken place (input file is attached). Comments, decisions:

- General comment: the STF should provide examples related to the features to the SG; use e.g. an MSC-like diagram to demonstrate the features.

- The STF should concentrate on the use case „documentation for conformance and interoperability testing“ (use case A) at this stage.

- SUT and tester decomposition: no decision has been taken, as the SG felt that it needs to discuss examples before making a decision. The STF is requested to prepare 2-3 example test descriptions using the component and the two-interaction-gates approaches in parallel, at the first day of their session on w15 and send them to the SG ASAP. The SG will discuss the examples by email.

- No test configuration types in this version. Types shall be „undefined“ (as opposed to untyped).

- Rename the language element „Annotation“ to „Attribute“.

- A realistic example of a useful invalid interaction flow, where any deviation results in PASS was requested.

- Verdict values shall be one of pass, fail, inconclusive, instead of free text. The need for forward compatibility was raised at this point. I.e. this version of the language should allow to be extended in a backward-compatible way in versions 2, 3 etc.

- In the interaction data category, cross-referencing between message fields has been requested to be added as a feature.
Note: after the meeting the ppt feature proposal, requested by Andreas has been uploaded to the STF’s docbox Input directory and Andreas notified.

- The need to distinguish functions based on their return value type has been questioned. No final decision is taken.

- The purpose of the Exception construct is unclear; its usage scenario needs to be clarified before including it to TDL v1.

- Editorial: test cases and test steps are merged  to test description (agreed earlier).

NOTE: The file <https://docbox.etsi.org/STF/STF454_MTS_TDL/Public/Proposed_TDL_features.pptx> has been uploaded after the meeting that contains more information than the excel sheet.

1. AOB: a face-to-face SG meeting was proposed for the 16th May. Participants at this SG meeting were available for the date; György to prepare a Doodle poll to check availability.
The Doodle poll has been prepared and sent out on the 5th April: <http://www.doodle.com/8dvtibbmxukh584p>

NOTE: The face-to-face meeting will not take place as just a few participants would be available; i.e. we will have the time allocated at MTS#59 to discuss all TDL related questions.

# TDL SG#5 Review meeting

**Date**: 5th June 2013 9:00-16:30, GoToMeeting and phone

**Participants**

 Anthony Wiles (AW)

 Andreas Ulrich (AU)

 Ina Schieferdecker (IS)

 Jens Grabowski (JG)

 Stephan Schulz (STS)

 György Réthy (GR)

 Marc-Florian Wendland (MW)

 Finn Kristoferssen (FK)

 Gusztáv Adamis (GA)

 Philip Makedonski (PM)

**Input documents**

MTS(13)000008\_Draft\_-\_DES\_MTS-140\_TDL\_\_v0\_0\_1\_\_ES\_203\_119\_\_\_\_Test\_Descript

MTS(13)000015\_STF454\_comments\_to\_the\_TDL\_discussion\_at\_MTS\_59

MTS(13)000014\_UGOE\_Comments\_on\_TDL\_Draft

MTS(13)59\_024\_STF454-TDL-Overview

MTS(13)59\_015\_Ericsson\_comments\_to\_the\_TDL\_draft

MTS(13)59\_022\_Conformiq\_Comments\_on\_TDL\_draft

MTS(13)60\_003 MTS\_59\_draft\_meeting\_report, clause 4.2

**Agenda**

* + STF454 introduction to the TDL proposal
		- MTS(13)000008\_Draft\_-\_DES\_MTS-140\_TDL\_\_v0\_0\_1\_\_ES\_203\_119\_\_\_\_Test\_Descript.zip
		- MTS(13)59\_024\_STF454-TDL-Overview.pptx
	+ Questions for clarification related to the proposal
	+ STF454 comments to the TDL discussion outcomes at MTS#59 (includes MTS(13)59\_015 and MTS(13)59\_022, as MTS(13)000015 contains responses to these comments)
	+ UGOE comments on the TDL draft
		- MTS(13)000014

**Review results**

**TD MTS(13)59\_024\_STF454-TDL-Overview**

The STF’s draft was introduced, two questions were clarified: by default end of a description is implicit, “exit” see discussion later is just an exceptional mean for explicit termination; it terminates the whole behaviour, not just one “lifeline”. The initial verdict is pass, explicit verdict setting is an option for the user

**MTS(13)000015** (includes responses to comments in MTS(13)59\_015 and MTS(13)59\_022, therefore those TDs are not discussed separately)

(1) Data types in TDL
AW (and JG in MTS(13)000014) commented, that long term roadmap for TDL is missing at the moment, thus cannot see how items will be progressed.
It was agreed that this version need not specify data types as such, but shall specify the allowed syntax when using values in TDL constructs (min/max in loops, boolean guards, float in time expressions etc.) as dedicated literal strings.
TDL shall allow referring to types and/or data defined in other languages.

(2) Time, timers
Several SG members expressed concerns if timers are not supported by TDL. This may lead to user acceptance and traceability problems, as protocol specifications, TPs and also test cases (TTCN-3) are using timers. The time concept in the current draft is vaguely elaborated. The need for timeout events is already identified (contained in the draft). STS proposes to define timer events as gate actions, similar to the timeout event.
It is agreed that the STF will produce and input to the SG, in the form of concrete examples of expressing all possible timer actions in TDL using both a (global) time and a timer concept. GR proposed to “reverse engineer” some existing test documents that uses timers.

