Eclipse™ TPTP 4.1 Release Review

8 November 2005

rev 4

Eclipse TPTP PMC

Introduction: TPTP 4.1 Release Review

- **Major Milestones**
    - Current release: 4.1 (Nov 11) (based on EP 3.1.x)
    - Prior releases: 4.0 (July'05), 3.3 (June'05), 3.2 (Dec'04)
    - Next release: 4.2 (June'06) (based on EP 3.2)
- **Release alignment**
    - Moved to bi-annual releases in 2006 (vs. quarterly releases)
        - TPTP "major" releases aligned with Eclipse "release train"
        - TPTP "minor" releases ~6 months later
        - TPTP maintenance releases aligned w/ Eclipse Platform maintenance releases

Features: TPTP 4.1 Requirements Process

- Requirements solicited via bugzilla (via newsgroups and mailing lists)

- Requirements reviewed for clarity, scope (project charter), alignment with themes, target release and priority by Requirements Group

  - Single representative from each TPTP contributing organization to avoid large-company dominance

  - Chair (Mike Norman, Scapa Technologies) solicits and represents additional community input

  - Intermediate and final conclusions posted on TPTP website

- Late-breaking exceptions handled through open exceptions process

- Themes and high-level requirements coordinated through Eclipse Requirements Council representation

Features: TPTP 4.1 Themes

- Adopted Eclipse Themes & Priorities Q4'04 for TPTP 3.3 onwards
  - Planning to adopt updated Eclipse Themes & Priorities when available
- 37 TPTP 4.1 enhancements categorized against Eclipse Themes as follows:

TPTP 4.1 Enhancement Alignment to Themes	#*
Design for Extensibility: Be a Better Platform	23
Simple to Use	22
Appealing to the Broader Community	12
Enable Consistent Multi-language Support	3
Scaling Up	2
Enterprise Ready	1
Rich Client Platform	1
Embedded Development	0

* Number of TPTP 4.1 enhancements aligned with theme (alignment to multiple themes possible); Distribution of requirements generally reflects the interests of the current community of contributors and adopters, but is not meant to preclude opportunities for additional contribution.

Features: TPTP 4.1 Key Feature Set

- Further enhancements to TPTP / JDT integration including ability to create and run JUnit tests for Eclipse plug-ins

- Technology preview of a new automated GUI testing capability

- Migrated manual test client from Swing to RCP

- Automatable and scriptable headless (i.e., without Eclipse/TPTP GUI) TPTP test execution via enhanced ANT/batch support

- Trace data model enhancements to support collection of execution trace data from non-Java programs, options to export statistical tabular views of trace data to XML, and test data model enhancements allowing better access to test verdicts

- Introduction as public APIs of our next generation data collection and communication frameworks (new agent controller, client and agent APIs)

- Improved ease of deployment and management of agent controller for data collection on local machine

- Added extension points in various viewers for report data to be consumed by tools such as BIRT

- Generic Log Adaptor enhancements including configurable time-stamping, consistent display of time-zones across multiple logs, optimizations, such as reduced memory consumption, to support large log files, "how to use" documentation, and an extension point to add default symptom database URLs

Features: Responding to the Community

- **JUnit**
  - Continuing to enhance integration – new plugin test suite wizard, workbench location wizard and configuration, and launch configuration

- **GUI Automation testing**
  - Adopted from Eclipse PDE and extended to integrate with TPTP as Tech Preview

- **XRay – Eclipse Profiler**
  - Adopted and offered as Tech Preview

- **Manual Test Client**
  - Migrated from Swing to RCP and enhanced

- **Open Source Community Solidarity**
  - Demonstrated integration with WTP and Tomcat as a target of TPTP-based testing and profiling
  - Provided BIRT data source for customizable reporting

- **Sample Tools**
  - Continuing to improve our exemplary tools (capabilities, performance, quality)

Non-Code Aspects: Documentation & Examples

- TPTP 4.1 download includes online documentation

    - Created by professional technical writers

- Tutorial & presentation materials available on www.eclipse.org/tptp

    - Current: EclipseCon 2005, Eclipse World 2005, ST&P 2005

    - Future: EclipseCon 2006, Linux World 2006

- TPTP 4.1 New&Noteworthy & Screencast (short demo)

    - To be made available via TPTP website

- TPTP Datasheet updated for 4.1

    - Introduction to TPTP, outlining benefits to end-users, contributors

- Continuing incremental improvements/updates to TPTP website

    - www.eclipse.org/tptp

Non-Code Aspects: Communications

- Article Placement
    - Dr Dobbs' Journal – August issue
        - The Eclipse Test and Performance Tools Platform - An open framework for tool builders, *Andy Kaylor, Dr. Dobb's Journal, October*, 2005
    - Eclipse Corner – Article under review
- Conferences
    - EclipseWorld 2005: Presented 1 tutorial and 3 technical classes
    - Software Test & Performance 2005: Presented 2 technical classes
- Community outreach for 4.1 release
    - News alert on TPTP website
    - Postings on popular Eclipse websites and blogs

TPTP now included in Yoxos Eclipse Distribution
"We are excited about the new version of TPTP and the availability of end-user tools for testing and performance tuning. TPTP provides developers with the out-of-the-box tools for monitoring multiple operating systems and application servers all as open source. This is great alternative to commercial tools that cost thousands of dollars. It is important to us to make sure that our Yoxos customers benefit from the new TPTP features and can easily update their Eclipse environments as quickly as possible."

