



AOT Lab
Dipartimento di Ingegneria
dell'Informazione
Università degli Studi di Parma



Software Development Tools

- The Eclipse Platform -

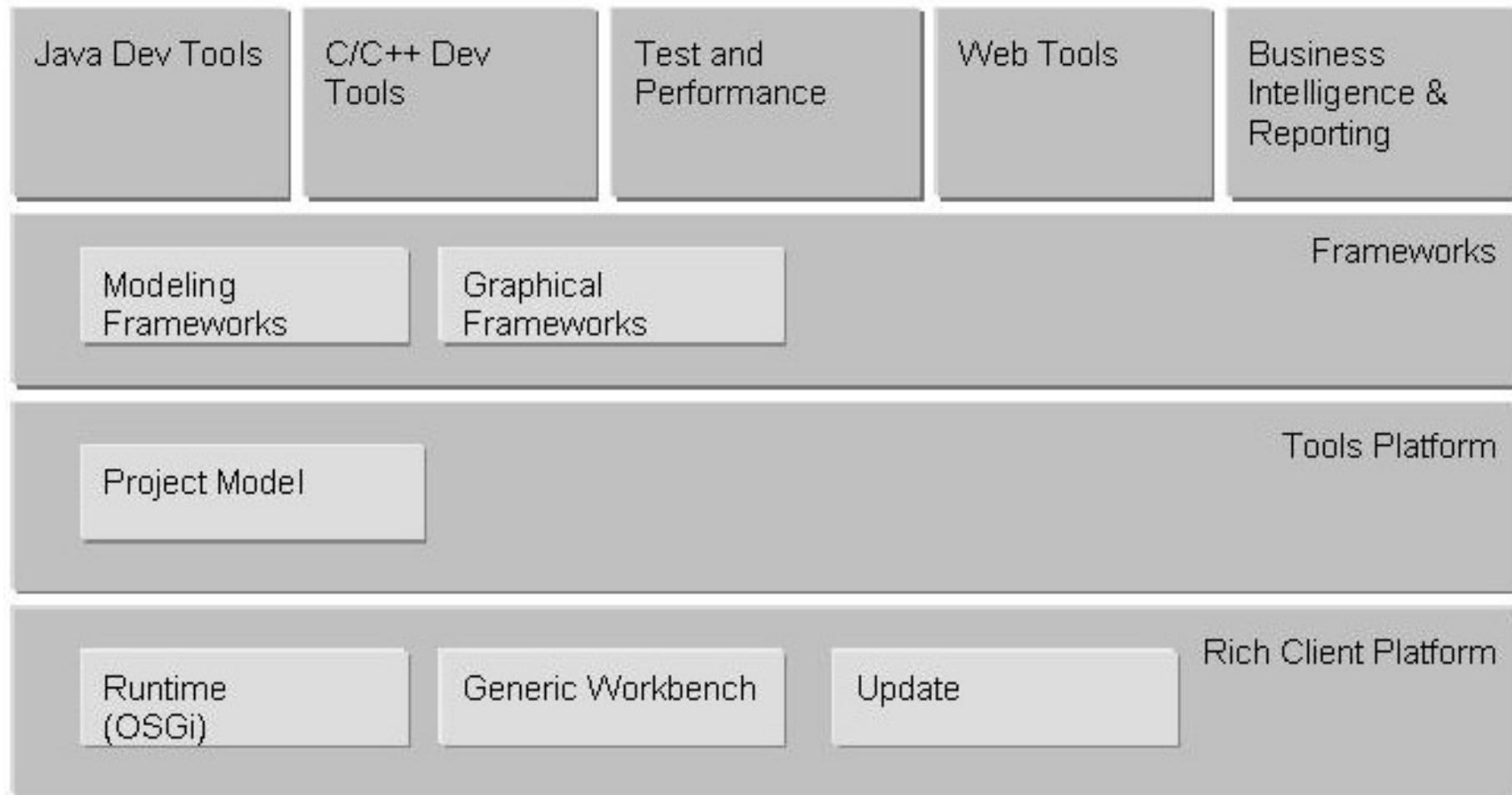
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negri@ce.unipr.it

- ◆ “Eclipse, an extensible development platform and application frameworks for building software”



- ◆ Versione attuale: Eclipse 3.1.1 (30 Sett. 2005)
- ◆ Scaricabile dal sito ufficiale: www.eclipse.org

La piattaforma attuale



- ◆ Eclipse è stato creato dai gruppi OTI e IBM già responsabili dei prodotti:
 - IBM VisualAge/Smalltalk (Smalltalk IDE)
 - IBM VisualAge/Java (Java IDE)
 - IBM VisualAge/Micro Edition (Java IDE)
- ◆ Inizialmente sviluppato da un gruppo di 40 programmatori impegnati a tempo pieno
- ◆ Migrato verso la licenza opensource di IBM e diviso in 3 progetti principali
 - Piattaforma
 - JDT (Java Development Tools)
 - PDE (Plug-in Development Environment)

La licenza OpenSource IBM

- ◆ CPL (Common Public License)
- ◆ Licenza promossa da IBM
- ◆ La licenza CPL è stata approvata dall'Open Source Initiative (OSI) e permette agli sviluppatori di modificare il codice e riutilizzarlo all'interno di prodotti commerciali
- ◆ Recentemente anche Microsoft ha rilasciato alcune librerie con licenza CPL

“in many ways Eclipse is the Emacs for the 21st century”

- ◆ Fornire una piattaforma aperta per lo sviluppo di applicativi che:
 - sia utilizzabile sul più alto numero di sistemi operativi
 - sia utilizzabile con un'interfaccia grafica o senza (GUI o non-GUI)
- ◆ Indipendente dal linguaggio di programmazione
 - Gestisca in modo completo vari tipi di linguaggi: HTML, Java, C/C++, XML, JSP, EJB ...
- ◆ Facilitare l'integrazione di tool specifici
 - Possibilità di inserire nuovi tool al prodotto di base per venire incontro alle esigenze del singolo sviluppatore

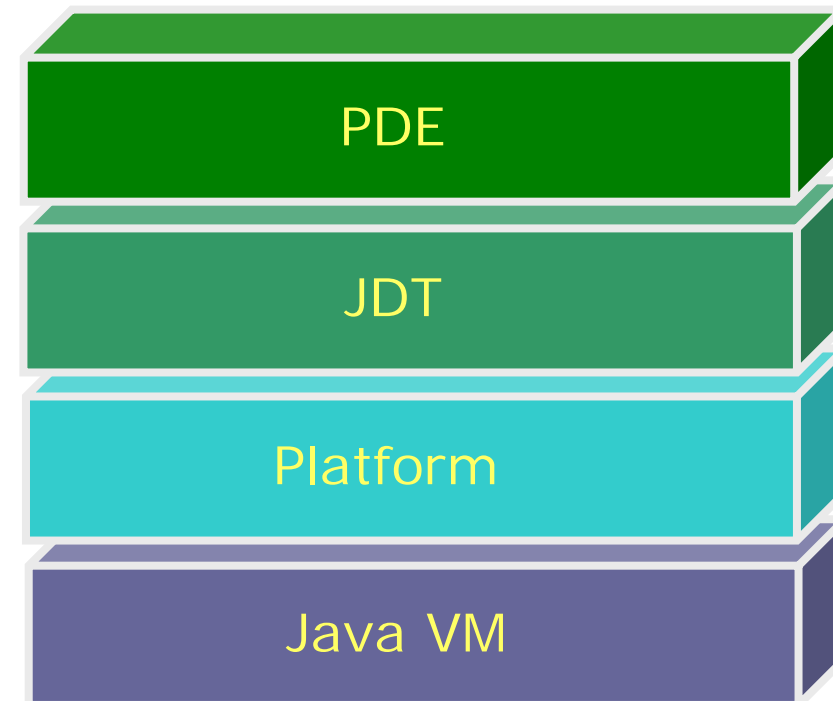
- ◆ Eclipse è una piattaforma universale per integrare tool di sviluppo
- ◆ Ha un'architettura aperta, estendibile, basata su plug-in

Plug-in Development Environment

Java Development Tools

Eclipse Platform

Standard Java2 Virtual Machine



Plug-in Development Environment

Estende il JDT fornendo il supporto per lo sviluppo di nuovi plug-in

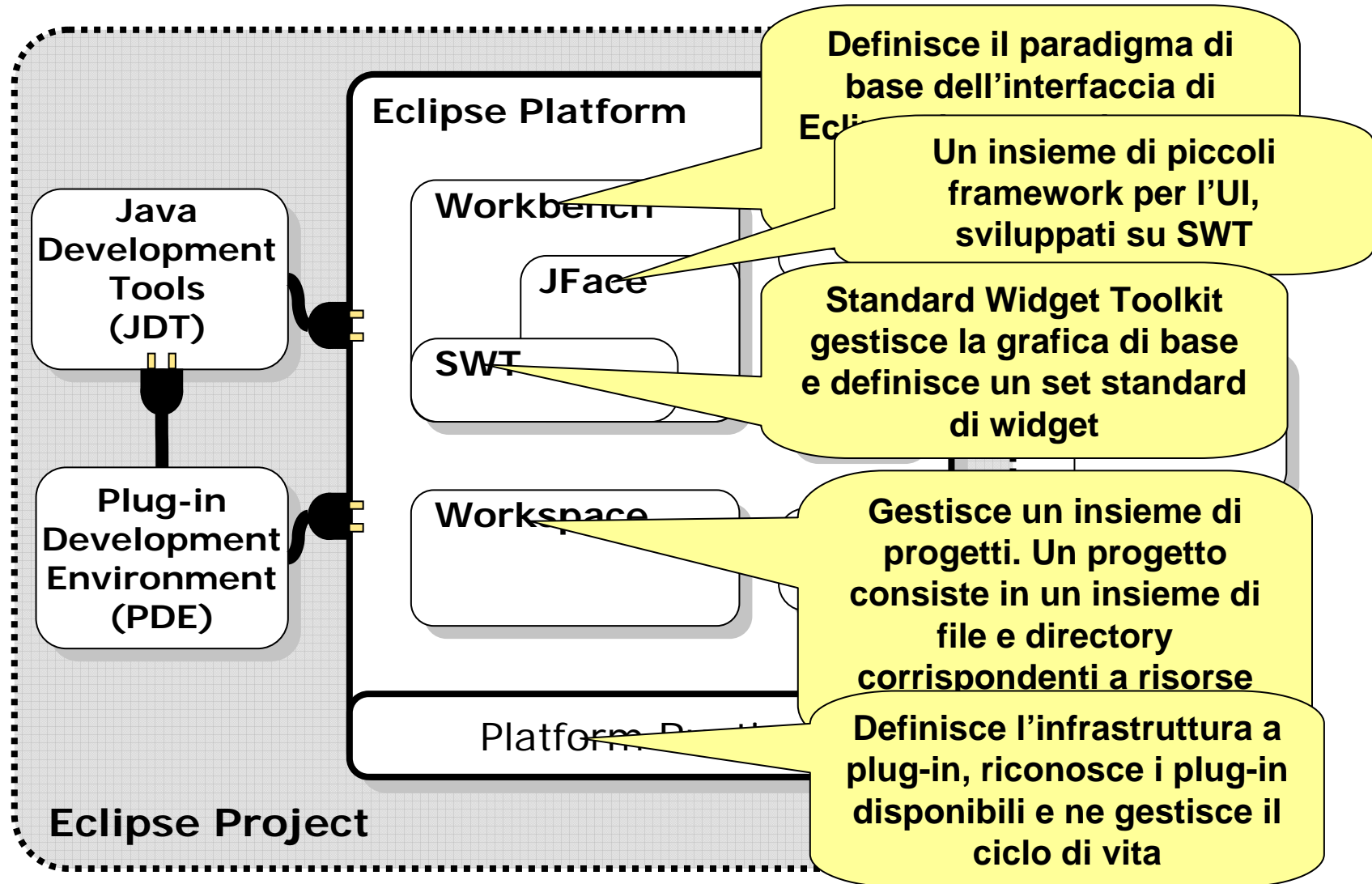
Java Development Tools

Fornisce un'IDE Java con possibilità di estendere l'infrastruttura

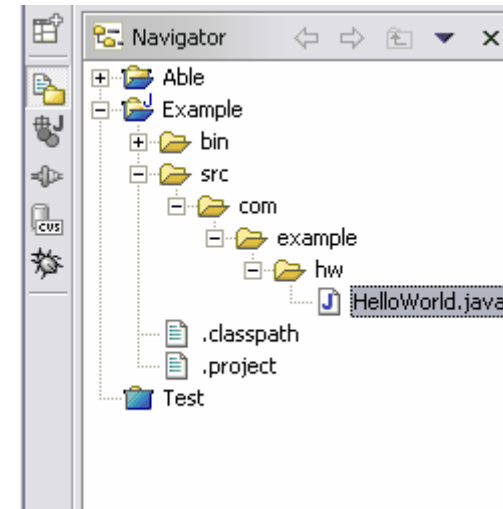
Platform

Definisce un'infrastruttura estendibile, indipendente dal linguaggio di programmazione

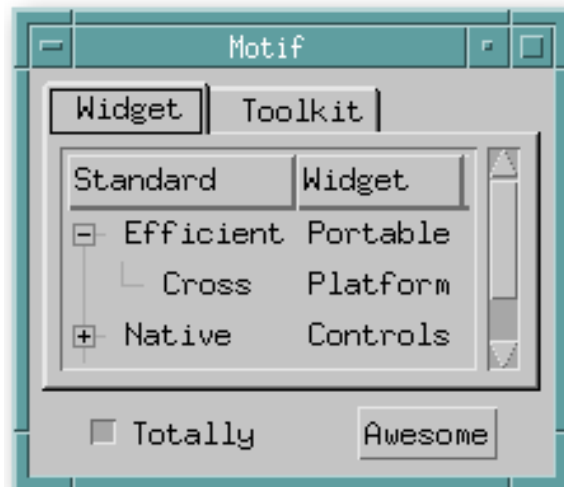
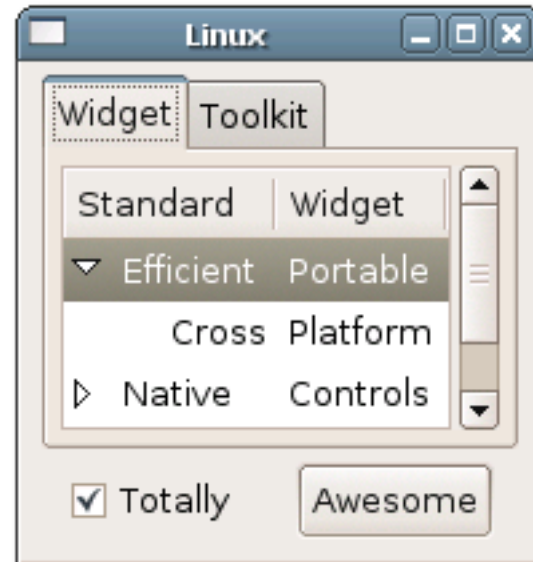
Architettura (3)



- ◆ **Risorse:** permette di accedere a files, directory o progetti
- ◆ Il Workspace è in grado di gestire 1 o più progetti
- ◆ I progetti corrispondono a directory nel file system
- ◆ Vista Navigator
 - Albero di file e directory
- ◆ Vari tool permettono di leggere, creare, modificare, cancellare risorse nel workspace