(3) Configuration of referenced TDs
Calling TDs using different configurations is a real life need, also present in the examples (e.g. as pre-condition to register UEs). The STF is requested to analyse the technical consequences of referencing TDs with configurations, differing from the configuration of the calling TD.

(4) ExitEvent
Decided to rename “ExitEvent” e.g. to “StopEvent”; *StopEvent* shall stop the whole behaviour (i.e. the top level TD , not just one port or component). No need for a return/exit type event.

(5) Evaluation of behaviour branches
Clear semantic description will be defined by the STF. This issue was also discussed later, when discussing MTS(13)000014 clauses 2.7 and 2.8. The instruction from the SG is that the tester’s behaviour shall be deterministic, avoid non-determinism in TDL; e.g. if in an alternative combined behaviour more than one branches are “activated” there shall be a rule in TDL to resolve it in a specified way (all tools shall give the same result and it shall not be a tool choice to be non-deterministic). Similar rules shall apply for conditional and exceptional as well.

(6) PO, PCO, CP, observe-ability of connections
STF response is accepted in general, the STF should investigate to add observe-ability information to connections as annotation.

(7) Type definitions for test configuration
STS remarked that his comment was a general one to have consistent levels of details; this is also influenced by other items, e.g. by (3) and (6), let the STF investigate this.

(8) Exceptional behaviour should be possible to be added at different levels
STF response is OK.

(9) Timeout
This feature is needed, the comment was its naming. It is also related to item (2). Proposed to rename it to something more suggesting the end of quiescence. Terms already widely used shall not be re-defined.

(10) Verdict values
STF response is OK with the extension that precedence rules should be added.

(11) Where is TDL supposed to be…
Make “Test Objective” a more generic referencing mechanism (in some cases even elements of TPs or test cases may need to be referenced).

(12) Test Case Flag
A more generic mechanism is needed to identify TDs which may become test cases; using the mechanism should be a user option; a kind of listing mechanism or using attribute were mentioned: the STF should investigate these proposals.

(13) Position of TDL
STF response is OK, introduction will be extended.

(14) Referencing UTP
Accepted.

(15) The name “Tester”
Is it OK to leave it Tester.

(16) Test Objective
see item (11).

(17) Termination vs. Exit
See item (4).

(18) Output/Input instead of send/receive
Accepted.

(19) Terms TDL model vs. specification
Accepted.

(20) TDL terms to be moved to an Annex
Accepted

(21) 2 - 3 TDL sub-deliveries to be oriented to the different levels of the usages (mail from Shi Cheng)
The proposal is related to the concrete syntax; the current priorities of the STF are the metamodel and the semantics. AW will clarify with Shi Cheng the more concrete requirements for the different levels in parallel; the STF should support him when any question arise. TDL minimum is identified to be a TPLan issue. The metamodel should a) be extensible, b) support TDL enhanced.

**MTS(13)000014**

(22) Clause 1.1 Missing process definition, referencing
Partly discussed earlier, no action needed from the STF.

(23) Clause 1.2, Examples
The STF need to cross-check the metamodel against the examples: are all features needed to fully describe the examples in the metamodel available in TDL? (e.g. the example shown in MTS(13)000014 uses: referencing other TDs in the pre-condition, referencing information from other messages, alternative behaviour, checking no message is received (timer/quiescence) etc.)

(24) Clause 1.3 Granularity of language concepts
Discussed in items (1) and (7) no additional action required.

(25) Clause 2.1 Definitions section
Possibly missing definitions to be checked by the STF, also taking into account item (20).

(26) Clause 2.2 Abbreviations
Abbreviations and their resolutions to be added by the STF.

(27) Clause 2.3 Packaging
Scoping shall be elaborated in more detail by the STF. What are the scope units? What is the visibility of the names (e.g. timer names, messages in calling and called TDs etc.)
Term “group”, “grouping” to be deleted (no other means of grouping than the packaging).

(28) Clause 2.4 Connections
Broadcast communication shall be kept in mind when specifying the metamodel; TDL shall be smoothly extensible to broadcast communication.

(29) Clause 2.5 Section “Test Description”
See item (3).

(30) Clause 2.6
Verdict values should be an extensible list of pre-defined values (see item (10))

(31) Clause 2.7
See also item (5). Semantics shall be specified in a way to maximally exclude non-determinism at the tester side. Semantics shall be precisely defined.

(32) Clause 2.8
Clarify semantical relation to the non-exceptional behaviour blocks.

**Next meeting**: Status meeting, after the next STF session; preliminary date if end of July/beginning of August, depending on SG member holidays.

# Decisions

[DE SG#1-1] The SG would like to follow up the project's progress using meetings on a once-per-two-weeks basis; concrete dates will be decided when the concrete project plan and the STF meeting schedule are known

[DE SG#1-2] The SG should be as responsive as possible when a question is brought to the SG for decision and/or asking guidance.

# Action Points:

[AP SG#1-1, AW] Ask 3GPP test descriptions from Shicheng

Done.

[AP SG#1-2, GR] Contact Andreas to discuss the use case - language feature matrix

Done.

[AP SG#2-1, GR] Collect and provide to the STF examples used in real system descriptions

Done.

[AP SG#3-1, GR] Create a doodle poll for the TDL features review meeting date-time

Done.

[AP SG#4-1, GR] Create a doodle poll regarding the proposed TDL SG face-to-face meeting on the 16th May, Berlin

Done