

Eclipse @ eBay

Michael Galpin, eBay

<http://fupeg.blogspot.com>

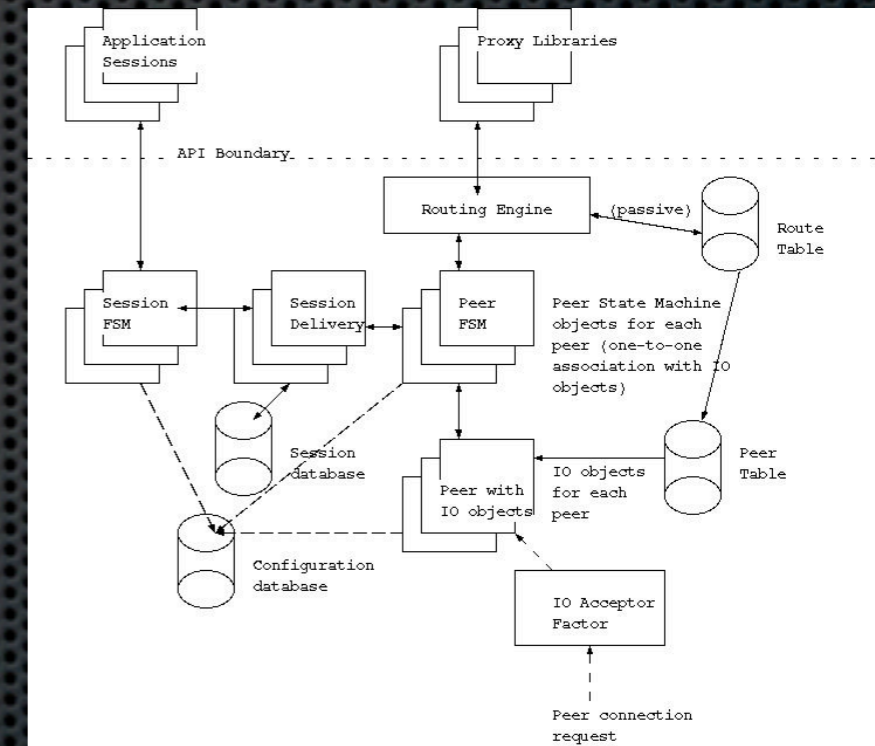
History

Auction Web

History

Auction Web

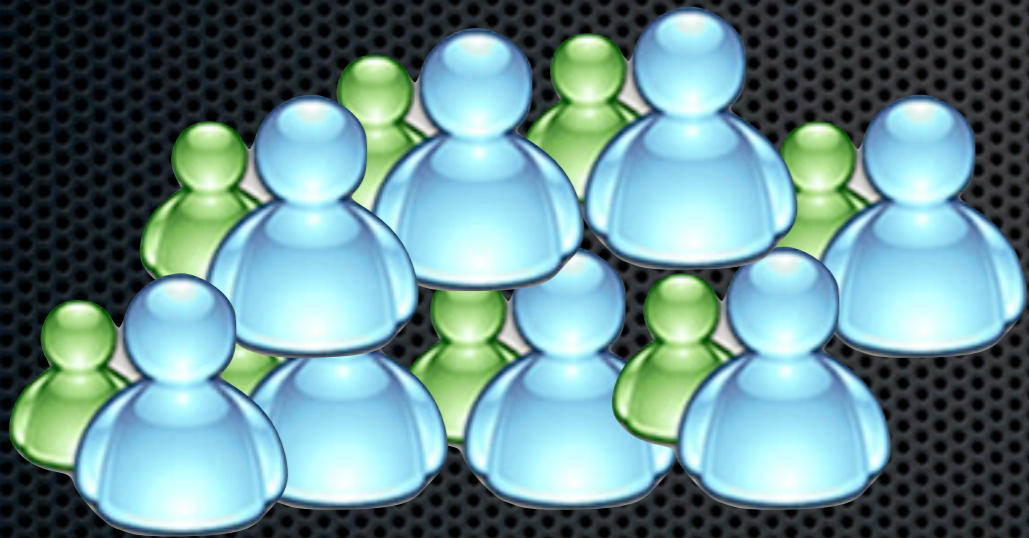
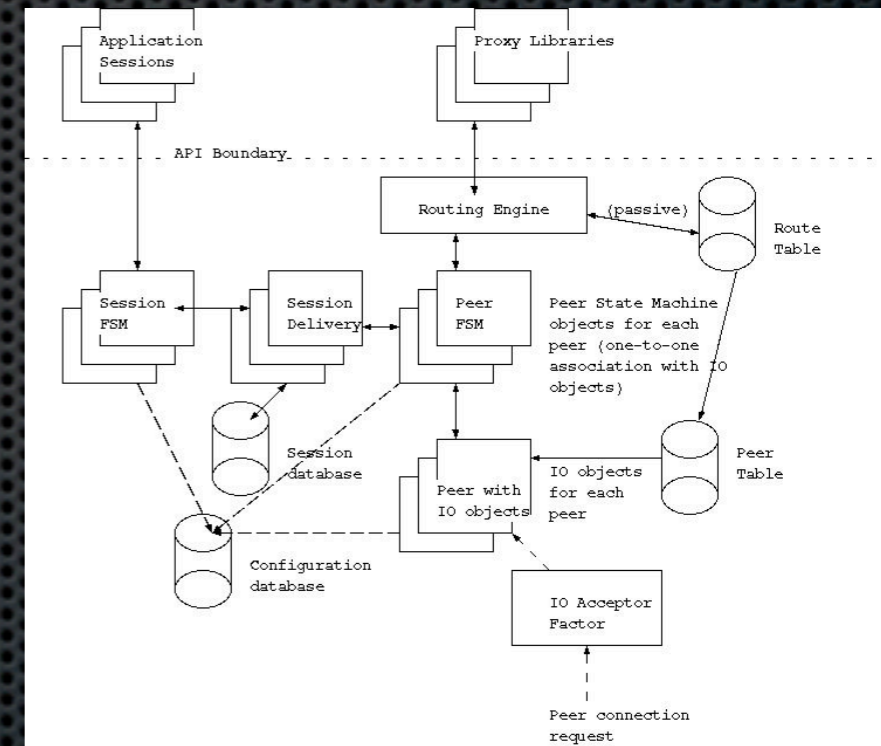
Architecture



History

Auction Web

Architecture



Organization

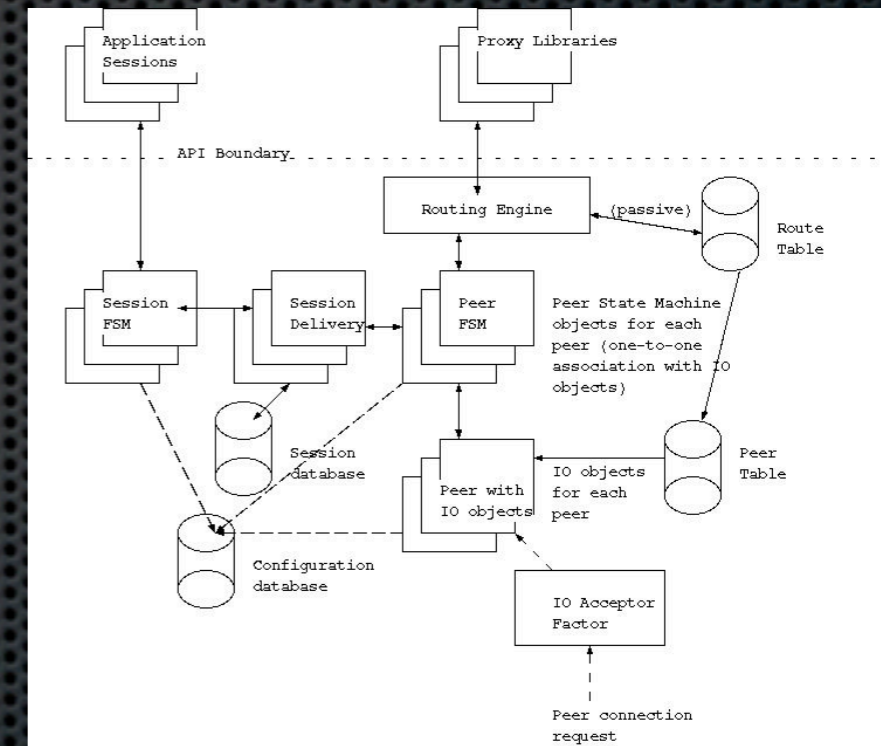
History

Auction Web



Organization

Architecture



In the Beginning...

In the Beginning...

- ✦ AuctionWeb, 1995

In the Beginning...

- ✦ AuctionWeb, 1995
- ✦ eBay, V1 Architecture

In the Beginning...



- ✦ AuctionWeb, 1995
- ✦ eBay, V1 Architecture
 - ✦ Perl

V2

V2

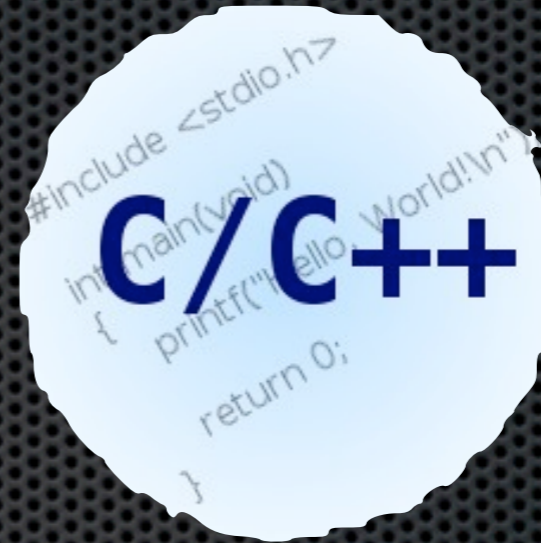
- Rapid growth

V2

- Rapid growth
- V2 Architecture

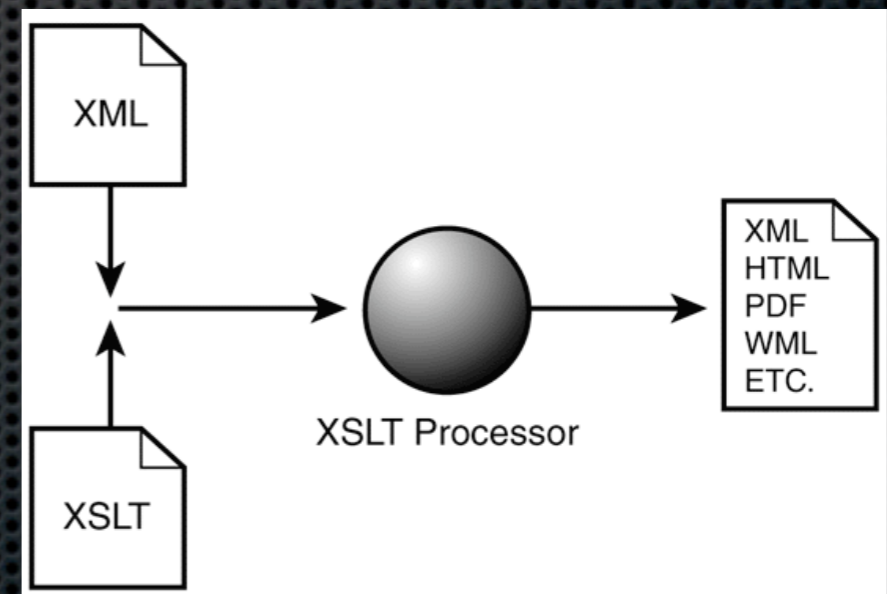
V2

- Rapid growth
- V2 Architecture
- C++ Back-end



V2

- Rapid growth
- V2 Architecture
- C++ Back-end
- XSLT Front-end



V3

V3

- Exponential Growth

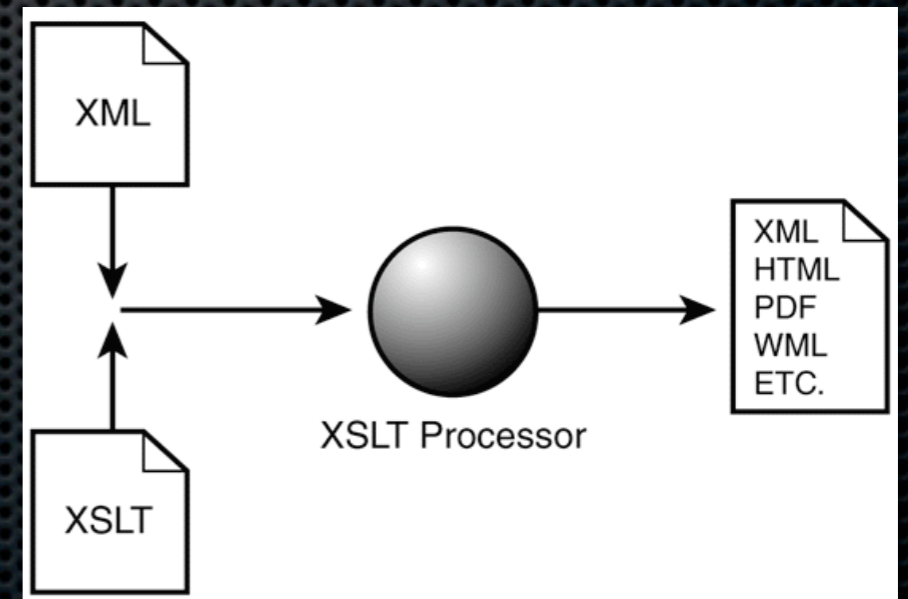
V3

- ✦ Exponential Growth
- ✦ C++ Replaced with Java (2001)



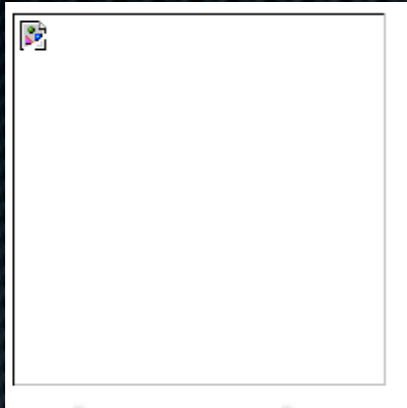
V3

- ✦ Exponential Growth
- ✦ C++ Replaced with Java (2001)
- ✦ Front-end not changed



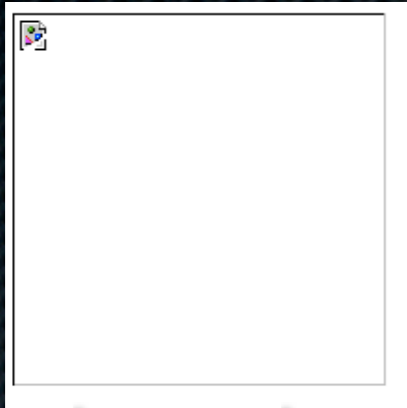
Growing Pains...