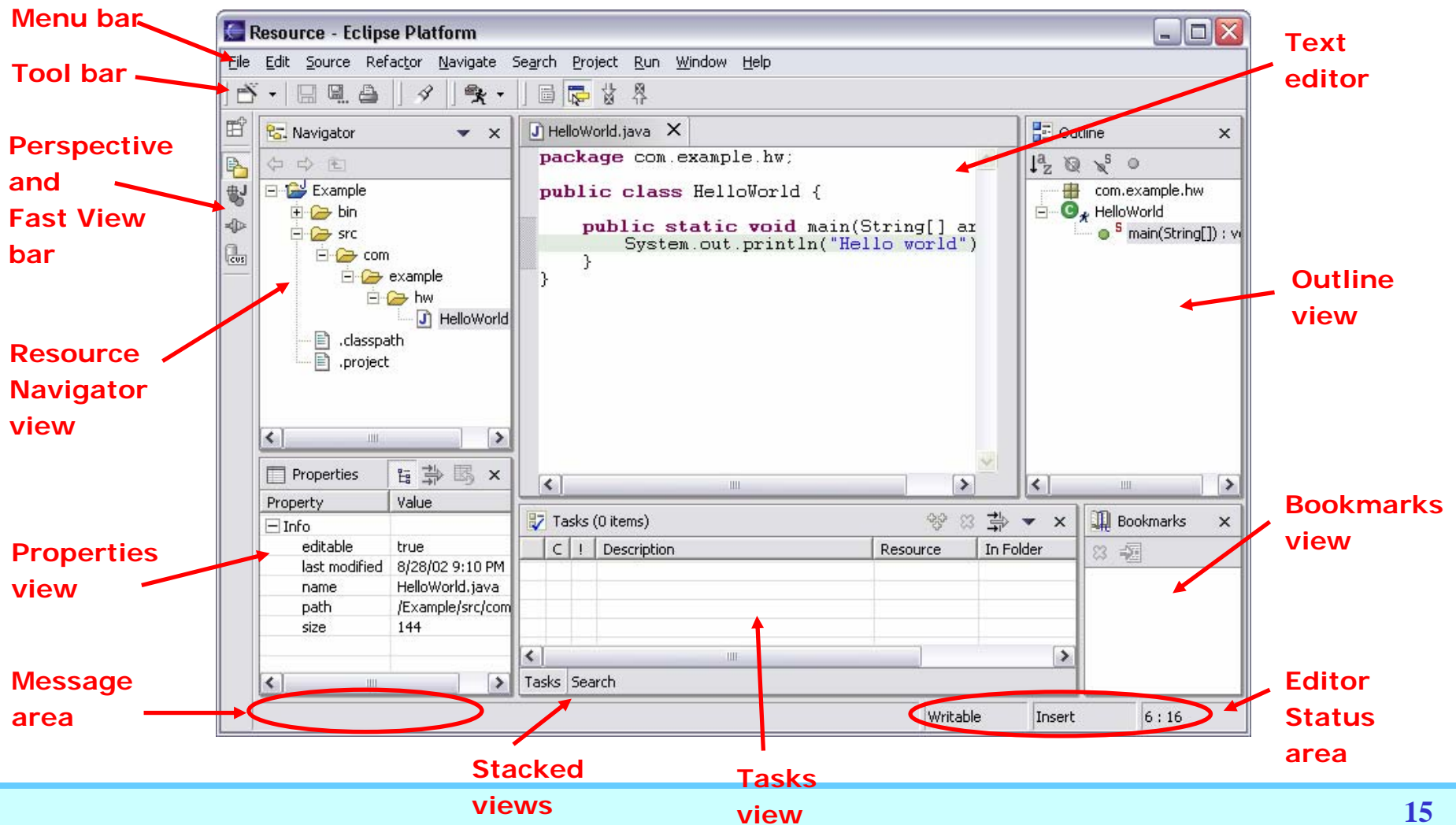
- ◆ Libreria contenente un insieme di strumenti grafici generici per la costruzione di GUI
 - bottoni, liste, testo, menu, alberi, testi formattati, ...
- ◆ Ha API indipendenti dal sistema operativo, ma ...
- ◆ ... richiede componenti nativi per ogni sistema operativo
 - Ogni piattaforma operativa deve mettere a disposizione il proprio file swt.jar
 - In Windows è una .dll, in Linux un .so
- ◆ Ogni progetto grafico in Eclipse deve utilizzare SWT, ma ...
- ◆ ... SWT può essere utilizzato anche indipendentemente da Eclipse
 - Ha spesso dimostrato prestazioni migliori rispetto a Swing, perchè ...???



- ◆ JFace è un framework grafico di più alto livello costruito su SWT
- ◆ Mette a disposizione una serie di classi per gestire le operazioni standard di un'interfaccia grafica
- ◆ Le API e l'implementazione sono indipendenti dal sistema operativo
- ◆ Permette di costruire in modo rapido:
 - Finestre di dialogo, preferenze, wizard, alberi, tabelle, liste, ecc...

- ◆ Il Workbench rappresenta l'interfaccia utente della piattaforma Eclipse
- ◆ Il Workbench usa JFace e vi aggiunge alcune funzionalità più complesse
- ◆ Componenti fondamentali
 - Editors
 - Views
 - Perspectives

Workbench - Terminologia



- ◆ Compaiono nell'area centrale del workbench
- ◆ Aggiungono azioni ai menu del workbench e alle toolbar
 - Open, edit, save, close lifecycle
- ◆ Il workbench fornisce
 - Extension Point per creare nuovi tipi di editors
 - Esempio: JDT crea un editor per gestire i file Java
 - API per editor di testo estendibili ed un framework

- ◆ Forniscono informazioni su di un oggetto
- ◆ Completano le funzionalità degli editors
 - Esempio: l'Outline View riassume il contenuto dell'editor
- ◆ Completano altre views
 - Esempio: la "Properties View" caratterizza una selezione
- ◆ Il workbench fornisce:
 - Extension Point per definire nuovi tipi di views
- ◆ La piattaforma Eclipse include un certo numero di views standard
 - Esempio: Resource Navigator, Outline, Properties, Tasks, Bookmarks, Search, ...

- ◆ Sono disposizioni di views ed editors
- ◆ Diverse perspectives possono essere utilizzate per gestire diverse operazioni
- ◆ Il workbench fornisce:
 - Extension Point per definire nuove perspectives
- ◆ La piattaforma Eclipse include un certo numero di perspectives standard
 - Esempio: Resource, Debug, ...

- ◆ Contribution Rule: “Everything is a contribution”
 - L’intera piattaforma Eclipse (escluso il Runtime Kernel) non ha nessuna funzionalità built-in, tutto è basato sulla Contribution
 - Eclipse + JDT \approx 60 plugins
 - IBM Websphere IDE \approx 600 plugins
 - Il Runtime Kernel è in grado di gestire migliaia di plugin
- ◆ Lazy Loading Rule: ” Contributions are only loaded when they are needed”
 - “Declaration vs Implementation”
 - La piattaforma mantiene le informazioni di tutti i plugin disponibili
 - Manifest file \rightarrow plugin.xml
 - L’implementazione viene caricata alla prima richiesta di accesso
 - PLUGIN_XXX.jar

- ◆ Plug-in: la più piccola unità funzionale in Eclipse
 - “a piece of behavior that is outside the run-time kernel”
 - (Contributing to Eclipse: Principles, Patterns and Plug-Ins by E.Gamma,K.Beck)
 - E' un componente strutturato che descrive se stesso al sistema utilizzando un manifest file (plugin.xml)
 - Può racchiudere numerose funzionalità (es. HTML editor) oppure una semplice funzione (es. l'azione per creare un file zip)
- ◆ Un plugin si concretizza fisicamente in una directory con all'interno:
 - plugin.xml: il manifest, una descrizione della Contribution
 - resources: risorse utili al plugin (es. icone) - OPZIONALE
 - Java code: strutturato in file .jar - OPZIONALE

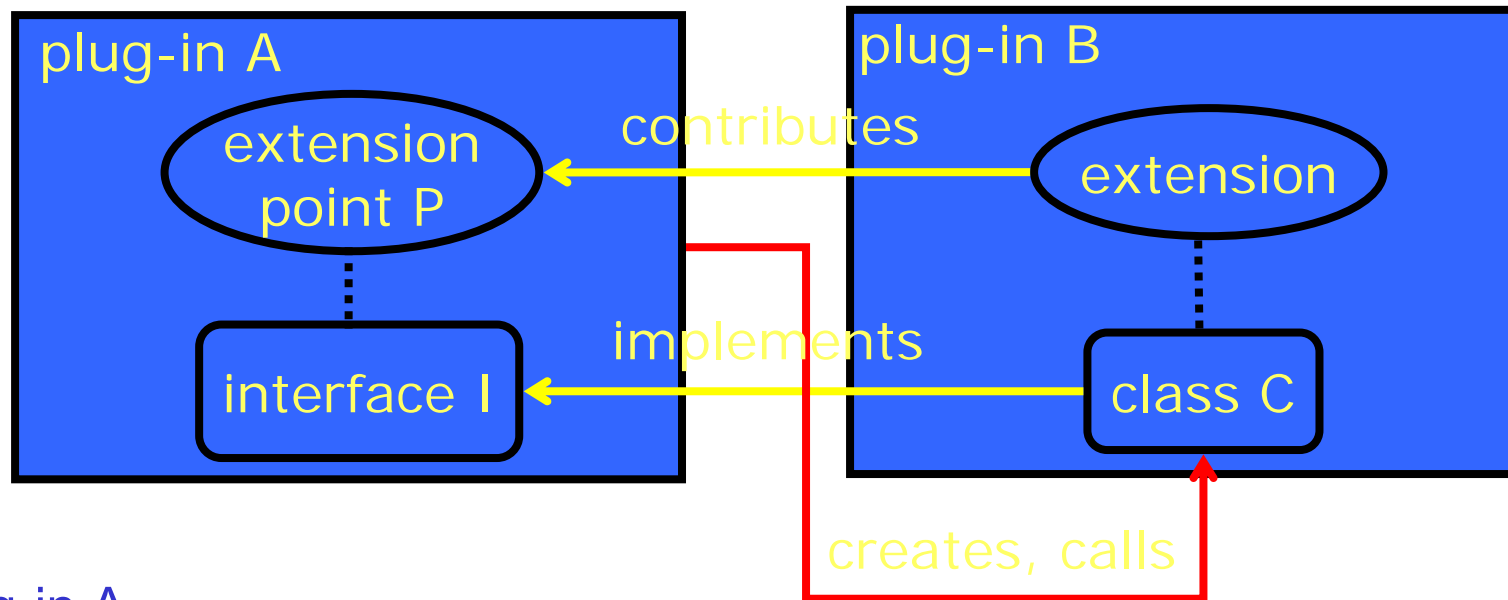
- ◆ Ha un identificatore univoco – plugin ID
- ◆ Porta una Contribution alla piattaforma
 - Descritta tramite il manifest
 - Implementata (quando serve) attraverso le librerie del plug-in
 - Può estendere un aspetto specifico della piattaforma (**Extensions**), per esempio:
 - Introdurre un nuovo tipo di risorsa o estendere un tipo di risorsa già presente
 - Può contribuire con nuovi punti di estensione (**Extension Points**), per esempio:
 - Validatori di documenti XML
- ◆ Può dipendere da altri plug-in
 - Dipendenza esplicita nella descrizione e gestita in automatico dalla piattaforma

- ◆ Ogni plug-in:
 - Contribuisce ad 1 o più Extension Point
 - Dichiarare 1 o più Extension Point (OPZIONALE)
 - Dipende da un set di altri plug-in (OPZIONALE)
 - Contiene librerie di codice Java o altri file (OPZIONALE)
 - Risiede in una sottodirectory a lui dedicata
- ◆ Plug-in Manifest
 - Dichiarare tutte le “Contributions”
 - Implementa interfacce o fornisce API
 - plugin.xml: descrive le proprietà del plug-in

Extension e Extension Point

- ◆ Un Extension Point è un punto di aggancio per i contributi dei plugin
 - “Qualcuno” (un altro plugin) lo ha dichiarato
 - `org.eclipse.ui`
 - E' identificato univocamente nella piattaforma (Id)
 - `org.eclipse.ui.ActionSets`
 - Ha uno schema che regola le informazioni dichiarative che i contributor devono fornire
 - Può contenere un set di Action, ecc...
 - Definisce un'interfaccia che la classe del contributor deve implementare
- ◆ Una Extension è la dichiarazione dalla Contribution
- ◆ Chi ha dichiarato l'Extension Point in genere interroga il registry per sapere chi offre delle Extension
 - Es. il workbench verifica chi fornisce una Extension per gli ActionSets per costruire l'interfaccia utente dell'IDE

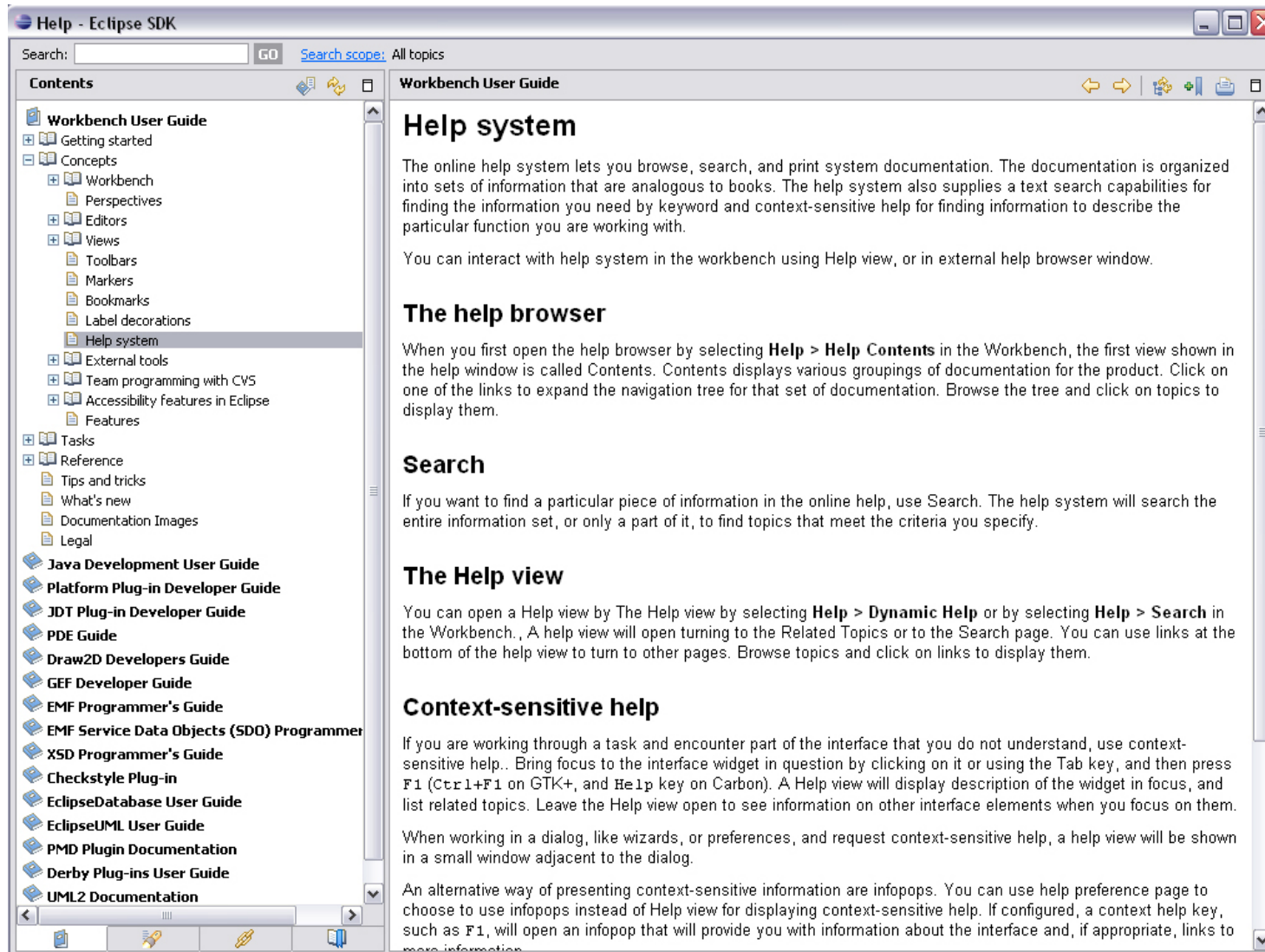
Architettura del Plug-in (2)



- ♦ Plug-in A
 - Dichiarare un Extension Point P
 - Dichiarare un'interfaccia I per il punto P
- ♦ Plug-in B
 - Implementare l'interfaccia I con la sua classe C
 - Inserisce la classe C come Contribution all'Extension Point P
- ♦ Il Plug-in A istanzia la classe C e richiama i metodi dell'interfaccia I

- ◆ Eclipse Platform Runtime è un micro-kernel
 - Tutte le funzionalità sono implementate in plug-ins

- ◆ Eclipse Platform Runtime gestisce l'inizializzazione e la creazione dell'ambiente di lavoro
 - Ricerca tutti i plug-ins installati sul disco
 - Unisce tutte le Extensions con i rispettivi Extension Points
 - Costruisce un registro globale dei plug-in
 - Crea una copia in cache del registro per l'esecuzione successiva



Help - Eclipse SDK

Search: **GO** Search scope: All topics

Contents

- Workbench User Guide
 - Getting started
 - Concepts
 - Workbench
 - Perspectives
 - Editors
 - Views
 - Toolbars
 - Markers
 - Bookmarks
 - Label decorations
 - Help system
 - External tools
 - Team programming with CVS
 - Accessibility features in Eclipse
 - Features
- Tasks
- Reference
 - Tips and tricks
 - What's new
 - Documentation Images
 - Legal
- Java Development User Guide
- Platform Plug-in Developer Guide
- JDT Plug-in Developer Guide
- PDE Guide
- Draw2D Developers Guide
- GEF Developer Guide
- EMF Programmer's Guide
- EMF Service Data Objects (SDO) Programmer's Guide
- XSD Programmer's Guide
- Checkstyle Plug-in
- EclipseDatabase User Guide
- EclipseUML User Guide
- PMD Plugin Documentation
- Derby Plug-ins User Guide
- UML2 Documentation

Workbench User Guide

Help system

The online help system lets you browse, search, and print system documentation. The documentation is organized into sets of information that are analogous to books. The help system also supplies a text search capabilities for finding the information you need by keyword and context-sensitive help for finding information to describe the particular function you are working with.

