Highlights

- **3.6 new features:**
  - Introduction of p2 API
  - Multiple instances of p2 in one VM
  - New Discovery UI
  - Multi-locale support in extension registry
  - Added support to send arguments to a running instance of Eclipse

- **API quality:**
  - High. No breaking changes to Equinox API
  - Binary compatible for compliant plug-ins
  - 24 new p2 API/SPI packages
  - In addition to the new p2 API 26 other classes or interfaces have new API (either new types, or existing types with new members)

- **IP Clearance and Licenses:**
  - All licenses and about files are in place as per the Eclipse Development Process, the Due Diligence Process was followed for all contributions

- **Community and Committer Diversity:**
  - 41 committers, 21 active in past 9 months
  - Organizations: IBM, EclipseSource, Cloudsmith, Individuals, Prosyst, Sonatype, compeople AG, WeigleWilczek GmbH, Tasktop
  - Geographies: Canada (9), USA (6), Germany (3), Bulgaria (1), Sweden (1), France (1)
  - Commits: IBM (52.0%), Sonatype (27.0%), Cloudsmith (10.1%), EclipseSource (5.9%), Individuals (1.9%), Prosyst (1.4%), Tasktop (1.2%)
  - Consumed by all other Eclipse projects
Themes and Plan Items

- **Scalability**
  - Support added for low memory events
  - Improve p2 resolver and engine performance

- **Robustness**
  - Define p2 API and JavaDoc
  - Multi-locale support in the extension registry
  - Provide p2 repository verification tools

- **Consumability**
  - API completeness
  - New p2 UI workflows
  - Improve p2 error reporting
  - Improve p2 responsiveness
  - Integration of servlet bridge with p2
  - Define p2 API

- **The Future**
  - OSGi standards participation
  - Investigate improvements to the extension registry

Deferred 3.6 Plan Items

• p2 install flexibility
• Use p2 to manage and run on other OSGi framework implementations
New and Noteworthy

• New Equinox Weaving feature included in Helios
• Support for multi-session Equinox console
• Added Event Admin implementation to RCP
• Revert support added to p2 director
• Multi-locale support in extension registry
• Added Servlet filter support
• Performance improvements in p2
• Improvements in proxy handling
• Defined event topic for memory events
• New server side features for products to use
3.6 Plug-in Changes from 3.5

**Added Plug-ins (10)**
- org.eclipse.equinox.p2.discovery.compatibility
- org.eclipse.equinox.p2.discovery
- org.eclipse.equinox.p2.operations
- org.eclipse.equinox.p2.ql
- org.eclipse.equinox.p2.ui.discovery
- org.eclipse.equinox.servletbridge.extensionbundle
- org.eclipse.equinox.weaving.aspectj
- org.eclipse.equinox.weaving.caching
- org.eclipse.equinox.weaving.caching.j9
- org.eclipse.equinox.weaving.hook

**Removed Plug-ins (2)**
- org.eclipse.equinox.p2.exemplarysetup
- org.eclipse.equinox.p2.tools
Non-Code Aspects

• The 3.6 release will contain updated User and ISV documentation

• Community is very active
  – Mailing lists and newsgroups have steady activity
    • Equinox-dev@eclipse.org, p2-dev@eclipse.org
  – Blogs dedicated to Eclipse are active e.g.
    • http://www.planeteclipse.org
  – Wiki content is growing
    • http://wiki.eclipse.org/Equinox
    • http://wiki.eclipse.org/Equinox/p2
Non-Code Aspects

- **Internationalization**
  - Latin1 and Latin2 locales are supported in all operating environments
  - DBCS locales are supported on all platforms
  - GB18030-1 Chinese codepage standard is supported on Windows, Linux GTK and Mac.

- **Localization**
  - Tested for Localization and participating in Babel Project

- **Accessibility**
  - Tested for accessibility, but Equinox has minimal GUI code
Non-Code Aspects

• Articles, examples, and tutorials
  – Numerous Webinars and Podcasts
  – Library of demo code in Equinox incubator
  – Tutorials given at EclipseCon and other conferences
  – New project named Toast in the Examples project demonstrating the various runtime technologies at Eclipse.
Platform Quality API

• API quality is a collaborative effort that involves the experience of the developers working on the Equinox project, and feedback from consumers.
• API changes and proposed API additions are often broadcast to mailing lists to raise awareness of the changes and encourage discussion and feedback.
• API changes between 3.5 and 3.6 are checked automatically by API tooling integrated into integration build process.
• No breaking API changes in 3.6
• The PMC is comfortable supporting the API that is in the Equinox project 3.6
3.6 API – Equinox

New p2 API/SPI packages

- org.eclipse.equinox.frameworkadmin
- org.eclipse.equinox.p2.core
- org.eclipse.equinox.p2.core.spi
- org.eclipse.equinox.p2.engine
- org.eclipse.equinox.p2.engine.query
- org.eclipse.equinox.p2.engine.spi
- org.eclipse.equinox.p2.metadata
- org.eclipse.equinox.p2.metadata.expression
- org.eclipse.equinox.p2.metadata.index
- org.eclipse.equinox.p2.operations
- org.eclipse.equinox.p2.planner
- org.eclipse.equinox.p2.ql
- org.eclipse.equinox.p2.query
- org.eclipse.equinox.p2.repository
- org.eclipse.equinox.p2.repository.artifact
- org.eclipse.equinox.p2.repository.artifact.spi
- org.eclipse.equinox.p2.repository.metadata
- org.eclipse.equinox.p2.repository.metadata.spi
- org.eclipse.equinox.p2.repository.spi
- org.eclipse.equinox.p2.repository.tools.analyzer
- org.eclipse.equinox.p2.repository.tools.comparator
- org.eclipse.equinox.p2.touchpoint.eclipse.query
- org.eclipse.equinox.p2.ui
- org.eclipse.equinox.simpleconfigurator.manipulator
### 3.6 API – Equinox

