STF 577: TDL Phase 5

Status Report

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Document History

- 2020-05-08: Document submitted for MTS#80 / MTS-TDL#4
- 2020-01-24: Document submitted for MTS-TDL#3
- 2020-01-24: Document submitted for MTS#79

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From the Terms of Reference…

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TDL Phase 5: Objectives

- Adaptation and extension of TDL addressing CRs
  - new features (inheritance, dependencies, test data)
  - updates to relevant parts, mapping new features to TTCN-3
- Update of TOP tools
  - resolve CRs, catch up with Eclipse updates, adaptations to TDL
- Update of technical report
  - validation, user guidelines

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TDL Phase 5: Deliverables

Deliv.	Work Item code Standard number	Working title Scope
D1*	RES/ES 203 119-1 V1.5.1	Methods for Testing and Specification (MTS); The Test Description Language (TDL); Part 1: Abstract Syntax and Associated Semantics
D2*	RES/ES 203 119-2 V1.4.1	Methods for Testing and Specification (MTS); The Test Description Language (TDL); Part 2: Graphical Syntax
D3*	RES/ES 203 119-3 V1.4.1	Methods for Testing and Specification (MTS); The Test Description Language (TDL); Part 3: Exchange Format
D4*	RES/ES 203 119-4 V1.4.1	Methods for Testing and Specification (MTS); The Test Description Language (TDL); Part 4: Structured Test Objective Specification (Extension)
D5*	RES/ES 203 119-6 V1.2.1	Methods for Testing and Specification (MTS); The Test Description Language (TDL); Part 6: Mapping to TTCN-3
D6*	RES/ES 203 119-7 V1.2.1	Methods for Testing and Specification (MTS); The Test Description Language (TDL); Part 7: Extended Test Configurations
D7	RTS/TR 103 119 V1.2.1	Methods for Testing and Specification (MTS); The Test Description Language (TDL); Reference Implementation and User Guidelines

* Work items of the TDL standard series which are not affected by CRs will not be updated.

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Today

- Work plan
- TDL evolution
- TOP maintenance
- Future of TDL

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Status Update

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Work Plan

- Timescale: Oct, 2019 (+0.5 months) - Oct, 2020 (+4 months)
  - delays with start due to administrative overhead
  - closing date adjusted for UCAAT 2020, other milestones not affected
  - work remotely, meet in person only if necessary
  - coordinated remote sessions scheduled as needed, based on availability
- Working sessions
  - WK05: Jan 30-31 Session 1 @ ETSI (2 days)
  - WK18: Apr 27-30 Focus Week @ Home (4 days)

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Milestones (Current Planning)

N	Task / Milestone / Deliverable	ToR Targets	Current Targets
M0	Start of work	16-Sep-2019	Oct-2019
T0	Project Management	16-Sep-2019–30-Jun-2020	Oct-2019–Oct-2020
T1	Evolution of TDL	16-Sep-2019–31-May-2020	Oct-2019–May-2020
T2	TOP Maintenance and Enhancements	16-Sep-2019–31-May-2020	Oct-2019–May-2020
T3	Validation and User Guidelines	01-Dec-2019–31-May-2020	Dec-2010–May-2020
M1	Stable drafts (MTS#79)	15-Jan-2020	Jan-2020
M2	Final drafts (MTS#80)	15-May-2020	May-2020
M3	Deliverables approved & published, ~~STF closed~~	30-Jun-2020	Jun-2020
M4*	Dissemination during UCATT 2020, STF closed		Oct-2020

* Milestones were refined during the preparatory meeting, M4 was added to extend the STF period

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Overall Timeline (Current)

Task Milest.	Description	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
T0	Project Management																
T1	Evolution of TDL																
T2	TOP Maintenance																
T3	Validation and Guidelines																
M0	Start of work																
M1	Stable drafts (MTS#79)																
M2	Final drafts (MTS#80)																
M3	Publication																
M4	Dissemination, closing																

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TDL Evolution

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Evolution of TDL

- Finalised proposals implemented for
  - inheritance support
  - separation of globally ordered and locally ordered test descriptions
    - test data specification - no change, examples and guide in TR
    - dependency specification - no major changes, predefined annotation
    - TR update, resolution of open CRs, general fixes and refinements
- New CRs submitted based on user feedback and other sources
- Drafts uploaded: May 11, TR expected May 14