Growing Pains...



Broken Images

Growing Pains...

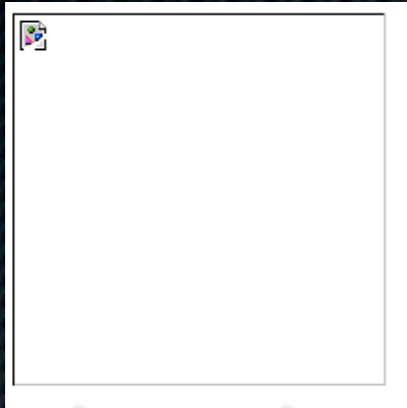


Broken Images



JavaScript Errors

Growing Pains...



Broken Images

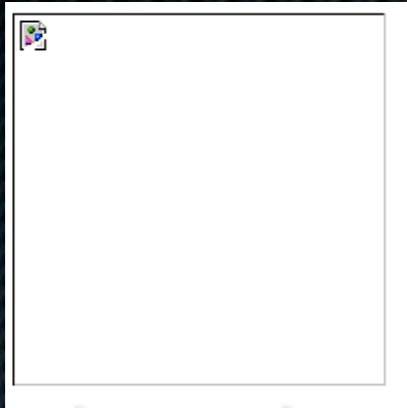


33 Languages



JavaScript Errors

Growing Pains...



Broken Images



33 Languages

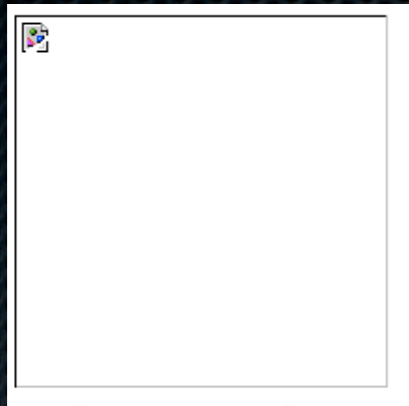


JavaScript Errors



Web 2.0

Growing Pains...



Broken Images



33 Languages



JavaScript Errors



Web 2.0

V4

V4

XSLT

V4



V4



HTML



Java

V4

~~XCT~~

~~HTIL~~



Java



Java

V4

~~XSLT~~

~~HTML~~

CSS



Java



Java

V4

~~XSLT~~

~~HTML~~

~~OS~~



V4



XML



HTML



CSS

JavaScript



Java



Java



Java

V4



JavaScript



Java



Java



Java



Java

eBay® 



Java != Silver Bullet

Java != Silver Bullet

- ✦ Everything is Java

Java != Silver Bullet

- ✦ Everything is Java
 - ✦ Everything is Code

Java != Silver Bullet

- ✦ Everything is Java
 - ✦ Everything is Code
- ✦ Image = Java Class

Java != Silver Bullet

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- ✦ Link = Java Class

Java != Silver Bullet

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- ✦ CSS = Java Classes

Java != Silver Bullet

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- ✦ Link = Java Class
- ✦ CSS = Java Classes
- ✦ JavaScript = Java Classes

Java != Silver Bullet

- ✦ Everything is Java
 - ✦ Everything is Code
- ✦ Image = Java Class
- ✦ Link = Java Class
- ✦ CSS = Java Classes
- ✦ JavaScript = Java Classes
- ✦ Content = Java Classes

Java != Silver Bullet

- ✦ Everything is Java
 - ✦ Everything is Code
- ✦ Image = Java Class
- ✦ Link = Java Class
- ✦ CSS = Java Classes
- ✦ JavaScript = Java Classes
- ✦ Content = Java Classes
- ✦ **LOTS OF CODE TO WRITE!!**

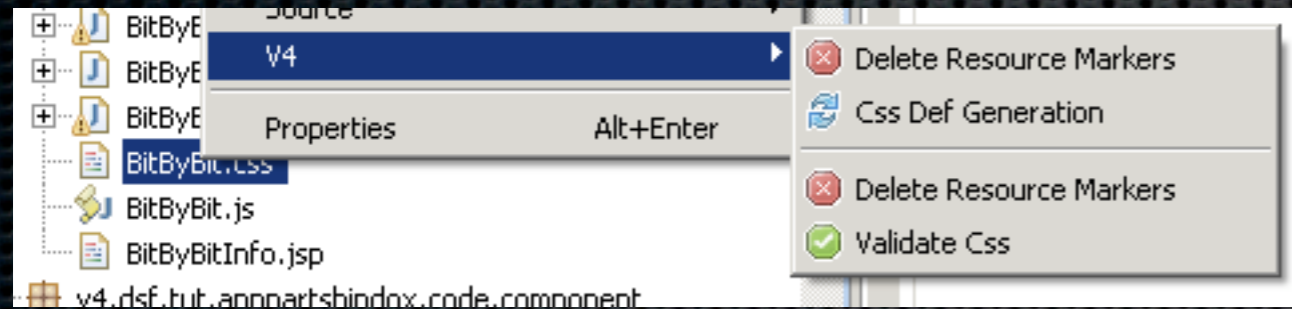
Java != Silver Bullet

- ✦ Everything is Java
 - ✦ Everything is Code
- ✦ Image = Java Class
- ✦ Link = Java Class
- ✦ CSS = Java Classes
- ✦ JavaScript = Java Classes
- ✦ Content = Java Classes
- ✦ **LOTS OF CODE TO WRITE!!**