You can interact with help system in the workbench using Help view, or in external help browser window.

The help browser

When you first open the help browser by selecting **Help > Help Contents** in the Workbench, the first view shown in the help window is called Contents. Contents displays various groupings of documentation for the product. Click on one of the links to expand the navigation tree for that set of documentation. Browse the tree and click on topics to display them.

Search

If you want to find a particular piece of information in the online help, use Search. The help system will search the entire information set, or only a part of it, to find topics that meet the criteria you specify.

The Help view

You can open a Help view by The Help view by selecting **Help > Dynamic Help** or by selecting **Help > Search** in the Workbench. A help view will open turning to the Related Topics or to the Search page. You can use links at the bottom of the help view to turn to other pages. Browse topics and click on links to display them.

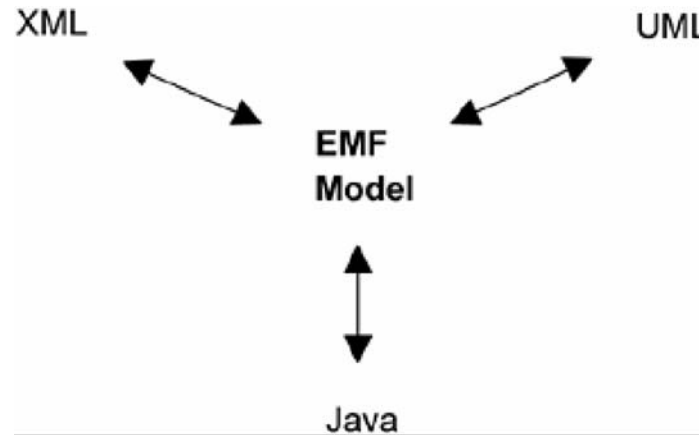
Context-sensitive help

If you are working through a task and encounter part of the interface that you do not understand, use context-sensitive help. Bring focus to the interface widget in question by clicking on it or using the Tab key, and then press **F1** (**Ctrl+F1** on GTK+, and **Help** key on Carbon). A Help view will display description of the widget in focus, and list related topics. Leave the Help view open to see information on other interface elements when you focus on them.

When working in a dialog, like wizards, or preferences, and request context-sensitive help, a help view will be shown in a small window adjacent to the dialog.

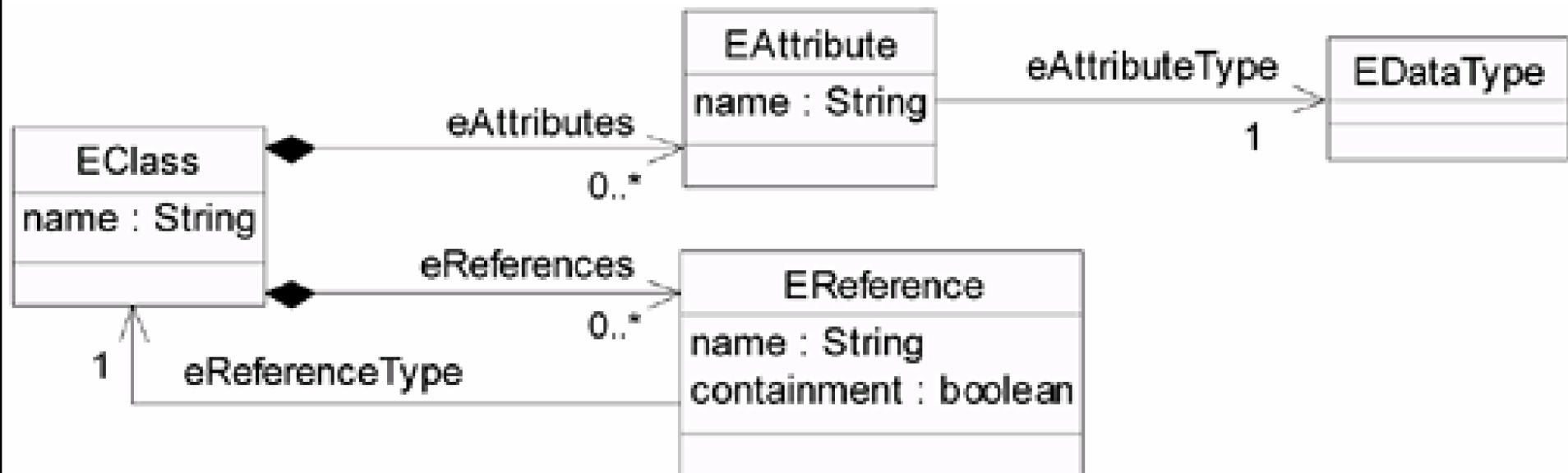
An alternative way of presenting context-sensitive information are infopops. You can use help preference page to choose to use infopops instead of Help view for displaying context-sensitive help. If configured, a context help key, such as **F1**, will open an infopop that will provide you with information about the interface and, if appropriate, links to more information.

“To model or to program, that is not the question”

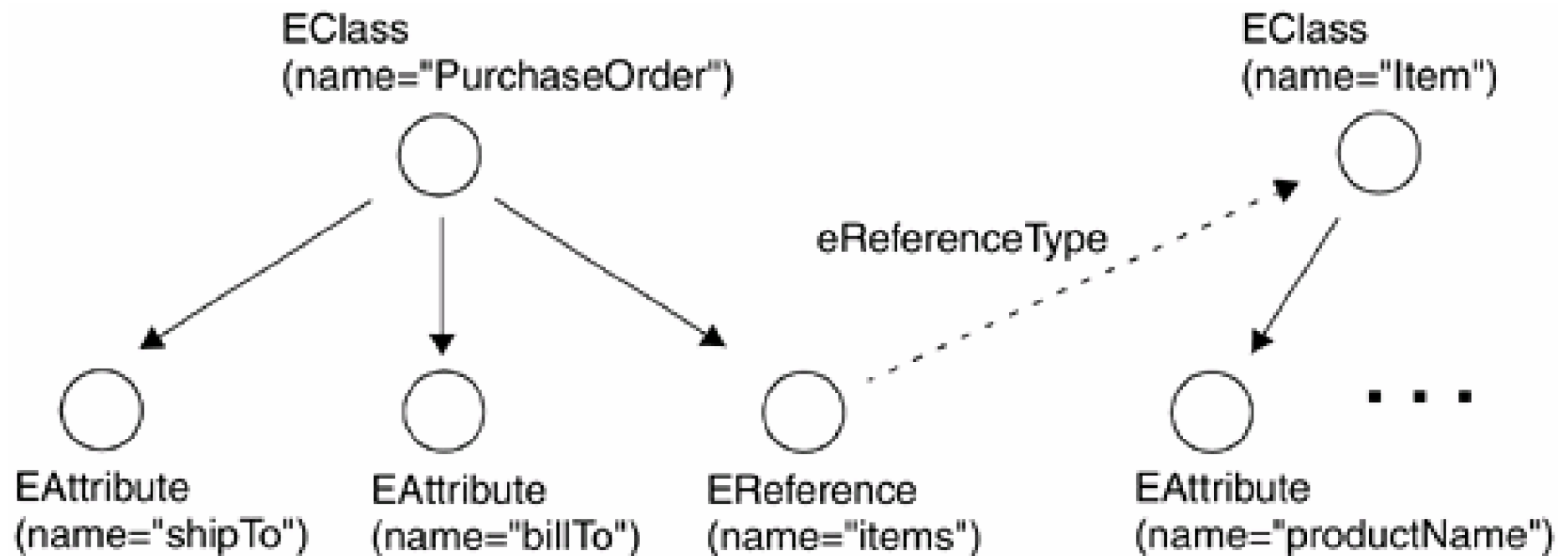


- ◆ E' un framework per la generazione di codice Java
- ◆ Concetti fondamentali
 - Portable design
 - Dynamic integration
 - Flexible development and tools integration using metadata
 - Better use of design patterns and templates

- ♦ Il metamodello utilizzato da EMF per rappresentare modelli è chiamato Ecore
- ♦ Un sottoinsieme di un Ecore model



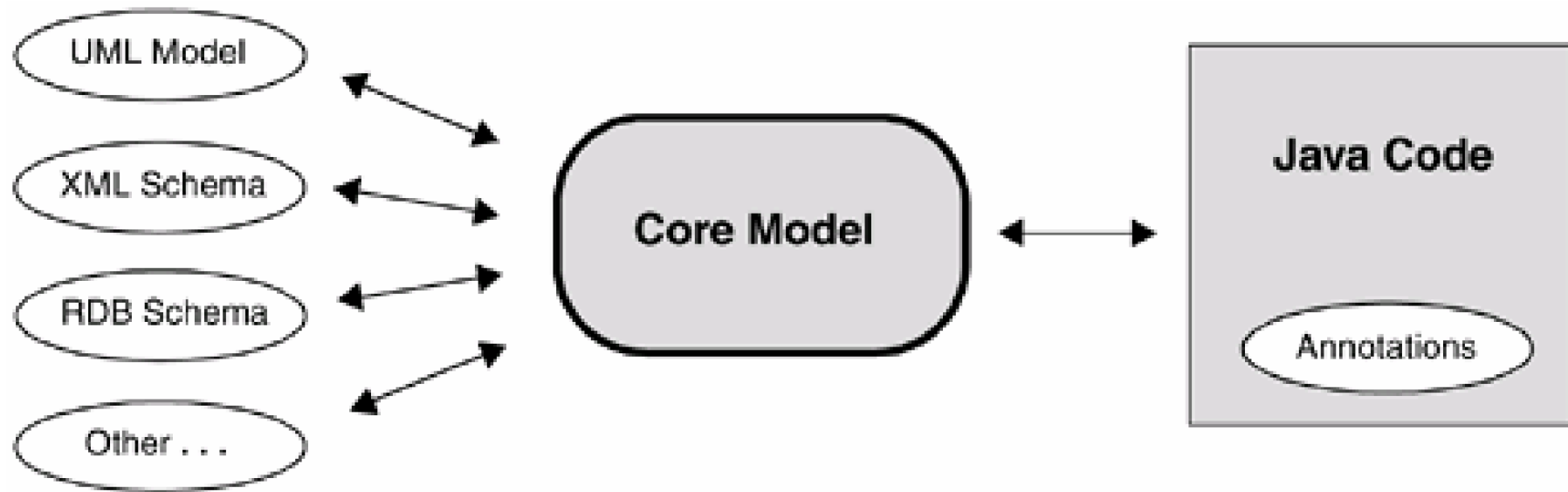
- ◆ Esempio di un ordine di acquisto



- ◆ Quando instanziamo le classi definite in un metamodello Ecore per definire un modello della nostra applicazione, stiamo creando un Core model → rappresentazione XML

```
<?xml version="1.0" encoding="ASCII"?>
<ecore:EPackage xmi:version="2.0" xmlns:xmi="http://www.omg.org/XML"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:ecore="http://www.eclipse.org/emf/2002/Ecore"
  name="po" nsURI="http:///com/example/po.ecore"
  nsPrefix="com.example.po">
  <eClassifiers xsi:type="ecore:EClass" name="PurchaseOrder">
    <eReferences name="items" eType="#//Item" upperBound="-1" containment="true"/>
    <eAttributes name="shipTo" eType="ecore:EDataType
      http://www.eclipse.org/emf/2002/Ecore#//EString"/>
    <eAttributes name="billTo" eType="ecore:EDataType
      http://www.eclipse.org/emf/2002/Ecore#//EString"/>
  </eClassifiers>
  <eClassifiers xsi:type="ecore:EClass" name="Item">
    <eAttributes name="productName" eType="ecore:EDataType
      http://www.eclipse.org/emf/2002/Ecore#//EString"/>
    <eAttributes name="quantity" eType="ecore:EDataType
      http://www.eclipse.org/emf/2002/Ecore#//EInt"/>
    <eAttributes name="price" eType="ecore:EDataType
      http://www.eclipse.org/emf/2002/Ecore#//EFloat"/>
  </eClassifiers>
</ecore:EPackage>
```

- ♦ **Gli elementi XML corrispondono esattamente alle istanze del metamodello Ecore**





- ◆ Permette di sviluppare rappresentazioni grafiche di modelli precostruiti
- ◆ Utilizza:
 - Draw2D: standard framework per il disegno in 2D basato su SWT
 - Usa l'architettura MVC (Model-View-Controller)

- ◆ GEF e EMF sono stati progettati per essere utilizzati insieme per la generazione di editor grafici
- ◆ Vantaggi
 - EMF permette di creare modelli consistenti, efficienti e facilmente modificabili
 - Tramite MVC c'è perfetta integrazione fra EMF e GEF
 - Viene mantenuto un legame reciproco fra modello ed implementazione
 - Si possono creare editor standard in modo automatico usando le EMF API
- ◆ Passi principali
 - Crea il tuo modello
 - Definisci la view
 - Scrivi le tue EditParts ed i Controllers
 - Metti insieme il tutto

