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# JavaOne<sup>SM</sup>

## The Galilean Moons of Eclipse

Wayne Beaton  
The Eclipse Foundation  
Evangelist  
Director, Committer Community

## Agenda

Ganymede

New and Noteworthy

Components/Equinox/OSGi

Demo

Questions

# What is Galileo?

Simultaneous release of 33+ Eclipse projects

Transparent and predictable development cycle

- Allow consumers to start their own integration

- Cross-project, and cross-product testing efforts

Not a unification of the projects

- Each project retains its identity

- Separate leadership, committers, project plan, ...

# More Pragmatically...

## Communication, Coordination

- Linkage to downstream use and requirements

- Staged, predictable release schedule

- Reduced functional redundancy

## Collaboration

- Project teams working together

## Build Aggregation

- Components collected together

- Single update site

## Predictable Quality



## Eleven Top Level Projects

Eclipse

Tools

Web Tools Platform

Test & Performance  
Tools Platform

Business Intelligence  
and Reporting Tools

Modeling

Data Tools Platform

Device Software  
Development Platform

SOA Tools Platform

Technology

Eclipse RT

## Galileo Projects (1/7)

### The Eclipse Project

- Eclipse Platform

- Java™ Development Tools (JDT)

- Plug-in Development Environment (PDE)

### Web Tools Platform (WTP)

### Data Tools Platform (DTP)

## Galileo Projects (2/7)

### Tools

C/C++ Development Tools (CDT)

PHP Development Tools (PDT)

Mylyn

Graphical Editing Framework (GEF)

Buckminster

Business Intelligence and Reporting Tools (BIRT)

## Galileo Projects (3/7)

### Device Software Development Platform Project

- Target Management (TM)

- Tools for mobile Linux (TmL)

- Mobile Tools for Java (MTJ)

### SOA Tools Platform (STP)

- SCA Tools

- BPMN

### Test & Performance Tools Platform (TPTP)

- Platform, Test, Trace, Monitoring

## Galileo Projects (4/7)

### Modeling (1/2)

#### Eclipse Modeling Framework (EMF)

Query, Transaction, Validation, Teneo, Net4j, CDO

#### Eclipse Modeling Framework Technology (EMFT)

EMF Search, EMF Compare, Ecore Tools, Mint

#### Graphical Modeling Framework (GMF)

## Galileo Projects (5/7)

### Modeling (2/2)

#### Model Development Tools (MDT)

OCL, UML2, UML2 Tools, XSD

#### Model-to-Model Transformation (M2M)

ATL, QVTO

#### Model-to-Text (M2T)

JET, Xpand, Acceleo

#### Textual Modeling Framework (TMF)

Xtext

# Galileo Projects (6/7)

## Technology

Accessibility Tools Framework (ACTF)

Dynamic Languages Toolkit (DLTK)

Eclipse Packaging Project (EPP)

Java Workflow Tooling (JWT)

Memory Analyzer (MAT)

Subversive

## Galileo Projects (7/7)

### Eclipse RT

Equinox

Eclipse Communication Framework (ECF)

Eclipse Persistence Services Project (EclipseLink)

Rich Ajax Platform (RAP)