Code Generators

Code Generators

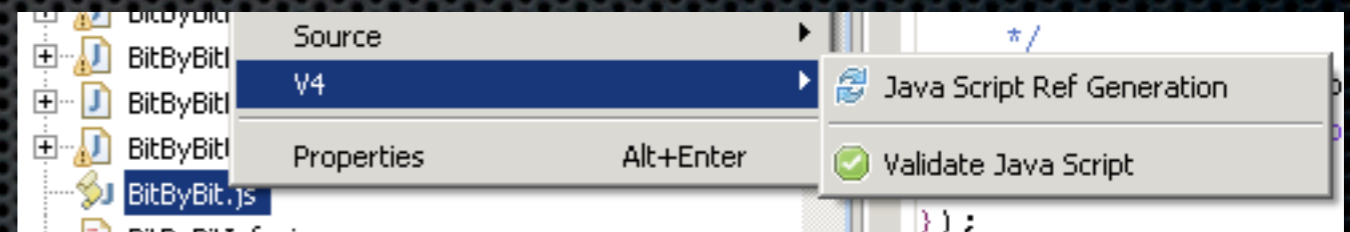


CSS

Code Generators

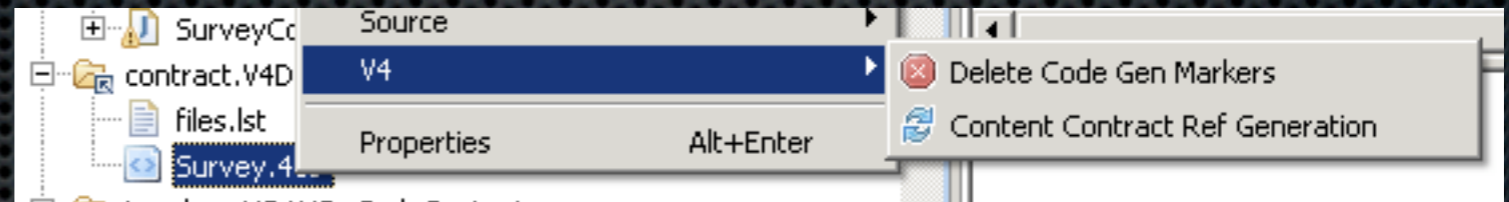


CSS



JavaScript

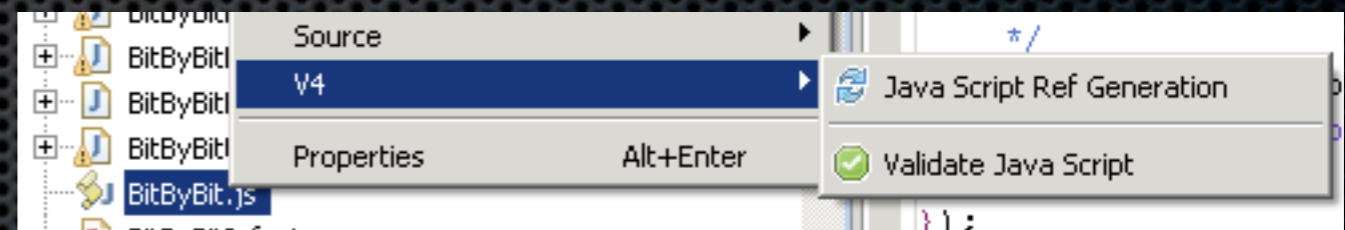
Code Generators



Content



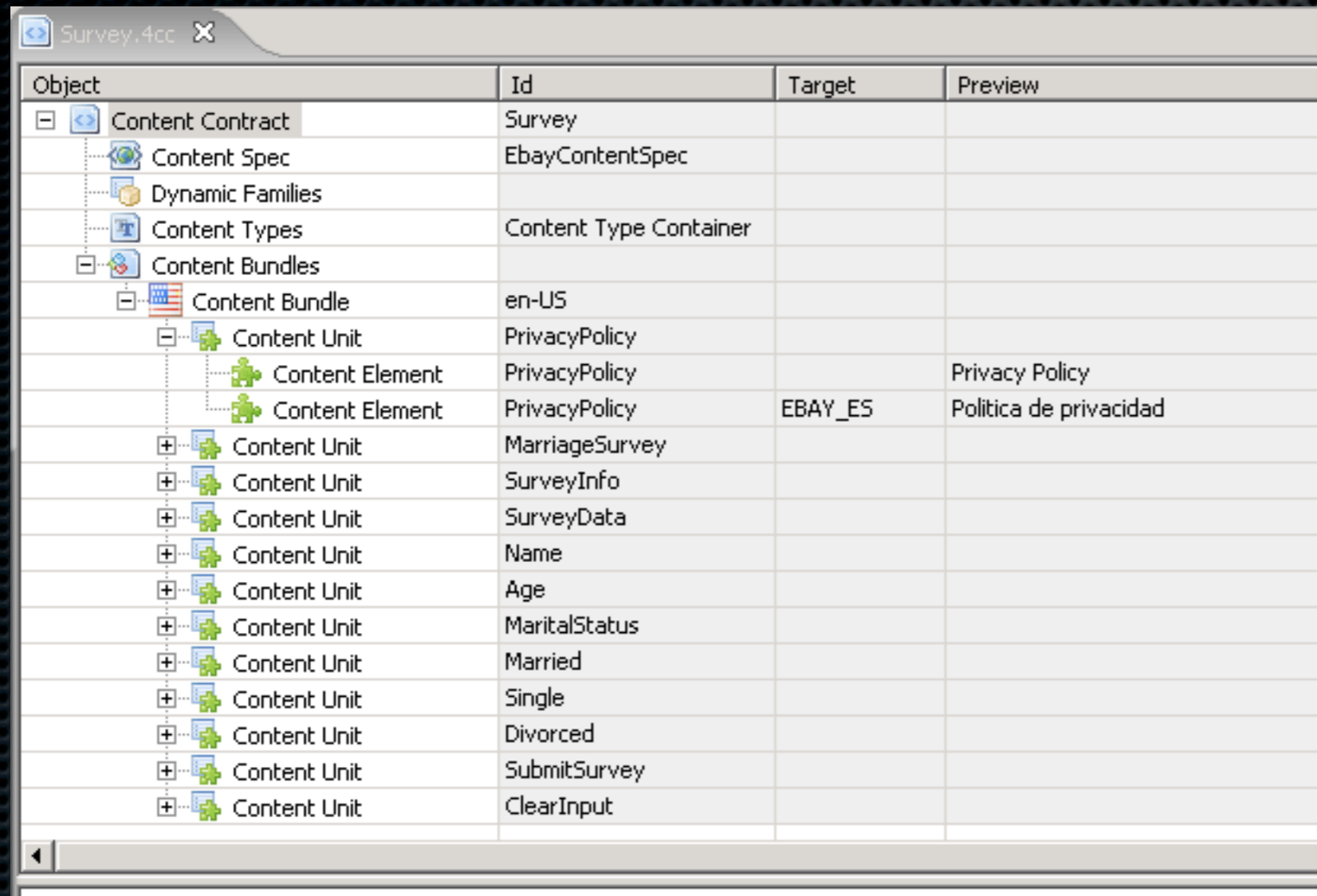
CSS



JavaScript

Advanced Editors

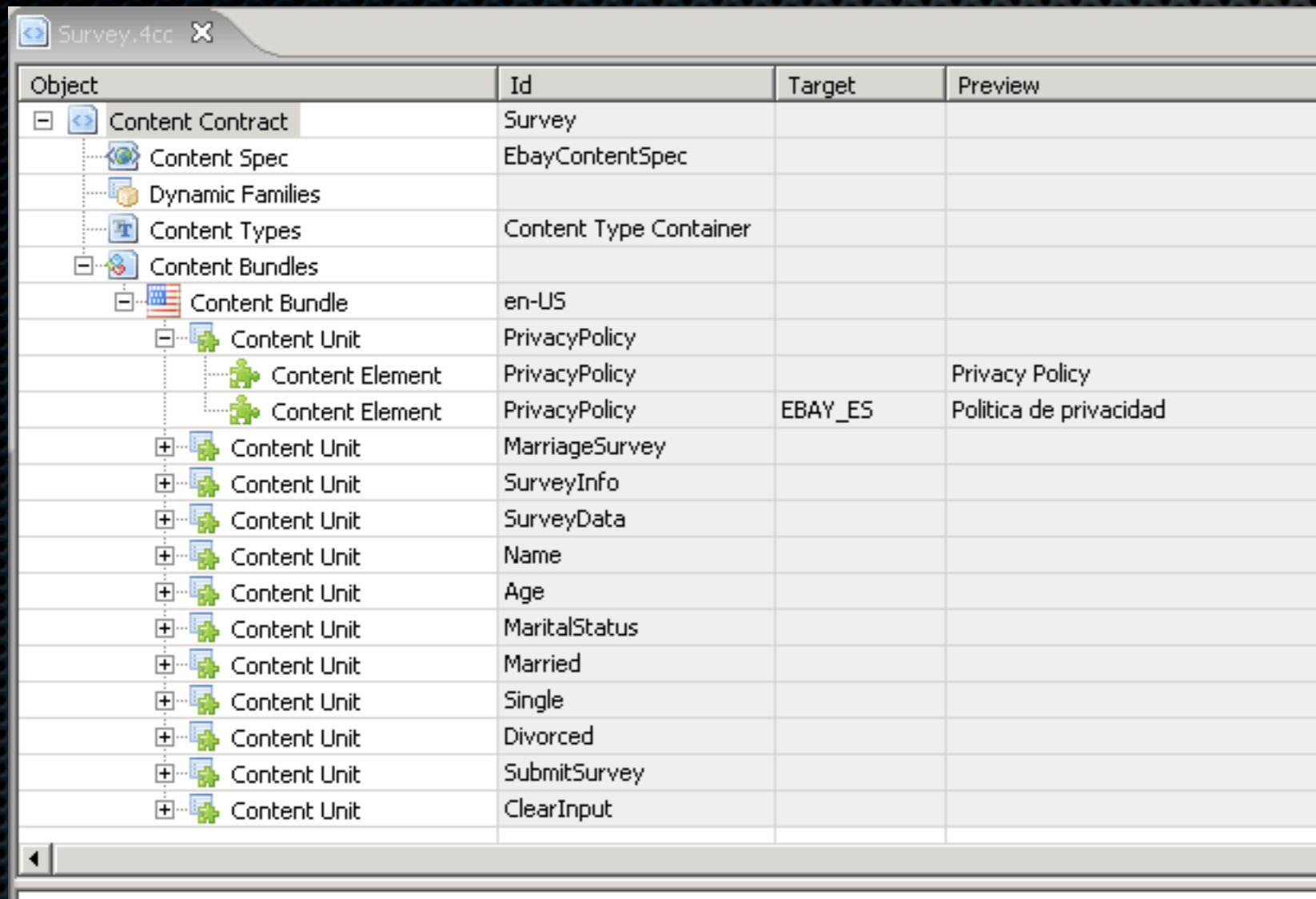
Advanced Editors



Object	Id	Target	Preview
Content Contract	Survey		
Content Spec	EbayContentSpec		
Dynamic Families			
Content Types	Content Type Container		
Content Bundles			
Content Bundle	en-US		
Content Unit	PrivacyPolicy		
Content Element	PrivacyPolicy		Privacy Policy
Content Element	PrivacyPolicy	EBAY_ES	Politica de privacidad
Content Unit	MarriageSurvey		
Content Unit	SurveyInfo		
Content Unit	SurveyData		
Content Unit	Name		
Content Unit	Age		
Content Unit	MaritalStatus		
Content Unit	Married		
Content Unit	Single		
Content Unit	Divorced		
Content Unit	SubmitSurvey		
Content Unit	ClearInput		

Content

Advanced Editors



The screenshot shows a content editor window titled "Survey.4cc". It features a tree view on the left and a table on the right. The tree view shows a hierarchy: Content Contract (Survey) -> Content Spec (EbayContentSpec) -> Dynamic Families -> Content Types (Content Type Container) -> Content Bundles -> Content Bundle (en-US) -> Content Unit (PrivacyPolicy) -> Content Element (PrivacyPolicy) -> Content Element (PrivacyPolicy, EBAY_ES). The table below shows the details of these content units.

Object	Id	Target	Preview
Content Contract	Survey		
Content Spec	EbayContentSpec		
Dynamic Families			
Content Types	Content Type Container		
Content Bundles			
Content Bundle	en-US		
Content Unit	PrivacyPolicy		
Content Element	PrivacyPolicy		Privacy Policy
Content Element	PrivacyPolicy	EBAY_ES	Politica de privacidad
Content Unit	MarriageSurvey		
Content Unit	SurveyInfo		
Content Unit	SurveyData		
Content Unit	Name		
Content Unit	Age		
Content Unit	MaritalStatus		
Content Unit	Married		
Content Unit	Single		
Content Unit	Divorced		
Content Unit	SubmitSurvey		
Content Unit	ClearInput		

JavaScript
Coming Soon

Content

Visual Explorers

Visual Explorers

The screenshot shows the 'Resources Jar' window in an IDE. The 'Load Jar' field contains the path: C:\Views\thor_docs\v3jars\EbayResources\1.1\java50\EbayResources.jar. The left pane shows a tree view of resources, with 'pichost (16)' selected. The right pane displays a table of image files with columns for Name, Path, Resolution, and Localization.

Name	Path	Resolution	Localization
basic_410x17.gif	aboutebay.pichost	410x17	Some Local (Same Sizes): de_de, fr_fr, zh_hk
bottomSide_177x12.gif	aboutebay.pichost	177x12	Some Local (Same Sizes): zh_hk
enhanced_410x17.gif	aboutebay.pichost	410x17	Some Local (Same Sizes): de_de, fr_fr, zh_hk
fadeLine_410x10.gif	aboutebay.pichost	410x10	Some Local (Same Sizes): zh_hk
ipixLayoutC_150x1201.gif	aboutebay.pichost	150x120	Some Local (Same Sizes): zh_hk
pictureBottom_235x91.gif	aboutebay.pichost	235x91	Some Local (Same Sizes): zh_hk
pictureBottom2_235x91.gif	aboutebay.pichost	235x91	Some Local (Same Sizes): zh_hk
pictureEnhanced_111x91.gif	aboutebay.pichost	111x91	Some Local (Same Sizes): zh_hk
pictureTop_235x91.gif	aboutebay.pichost	235x91	Some Local (Same Sizes): zh_hk
pictureTop2_235x91.gif	aboutebay.pichost	235x91	Some Local (Same Sizes): zh_hk
resourceCenter_150x25.gif	aboutebay.pichost	150x25	Some Local (Same Sizes): de_de, fr_fr, zh_hk
slideShow_111x91.gif	aboutebay.pichost	111x82	Some Local (Same Sizes): zh_hk
specialEvents_133x25.gif	aboutebay.pichost	133x25	Some Local (Same Sizes): zh_hk, it_it
titleBottom_175x55.gif	aboutebay.pichost	175x55	Some Local (Various Sizes): de_de, fr_fr, zh_hk
titleTop_326x79.gif	aboutebay.pichost	326x79	Some Local (Same Sizes): fr_fr, zh_hk, fr_be
topSide_177x12.gif	aboutebay.pichost	177x12	Some Local (Same Sizes): zh_hk

Images

Visual Explorers

Load Jar: C:\Views\thor_docs\v3jars\EbayResources\1.1\java50\EbayResources.jar

Filter: Show sub-children

From (mm/dd/yyyy): 01/01/1990 To (mm/dd/yyyy): 06/13/2008

Name	Path	Resolution	Localization
basic_410x17.gif	aboutebay.pichost	410x17	Some Local (Same Sizes): de_de, fr_fr, zh_hk
bottomSide_177x12.gif	aboutebay.pichost	177x12	Some Local (Same Sizes): zh_hk
enhanced_410x17.gif	aboutebay.pichost	410x17	Some Local (Same Sizes): de_de, fr_fr, zh_hk
fadeLine_410x10.gif	aboutebay.pichost	410x10	Some Local (Same Sizes): zh_hk
ipixLayoutC_150x1201.gif	aboutebay.pichost	150x120	Some Local (Same Sizes): zh_hk
pictureBottom_235x91.gif	aboutebay.pichost	235x91	Some Local (Same Sizes): zh_hk
pictureBottom2_235x91.gif	aboutebay.pichost	235x91	Some Local (Same Sizes): zh_hk
pictureEnhanced_111x91.gif	aboutebay.pichost	111x91	Some Local (Same Sizes): zh_hk
pictureTop_235x91.gif	aboutebay.pichost	235x91	Some Local (Same Sizes): zh_hk
pictureTop2_235x91.gif	aboutebay.pichost	235x91	Some Local (Same Sizes): zh_hk
resourceCenter_150x25.gif	aboutebay.pichost	150x25	Some Local (Same Sizes): de_de, fr_fr, zh_hk
slideShow_111x91.gif	aboutebay.pichost	111x82	Some Local (Same Sizes): zh_hk
specialEvents_133x25.gif	aboutebay.pichost	133x25	Some Local (Same Sizes): zh_hk, it_it
titleBottom_175x55.gif	aboutebay.pichost	175x55	Some Local (Various Sizes): de_de, fr_fr, zh_hk
titleTop_326x79.gif	aboutebay.pichost	326x79	Some Local (Same Sizes): fr_fr, zh_hk, fr_be
topSide_177x12.gif	aboutebay.pichost	177x12	Some Local (Same Sizes): zh_hk

Images

Links

Load Jar: C:\Views\thor_docs\v3jars\EbayResources\1.1\java50\EbayResources.jar

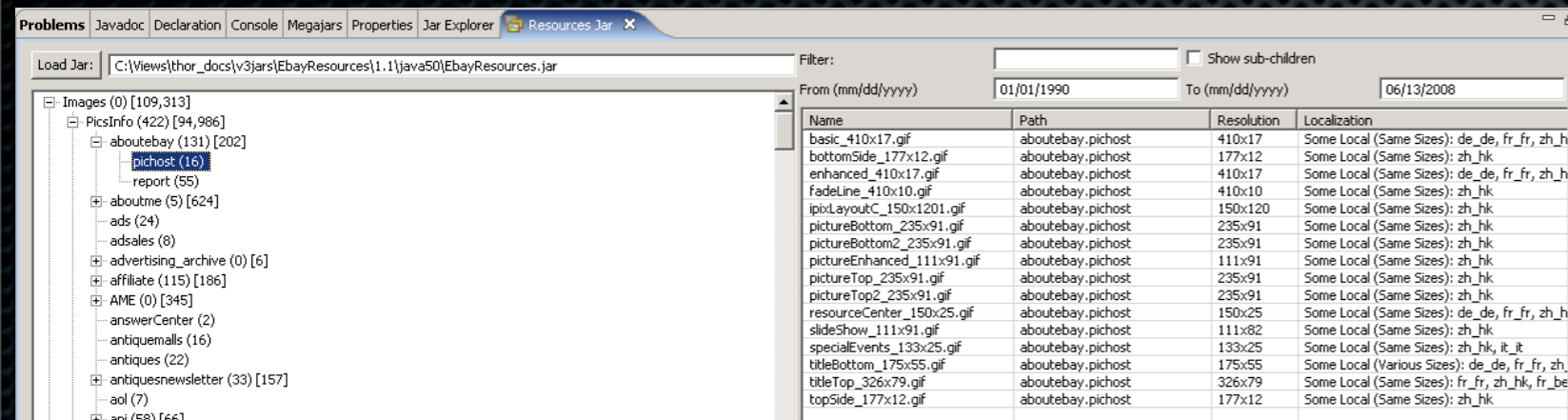
Filter: Show sub-children

From (mm/dd/yyyy): 01/01/1990 To (mm/dd/yyyy):