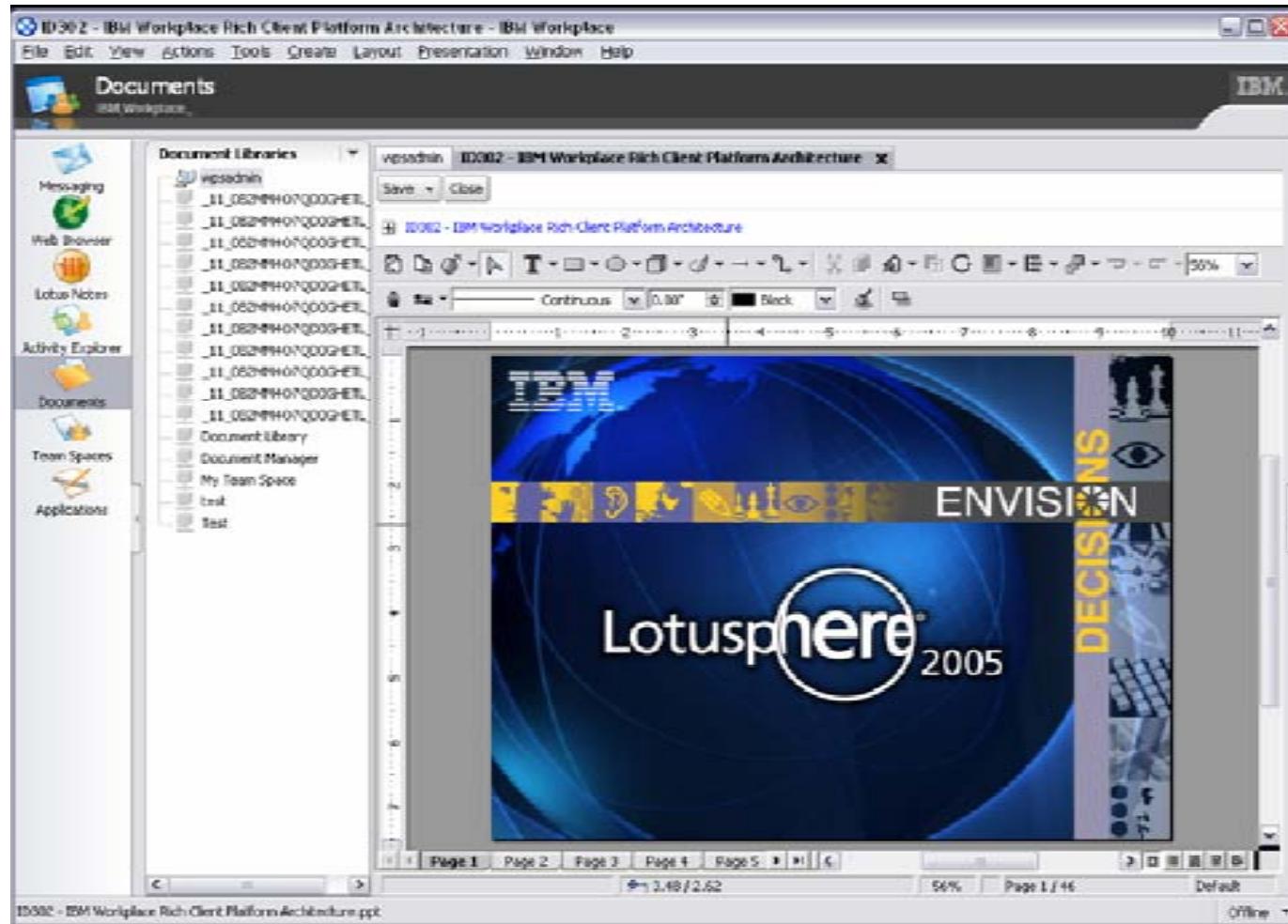


Java Development Tools

- ◆ Composto da una serie di plug-in per la creazione di un'IDE per la gestione di progetti Java
- ◆ Fornisce API per essere esteso a piacere
- ◆ Componenti principali:
 - **Core:** definisce l'infrastruttura non grafica
 - Java builder, search, refactoring, tree navigation
 - **UI:** workbench specifico per Java
 - Packages View, Type Hierarchy View, Java Outline View, Wizards per creare elementi Java, Java Editor
 - **Debug:** fornisce strumenti per il debugging
 - JVM introspection
 - **APT:** supporto per le annotazioni introdotte nella versione Java 5.0

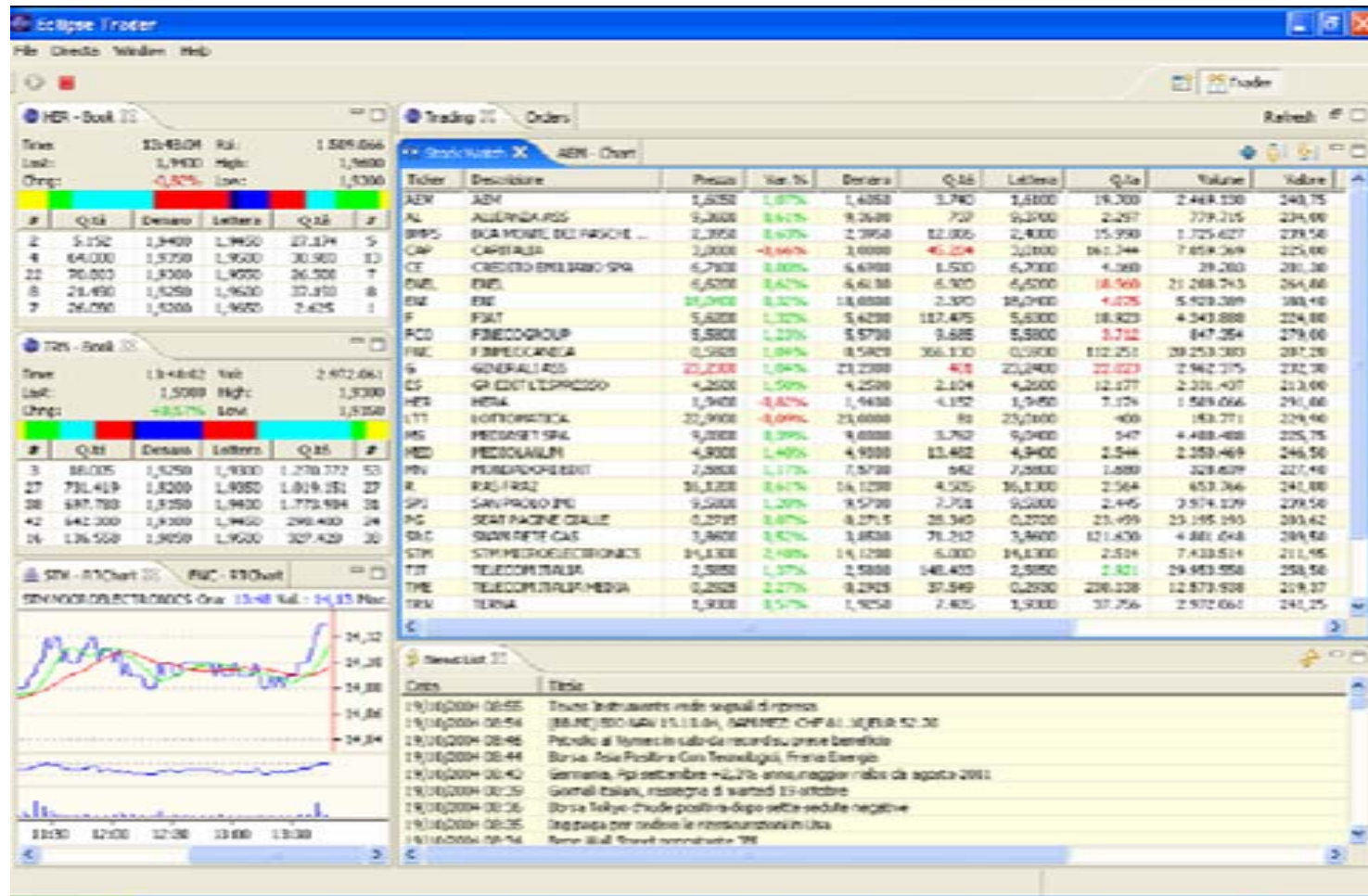
- ◆ “The Rich Client Platform (RCP) is an exciting new way to build Java applications that can compete with native applications on any platform.”
- ◆ Storia:
 - Eclipse 2.1: degli hacker nella comunità di Eclipse cominciarono a sviluppare delle applicazioni non-IDE
 - Eclipse 3.0: gli aspetti relativi all'IDE sono stati estratti dal workbench, dando origine a RCP

RCP – Esempi (1)



IBM Lotus Workplace

RCP – Esempi (2)



Eclipse Trader

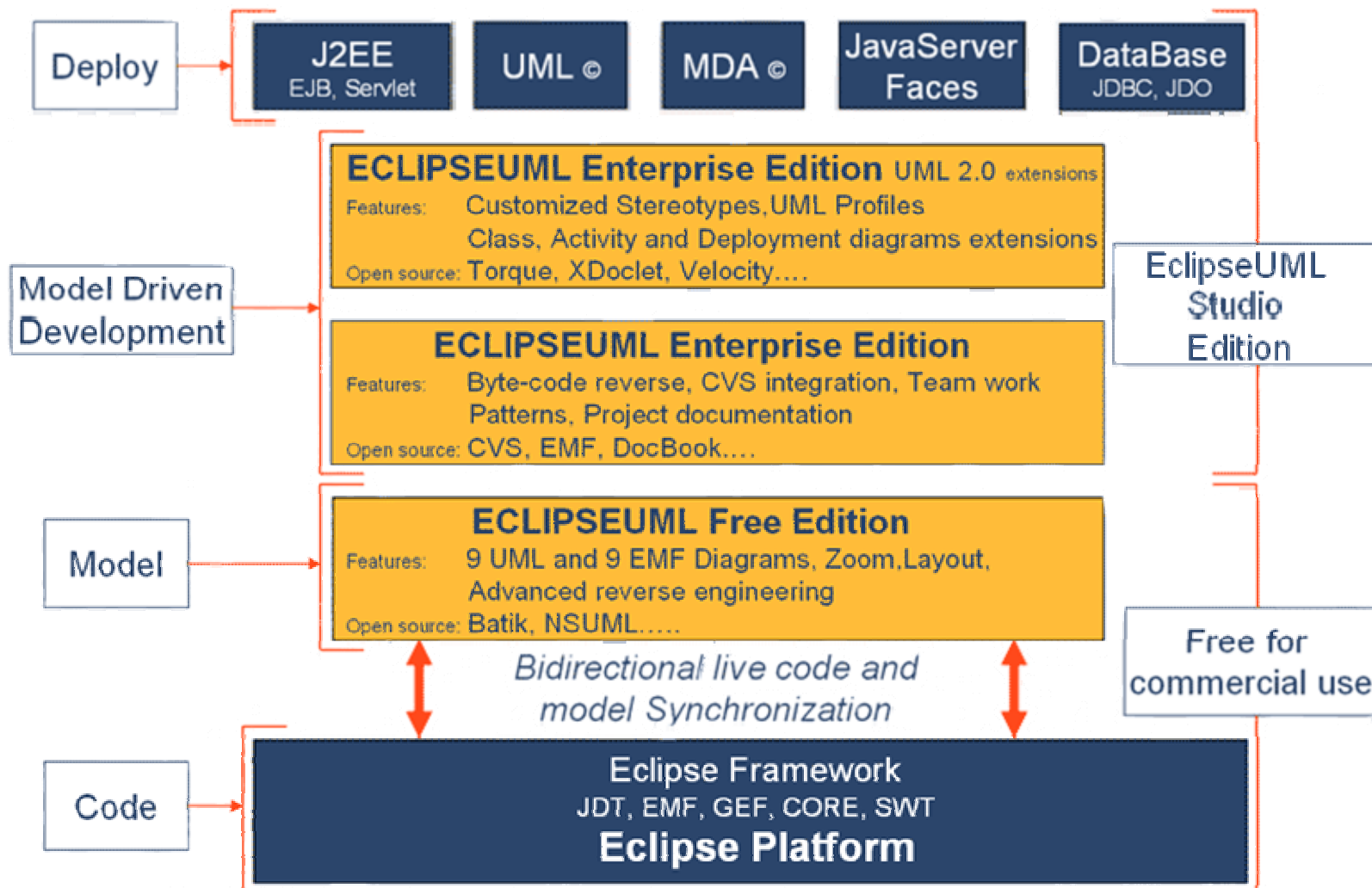
- ◆ Un'applicazione RCP è un'applicazione di Eclipse nella quale il workbench è eseguito nel main event loop
- ◆ Alcuni numeri:
 - Dimensione download ~ 5MB
 - Dimensione decompresso ~ 6MB
 - Dimensione VM di Hello World (non Eclipse) ~ 8MB
 - Dimensione VM di Hello World RCP ~ 9MB
 - Numero di plug-in inseriti nel bianrio di RCP: 10

- ◆ Tool visuale per la modellizzazione UML, integrato in modo nativo con Eclipse e CVS



- ◆ Gratuito solo in versione personale
 - Versione attuale: 2.1.0
- ◆ Sviluppato in Java, disponibile al sito:
<http://www.omondo.org>
- ◆ Eclipse 100% native API
 - Permette di integrare il plug-in in altre applicazioni

Omondo – Architettura Prodotti





Omondo – Free & Studio Edition

Features

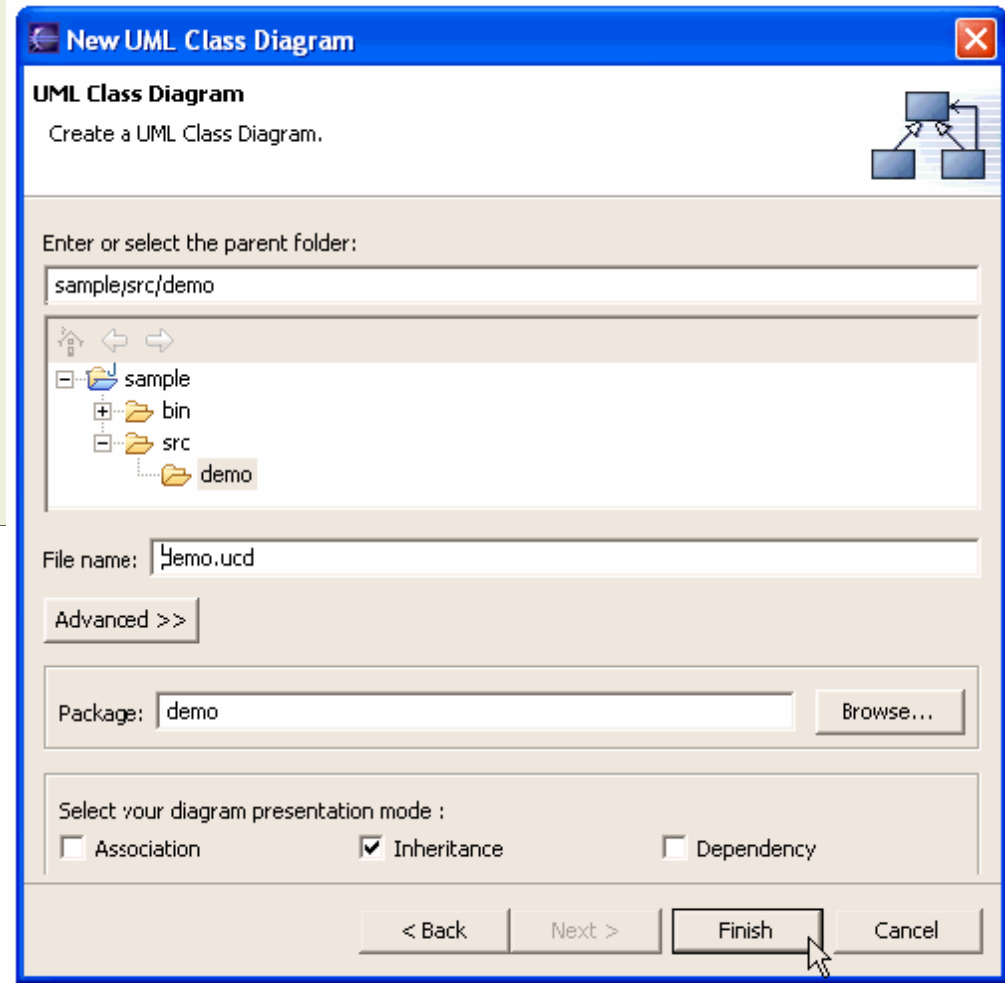
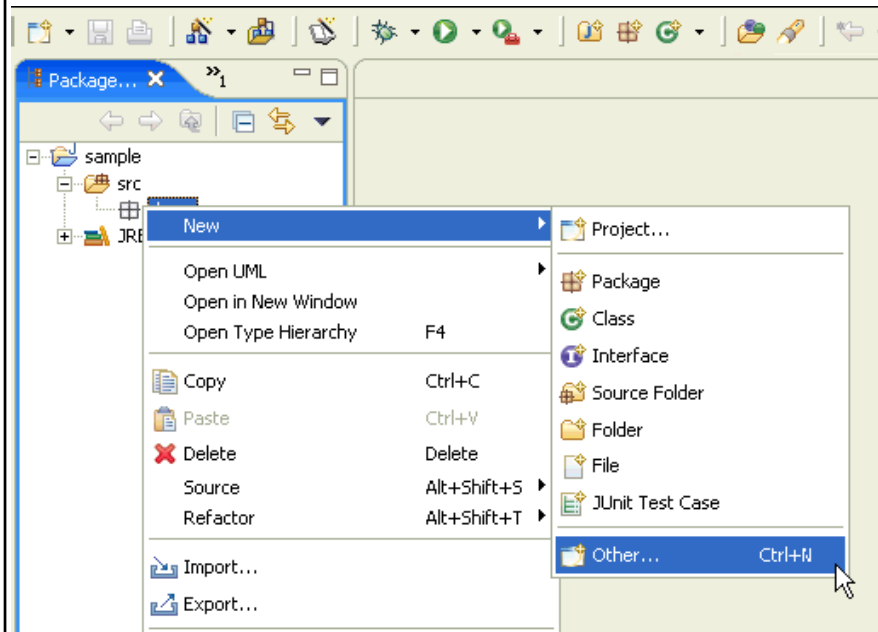
MODEL	EclipseUML Free Edition	EclipseUML Studio Edition
UML 2.0		
UML 1.4		
JDK 1.5		
Eclipse 3.1		
Eclipse 3.0.2		
Eclipse 2.1.3		
GEF		
EMF		
Print function		
Graphical Export functions	SVG	
Auto-Layout		
Zoom		
All UML Diagrams		
UML 2.0 Import/Export		
Database		
J2EE		
Team solution		
CVS		
Integrates with any SCC-compliant tool		
UML Profiles		
Open API		