Riena

Swordfish

# Eclipse Does Runtimes

Traditionally known for tools

The Eclipse Component Model, Equinox at heart

Many “runtime” projects

RCP, ECF, EMF, EclipseLink, RAP, Riena,  
Swordfish, Gyrex

Nebula, Glimmer, Higgins, GEF, GEF3D

Open Financial Market Platform

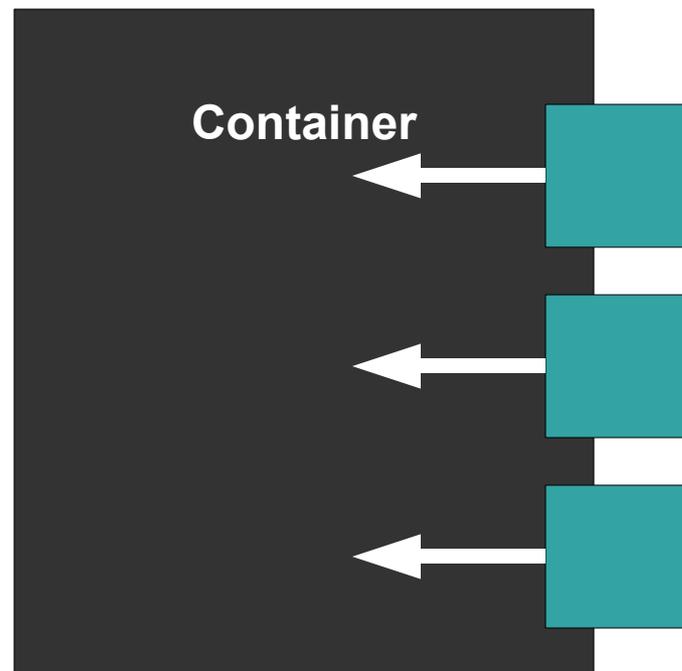
Open Healthcare Framework

# Traditional Components

Components “plug-into”  
container, but are  
separate (think EJB)

Different component  
strategies for standard,  
enterprise, device  
platforms

JAR files are not  
components



# Equinox/OSGi

Single component model for all platforms

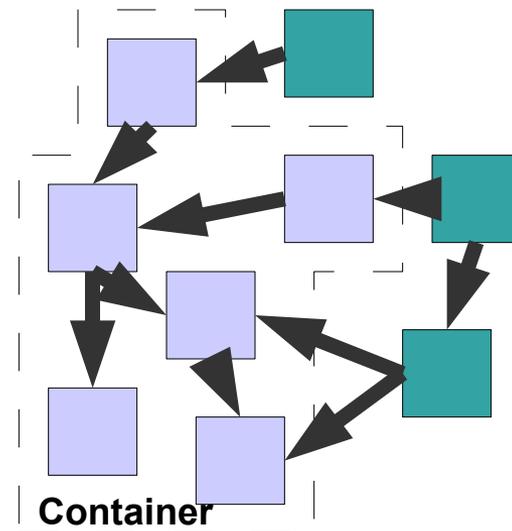
Application components indistinguishable from container components