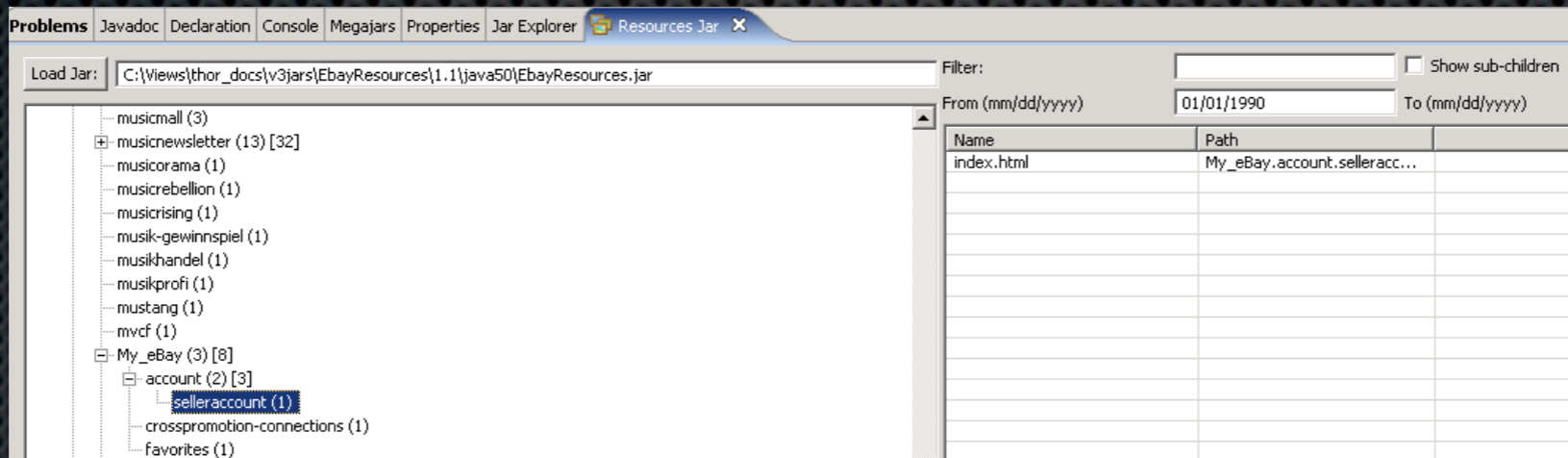
Name	Path
index.html	My_eBay.account.selleracc...