**New**
- Support to allow multiple OSGi console sessions
- Support to get a bundle data area from a Location service
- Support to dynamically enable and set debug tracing
- Launcher options to pass parameters to a running Eclipse instance
- Platform constants for ppc 64
- LocaleProvider service interface to support multi-locale scenarios
- Support for asynchronous application results
- Defined event topic constant for memory events
- Support programatic access to declarative services runtime
- Support for servlet filters
- Support to determine when preferences have been overridden
- Support for wildcards to match preference keys to transfer
- Support for multi-locale extension registry
Tool Usability

• As part of the Runtime project, tooling falls outside the Equinox project mandate
• Some developer tools such as console, command line tools provided
• Work closely with the PDE project which provides tooling for Equinox
Architectural Issues

• Primary runtime is still a 1.4 JRE. Complementary functionalities on Java SE 5 (junit4, APT 5) and Java SE 6 (APT 6, compiler API)
• Many core Equinox bundles use the OSGi minimum 1.2 profile
• p2 uses Java SE 5 syntax (generics etc.) but is down compiled to support J2SE 1.4 and the OSGi minimum 1.2 profile
• 10 new bundles, 2 removed bundles
End of Life Issues

• When evolving API the Equinox Project will, whenever possible, deprecate the affected API methods and continue to keep them operational.

• Exceptions to this rule are in the 3.6 migration guide.
Bugzilla

• Between June 25, 2009 and May 21, 2010 (RC2)
  – More than 1500 reports were created
  – Over 1500 were resolved
  – Over 500 were resolved without changing code
    • invalid, duplicate, worksforme, etc...
  – Over 70 were backported to 3.5.x maintenance

• Current state (RC3) is
  – 3 blockers, 18 critical
  – 0 P1, 8 P2
Bug resolution during 3.5

<table>
<thead>
<tr>
<th>Severity</th>
<th>Target Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.6</td>
</tr>
<tr>
<td>blocker</td>
<td>.</td>
</tr>
<tr>
<td>critical</td>
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<tr>
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<tr>
<td>trivial</td>
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<tr>
<td>enhancement</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
</tr>
</tbody>
</table>
Resolved bugs
including fixed, invalid, …
Fixed bugs (only)

![Bar chart showing fixed bugs by milestone]

- **Target Milestone**
  - 3.6
  - 3.6 M1
  - 3.6 M2
  - 3.6 M3
  - 3.6 M4
  - 3.6 M5
  - 3.6 M6
  - 3.6 M7
  - 3.6 RC1
  - 3.6 RC2

- **Bugs**
  - 0
  - 50
  - 100
  - 150
  - 200
  - 250
  - 300
  - 350
  - 400

- **Categories**
  - blocker
  - critical
  - major
  - normal
  - minor
  - trivial
  - enhancement
Standards

• OSGi
  – Service Platform Core Specification, Release 4.2
  – Elements of the OSGi Service Platform Service Compendium, Release 4.2
  – Continued development of the next OSGi Specification (tentatively called Release 4.3) is going on in a branch.
UI Usability

• Strings are externalized to support translation into other languages.
• Extensive use of mnemonics and shortcut keys in the user interface enhances usability.
• Full Bidirectional support (mirroring) on Windows and Linux GTK, bidirectional text on Mac OS X
• Accessibility support for Windows, Linux GTK and Mac OS X
• We are not aware of any non-compliance with accessibility standards in the user interface
Schedule

• Milestones every 6 weeks, 6 cycle duration
  – API frozen on March 12 (M6), Feature freeze April 30 (M7)
• Tracked schedule
  – All milestones delivered as promised
• End game (release candidate) milestones for 4 cycles
  – Duration reduced from 2-week to 1-week cycles at RC2 milestone
  – No new features or API allowed without proper approvals
  – Development to end on June 3, 2010
  – Increasingly stringent approval, checking, and change notification requirements in this stage
Process

• The Equinox project is developed using an open, transparent, and inclusive process
• Teams rely on Bugzilla, mailing lists and newsgroups for input
• Weekly planning calls conducted with the PMC and component leads
  – Meeting minutes posted on the Equinox wiki page
• Component teams have publicly available milestone plans on the wiki
Community

- Equinox team members are active in Bugzilla, newsgroups, and mailing lists
- Blogs started by Equinox committers are active
  - http://www.planeteclipse.org
- Some teams are using the equinox-dev IRC channel
  - irc://irc.freenode.net/#equinox-dev
  - also see: http://wiki.eclipse.org/index.php/IRC
- The Equinox team participates in code camps, conference presentations, and tutorials, including
  - EclipseCon, JavaOne, JavaWorld, JAOO, Eclipse Summit Europe, Eclipse Forum Europe, JAX, JAX Asia
- The Equinox team interacts with other open source projects, standards bodies, and other projects on eclipse.org, including
  - OSGi, Apache, JCP
IP Issues

• All significant and third party contributions have been reviewed and approved by Eclipse legal.
• About files and license files are complete and correct.
• Draft IP log:
Project Plan for Equinox 3.7

• Still in planning stage