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TOP Maintenance

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TOP Status

- Maintenance
  - support newer Eclipse version (2019-12), Sirius, Xtext, etc.
  - organise and resolve issues in BugZilla (2 open, 4 pending, 6 resolved)
  - alignment with new features, fixes and refinements
  - TOP-first: variants extension for TDL-TO preview (from roadmap)
- Standard data type library provided as resource
  - basic syntax support
  - needs to be manually imported still

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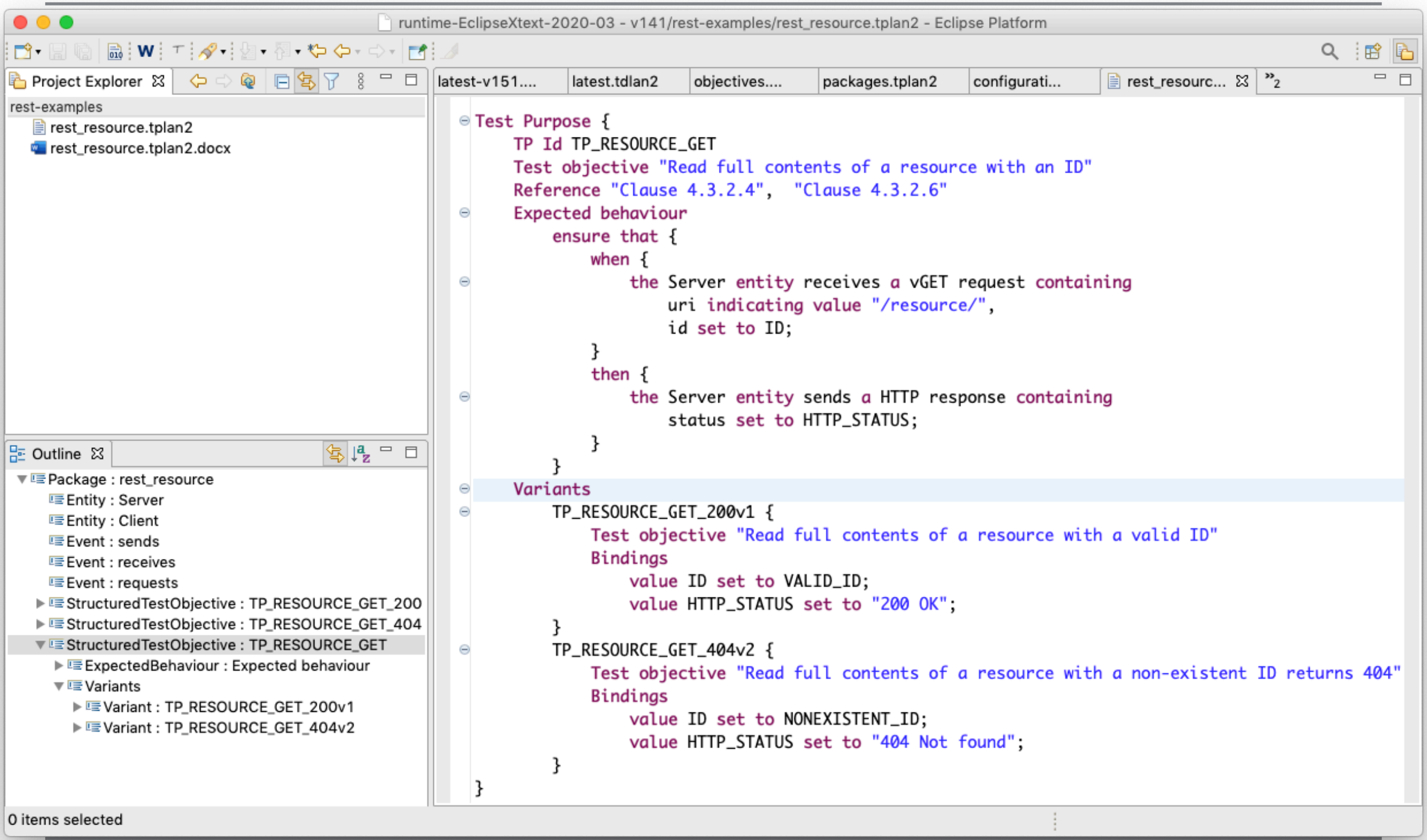
TDL-TO Variants Preview



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TDL-TO Variants Preview

AutoSave OFF rest_resource.tplan2.docx - Compatibility Mode

Home Insert Draw Design Layout References Mailings Review View Tell me Share Comments

TP Id	TP_RESOURCE_GET
Test Objective	Read full contents of a resource with an ID
Reference	Clause 4.3.2.4 Clause 4.3.2.6
Expected Behaviour	

ensure that {
when {
the Server receives a vGET request containing
uri indicating value "/resource/",
id set to ID
}
then {
the Server sends a HTTP response containing
status set to HTTP_STATUS
}
}	

