



# *Tools for mobile Linux Release Review 0.1*

Eric Cloninger

[ericc@motorola.com](mailto:ericc@motorola.com)

TmL Project Lead

Release review data compiled for Development Process 2.4

# *Agenda*



- TmL Background
- Features
- Non-Code Aspects
- API Status
- Architectural Issues
- Tool Usability
- End-of-life
- Bugzilla
- Standards
- UI Usability
- Schedule
- Communities
- IP Issues
- Next Release Project Plan

# *TmL Background*



- A sub-project of DSDP
- 0.1 release tentatively scheduled for October 10, 2008
- Incubated in December 2006 and driven largely by Motorola
- Contributions from other mobile and embedded developers
- Goal is to provide support for development of mobile Linux applications on the Eclipse IDE using C/C++

# Features (2.1)



- 0.1 project plan with Milestones and detailed Deliverables available at <http://www.eclipse.org/projects/project-plan.php?projectid=dmdp.tml>
  
- Components:
  - Device framework
    - Provides support for the Devices and Services plugins
  - VNC Viewer
    - Provides the VNC viewer component. Contains a stand-alone library and plugins to use this library in a SWT viewer.
  - Protocol Component
    - Provides the Remote Frame Buffer (RFB) protocol used by the VNC viewer

## Non-Code Aspects (2.2)



- User documentation and tutorials
  - End-user documentation is minimal. Plan to address this for 0.3 release on Galileo train
  - Tutorial that explains how to integrate the VNC viewer into an Eclipse Ganymede shell targeting REACT OS and ARM Linux under QEMU
  - Tutorial that explains how to create plug-ins to be contributed or making use of the TmL framework available for internationalization, logger entries, exception handling and common utilities for retrieve information from framework (ongoing)
- Current implementation is US English. Code uses proper mechanisms for retrieving strings and formatting numbers (NLS standard). Discussion is underway for adding another language for Galileo (not confirmed).
- Slide decks presented at EclipseCon 2008 and LinuxWorld 2008 are available from the project wiki pages
- As this is the first release, there are no outdated artifacts

## API Status (2.3)



- Eclipse Quality Standards  
[http://www.eclipse.org/projects/dev\\_process/eclipse-quality.php](http://www.eclipse.org/projects/dev_process/eclipse-quality.php)
  - IP due diligence as per the [Eclipse IP Policy](#) and other Eclipse processes [\[5\]](#), [\[6\]](#), [\[7\]](#), [\[8\]](#).
- Incomplete API: Device (devices, services, state machine)
  - Specification – incomplete
  - Test Suite - incomplete
  - Implementation - yes
  - Clients - yes
  - Support Promise - yes
  - Package - public
- The API is stable for 0.1 and will be documented in release 0.3
- The device API has a contribution under [#236476](#) that provides a generic device plug-in for device types. This contribution will be included in 0.2, scheduled for December 17, 2008.

## *Architectural Issues (2.4)*



- The device API will be extended in 0.3 to support a Simulated end-to-end environment that provides an environment to integrate and test mobile enterprise applications
  - There is a bug to address this issue in Bugzilla (#243500)
- Need Unit Tests
  - Unit tests will be created for the 0.3 release (#243511)
- State Machine Mechanism
  - The current mechanism used in the state machine is not thread safe and needs to be refactored (#221739)
- Device interface refactoring
  - For 0.2, the extension point `org.eclipse.tml.device` will be replaced with `org.eclipse.tml.devicetype`. The new extension point abstracts device types, allowing concrete implementations to share properties and services (#236476)

## *Tool Usability (2.5)*



- The tool provides VNC viewer functionality inside an Eclipse view. The interactions of the view are defined by the VNC protocol
- User interactions provided by TmL elements (e.g. property editors, preference pages, wizards, etc.) all use Eclipse SWT controls in a manner consistent with commonly accepted principles
- The user interfaces in TmL are separated from the framework underneath, so they could be replaced by adopters of the project
- The Instance Manager in 0.1 is a new contribution that looks nicer and is easier to use, compared to the previous view in TmL



## *End-of-Life (2.6)*



- This is the first TmL release, so all APIs are new
- The initial code for TmL was based on the Emulator Framework (#206666, #206668). It was necessary to improve this framework for a more generic scope. The code is kept in CVS for archival purposes, but it is not included in the 0.1 release.
- For 0.2, the extension point `org.eclipse.tml.device` will be replaced by `org.eclipse.tml.devicetype`, scheduled for December 17, 2008 (#236476)
- For 0.3, no APIs are planned to be deprecated

# Bugzilla



- 50 bugs currently resolved or closed as fixed up to 23-SEP-2008
- 26 open bugs, many of them work items for future releases
- 4 P2 bugs currently open
- 0 bugs of any severity of types == blocker, critical, or major
- Main bugs categories
  - 32 bug fixes
  - 19 features improvements
- 17 bugs with external patches applied
  
- Limited discussions on bugzilla (area to improve)

# Bugzilla (2.7)



- The current situation, as of 23 September 2008

Open bugs by target milestone	
0.1	61
0.1.1	5
0.2	2
0.3	15
Future	4

Bugs in Release 0.1	
Duplicated	8
Invalid	3
Fixed	50

Fixed bugs in Release 0.1 by Priority						
	Total	P1	P2	P3	P4	P5
critical	3			3		
major	7		1	6		
minor	3	1		2		
normal	19		2	18		
enh	17		1	15	1	

Fixed bugs in Release 0.1 by Contributor			
	External	Committer	Total
critical	1	2	3
major	5	2	7
minor	2	1	3
normal		18	18
enhancement	11	8	19
	19	31	50

## *Standards (2.7)*



- Although the Remote Frame Buffer protocol is not an RFC, it is widely used. TmL uses versions 3.3 and 3.8 of the protocol.

