Embedded Rich Client Platform (eRCP) 1.2 Release Review

August 13th, 2008

Introduction: eRCP 1.2 Release Review

- **eRCP Project**
  - Original project proposal submitted by IBM, Nokia, Motorola
  - Original code contributions from IBM and Nokia
  - New committer from ProSyst

- **Major Milestones and Previous Releases**
  - Technology Project approved (11/5/2004)
  - eRCP moved to DSDP (7/19/2006)
  - eRCP 1.0 released (9/21/2006 – on schedule)
  - eRCP 1.1 released (7/25/2007 – on schedule)

Basic Features

- **Core Runtime:** the Eclipse Core which provides OSGI and Extension Point Framework support

- **eSWT:** Rich UI API, a subset of desktop SWT

- **eJFace:** a set of classes which extend eSWT to enable eRCP applications to integrate with an eRCP workbench, and provide more complex widgets like MVC oriented viewers

- **eWorkbench:** A UI framework which supports multiple cooperative eRCP applications, and a generic Workbench which manages launching and display of eRCP applications

- **eUpdate:** a simplified API and interface for dynamically updating device software

- **MicroXML:** smaller, faster implementation of SAX and DOM API

Supported Platforms

- **Windows Mobile 5** PPC & Phone Edition
- **Windows Mobile 6** Classic, Professional, & Standard
- **WinCE 5 Professional**
- **Windows Desktop** (XP, Vista)
- **Nokia S60** (eSWT is currently at 1.1 level)

Other projects that are in CVS but incomplete/not supported
- eSWT for GTK
- eSWT for QTe

New Features in eRCP 1.2

- New platforms: Windows Mobile 6 Standard
  - Extensive navigation changes for non-touch screen devices

- Currency with Eclipse 3.4
  - OSGi and Core runtime components from Ganymede

- eSWT
  - Browser.execute() support – specific support is platform dependent
  - SWT.VIRTUAL support in Table, Tree, and MultiPageDialog
  - Bug fixes
  - Memory leak fixes

- Weekly builds now posted

Features not included

- Nokia S60 code for eSWT was contributed, but is not yet at the 1.2 level. Nokia will complete this work post eRCP 1.2 GA.

Non-Code Aspects

- The complete eRCP 1.2 JavaDoc is provided in zip form

- Programming guides and "How To" documents are provided on the eRCP website

- Translation of the runtimes is provided for 10 languages (eWorkbench, eUpdate and samples translations provided by IBM)
    - English
    - Spanish
    - Italian
    - French
    - Brazilian Portuguese
    - German
    - Japanese
    - Traditional Chinese
    - Simplified Chinese
    - Korean

APIs

- All eRCP base platform and eSWT APIs are existing SWT and desktop RCP APIs

- eSWT Mobile Extensions APIs are new, but very much in the same form as existing SWT APIs. Few changes for eRCP 1.2

- An eSWT test suite is provided to confirm spec compliance and 3 platform implementations confirms portability

- There are several projects using eSWT including the eSWT Demo App which utilizes almost every eSWT widget

- Have achieved application binary compatibility across multiple platforms

Architectural Issues

- eRCP has periodically synchronized base platform components with desktop RCP and will continue to do so for future releases to keep projects in sync. Our goal is to do this within 2 months of major RCP releases.

- eSWT APIs are intrinsically extensible since their purpose is to provide UI function to a wide variety of applications and application models rather than serving any particular application/application model

- eSWT API is partitioned into three pieces to facilitate use on low end devices that may not want all function in one lump. However, all runtimes currently provide all three pieces together.

Tool Usability

- Eclipse IDE can be used to develop applications for eRCP

- Eclipse Eco-System is also producing tools
    - Instantiations is producing a commercial visual editor tool for eSWT

End-of-Life

- S80 Runtime is downloadable but not updated or supported
  - S80 devices are no longer sold by Nokia
  - S60 Runtime compatible with eRCP 1.1 is now available

- WM 2003 devices are no longer supported
  - eSWT can be compiled for WM 2003, but bugs occurring only on WM 2003 will not be supported by committers

Defect Statistics (as of 7/22/2008)

- 53 Open reports
  - 0 blocking
  - 0 major
  - 53 normal (still being addressed)
  - 1 deferred
- 27 reports resolved since 1.1.1 (March 18, 2008)

Supported Standards

- There are no official eSWT standards. However, SWT has been a well known API for many years. Any API in the eSWT subset follows the same specification of that API in SWT.
- OSGi Framework
  - Inherited from desktop
- JME CLDC 1.0 (eSWT only)
- JME CDC 1.0

- eRCP itself may become an OSGi standard before the next release

UI Usability

- The only application interface in eRCP is for Application Manager (eUpdate). This interface is designed for devices so already takes into account small screens and different input mechanisms.