Jochen Krause, President, Innoopract, August 1, 2005

APIs: Status of TPTP 4.1 Content

Name	API Type	Doc Status	Test Cases	# of Clients	Backward Compatible	Maturity
Charting service	Platform javadoc Provisional	Usage, Examples & javadoc	Yes	3 test reports plus consumers	Yes (Moving from Provisional in 4.0)	3 years SVG 3 years SWT
Agent Controller	Platform	Overview, How To and doc	Yes	TPTP samples	Yes (Moving from Provisional in 4.0)	High
BPEL service (Potentially moving to new Eclipse STP Project)	Platform package Provisional	Overview Examples & javadoc	Yes	1 external	Provisional since 4.0	18 months but an experienced team

All new API typically go through at least 1 release of Provisional status

Two styles of Provisional being applied to new functional areas:
- API is stable and will maintain binary compatibility forward
  - <u>Platform javadoc Provisional</u> - javadoc with provisional tag, Provide contract description and samples, Risk is implementation reliability
- API is deemed final, but is not 100% guaranteed, however is available for usage
  - <u>Platform package Provisional</u> - Not part of standard package - requires an explicit download, Provisional package name, Contract and samples provided

Architectural Issues

- Continuing incremental migration (4.0/4.1/4.2) of linkages to JDT JUnit
  - Discussion of tighter extension/integration underway for 4.2
- Created xml data source extension for BIRT exploitation
- TCP monitor introduced in WTP will be reconciled with TPTP 2H05-TBD
- WTP web services validation will be migrated to TPTP analysis framework 2H05-TBD
- Launch and control linkage to JDT/CDT… workgroup in place
- Previous feature requests for linkage to requirement/defect artifacts is on hold until there is team support for record resources in the workbench platform

End-of-Life

- All APIs and features from previous releases of Hyades / TPTP are being preserved in 4.1
- Some of the EMF xmi resource formats have been extended in 4.1, but automatic forward and backward compatibility continues to be in place from TPTP 1.0 onward

Bugzilla Statistics

Defects	Target Milestone				---	4.2	future	Total
NEW	.	.	3	20	12	193	38	266
ASSIGNED	.	.	.	7	.	168	19	194
REOPENED	.	.	.	1	.	6	.	7
RESOLVED	15	138	303	94	48	2	.	600
VERIFIED	.	6	8	.	.	.	.	14
CLOSED	.	104	96	13	1	.	.	214
Total	15	248	410	135	61	369	57	**1295**

Column headers within Target Milestone: 4.1, 4.1i1, 4.1i2, 4.1i3

Bug statistics as of November 2, 2005

Release Exit Criteria

- No high severity defects & 100% test attempt / pass (95% pass on early iterations)
- Test results posted; All exceptions reviewed before deferral / discharge
- All tests are in CVS as TPTP manual and JUnit tests

TPTP 4.1 stats

- 777 bugzilla defects resolved / verified / closed
- 37 feature enhancements integrated

Standards (same as TPTP 4.0)

- Provide implementations of
    - JSR 47 logging implementation
    - OMG UML2 Test Profile (pre-approval level)
        - Alignment to approved level is under assessment
    - Oasis common base event (pre-approval level 1.0.1)
        - WEBM/CIM proposal recently approved
    - Provisional BPEL engine
- Provide a common engine for the use of
    - The above standards
    - JVMPI – to be replaced by JVMTI
    - Extend JUnit with TPTP test tracking capabilities
    - SVG for charting

Schedule

- In last stage of TPTP 4.1 final iteration and GA declaration
  - Release consisted of two 7-week development and one 3-week shut-down iterations
  - TPTP 4.1 will commence our alignment with Eclipse Platform 3.2 builds (with M3 Nov 18)