Consistent management

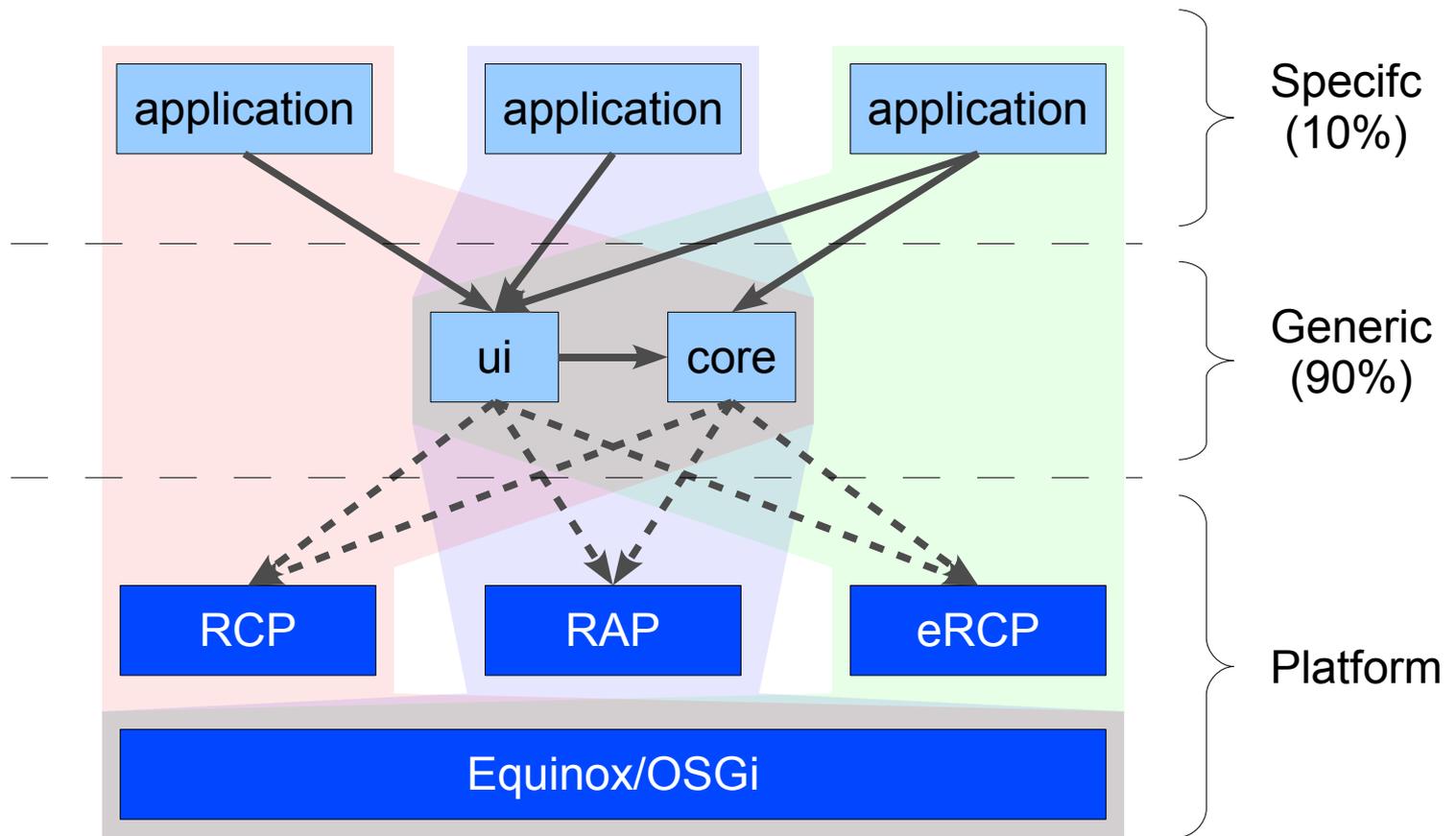
Explicit, declarative dependencies

Multiple version support

Dynamic loading/unloading



## Shared Components Architecture

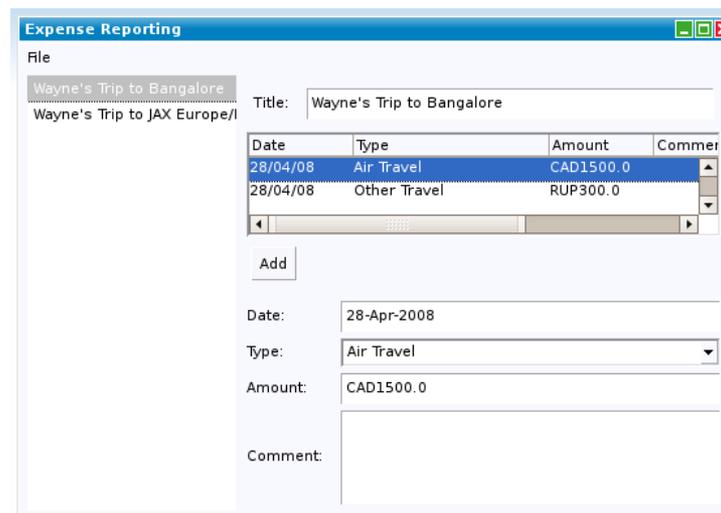
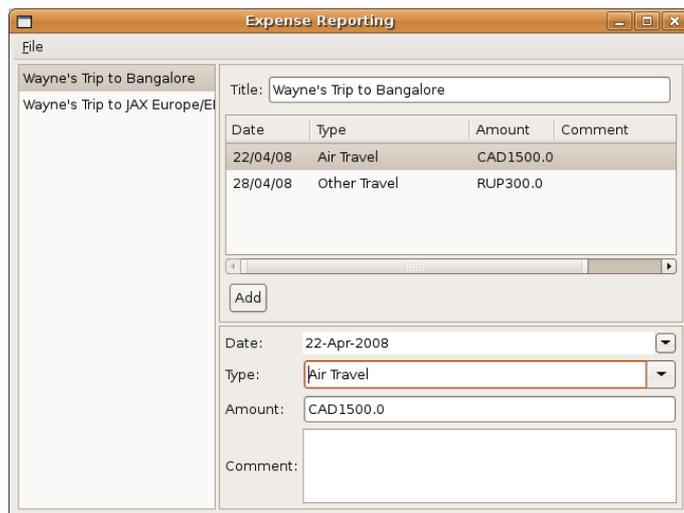