Visual Explorers

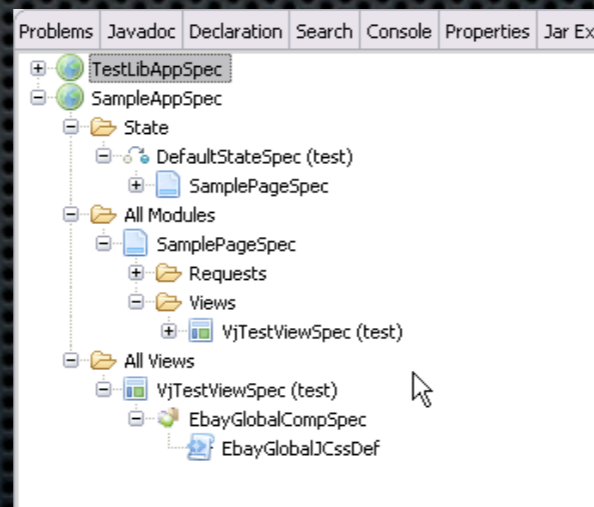
Images



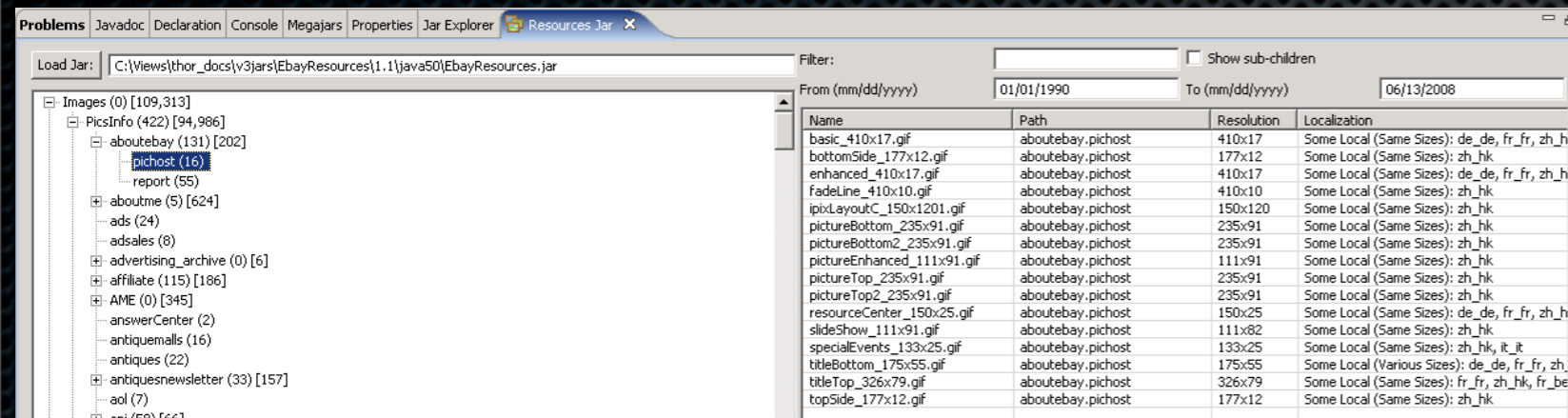
Links



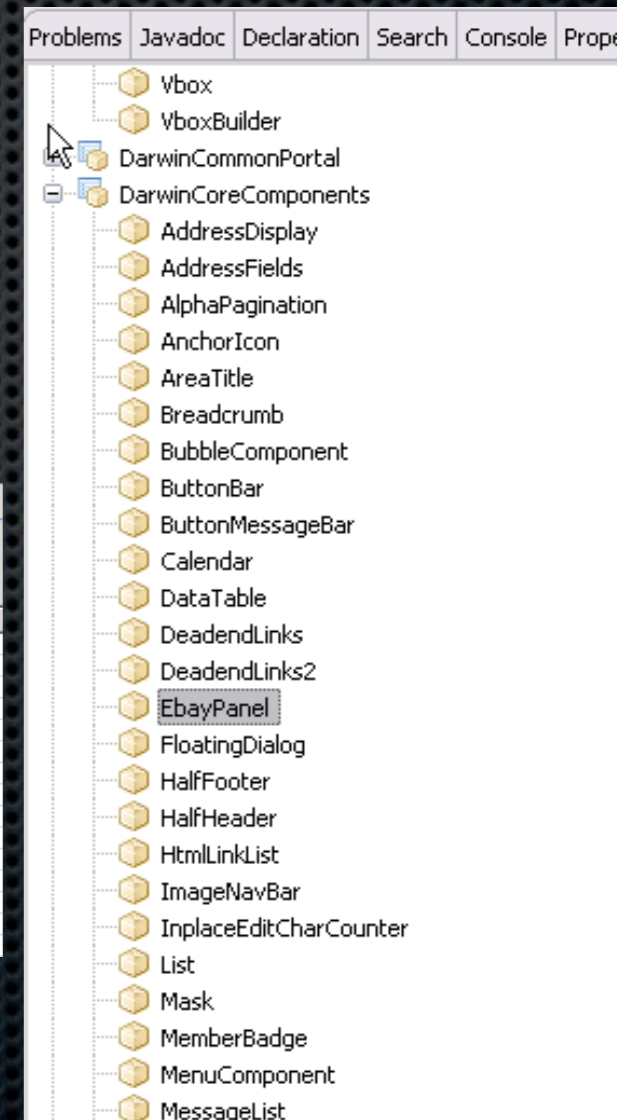
Apps



Visual Explorers



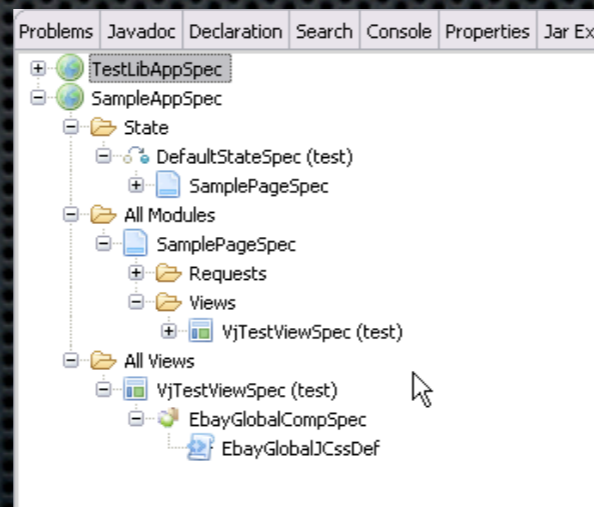
Images



Components



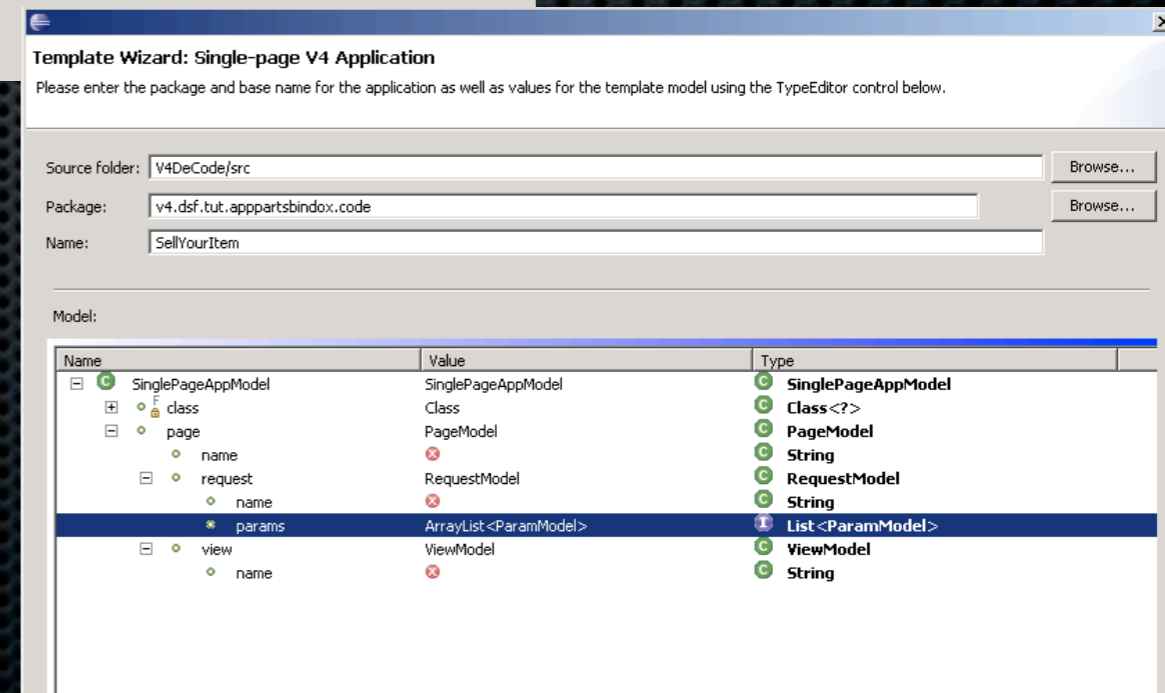
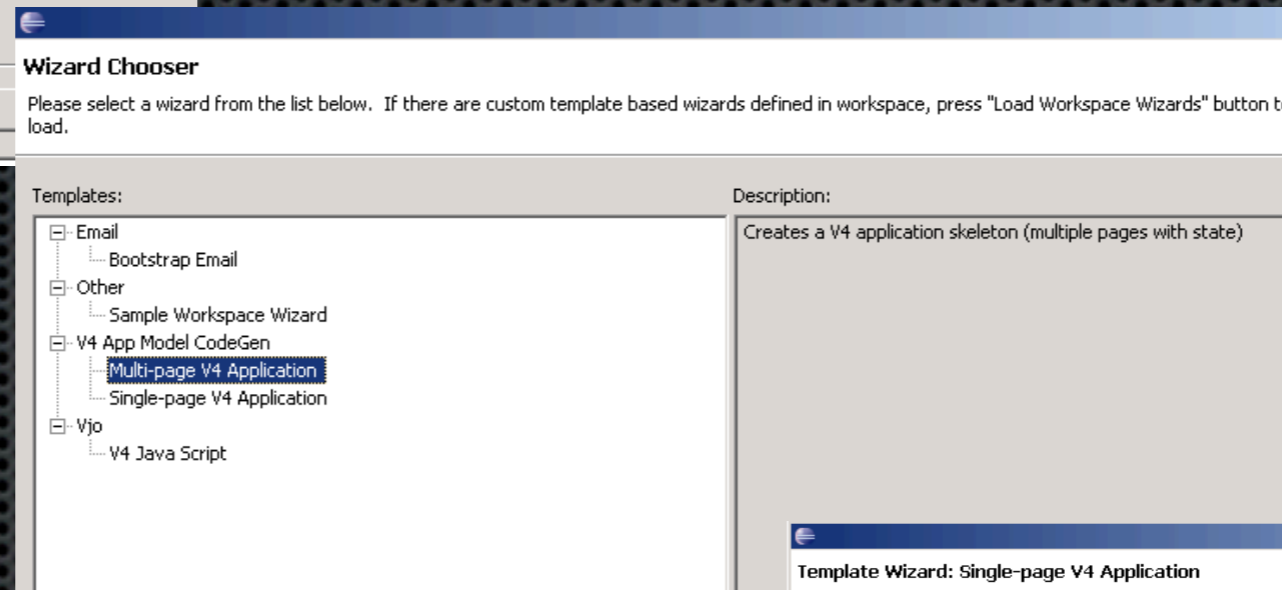
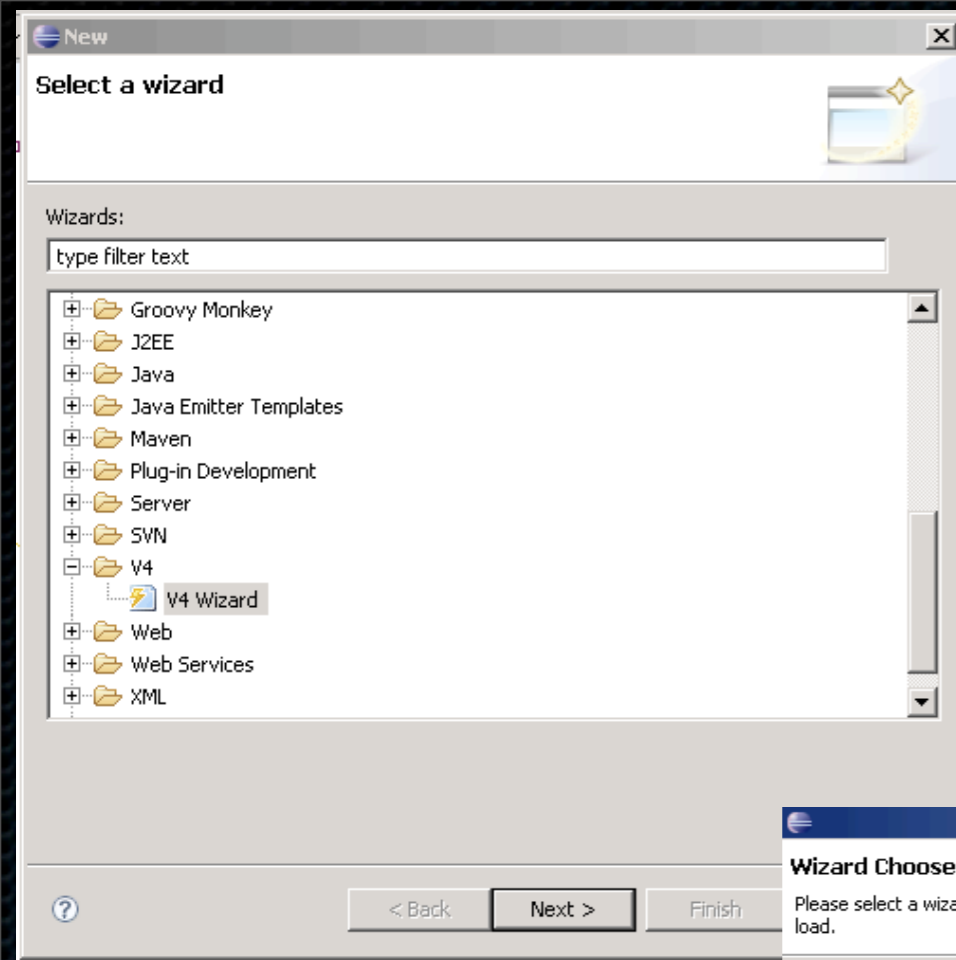
Links



Apps

Wizards

Wizards



Developer Productivity: Dervlets

```
package v4.dsf.tut.apppartsbindox.code;
```

```
import com.ebay.dsf.html.dom.DH1;
```

```
public class BitByBit01 {  
    public DH1 showTitle() {  
        return new DH1("Marriage Survey");  
    }  
}
```

Undo Typing	Ctrl+Z
Revert File	
Save	
Open Declaration	F3
Open Type Hierarchy	F4
Open Call Hierarchy	Ctrl+Alt+H
Quick Outline	Ctrl+O
Quick Type Hierarchy	Ctrl+T
Show In	Alt+Shift+W ▶
Cut	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Code Generation	▶
Source	Alt+Shift+S ▶
Refactor	Alt+Shift+T ▶
Local History	▶
References	▶
Declarations	▶
Add to Snippets...	
Find Bugs	▶
eBay Cmd Prompt	
eBay Explorer	
Run As	▶
Debug As	▶

1 Run on Server	Alt+Shift+X, R
2 Dervlet	
3 Java Bean	
4 Maven build	Alt+Shift+X, M
5 Maven build...	
6 Maven clean	
7 Maven generate-sources	
8 Maven install	
9 Maven test	
Run...	

Developer Productivity: Spyglass

Developer Productivity: Spyglass

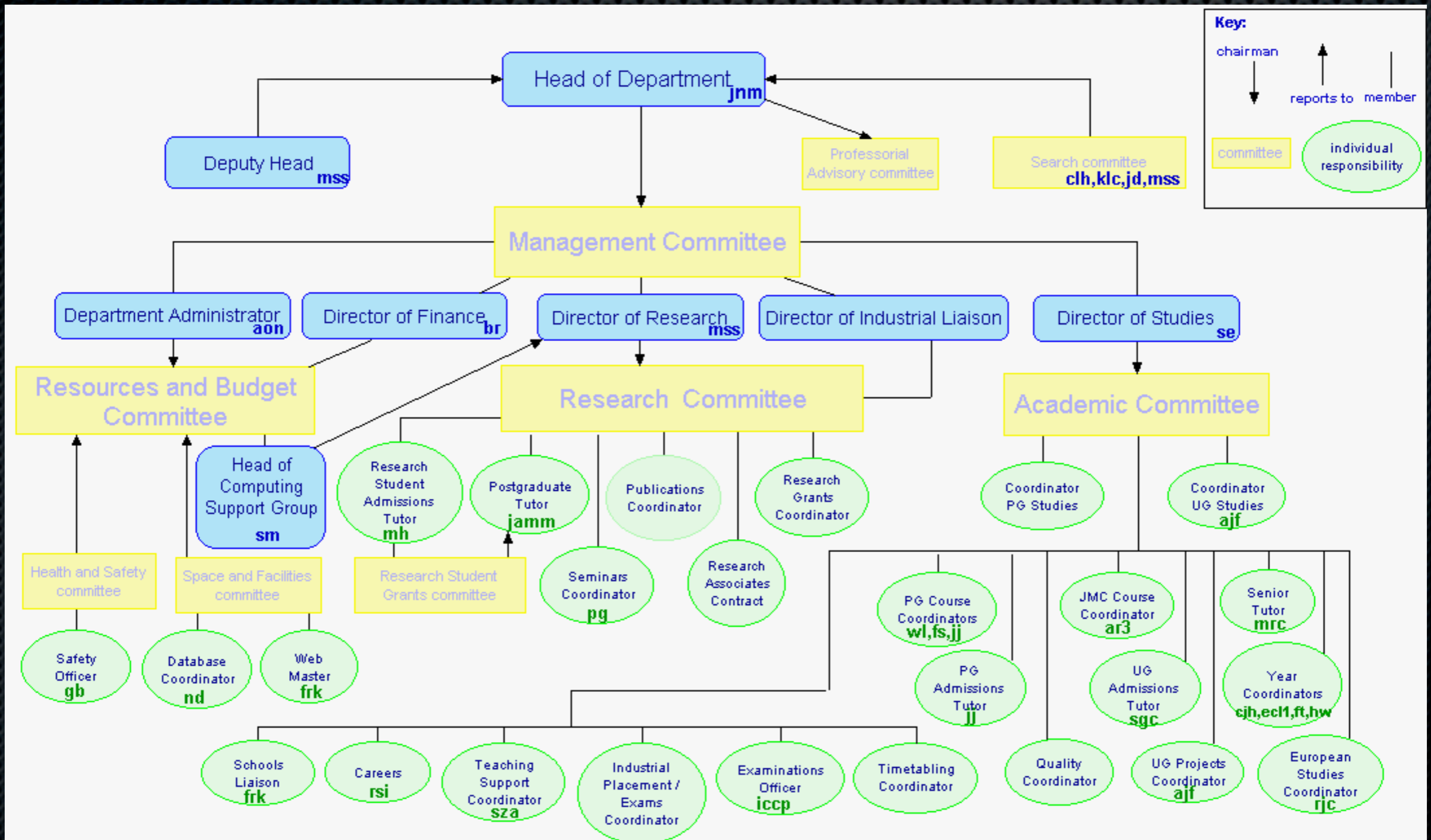
The screenshot shows a web browser window titled "My eBay" with the URL `http://my.ebay.com/ws/eBayISAPI.dll?MyEbayBeta&gbh=1`. The page displays the eBay logo, a user greeting "Hi, gepuf! (Sign out)", a search bar with "All Categories", and navigation tabs for "Categories", "Motors", "Express", and "Stores". Below these are "My eBay BETA" and "Hello, gepuf (39 ★)", followed by "All Activity" and "My Messages" tabs. A tooltip for the "MemberBadge" component is visible, listing its class names and actions like "Open in pattern engine" and "Open in Eclipse".

Component: **MemberBadge**
com.ebay.darwin.component.core.memberbadge.MemberBadge
com.ebay.app.myebay2.pres.component.topheader.TopHeader