Key Dates	
July 18, 2005	Commenced TPTP 4.1 development
Sept 9, 2005	Completed TPTP 4.1 Iteration 1 (vs. 9/2 scheduled)
Oct 3, 2005	Released TPTP 4.0.1 GA (Maintenance release aligned with Eclipse Platform 3.1.1)
Oct 28, 2005	Completed TPTP 4.1 Iteration 2 (vs. 10/21 scheduled, but not declared stable)
Nov 8, 2005	TPTP 4.1 Release Review
Nov 11, 2005	TPTP 4.1 GA (Supporting Eclipse Platform 3.1.x)
Nov 18, 2005	TPTP "4.2 i0a"* (Supporting Eclipse Platform 3.2 M3)
Dec 17, 2005	Target for TPTP "4.2 i0b"* (Supporting Eclipse Platform 3.2 M4)
Feb 24, 2006	Target for TPTP 4.2 i1 (Supporting Eclipse Platform 3.2 M4)
April 14, 2006	Target for TPTP 4.2 i2 (Supporting Eclipse Platform 3.2 RC0)
May 26, 2006	Target for TPTP 4.2 i3 (Supporting Eclipse Platform 3.2 RC?)
June, 2006	Target for TPTP 4.2 GA (Supporting Eclipse Platform 3.2 GA)

* "4.2 i0a" is functionally equivalent to 4.1; "4.2 i0b" may contain early contributions toward 4.2 (which doesn't officially start until Jan)

Process

- ~60 contributors (57 Committers plus a few Developers) from 4 organizations
  - Committer elections and removals have followed charter principles
  - Continuing to recruit additional contributor (organizations and individuals)
- Open communications via 6 TPTP mailing lists and newsgroup
  - Project activities communicated via mailing lists for PMC/general and one each for each sub-project (plus newly added low-noise news only mailing list)
- Meetings, meeting, meetings – numerous, open, and documented
  - Quarterly F2F PMC+PG, Weekly PMC+PG, MG, AG, Project, Component, etc.
- Open and inclusive release planning and tracking processes
  - Bugzilla used to request and track all defects and enhancements
  - Additional reports (defects, tests, etc.) used to enhance planning / tracking
- All contributions made directly to Eclipse CVS
  - Nightly, stable/iteration, and release builds available to the community

Community

- Open communications via 6 TPTP mailing lists and newsgroup
  - Newly created low-noise news only list: tptp-news@eclipse.org
  - PMC, Groups, coordination, announcements, etc.: tptp-pmc@eclipse.org
  - Separate Committer mailing lists for each TPTP project: tptp-platform-dev, tptp-testing-tools-dev , tptp-tracing-profiling-tools-dev, tptp-monitoring-tools-dev
  - Improved Committer responsiveness to newsgroups
- Open and inclusive release planning and tracking processes
  - Bugzilla used to request and track all defects and enhancements
  - Additional reports (defects, tests, etc) used to enhance planning / tracking
- Substantial TPTP downloads activity
  - About 11% of Platform for period July 1 through August 19 (TPTP 4.0 and EP 3.1)
  - >580K downloads (all TPTP) during Sept and Oct
- Coordination/cooperation between other Eclipse projects
  - Platform, BIRT (assigned TPTP Committer to BIRT), DSDP, WTP
- TPTP evangelism and outreach in the market & broader community
  - Continuing to drive adoption across other Eclipse projects and industry
  - Presence at EclipseCon, Eclipse World, Linux World & upcoming ST&P

Intellectual Property

- Accepting Contributions (In-Bound Licensing)
  - All new code provided under Eclipse Public License (EPL)
  - Inclusion of 3rd-party (non-EPL) components approved by EMO
    - JUnit, Jakarta Log4J, Jakarta Commons Logging, Xerces-C, Batik
    - Xerces-C updated for this release (to version 2.6 from version 2.4)

- Licensing Contributions (Out-Bound Licensing)
  - TPTP 4.1 provided under EPL
  - about.html / licenses are in place

- Due Diligence and Record Keeping
  - All TPTP Committers completed Committer Agreement & approved by PMC/EMO
  - PMC maintains list of all 3rd-party (non-EPL) components used by TPTP
  - EMO completed source scan and due diligence to confirm contributions