- eRCP Application Manager and demo apps are translated into 10 languages and enabled for other languages including bi-di

Schedule

Planned schedule:

- There have been no 1.2 milestones since functional changes have been minor and many bug fixes were included in the March eRCP 1.1.1 release.
- eRCP 1.2 release was scheduled for 7/25/2008

Actual schedule:

- Release upon completion of Release Review (August 13th)

Community

- Committers
  - 14 committers from 3 companies (8 with commits this year)
  - 101 posts on mailing list since Feb 11, 2008
  - 140 posts on newsgroup this year
  - 33 bugs created this year

- Users
  - 7000 Downloads this year
  - Feedback from ProSyst, SAP and other users

- Adopters
  - IBM   – Lotus Expeditor for Device is based on eRCP
          – Lotus Sametime Mobile is an eRCP application
  - Nokia   – eSWT shipped on all Nokia S60 3.2 phones
          – will be the largest deployment of Eclipse technology ever
  - ProSyst – Independent implementation of OSGi
  - Sprint   – eRCP is in Mobile Java Service Platform (Titan)

Community (Continued)

- Presentations at EclipseCon 2005, 2006, 2007, 2008
  (http://eclipsezilla.eclipsecon.org/php/attachment.php?bugid=3688)
  (http://www.eclipsecon.org/2008/index.php?page=sub/&id=596)
- Front page article on eclipsezone.com
  (http://www.eclipsezone.com/articles/ercp-interview)
- EclipseWorld 2006 session

  (http://www.eclipseworld.net/friday_am.htm)
- EclipseSummit 2007 session
  (http://www.eclipsecon.org/summiteurope2007/index.php?page=detail/&id=46)
- DeveloperWorks article – "Explore Eclipse's embedded Rich Client Platform"
  (http://www-128.ibm.com/developerworks/library/os-ecl-rcp/index.html)
- Eclipse Review magazine article – "Eclipse on Cell Phones"

IP Issues

As per the [Eclipse IP Policy](), the project verifies that:
- ... that the about files and use licenses are in place
- ... 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
- ... that all significant contributions have been reviewed and approved by the Foundation's legal staff
- ... third-party libraries, have been documented in the release and reviewed and approved by the Foundation's legal staff, see https://dev.eclipse.org/ipzilla/show_bug.cgi?id=337
- ... that all contribution questionnaires have been completed
- ... the "provider" field of each plug-in is set to "eclipse.org"
- ... the "copyright" field of each plug-in is set to the copyright owner

Project Log

- ## Committers
  - Mark Rogalski (IBM)
  - Phil Loats (IBM)
  - Uriel Liu (IBM)
  - Philippe Krief (IBM)
  - Ken Walker (IBM)
  - Aleksi Uotila (Nokia)
  - John Hsu (IBM)

  - Petru Motrescu (Nokia)
  - Jussi Suistomaa (Nokia)
  - Gorkem Ercan (Nokia)
  - Eric Hsu (IBM)
  - Julian Chen (IBM)
  - Danail Nachev (ProSyst)
  - Bernd Lachner

- ## Developers
  - Radoslav Gerganov (ProSyst)
  - Ed Merks

- ## Third Party Software

NAME/VERSION	LOCATION	LICENSE	USAGE
libJPEG release 6b	eswt-converged.dll	libJPEG license	use of unmodified source

This log can be found at http://www.eclipse.org/ercp/project-log.html

IP Speak-Up-Now

- The EMO explicitly asks during the Release Review if any Member would like to assert that this release infringes their IP rights. If so, the EMO and the project will follow the Eclipse IP Policy in discussions with that Member.

Project Plan

- Bring eSWT for Nokia S60 up to 1.2 level
  - Nokia not setting a target date

- Move eRCP to top level Runtimes project
  - Better synergy since eRCP is mostly a runtime
  - Target September, 2008

- eRCP 1.2.1 maintenance release
  - Date dependent upon number and severity of bug fixes that would be included (possibly January, 2009)

- eRCP standardization work
  - Target June, 2009 (dependent on OSGi standardization process)

- eRCP 1.3
  - Target July, 2009

Thank you

Please provide on-going feedback…

- https://bugs.eclipse.org/bugs/enter_bug.cgi?product=ERCP

- news://news.eclipse.org/eclipse.dsdp.ercp

- dsdp-ercp-dev@eclipse.org

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