- ◆ Supporto per gestire la creazione di diagrammi UML 2.0: disegno, modifica, stampa, zoom ...
- ◆ Reverse Engineering
- ◆ Sincronizzazione automatica fra i modelli ed il codice corrispondente
- ◆ Integrazione automatica con EMF e GEF
- ◆ Nella versione EclipseUML Studio
 - Graphical Database Diagram
 - EclipseJ2ee
 - CVS
 - Team solution



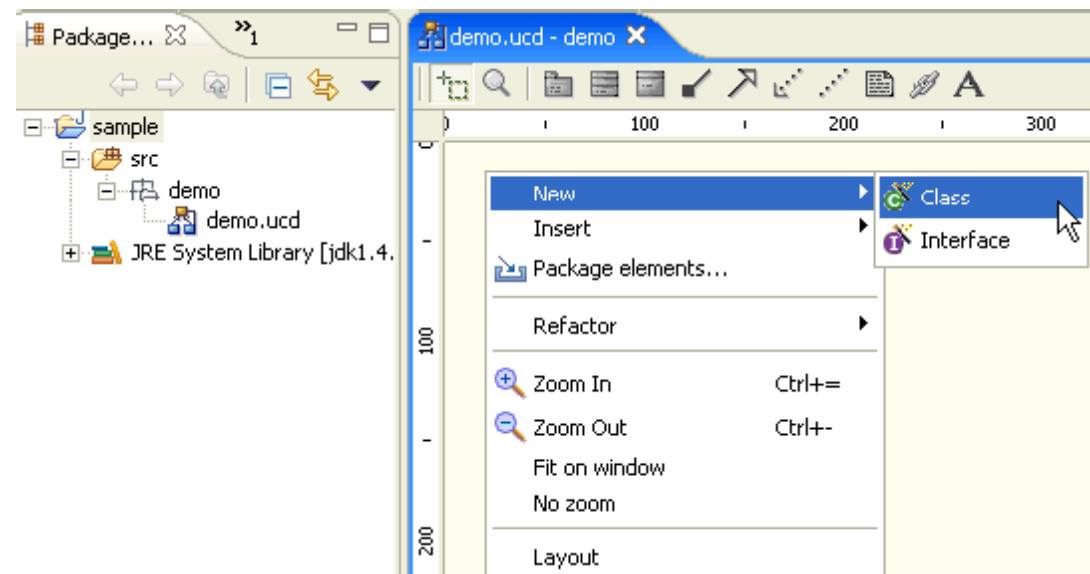
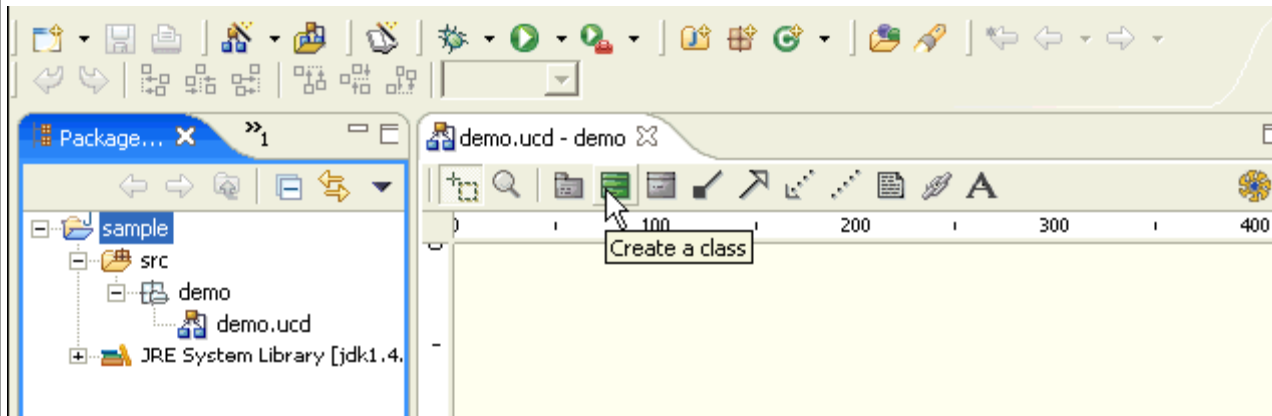
Omondo - Diagrammi Supportati

- ◆ Class Diagram
- ◆ Sequence Diagram
- ◆ Use Case Diagram
- ◆ State Diagram
- ◆ Activity Diagram
- ◆ Object Diagram
- ◆ Component Diagram
- ◆ Deployment Diagram
- ◆ Robustness Diagram



Creare un class diagram

Omondo – Class Diagram



Creare una classe

Omondo – Class Diagram

New Java Class

Create a new Java class.

Source Folder:

Package:

☐ Enclosing type:

Name:

Modifiers: ☒ public ☐ default ☐ private ☐ protected
☐ abstract ☐ final ☐ static

Superclass:

Interfaces:

Which method stubs would you like to create?

☐ public static void main(String[] args)

☐ Constructors from superclass

☒ Inherited abstract methods

New

Create a new class attribute

Properties | Tagged Values | Javadoc

Stereotypes

Name

Type

Dimension

Attribute

Visibility ☐ public ☐ protected ☐ package ☒ private

Default value

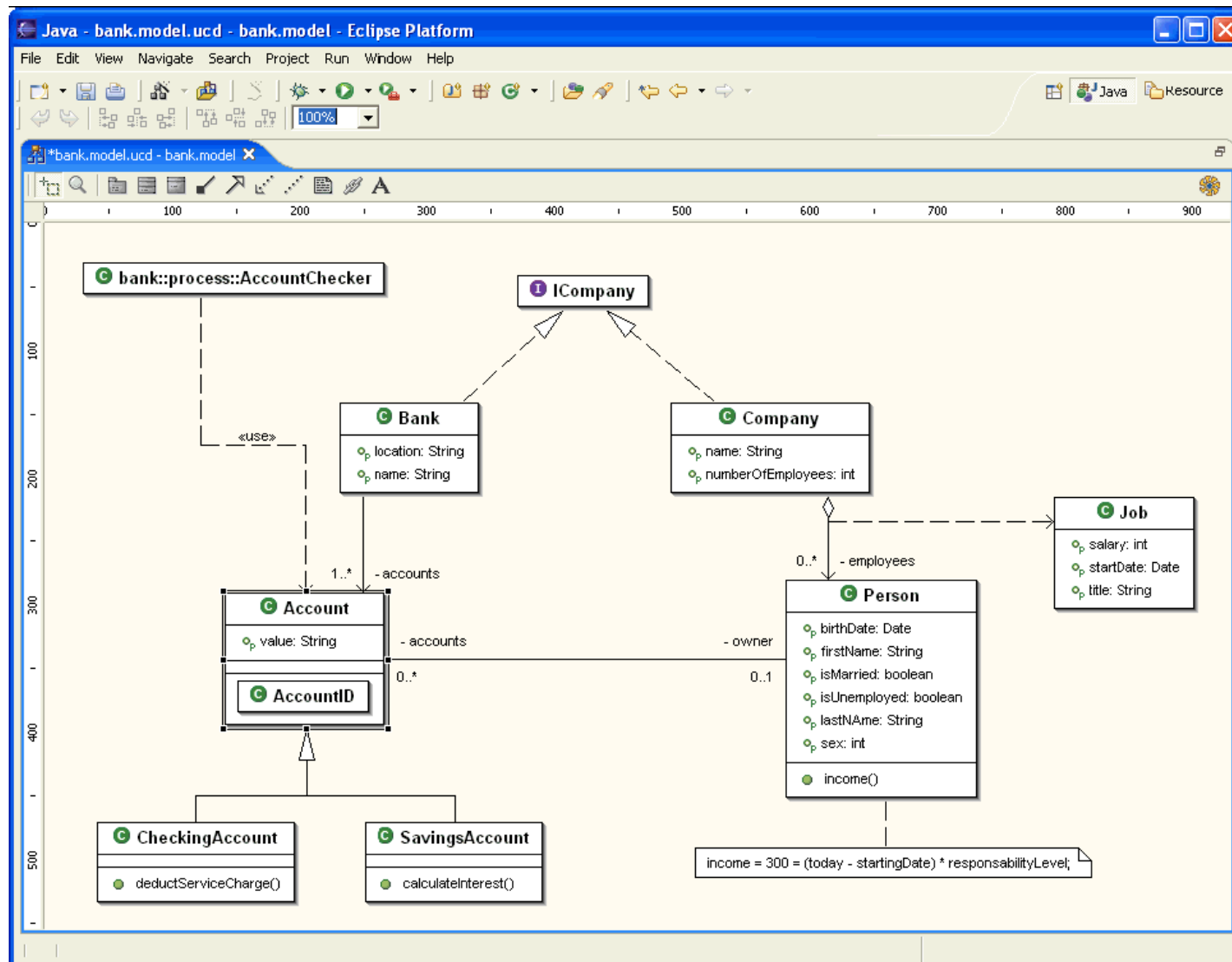
Modifiers ☐ static ☐ final ☐ transient ☐ volatile