Eclipse Foundation IP Policy: http://www.eclipse.org/org/documents/Eclipse%20IP%20Policy2003_12_03%20Final.pdf
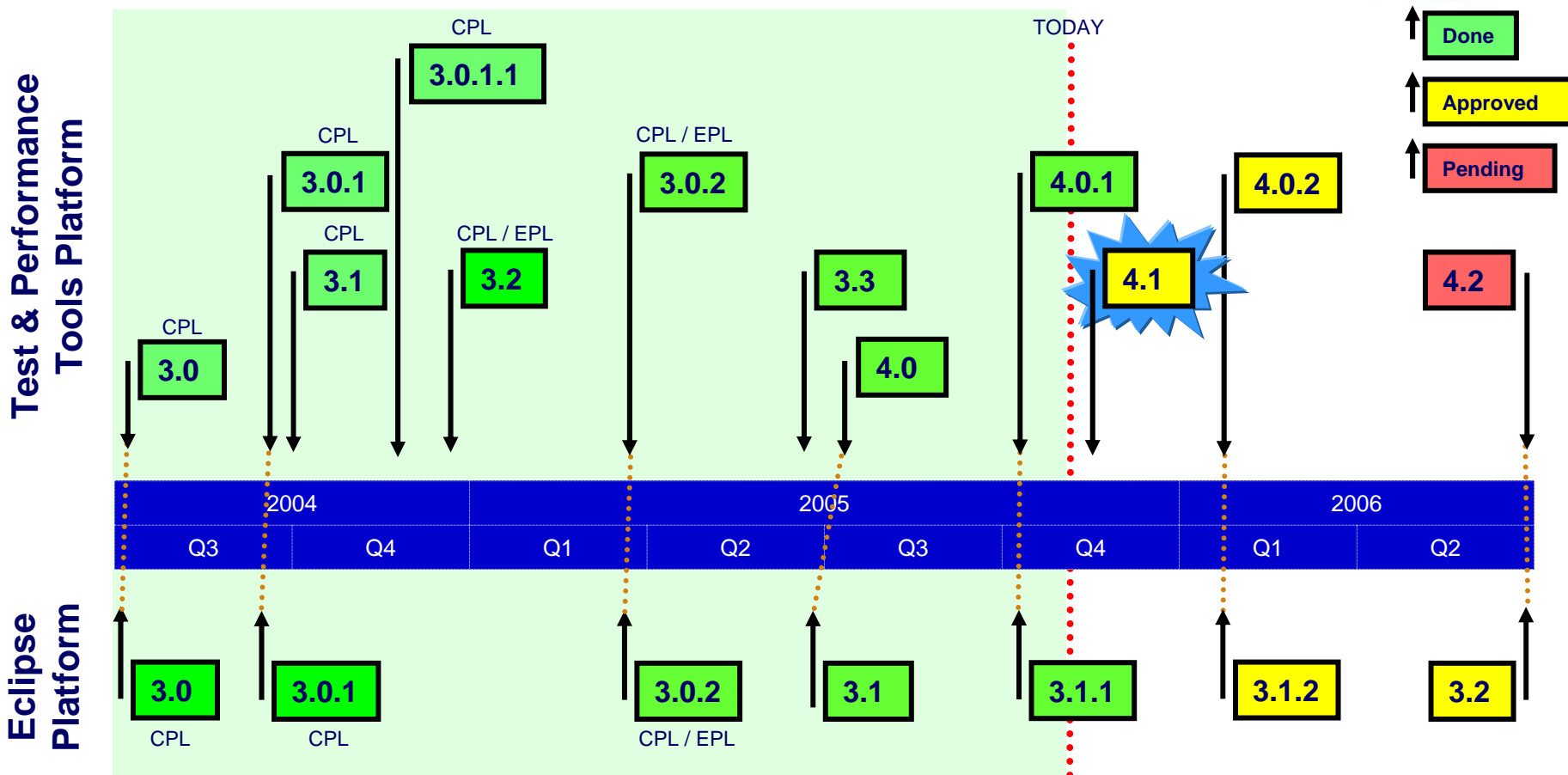
Project Plan

- TPTP 4.1 scheduled for Nov 2005
  - Based on Eclipse Platform 3.1.x
  - Also available on Eclipse Platform 3.2 "M3"

- TPTP 4.0.2 / TPTP 4.1.1 maintenance releases targeted for Jan 2006
  - Aligned with Eclipse Platform 3.1.2 maintenance release

- Targeting TPTP 4.2 for June 2006
  - Expecting to finalize plan Dec 2005 & commence development Jan 2006
  - Aligned with Eclipse "release train" starting with Eclipse Platform 3.2 "M3"

- Targeting TPTP 4.3 for Nov 2006
  - Commencing planning in Q1'06 and development July 2006

Project Plan: TPTP Roadmap

- TPTP 3.x and 4.[0|1].x releases are based on Eclipse Platform 3.0.x and 3.1.x respectively
- CPL / EPL notations refer to the license(s) under which the release will be made; TPTP 3.3 and EP 3.1 and later are EPL only

Thanks and…

Feedback, Feedback, Feedback!

- **Please provide us with your feedback, requirements, issues**

- **Submit enhancement requests / defects in Bugzilla**
  https://bugs.eclipse.org/bugs/enter_bug.cgi?product=TPTP

- **Submit questions / issues in the TPTP Newsgroup:**
  news://news.eclipse.org/eclipse.tptp

- **Engage with the PMC to contribute:**
  tptp-pmc@eclipse.org or individual PMC members at
  http://www.eclipse.org/tptp/groups/PMC/pmc.html