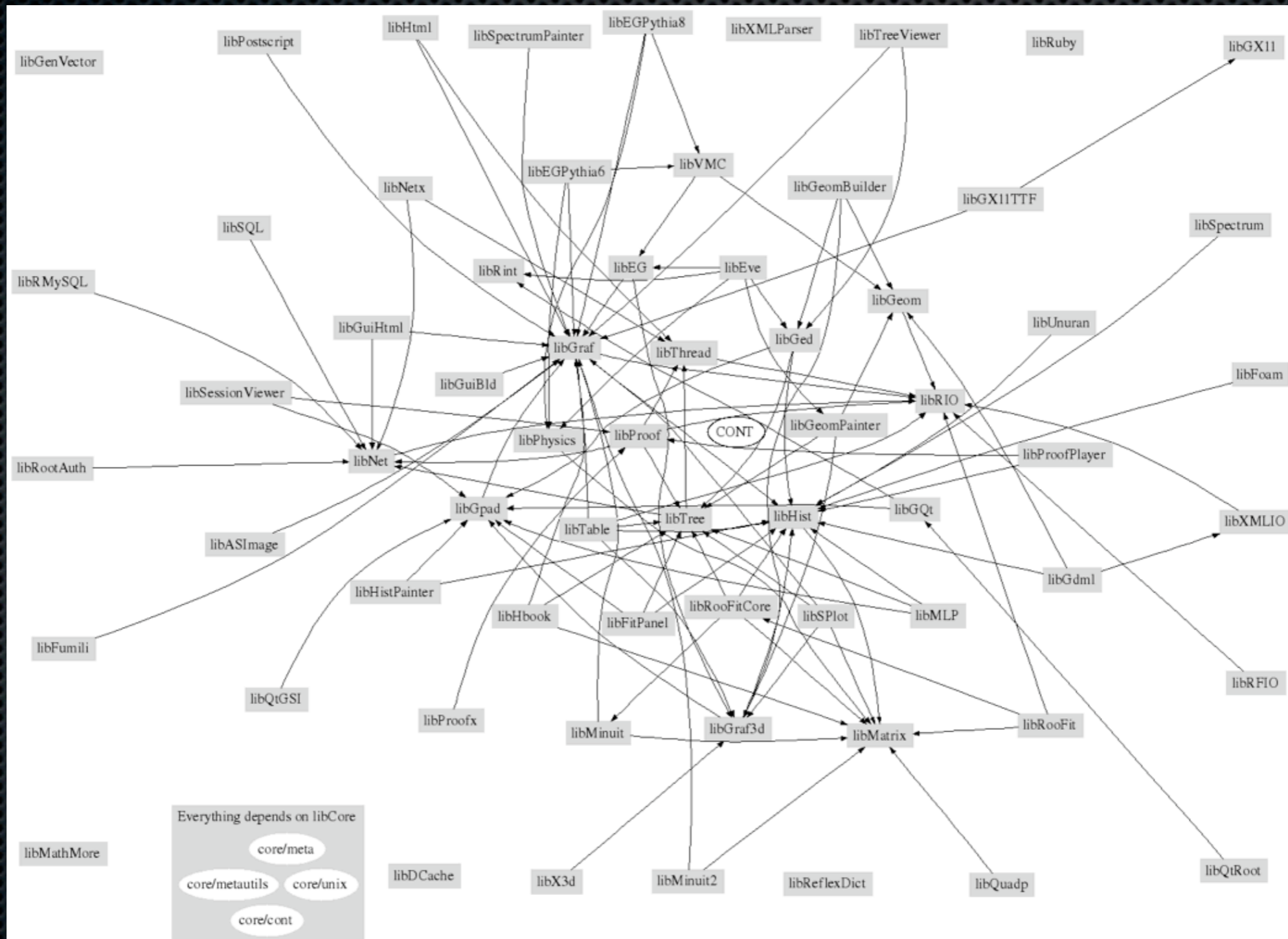
Open in pattern engine
Open in QuickSearch
Open in Eclipse
Open creation location
Open Resources in Eclipse

The screenshot shows an Eclipse IDE menu with the following items: "Find Files Not Under Source Control", "Test Plugin", "Jar Explorer", "Resources Jar Explorer", "Start Embedded Server" (highlighted), and "Stop Embedded Server". Below the menu, a code snippet is visible: `import java.io.IOException`.

Organization

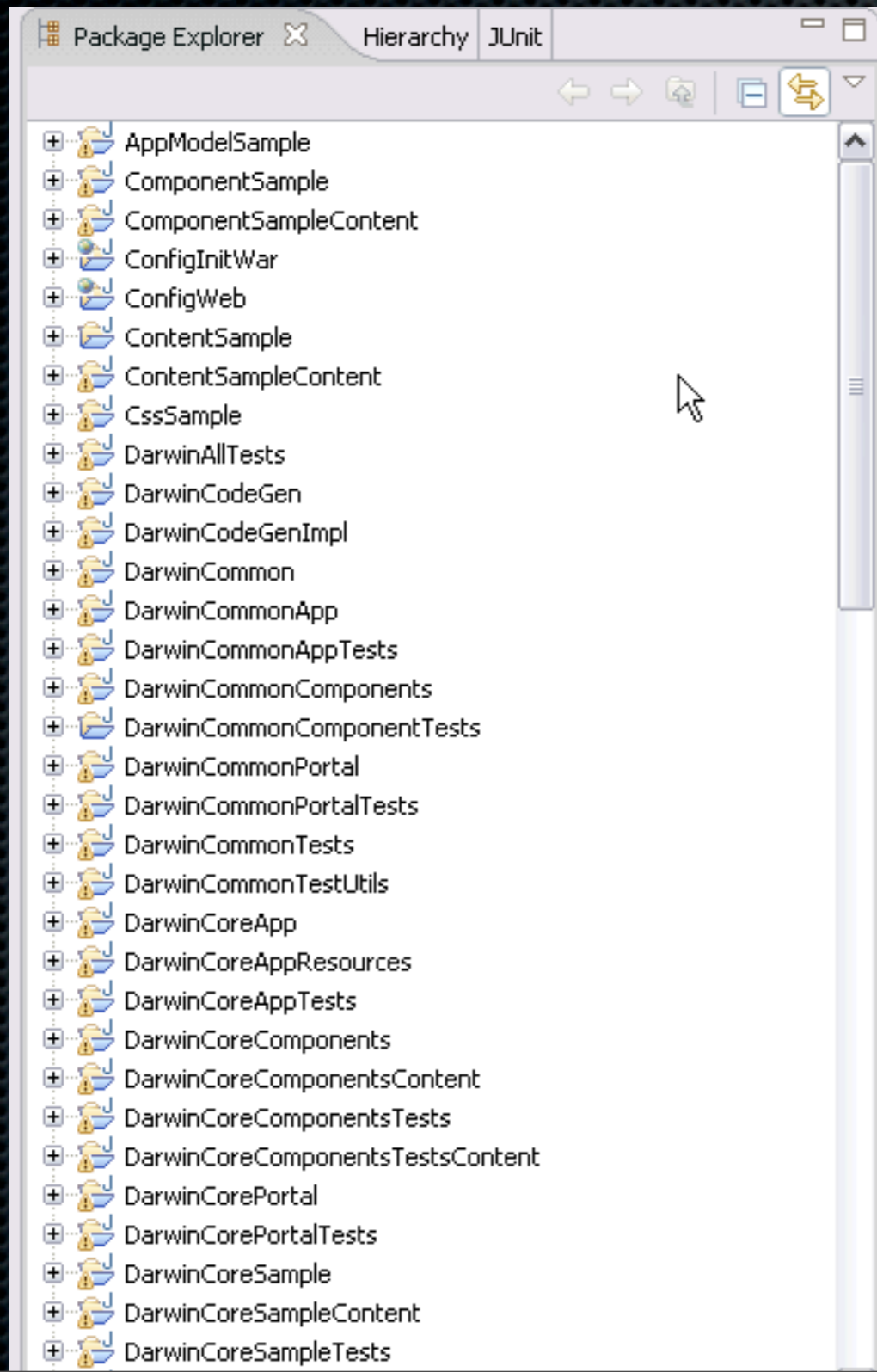


Dependencies

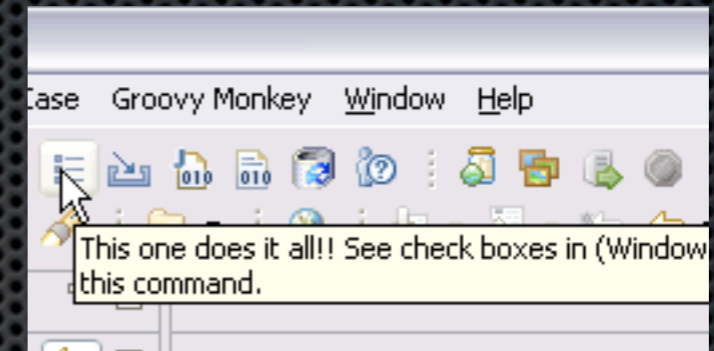
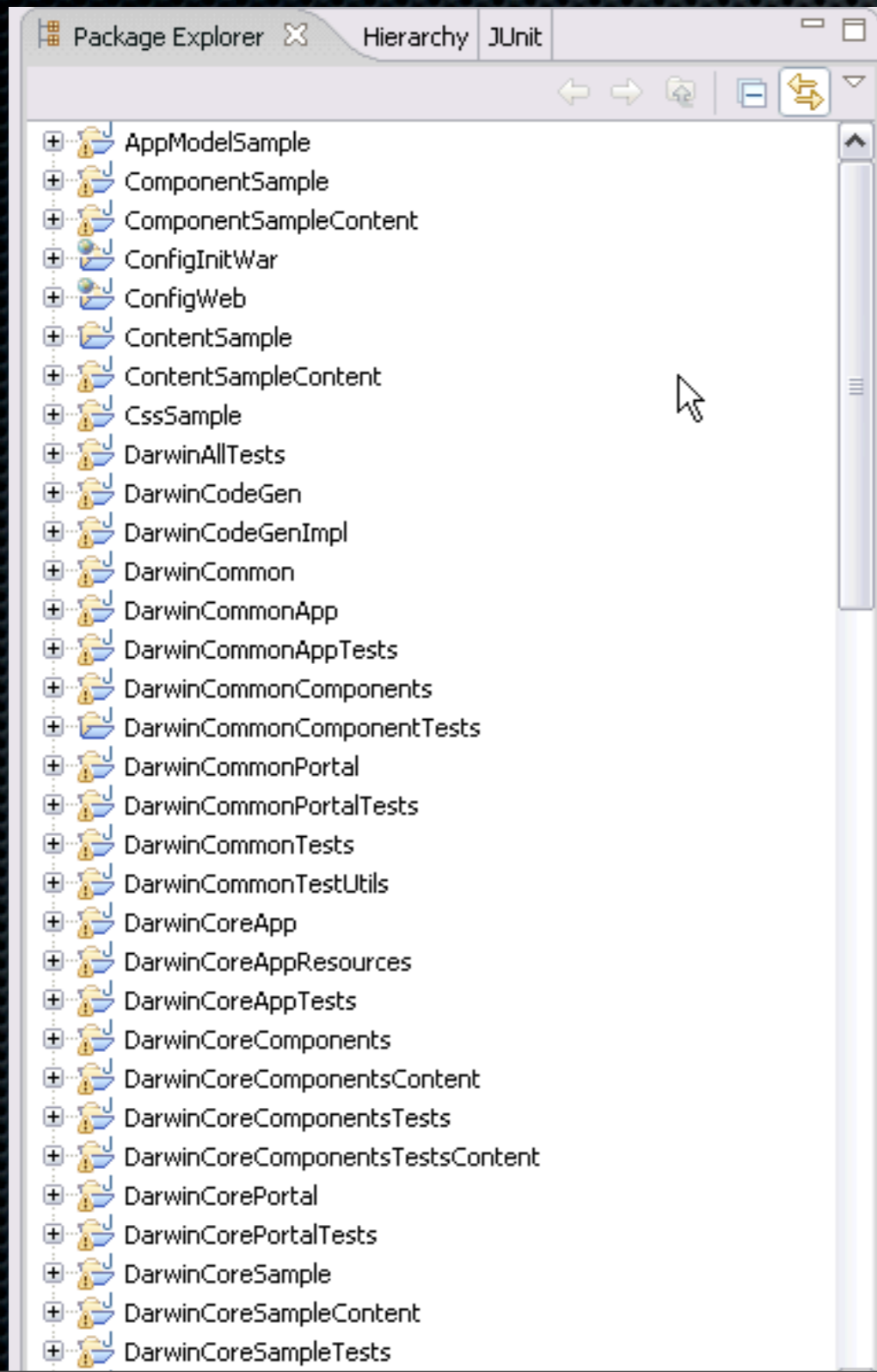