Accessors

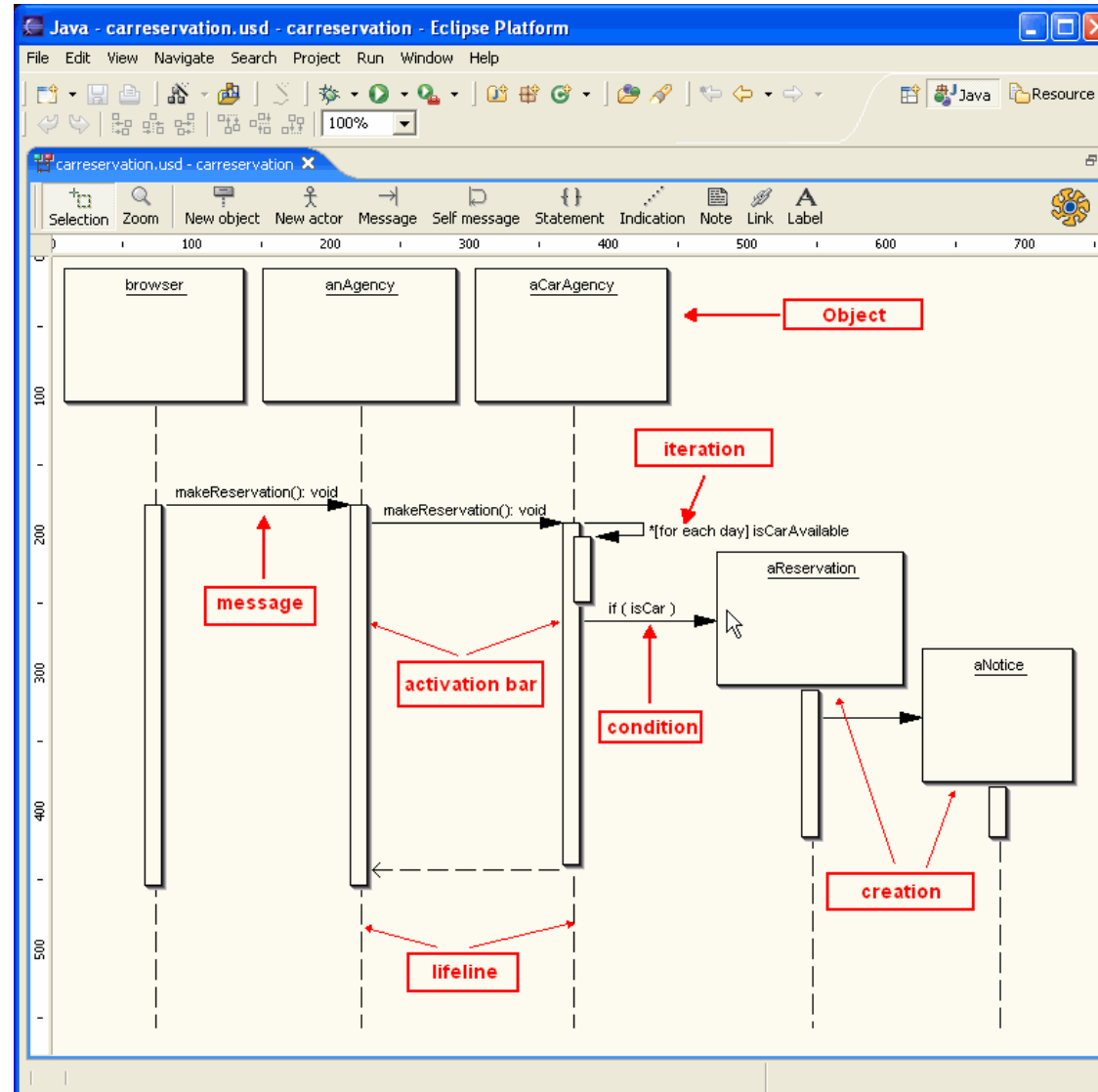
☒ Use accessors

Visibility ☒ public ☐ protected ☐ package ☐ private

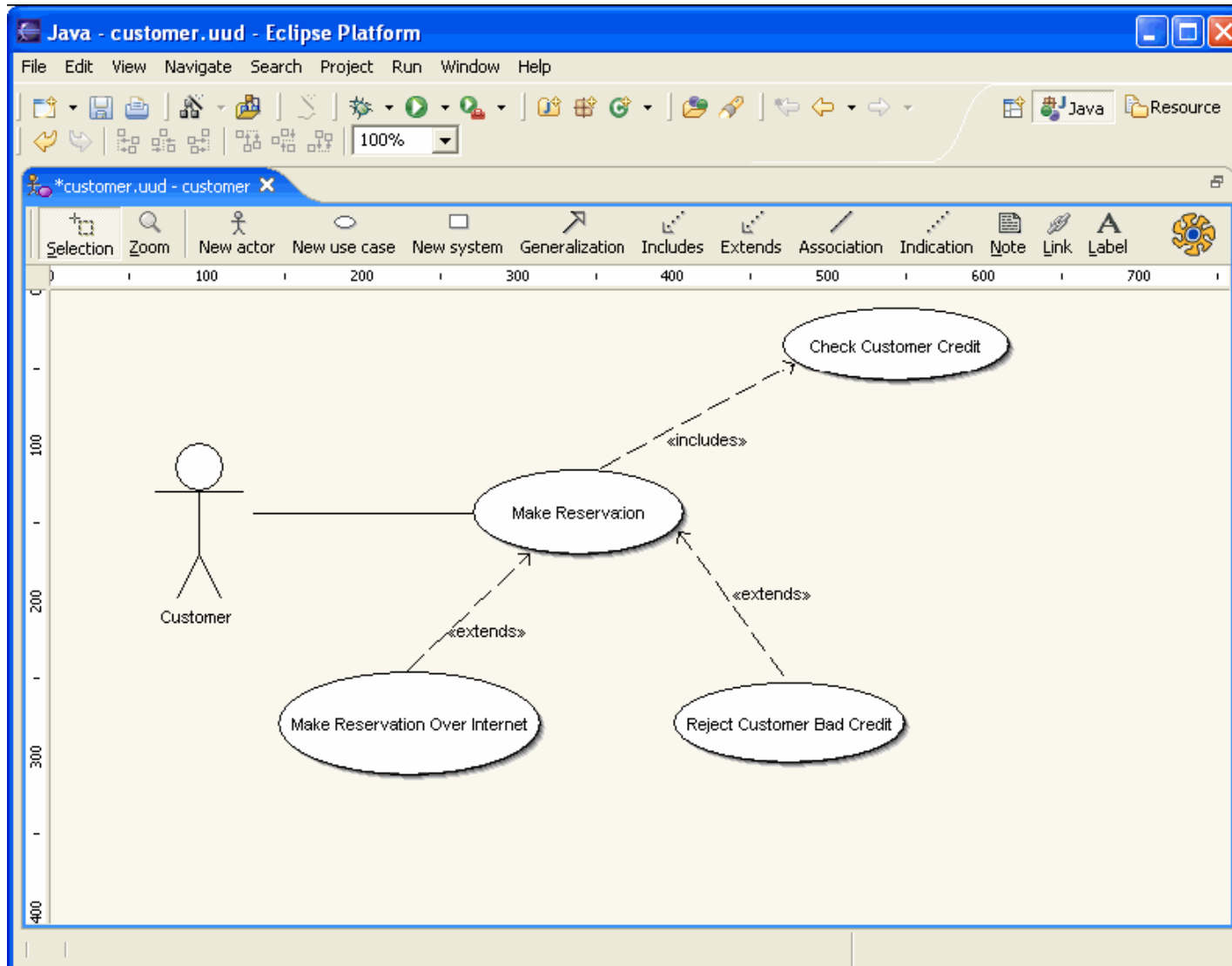
Omondo – Class Diagram



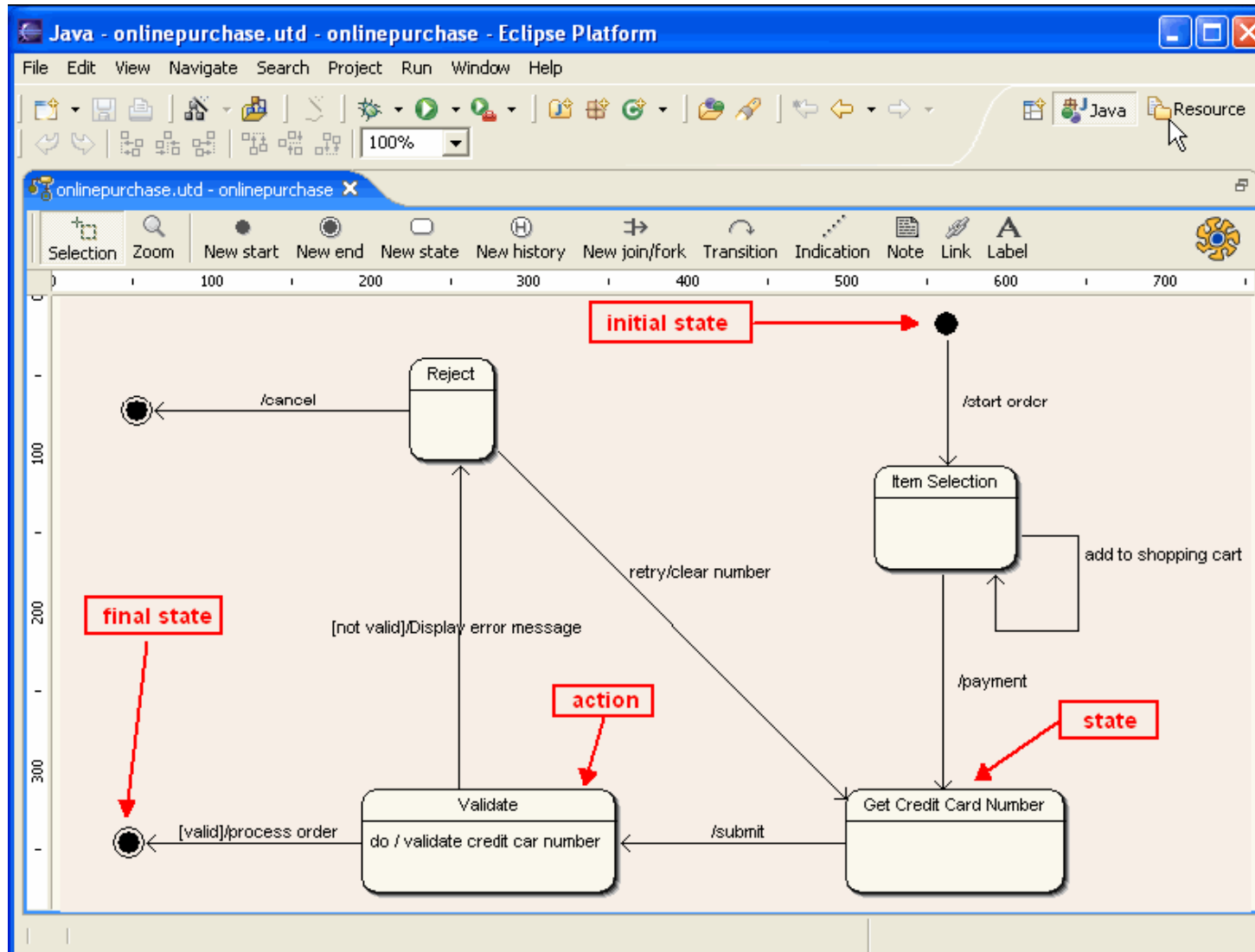
Omondo – Sequence Diagram



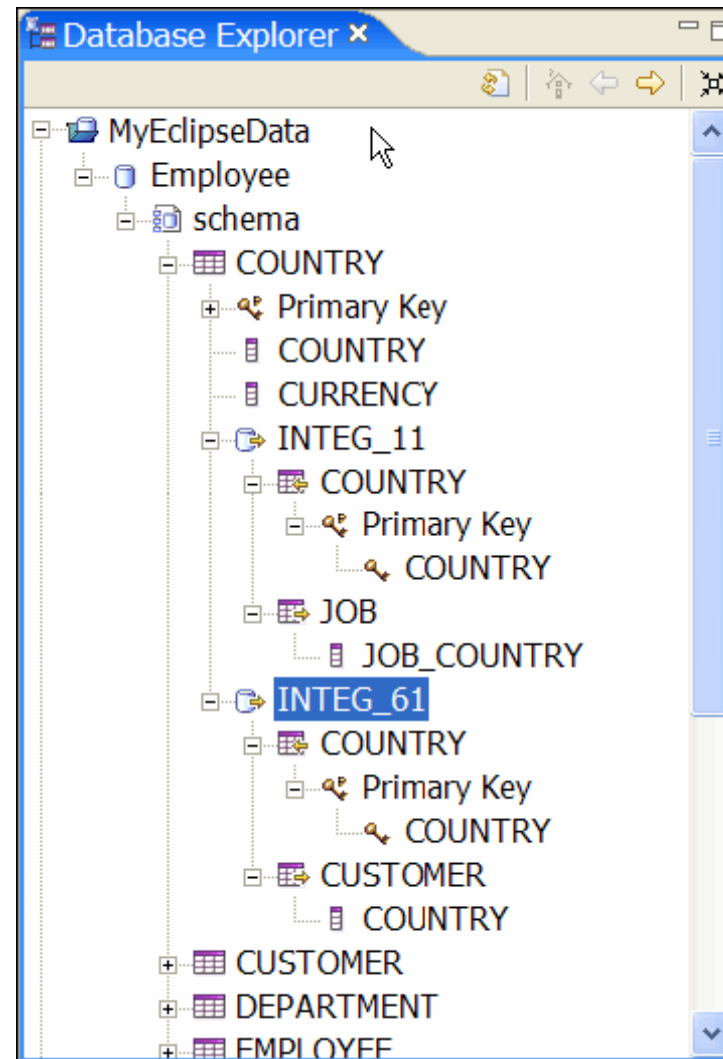
Omondo – Use Case Diagram



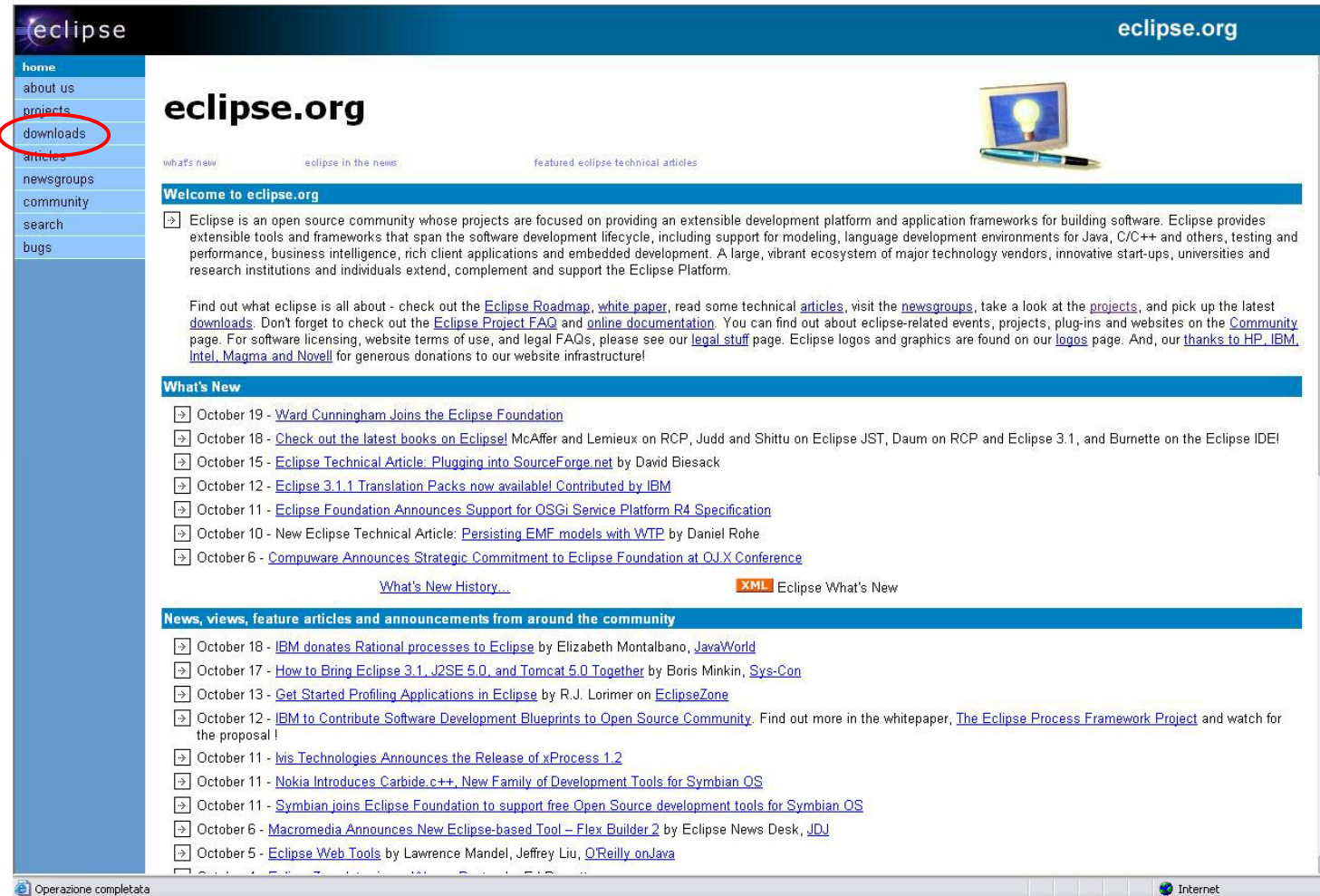
Omondo – State Diagram



Omondo – Database Explorer



www.eclipse.org



The screenshot shows the Eclipse homepage with a navigation menu on the left. The 'downloads' link is circled in red. The main content area features a welcome message, a 'What's New' section with a list of recent updates, and a 'News, views, feature articles and announcements from around the community' section.

eclipse.org

home
about us
projects
downloads
articles
newsgroups
community
search
bugs

eclipse.org

what's new | eclipse in the news | featured eclipse technical articles

Welcome to eclipse.org

Eclipse is an open source community whose projects are focused on providing an extensible development platform and application frameworks for building software. Eclipse provides extensible tools and frameworks that span the software development lifecycle, including support for modeling, language development environments for Java, C/C++ and others, testing and performance, business intelligence, rich client applications and embedded development. A large, vibrant ecosystem of major technology vendors, innovative start-ups, universities and research institutions and individuals extend, complement and support the Eclipse Platform.

Find out what eclipse is all about - check out the [Eclipse Roadmap](#), [white paper](#), read some technical [articles](#), visit the [newsgroups](#), take a look at the [projects](#), and pick up the latest [downloads](#). Don't forget to check out the [Eclipse Project FAQ](#) and [online documentation](#). You can find out about eclipse-related events, projects, plug-ins and websites on the [Community](#) page. For software licensing, website terms of use, and legal FAQs, please see our [legal stuff](#) page. Eclipse logos and graphics are found on our [logos](#) page. And, our [thanks to HP, IBM, Intel, Magma and Novell](#) for generous donations to our website infrastructure!