# Single Sourcing: Shared Components

Client: Rich client via Eclipse RCP

Server: Rich Internet Application via Eclipse RAP

Embedded: Device via Eclipse eRCP



# New and Noteworthy: Eclipse PDT

Lighter and Faster

Debugger integration

Zend Debugger, XDebug

Editor Improvements

Mark Occurrences, Override Indicators, Improved Code Assist

More

Type hierarchy, Type and Method Navigation, Buildpath Configuration

```
public function writeDate($date)
{
    if ($date instanceof DateTime) {
        $dateString = $date->format('U') * 1000;
    } elseif ($date instanceof Zend_Date) {
        $dateString = $date->toString('U') * 1000;
    } else {
```

# New and Noteworthy: EclipseLink

Open-source Java persistence solution

Advanced features, performance and scalability for enterprise software developers

Across data sources, formats, and containers

- Object-Relational (JPA)

- Object-XML Binding (MOXy)

- Service Data Objects (SDO)

- Web Services for RDBMS (DBWS)

## New and Noteworthy: ACTF

Framework for accessibility tools

Alternative interfaces for Persons with Disabilities

Assistive technology simulation tools

Compliance validation and usability visualization tools

Accessibility check plugins for IDEs

# ACTF Support

Accessibility APIs such as Microsoft Active Accessibility (MSAA) and IAccessible2

Eclipse SWT

Flash, HTML, Java Swing

OpenDocument Format (ODF)

Customized validation rules by using XML configuration files or Java APIs

## Sighted

## Blind



- [IBM.]
- [Skip to main content.] United States
- (Start of form 1.)
- [Text.]
- [Search: Image Button.]
- (End of form 1.)
- Home | Products & services | Support & downloads
- | My account
- Select country / region
- (Start of form 2.)
- (Start of select menu with 10 items.)
- Select one [Selected.]
- Canada [Off.]
- China [Off.]
- France [Off.]
- Germany [Off.]
- Italy [Off.]
- Japan [Off.]
- United Kingdom [Off.]
- United States [Off.]
- Full country list [Off.]

Eye-movement-based exploration with visual cues

Keyboard-based exploration without visual cues

The screenshot displays a web browser window titled "HTML - aDesigner" showing the IBM United States website. The browser's address bar shows "http://www.ibm.com/us/". The page content includes the IBM logo, navigation links (Home, Products, Services & industry solutions, Support & d...), a main banner with the text "Spoiler alert: this could get messy" and "Get ready for new battles, alliances and intrigues among media creators, distributors and consumers", and a footer with sections for "Learn about", "Shop for", and "Get support".

Overlaid on the right side of the browser window is a "Blind" user interface. This interface shows a simplified, high-contrast view of the page content, with elements enclosed in dashed boxes. A "Visualize" button is visible at the top left of this interface. The content includes the text "[IBM®]", "[Skip to main content.]", "United St:", "[Search for:]", "Home", "Products", "Services & industry solutions", "3 seconds from top.", "From professional golf t", "Learn about", "Shop for", and "Get support".

At the bottom of the application window, there is a "Summary report" section. It features two tabs: "Summary report" (selected) and "Detailed report". The report text reads: "Excellent! This page is well structured and might be easy for blind users to navigate. Congratulations! This page is completely compliant with guidelines." To the right of the text is a star rating system showing three stars (two yellow, one white) and the word "Good". Below the stars is a circular gauge with three segments labeled "Compliance", "Listenability", and "Navigability". The "Compliance" segment is filled with blue, while the other two are empty.

## Spreading Accessibility

Contribute to other Eclipse projects

Cooperate with other Eclipse projects

Help accessibility of other Eclipse projects

## Wrap up: Pervasive Components

Single component model

Client, Server, Embedded

Container is itself composed of components

Eclipse does Runtimes

## Wrap up: Galileo

33+ Projects

Simultaneous release train

Coordination, communication, collaboration,  
aggregation

Predictable quality

Process transparency

# Get Involved

The best way to ensure Eclipse quality is to get involved

Download the Galileo “RC” builds

- Test

- Report bugs

Get involved earlier next year

- Open source works best with direct involvement

- Your feedback is critical

## More Information

Ask questions in project newsgroups

<news://news.eclipse.org>

Not sure? Post in newcomer

<news://news.eclipse.org/eclipse.newcomer>

Planet Eclipse

<http://planet.eclipse.org>

Bugzilla

<http://bugs.eclipse.org>



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# Thank You

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