## *UI Usability (2.8)*



- All resources in the 0.1 release are provided in US English. All strings are stored and numeric formats are created according to Eclipse guidelines.
- All plugins store strings and other localizable resources inside bundles
- Externalization and Accessibility are not the focus of this release
- TmL provides no changes to the Section 508 compliance available in the Eclipse project as a whole

## *Schedule (2.9)*



- All dates tentative, except for 0.3
- 0.1 following review approval (October 10, 2008)
  - Current stable functionality (State Machine Engine + VNC Viewer + feedback from MOTODEV Studio teams)
- 0.1.1 following Eclipse 3.4.1 (November 14, 2008)
  - Bug fixes + State Machine bug #221739
- 0.2 has DeviceType contribution (December 17, 2008)
  - Contribution itself + bugs arising from contribution
  - Initial version of /proc file viewers using telnet/ftp
- 0.2.1 following Eclipse 3.4.2 (~March 20, 2009)
  - If necessary, as issues arise with Ganymede SR 2
- 0.3 Galileo Release Train (June 25, 2009)

# Communities (2.10)



- Commercial adoption
  - TmL code is currently being used in (2) Motorola products that began shipping in August 2008. These projects will be updated to use the 0.1 TmL plugins in Q4 2008. Another Motorola product is tentatively slated to ship with TmL by Q1 2009.
  - TmL is being developed for inclusion in an upcoming product from MontaVista
  - Recent queries from Symbian about using TmL in their product(s)
- New members added to project in 2008
  - Two code committers added
  - Another code committer from outside Motorola/Eldorado is planned
  - New project lead (Eric Cloninger) and engineering lead (Fabio Fantato)
- First external code contribution in May 2008, now in CVS
  - Another external contribution planned for inclusion in the 0.2 release

## *Communities (2.10) cont'd*



- Moderate activity on dsdp-tml-dev mailing list (area to improve)
- All work accounted for on Bugzilla
- Bi-weekly open phone calls since April 2007, with announcements to mailing list several days prior
- PR/Evangelism
  - EclipseCon 2007 – Short talk
  - EclipseCon 2008 – 2 talks (1 short, 1, long)
  - EclipseCon 2009 – Abstracts for 3 talks planned (1 long, 1 short, 1 tutorial)
  - LinuxWorld 2008 – Long talk
  - Individual recruiting activities
  - Discussions with other Eclipse groups for the Galileo train and beyond



# IP Issues



Per Eclipse IP Policy, the project leadership verifies that ...

- ✓ ... the "about" files and use licenses are in place as per the Guidelines
- ✓ ... all contributions (code, documentation, images, etc) have been committed by individuals who are Members of the Foundation and are abiding by the Eclipse IP Policy (training through Committer HOWTO)
- ✓ ... 3<sup>rd</sup> party libraries have been documented in the release and reviewed by the Foundation's legal staff
- ✓ ... all contribution questionnaires have been completed
- ✓ ... the "provider" field of each plug-in is set to "Eclipse.org"
- ✓ ... the "copyright" of each plug-in is set to the copyright owner
- ✓ ... there are no 3<sup>rd</sup> party logos or fonts to be licensed under the EPL
- ✓ ... All jar packages contains "Incubation" label to indicate the currently project status

See the IP Log at

- <http://www.eclipse.org/dsdp/tml/development/tml-log.csv>
- [http://www.eclipse.org/projects/ip\\_log.php?projectid=dsdp.tml](http://www.eclipse.org/projects/ip_log.php?projectid=dsdp.tml)
- <http://www.eclipse.org/dsdp/tml/ipLog.php>

## *IP Issues Speak-Up-Now (2.12)*



- None

# *Project Plan (2.13)*

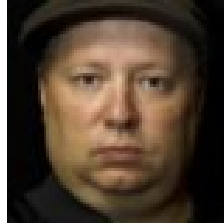


- 0.2 in December 2008, containing contribution from Yufen Kuo, which will result in an API change, necessitating the need for a new release
  - Viewers for the data files found in /proc (using telnet and ftp)
  
- 0.3 on the Eclipse Galileo train (June 25, 2009)
  - Bug fixes as necessary
  - “Device proxy” framework with GPS reference implementation
  - Architectural refactoring
  - More /proc file viewers
  - Documentation
  
- Project Plan is in CVS
  - <http://www.eclipse.org/projects/project-plan.php?projectid=dsdp.tml>

# TmL Committers and Contributors



**Christian Kurzke**  
Architect



**Eric Cloninger**  
TmL Project Lead



**Daniel Franco**



**Otavio Ferranti**



**Fabio Fantato**



**Maureen Brenner**  
(emeritus)



**Yufen Kuo**

**Eugene Melekhov**

# *TmL Project Resources*



- Project web site:
  - <http://www.eclipse.org/dsdp/tml>
- Project wiki:
  - <http://wiki.eclipse.org/DSDP/TML>
- Regular phone meetings:
  - <http://wiki.eclipse.org/DSDP/TML/TmLOpenPhoneMeetings>
- Developer mailing list:
  - <https://dev.eclipse.org/mailman/listinfo/dsdp-tml-dev>
  - [dsdp-tml-dev@eclipse.org](mailto:dsdp-tml-dev@eclipse.org)
- Pre-release update site available after September 23, 2008
  - <http://download.eclipse.org/dsdp/tml/updates/0.1/>