TP Id	Description	ID	HTTP_STATUS
TP_RESOURCE_GET_200v1	"Read full contents of a resource with a valid ID"	VALID_ID	"200 OK"
TP_RESOURCE_GET_404v2	"Read full contents of a resource with a non-existent ID returns 404"	NONEXISTENT_ID	"404 Not found"

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Future

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TDL and TOP Evolution

- Maintenance and extensions
  - REST API specification and testing needs
  - OpenAPI integration, language extensions
  - Workflow from TO to TD to executable tests
  - Capturing and managing requirements?
- Textual syntax refinements (normative)
  - indentation-based syntax? full coverage vs lean essentials?
- Adaptive / AI testing requirements (for subsequent activities)

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New Initiatives

- Extension for TO to capture TDs that are used in most documents
  - alternatively a separate extension
- Integration and cooperation with NWM group
  - embed TDL fragments / objects into deliverables
- Capture ICSs and requirements classification within TDL
  - currently annotations can be used for this purpose
  - guidelines shall include reference examples how to achieve that
  - check tools that can provide an insight how to express and integrate that

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New Platform

- Switch TOP to GitLab as single, modern platform
  - ETSI forge focused on deliverables only
  - ETSI labs may provide more visibility
    - Separate domain (top.etsi.org) may be lost -> redirection? landing page?
    - Ongoing discussion within ETSI
- Currently STF 577 GitLab space used as a pilot / sandbox
  - all repositories migrated, bugzilla migration pending
  - target STF contributions, mirrored to top.etsi.org once stable

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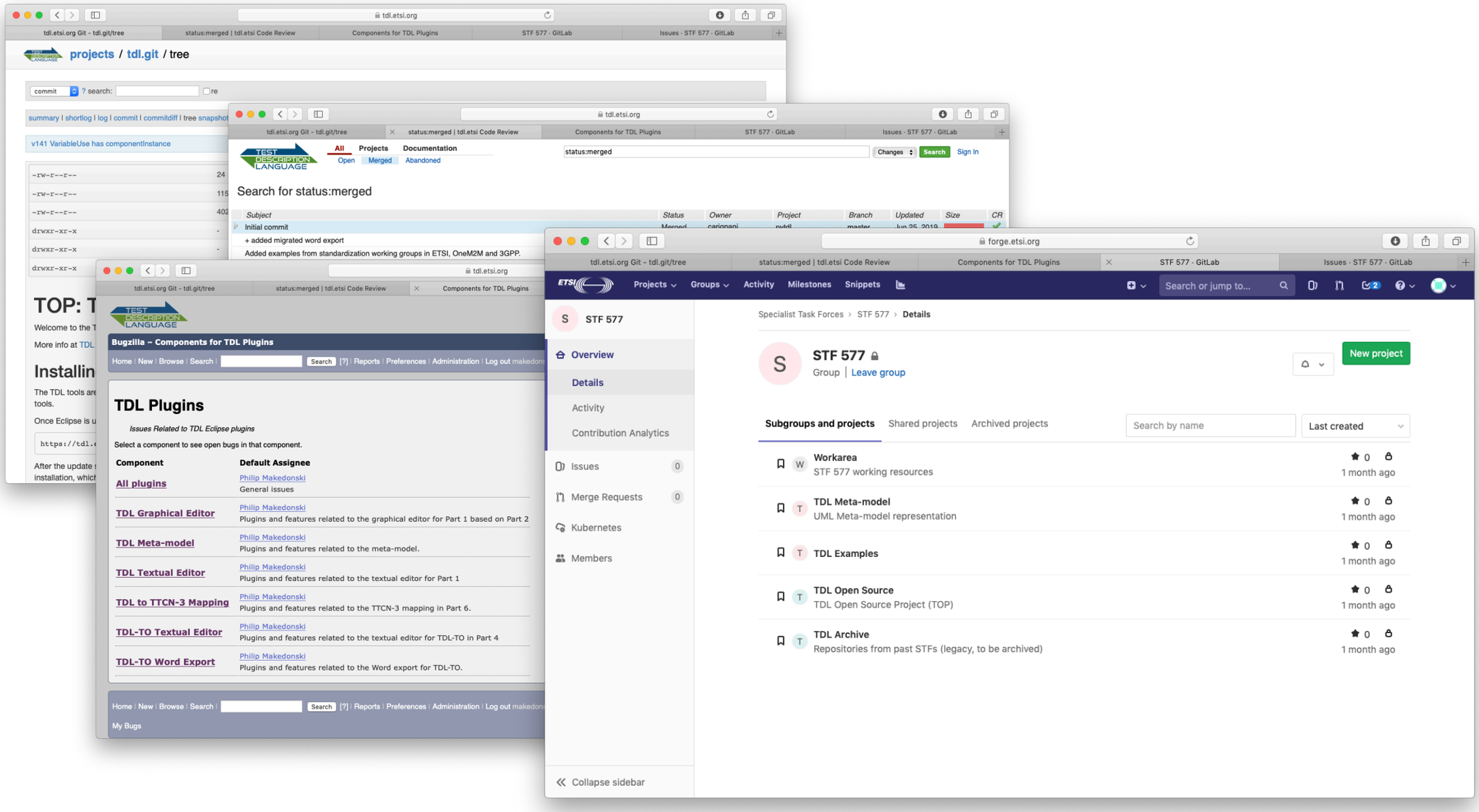
New Platform