Managing Complexity

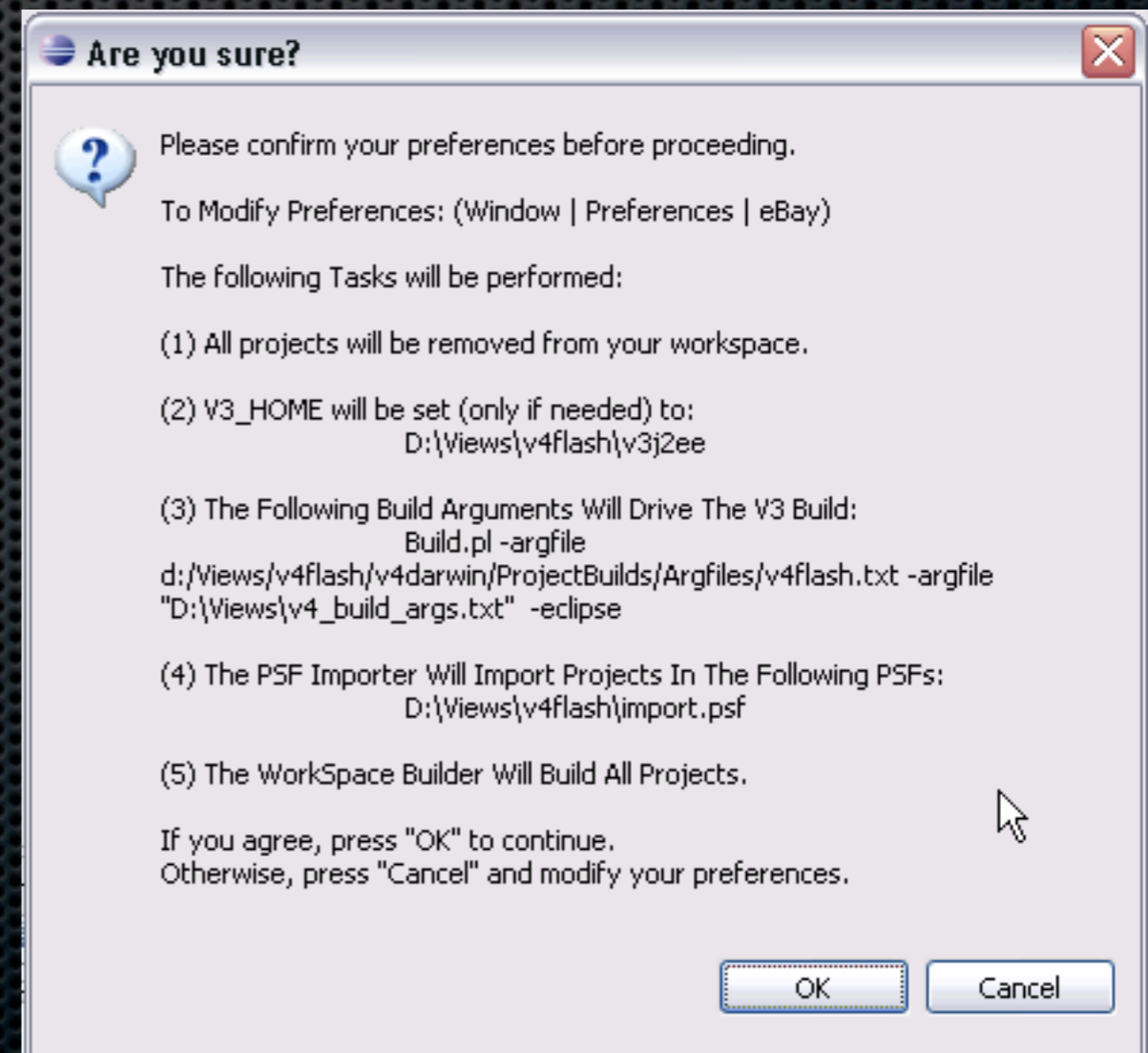
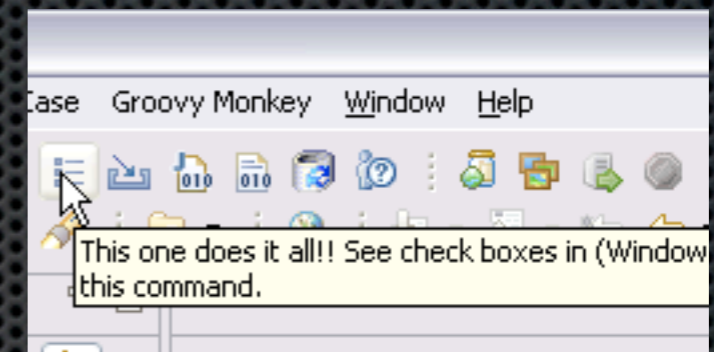
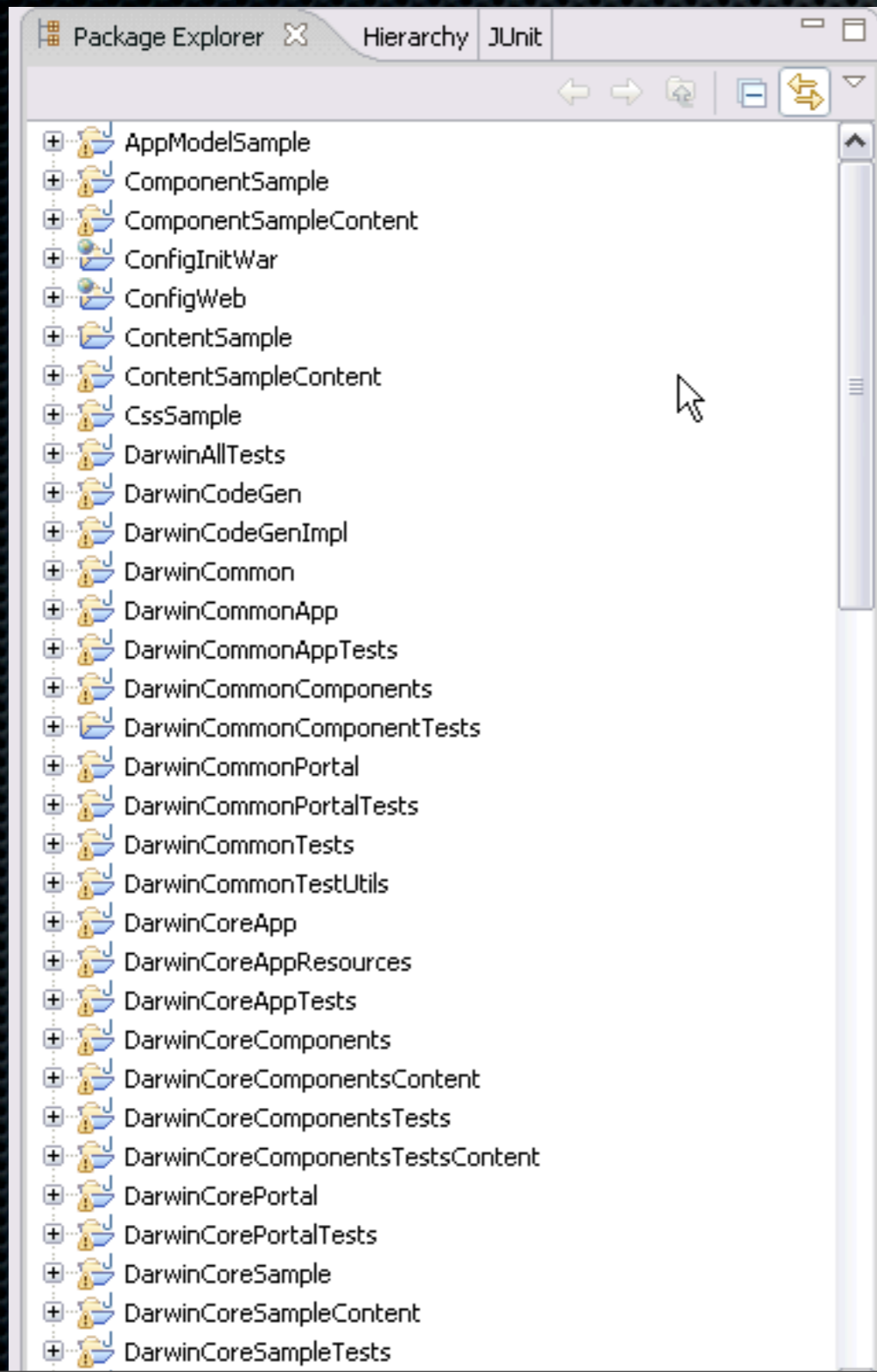
Managing Complexity



Managing Complexity



Managing Complexity



Managing Dependencies

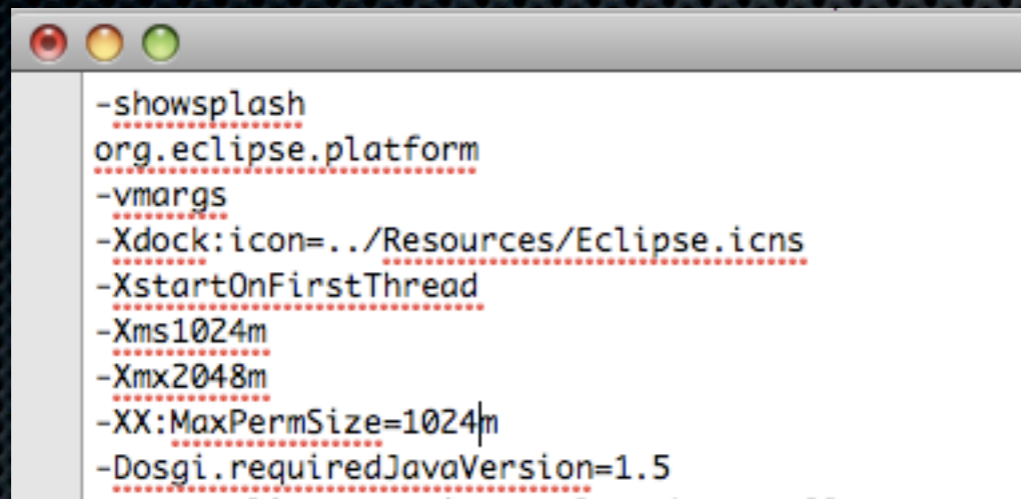
The screenshot shows an IDE window with the 'Project Dependencies' view. The left pane displays a tree view of the project structure, with the 'Kernel' module selected. The right pane shows a table of direct dependencies for the selected module.

Selected: Kernel Results: Direct Dependencies

Name	Directory	Type
apache-util	D:\Views\v4flash\externalv3\apache-util\1.0	Library
axis	D:\Views\v4flash\externalv3\soap\apache-axis...	Library
cal	D:\Views\v4flash\externalv3\...\v3jars\cal\clien...	Library
eBayMsxmlJni	D:\Views\v4flash\externalv3\...\v3jars\xsl\eba...	Library
eBayPerfMon	D:\Views\v4flash\externalv3\...\v3jars\perfm...	Library
EbayServer	D:\Views\v4flash\externalv3\...\v3jars/Housto...	Library
hsqldb	D:\Views\v4flash\externalv3\hsqldb\1.7.3.1	Library
jdom	D:\Views\v4flash\externalv3\xml\jdom\b9	Library
jsse	D:\Views\v4flash\externalv3\jsse\1.0.3_02	Library
KernelDAL	D:\Views\v4flash\externalv3\...\v3jars/Housto...	Library
mail	D:\Views\v4flash\externalv3\j2ee\mail\unknown	Library
mysql	D:\Views\v4flash\externalv3\mysql\5.0.4	Library
servlet-api	D:\Views\v4flash\externalv3\j2ee\servlet-api\2.4	Library
teradata	D:\Views\v4flash\externalv3\Teradata\3.4	Library
traffic-limiter	D:\Views\v4flash\externalv3\...\v3jars\cal\Traf...	Library
uKernel	D:\Views\v4flash\externalv3\...\v3jars/Housto...	Library
uKernelCore	D:\Views\v4flash\externalv3\...\v3jars/Housto...	Library
xsl	D:\Views\v4flash\externalv3\xsl\icl-saxon\6.5....	Library
xylem	D:\Views\v4flash\externalv3\xsl\ibm-xylem\Gu...	Library

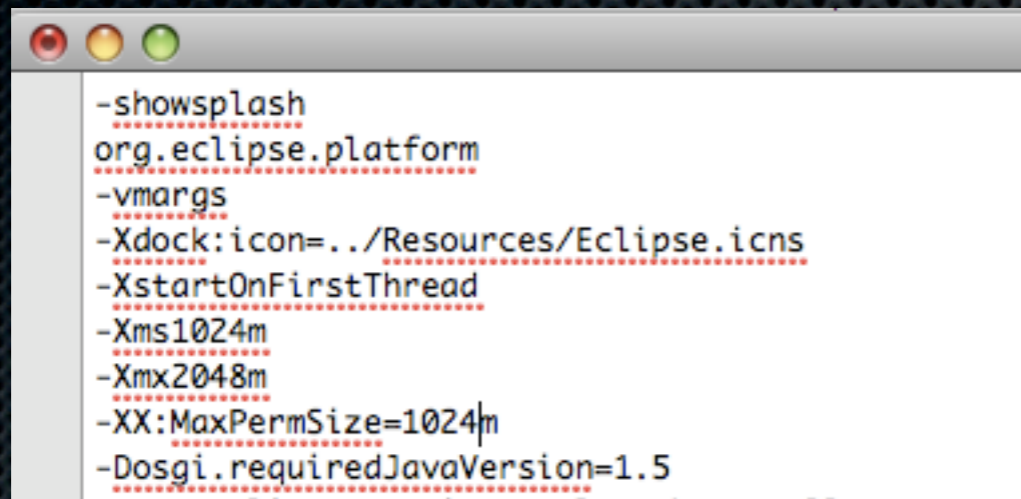
Managing Complexity

Managing Complexity



```
-showsplash  
org.eclipse.platform  
-vmargs  
-Xdock:icon=../Resources/Eclipse.icns  
-XstartOnFirstThread  
-Xms1024m  
-Xmx2048m  
-XX:MaxPermSize=1024m  
-Dosgi.requiredJavaVersion=1.5
```

Managing Complexity



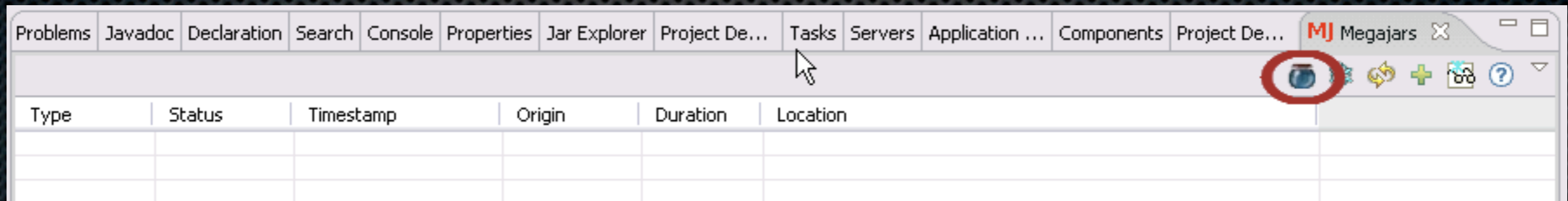
```
-showsplash  
org.eclipse.platform  
-vmargs  
-Xdock:icon=../Resources/Eclipse.icns  
-XstartOnFirstThread  
-Xms1024m  
-Xmx2048m  
-XX:MaxPermSize=1024m  
-Dosgi.requiredJavaVersion=1.5
```