What's New

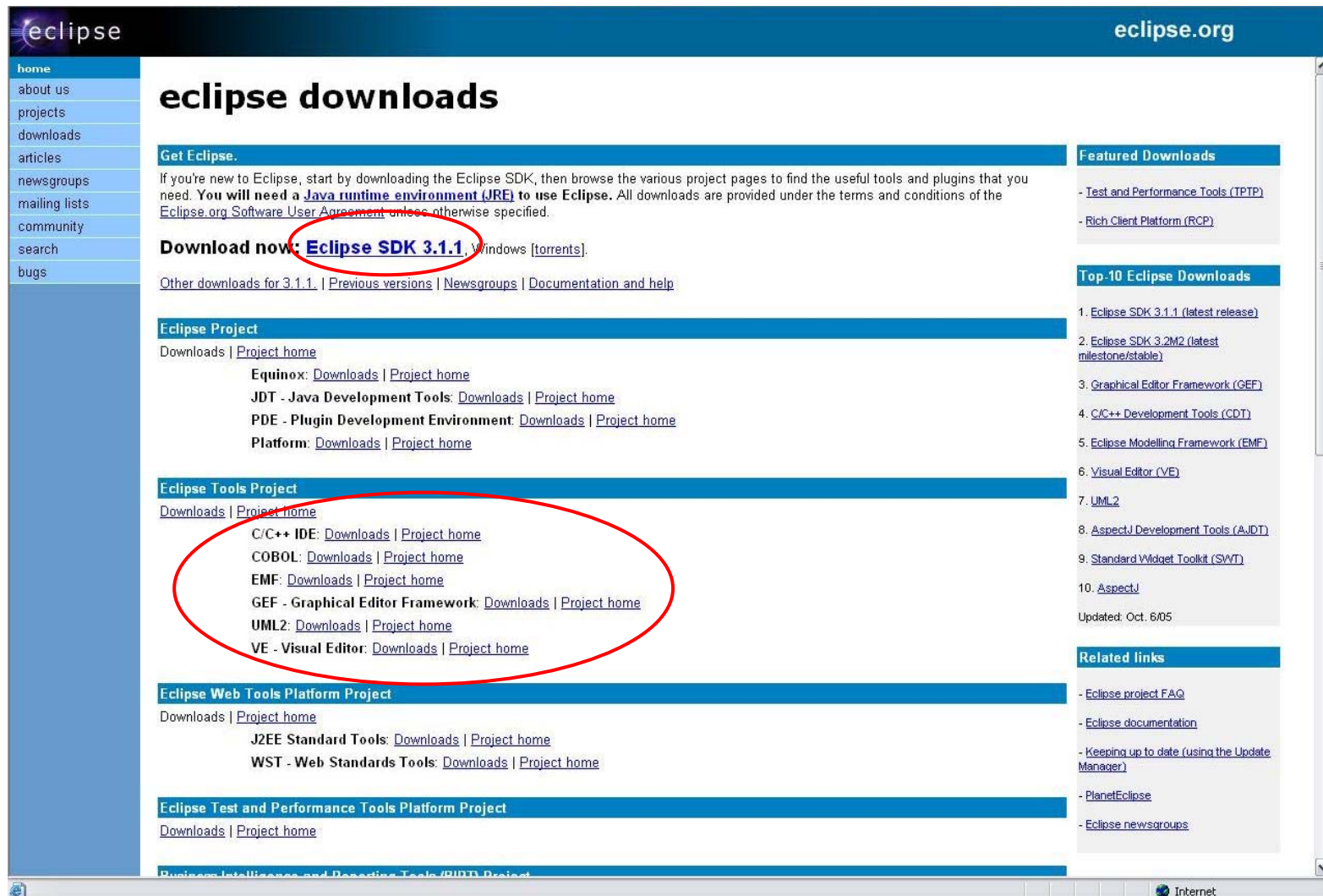
- October 19 - [Ward Cunningham Joins the Eclipse Foundation](#)
- October 18 - [Check out the latest books on Eclipse!](#) McAffer and Lemieux on RCP, Judd and Shittu on Eclipse JST, Daum on RCP and Eclipse 3.1, and Burnette on the Eclipse IDE!
- October 15 - [Eclipse Technical Article: Plugging into SourceForge.net](#) by David Biesack
- October 12 - [Eclipse 3.1.1 Translation Packs now available!](#) Contributed by IBM
- October 11 - [Eclipse Foundation Announces Support for OSGi Service Platform R4 Specification](#)
- October 10 - New Eclipse Technical Article: [Persisting EMF models with WTP](#) by Daniel Rohe
- October 6 - [Compuware Announces Strategic Commitment to Eclipse Foundation at QJX Conference](#)

[What's New History...](#) [XML](#) Eclipse What's New

News, views, feature articles and announcements from around the community

- October 18 - [IBM donates Rational processes to Eclipse](#) by Elizabeth Montalbano, [JavaWorld](#)
- October 17 - [How to Bring Eclipse 3.1, J2SE 5.0, and Tomcat 5.0 Together](#) by Boris Minkin, [Sys-Con](#)
- October 13 - [Get Started Profiling Applications in Eclipse](#) by R.J. Lorimer on [EclipseZone](#)
- October 12 - [IBM to Contribute Software Development Blueprints to Open Source Community](#). Find out more in the whitepaper, [The Eclipse Process Framework Project](#) and watch for the proposal!
- October 11 - [Vis Technologies Announces the Release of xProcess 1.2](#)
- October 11 - [Nokia Introduces Carbide.c++, New Family of Development Tools for Symbian OS](#)
- October 11 - [Symbian joins Eclipse Foundation to support free Open Source development tools for Symbian OS](#)
- October 6 - [Macromedia Announces New Eclipse-based Tool - Flex Builder 2](#) by Eclipse News Desk, [JDJ](#)
- October 5 - [Eclipse Web Tools](#) by Lawrence Mandel, Jeffrey Liu, [O'Reilly onJava](#)

Operazione completata Internet



The screenshot shows the Eclipse.org website's download page. The page has a dark blue header with the Eclipse logo and the URL 'eclipse.org'. A left sidebar contains navigation links: home, about us, projects, downloads, articles, newsgroups, mailing lists, community, search, and bugs. The main content area is titled 'eclipse downloads' and includes a 'Get Eclipse.' section with instructions for new users, emphasizing the need for a Java runtime environment (JRE). Below this, the 'Download now: Eclipse SDK 3.1.1' link is circled in red. Other download links for Windows and torrents are also present. The page lists various Eclipse projects and their download links, with the 'Eclipse Tools Project' section also circled in red. On the right, there are sections for 'Featured Downloads' (Test and Performance Tools, Rich Client Platform), 'Top-10 Eclipse Downloads' (listing various SDKs and frameworks), and 'Related links' (FAQ, documentation, update manager, PlanetEclipse, newsgroups).

eclipse eclipse.org

eclipse downloads

Get Eclipse.
If you're new to Eclipse, start by downloading the Eclipse SDK, then browse the various project pages to find the useful tools and plugins that you need. **You will need a Java runtime environment (JRE) to use Eclipse.** All downloads are provided under the terms and conditions of the [Eclipse.org Software User Agreement](#) unless otherwise specified.

Download now: Eclipse SDK 3.1.1. [Windows](#) [\[torrents\]](#).

[Other downloads for 3.1.1.](#) | [Previous versions](#) | [Newsgroups](#) | [Documentation and help](#)

Eclipse Project
[Downloads](#) | [Project home](#)
Equinox: [Downloads](#) | [Project home](#)
JDT - Java Development Tools: [Downloads](#) | [Project home](#)
PDE - Plugin Development Environment: [Downloads](#) | [Project home](#)
Platform: [Downloads](#) | [Project home](#)

Eclipse Tools Project
[Downloads](#) | [Project home](#)
C/C++ IDE: [Downloads](#) | [Project home](#)
COBOL: [Downloads](#) | [Project home](#)
EMF: [Downloads](#) | [Project home](#)
GEF - Graphical Editor Framework: [Downloads](#) | [Project home](#)
UML2: [Downloads](#) | [Project home](#)
VE - Visual Editor: [Downloads](#) | [Project home](#)

Eclipse Web Tools Platform Project
[Downloads](#) | [Project home](#)
J2EE Standard Tools: [Downloads](#) | [Project home](#)
WST - Web Standards Tools: [Downloads](#) | [Project home](#)

Eclipse Test and Performance Tools Platform Project
[Downloads](#) | [Project home](#)

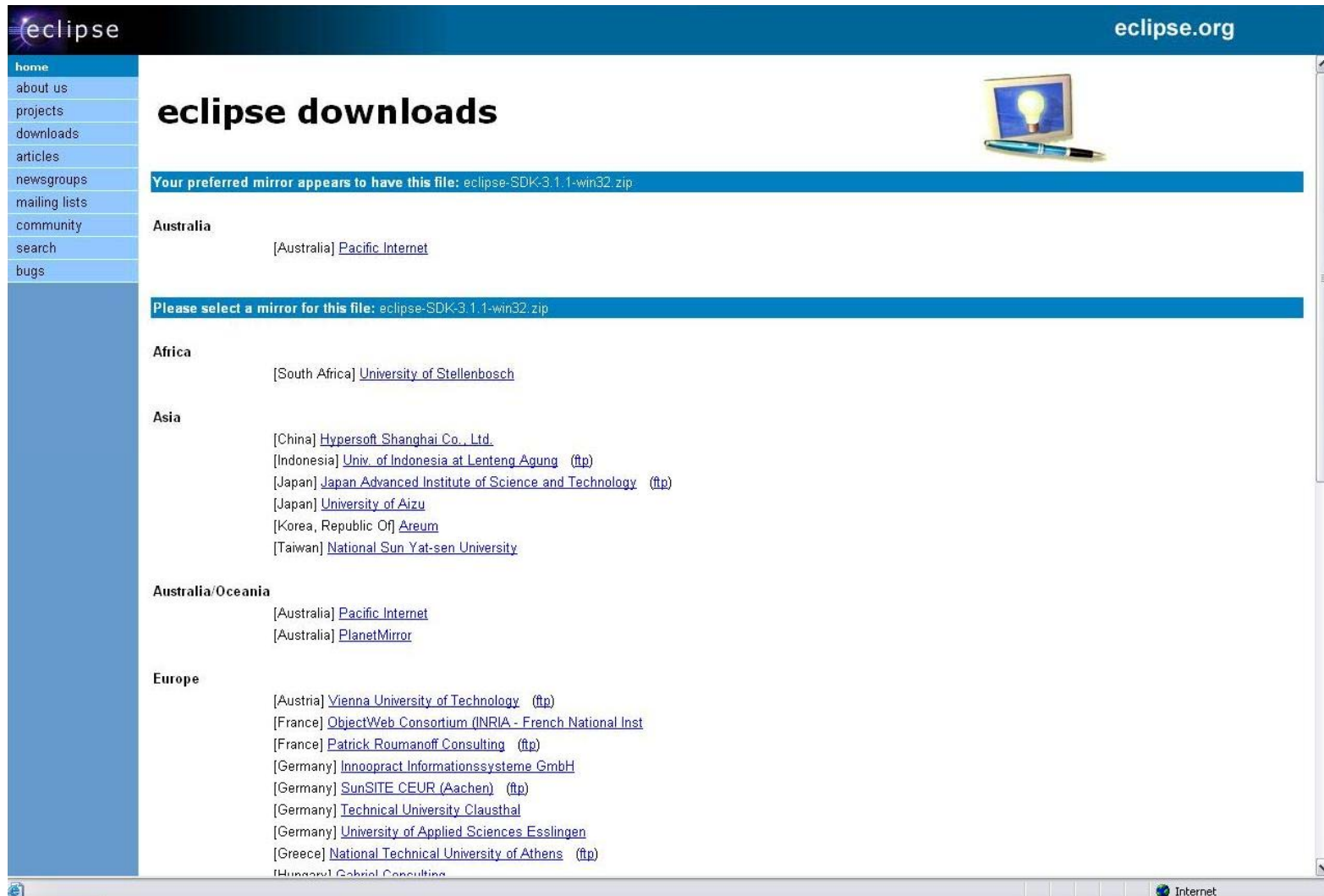
Business Intelligence and Reporting Tools (BIRT) Project

Featured Downloads
[Test and Performance Tools \(TPTP\)](#)
[Rich Client Platform \(RCP\)](#)

Top-10 Eclipse Downloads
1. Eclipse SDK 3.1.1 (latest release)
2. Eclipse SDK 3.2M2 (latest milestone/stable)
3. Graphical Editor Framework (GEF)
4. C/C++ Development Tools (CDT)
5. Eclipse Modelling Framework (EMF)
6. Visual Editor (VE)
7. UML2
8. AspectJ Development Tools (A.JDT)
9. Standard Widget Toolkit (SWT)
10. AspectJ
Updated: Oct. 6/05

Related links
[Eclipse project FAQ](#)
[Eclipse documentation](#)
[Keeping up to date \(using the Update Manager\)](#)
[PlanetEclipse](#)
[Eclipse newsgroups](#)

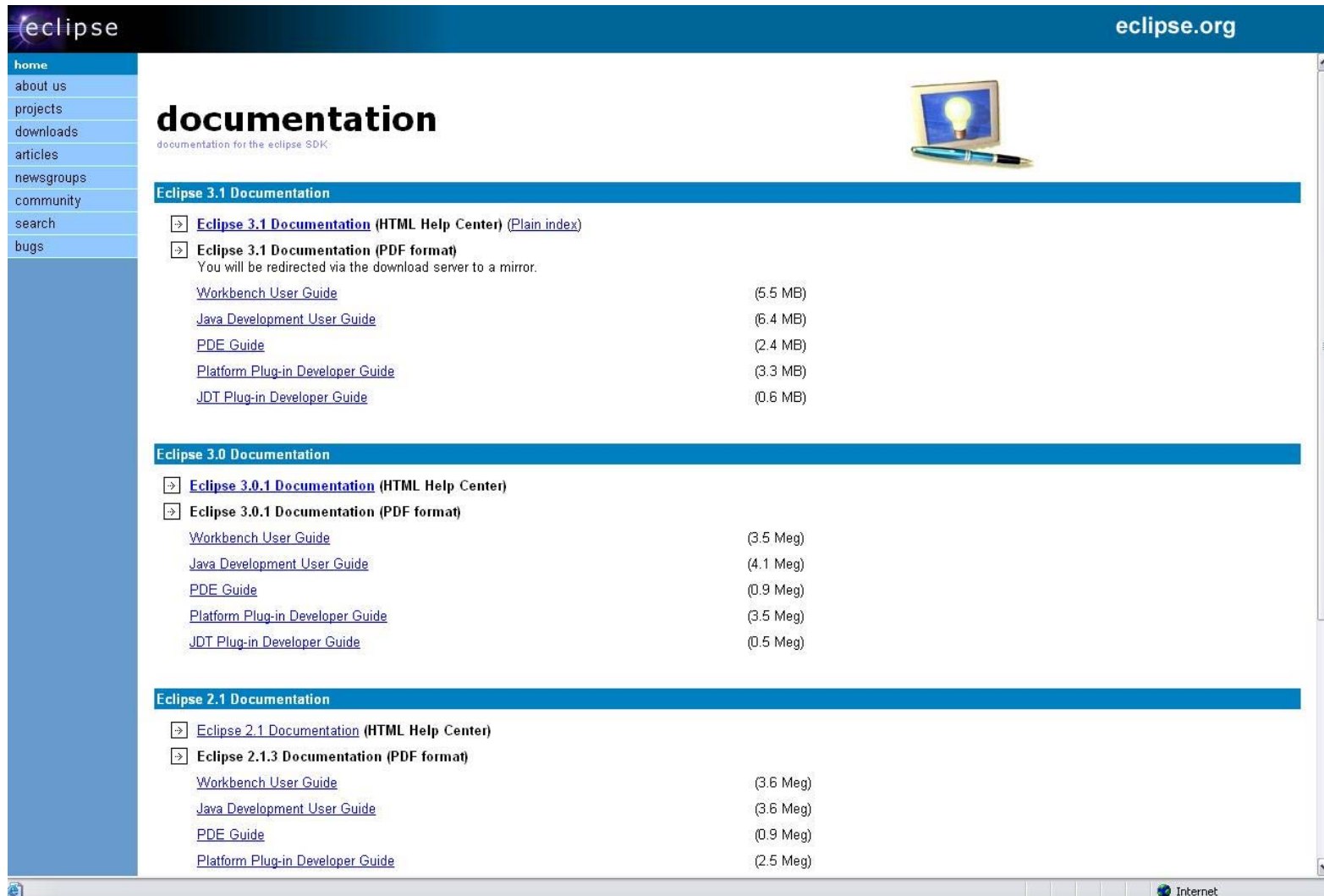
Internet



The screenshot shows the Eclipse Downloads page on eclipse.org. The page has a dark blue header with the Eclipse logo and the URL 'eclipse.org'. A left sidebar contains a navigation menu with links: home, about us, projects, downloads, articles, newsgroups, mailing lists, community, search, and bugs. The main content area is titled 'eclipse downloads' and features a small graphic of a lightbulb on a laptop. A blue banner states: 'Your preferred mirror appears to have this file: eclipse-SDK-3.1.1-win32.zip'. Below this, the page lists mirrors by region:

- Australia**
 - [Australia] [Pacific Internet](#)
- Please select a mirror for this file: eclipse-SDK-3.1.1-win32.zip**
- Africa**
 - [South Africa] [University of Stellenbosch](#)
- Asia**
 - [China] [Hypersoft Shanghai Co., Ltd.](#)
 - [Indonesia] [Univ. of Indonesia at Lenteng Agung](#) (ftp)
 - [Japan] [Japan Advanced Institute of Science and Technology](#) (ftp)
 - [Japan] [University of Aizu](#)
 - [Korea, Republic Of] [Areum](#)
 - [Taiwan] [National Sun Yat-sen University](#)
- Australia/Oceania**
 - [Australia] [Pacific Internet](#)
 - [Australia] [PlanetMirror](#)
- Europe**
 - [Austria] [Vienna University of Technology](#) (ftp)
 - [France] [ObjectWeb Consortium \(INRIA - French National Inst](#)
 - [France] [Patrick Roumanoff Consulting](#) (ftp)
 - [Germany] [Innoo pract Informationssysteme GmbH](#)
 - [Germany] [SunSITE CEUR \(Aachen\)](#) (ftp)
 - [Germany] [Technical University Clausthal](#)
 - [Germany] [University of Applied Sciences Esslingen](#)
 - [Greece] [National Technical University of Athens](#) (ftp)
 - [Hungary] [Gabriel Consulting](#)

The browser's status bar at the bottom indicates 'Internet'.