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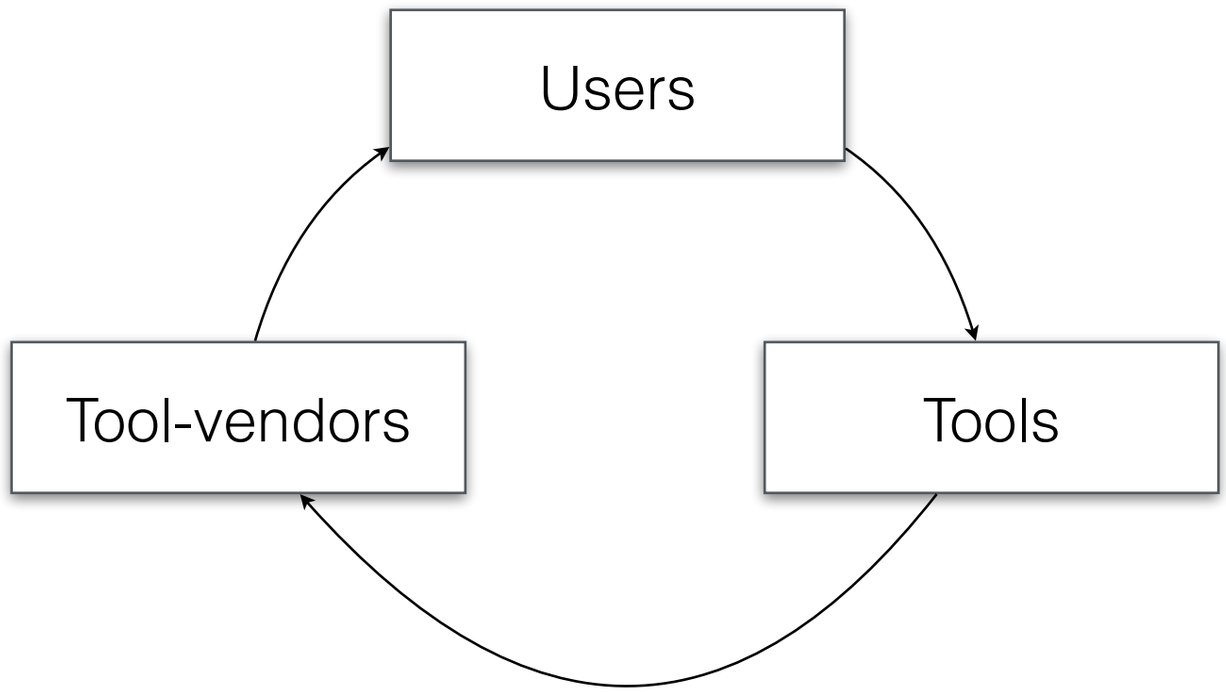
Reflections

- We need users
  - initial studies and some interest at ETSI
  - other parties: NetResults, TSP, U-Ottawa, McGill U
- Users need tools and guides
  - TOP can be a platform for both
- Tools need tool-vendors
  - TOP as a starting point
- Tool-vendors need users



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Reflections

- Further refinements and extensions desirable
  - inheritance, data and typing, local behaviour, mapping to TTCN-3
  - secondary, need to come from actual users
- Main focus on increasing acceptance and adoption
  - identify limiting factors and act on them, requires faster turnaround
  - information and training on solving actual problems instead of on features
- Fostering initiative among stakeholders
- Support and funding opportunities

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Any other business?

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