Lighten Your Load

Managing Complexity

```
-showsplash  
org.eclipse.platform  
-vmargs  
-Xdock:icon=../Resources/Eclipse.icns  
-XstartOnFirstThread  
-Xms1024m  
-Xmx2048m  
-XX:MaxPermSize=1024m  
-Dosgi.requiredJavaVersion=1.5
```

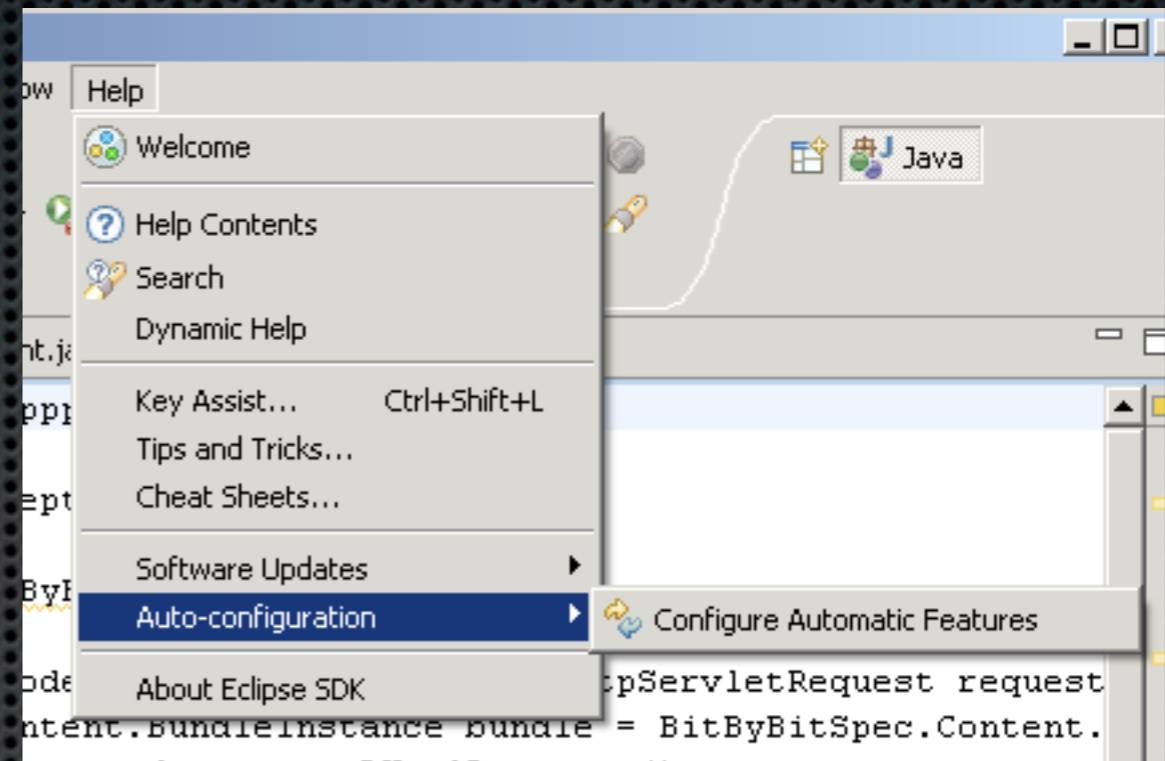
Lighten Your Load



Megajars

Essentials

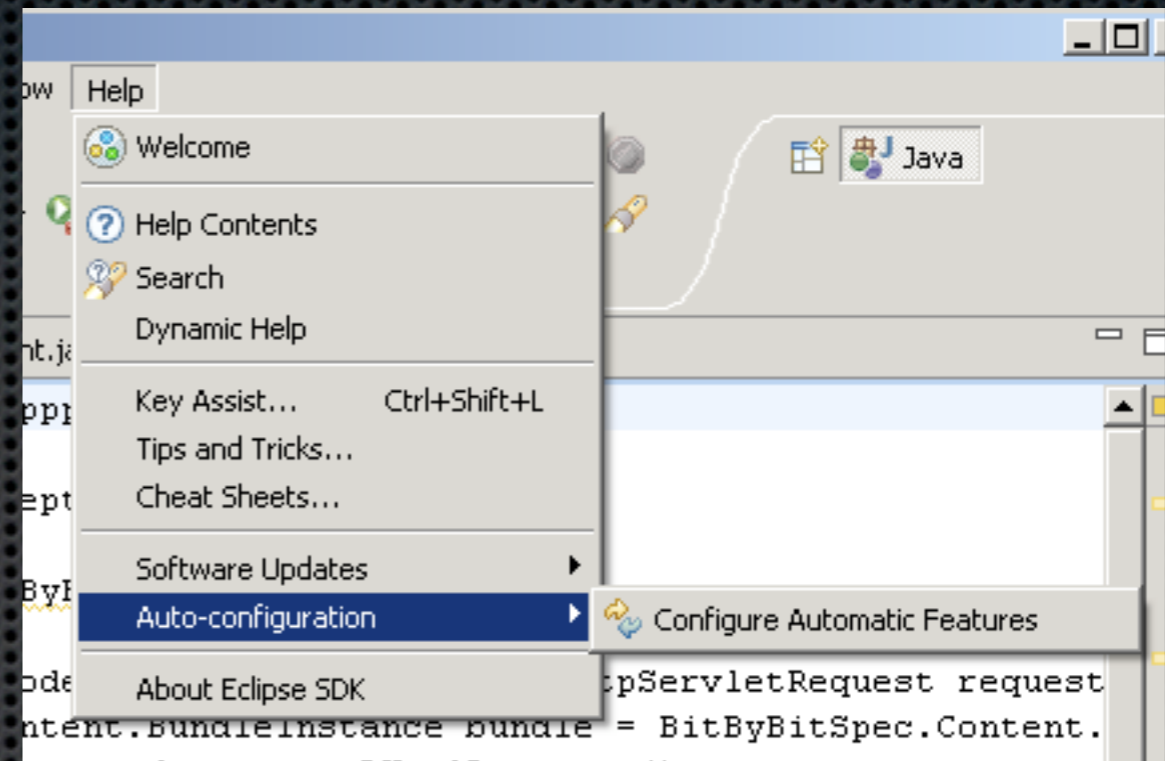
Essentials



Auto-configuration

Essentials

FindBugs™



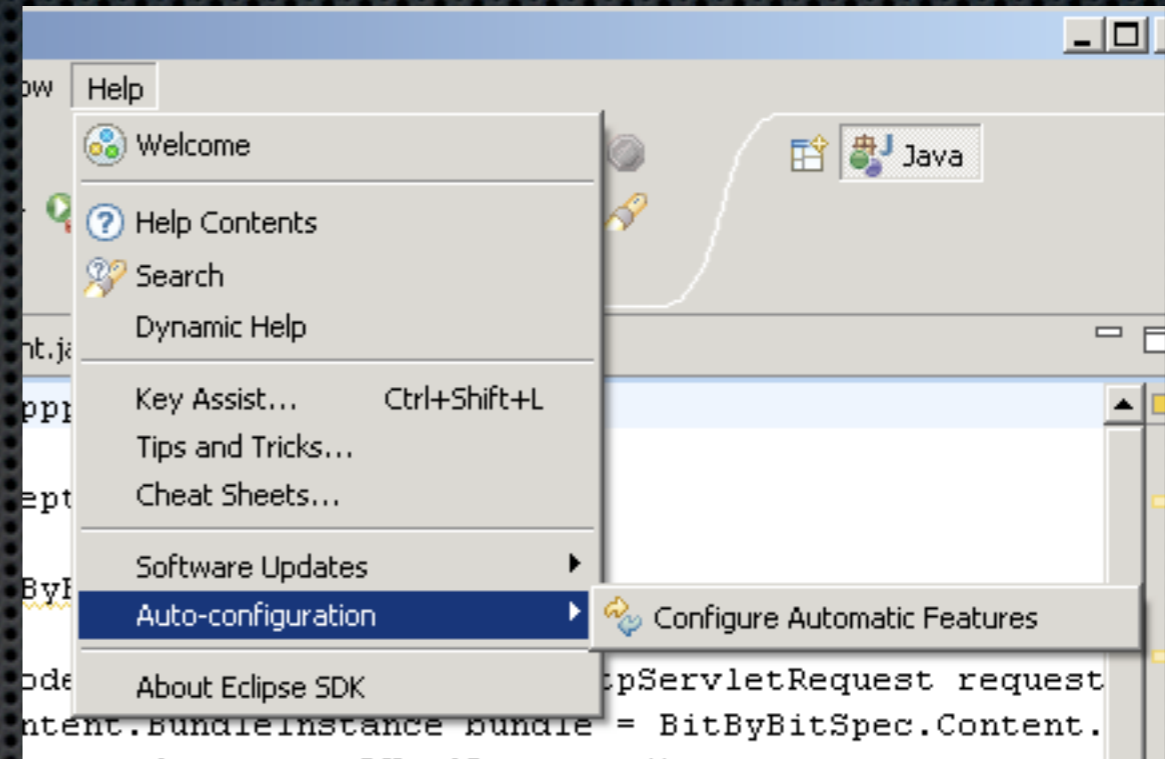
Auto-configuration

Essentials

FindBugs™



ClearCase



Auto-configuration

Essentials

FindBugs™

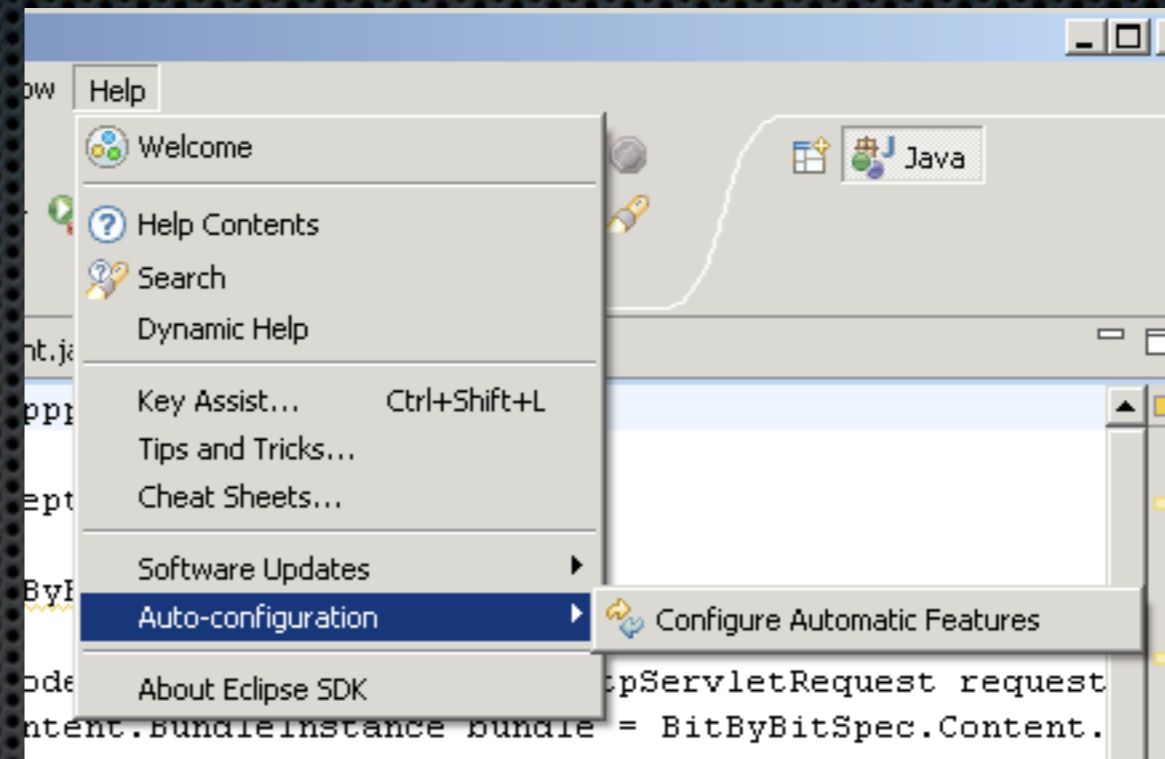


ClearCase



WTP

Server	Status	State
Apache Geronimo v1.1	Stopped	Republish



Auto-configuration

Eclipse @ eBay

Michael Galpin, eBay

<http://fupeg.blogspot.com>