The screenshot shows the Eclipse.org website's documentation page. The page has a dark blue header with the Eclipse logo and 'eclipse.org'. A left sidebar contains a navigation menu with links: home, about us, projects, downloads, articles, newsgroups, community, search, and bugs. The main content area is titled 'documentation' with the subtitle 'documentation for the eclipse SDK'. Below this, there are three sections for Eclipse 3.1, 3.0, and 2.1 documentation. Each section lists links to HTML Help Center and PDF format documentation, along with specific guides like Workbench User Guide, Java Development User Guide, PDE Guide, Platform Plug-in Developer Guide, and JDT Plug-in Developer Guide, each with its file size.

eclipse eclipse.org

documentation
documentation for the eclipse SDK

Eclipse 3.1 Documentation

- [Eclipse 3.1 Documentation \(HTML Help Center\)](#) [\(Plain index\)](#)
- [Eclipse 3.1 Documentation \(PDF format\)](#)
You will be redirected via the download server to a mirror.

Workbench User Guide	(5.5 MB)
Java Development User Guide	(6.4 MB)
PDE Guide	(2.4 MB)
Platform Plug-in Developer Guide	(3.3 MB)
JDT Plug-in Developer Guide	(0.6 MB)

Eclipse 3.0 Documentation

- [Eclipse 3.0.1 Documentation \(HTML Help Center\)](#)
- [Eclipse 3.0.1 Documentation \(PDF format\)](#)

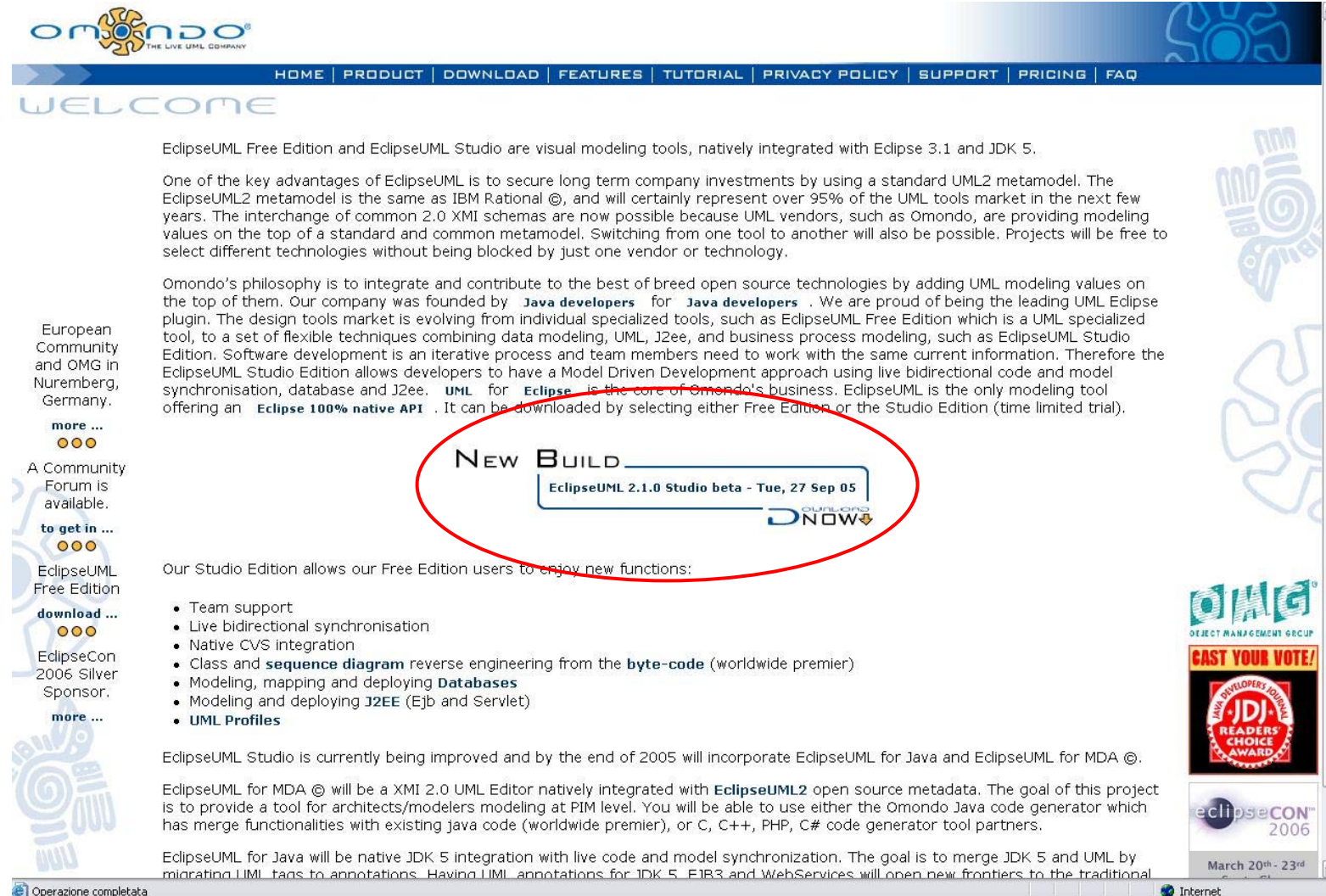
Workbench User Guide	(3.5 Meg)
Java Development User Guide	(4.1 Meg)
PDE Guide	(0.9 Meg)
Platform Plug-in Developer Guide	(3.5 Meg)
JDT Plug-in Developer Guide	(0.5 Meg)

Eclipse 2.1 Documentation

- [Eclipse 2.1 Documentation \(HTML Help Center\)](#)
- [Eclipse 2.1.3 Documentation \(PDF format\)](#)

Workbench User Guide	(3.6 Meg)
Java Development User Guide	(3.6 Meg)
PDE Guide	(0.9 Meg)
Platform Plug-in Developer Guide	(2.5 Meg)

Internet



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WELCOME

EclipseUML Free Edition and EclipseUML Studio are visual modeling tools, natively integrated with Eclipse 3.1 and JDK 5.

One of the key advantages of EclipseUML is to secure long term company investments by using a standard UML2 metamodel. The EclipseUML2 metamodel is the same as IBM Rational ©, and will certainly represent over 95% of the UML tools market in the next few years. The interchange of common 2.0 XMI schemas are now possible because UML vendors, such as Omondo, are providing modeling values on the top of a standard and common metamodel. Switching from one tool to another will also be possible. Projects will be free to select different technologies without being blocked by just one vendor or technology.

Omondo's philosophy is to integrate and contribute to the best of breed open source technologies by adding UML modeling values on the top of them. Our company was founded by **Java developers** for **Java developers**. We are proud of being the leading UML Eclipse plugin. The design tools market is evolving from individual specialized tools, such as EclipseUML Free Edition which is a UML specialized tool, to a set of flexible techniques combining data modeling, UML, J2ee, and business process modeling, such as EclipseUML Studio Edition. Software development is an iterative process and team members need to work with the same current information. Therefore the EclipseUML Studio Edition allows developers to have a Model Driven Development approach using live bidirectional code and model synchronisation, database and J2ee. **UML for Eclipse** is the core of Omondo's business. EclipseUML is the only modeling tool offering an **Eclipse 100% native API**. It can be downloaded by selecting either Free Edition or the Studio Edition (time limited trial).

European Community and OMG in Nuremberg, Germany.

more ...

A Community Forum is available.

to get in ...

EclipseUML Free Edition

download ...

EclipseCon 2006 Silver Sponsor.

more ...

NEW BUILD

EclipseUML 2.1.0 Studio beta - Tue, 27 Sep 05

Our Studio Edition allows our Free Edition users to enjoy new functions:

- Team support
- Live bidirectional synchronisation
- Native CVS integration
- Class and **sequence diagram** reverse engineering from the **byte-code** (worldwide premier)
- Modeling, mapping and deploying **Databases**
- Modeling and deploying J2EE (Ejb and Servlet)
- **UML Profiles**

EclipseUML Studio is currently being improved and by the end of 2005 will incorporate EclipseUML for Java and EclipseUML for MDA ©.

EclipseUML for MDA © will be a XMI 2.0 UML Editor natively integrated with **EclipseUML2** open source metadata. The goal of this project is to provide a tool for architects/modelers modeling at PIM level. You will be able to use either the Omondo Java code generator which has merge functionalities with existing java code (worldwide premier), or C, C++, PHP, C# code generator tool partners.

EclipseUML for Java will be native JDK 5 integration with live code and model synchronization. The goal is to merge JDK 5 and UML by migrating UML tags to annotations. Having UML annotations for JDK 5, EJB3 and WebServices will open new frontiers to the traditional

Operazione completata

Internet

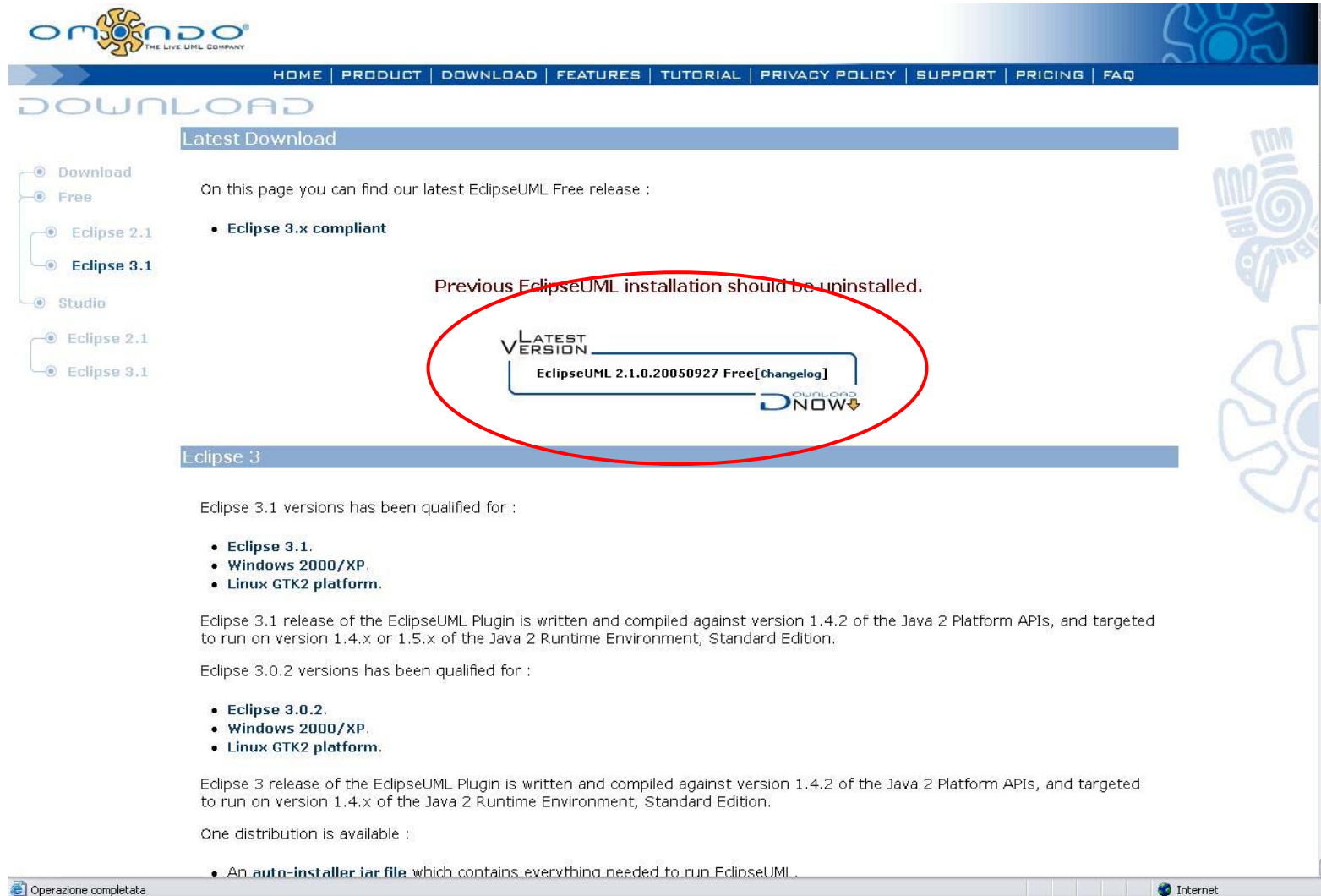
OMG
OBJECT MANAGEMENT GROUP

CAST YOUR VOTE!

JDJ
READERS' CHOICE AWARD

eclipseCON
2006

March 20th - 23rd



The screenshot shows the Omondo website's download page. The header includes the Omondo logo and a navigation menu with links: HOME, PRODUCT, DOWNLOAD, FEATURES, TUTORIAL, PRIVACY POLICY, SUPPORT, PRICING, and FAQ. The main heading is "DOWNLOAD".

Latest Download

On this page you can find our latest EclipseUML Free release :

- **Eclipse 3.x compliant**

Previous EclipseUML installation should be uninstalled.

LATEST VERSION
EclipseUML 2.1.0.20050927 Free[changelog]
[DOWNLOAD NOW](#)

Eclipse 3

Eclipse 3.1 versions has been qualified for :

- **Eclipse 3.1.**
- **Windows 2000/XP.**
- **Linux GTK2 platform.**

Eclipse 3.1 release of the EclipseUML Plugin is written and compiled against version 1.4.2 of the Java 2 Platform APIs, and targeted to run on version 1.4.x or 1.5.x of the Java 2 Runtime Environment, Standard Edition.

Eclipse 3.0.2 versions has been qualified for :

- **Eclipse 3.0.2.**
- **Windows 2000/XP.**
- **Linux GTK2 platform.**

Eclipse 3 release of the EclipseUML Plugin is written and compiled against version 1.4.2 of the Java 2 Platform APIs, and targeted to run on version 1.4.x of the Java 2 Runtime Environment, Standard Edition.

One distribution is available :

- **An auto-installer jar file** which contains everything needed to run EclipseUML.

At the bottom of the browser window, a status bar shows "Operazione completata" and "Internet".



DEMO





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dell'Informazione
Università degli Studi di Parma



Software Development Tools

- The Eclipse Platform -

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