

Angelo Gargantini



Eclipse

**un editor per Java
ma anche di più di questo**



IO, Angelo Gargantini



- Ricercatore di Ingegneria Informatica UniBG qui a Dalmine
- Ricerca: ingegneria del software
- Insegno
 - Informatica II prog. OO in Java – I anno II semestre
 - Informatica III – IV anno
 - Progetto di Informatica III (progetto in Java)





Agenda



- Cosa è eclipse
- Eclipse come editor per Java
 - Funzionalità base
 - Cenni a funzionalità avanzate (plugin)
- Eclipse come framework per sviluppare
 - Plugin (estensioni)
 - Applicazioni (Rich Client Platform)



Eclipse



- Cosa è eclipse?
 - Un editor per Java
 - Scrivi i tuoi programmi, compili, debug, ...
 - Un editor in generale
 - Scrivi i tuoi file di testo, pagine web, etc.
 - Una piattaforma su cui sviluppare applicazioni
 - Riusare molte cose
 - Sviluppare mediante plugin



Licenza



- EPL (eclipse public license)
- Open source/Free Software
 - Si può usare liberamente
 - Si può scaricare il codice sorgente
 - Si può condividere il codice sorgente
 - Si può modificare il codice
 - Si possono sviluppare prodotti derivativi (basati su eclipse)

Differenza rispetto altre licenze open source



- Rispetto GPL (es kernel linux)
 - Permette di distribuire prodotti basati su eclipse con licenze non EPL e non open (Non in GPL)
 - La licenza viene terminata se si fa causa **patent retaliation** clause (non in GPL2)
- Rispetto ad Apache/BSD
 - Porzioni di codice EPLed modificate devono rimanere EPL





Storia



'90 Microsoft Visual Studio

- Per Java: Symantec's Visual Café, Borland's JBuilder, IBM's Visual Age for Java, Netbeans Sun

98 IBM Software Group inizia a lavorare a un IDE

01 rilasciato open source

- Controllato da IBM+Rational+Borland e pochi altri

04 Eclipse Foundation

- IBM e molti altri membri partecipano, ma la Foundation è autonoma

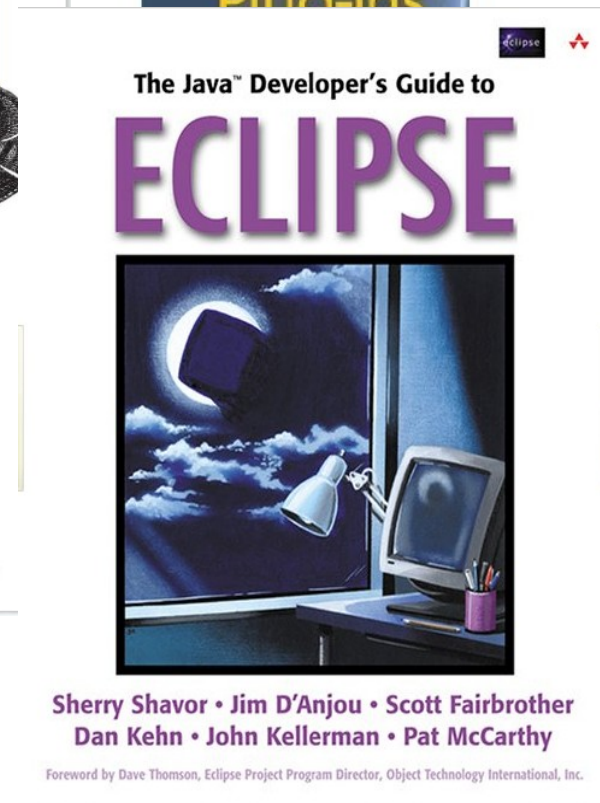
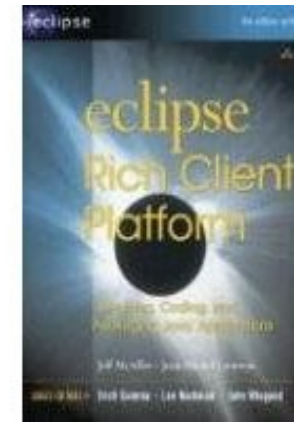
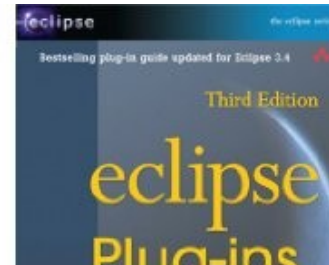
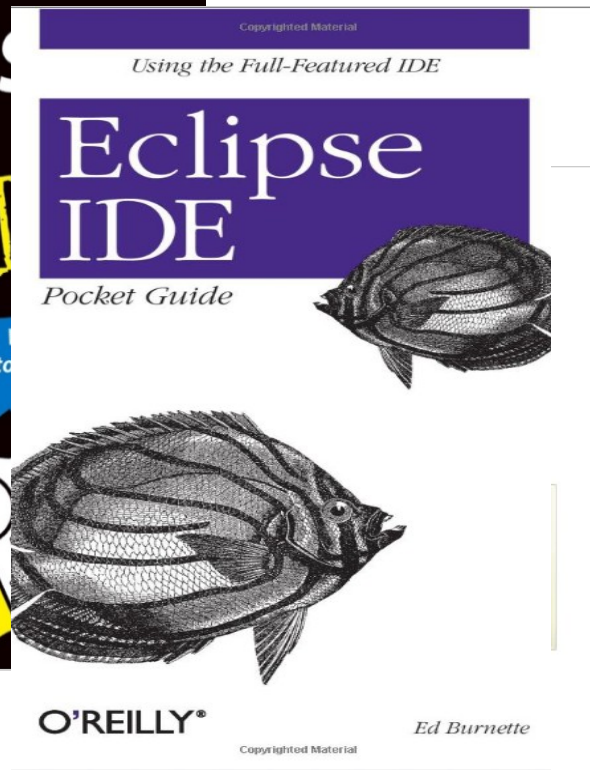
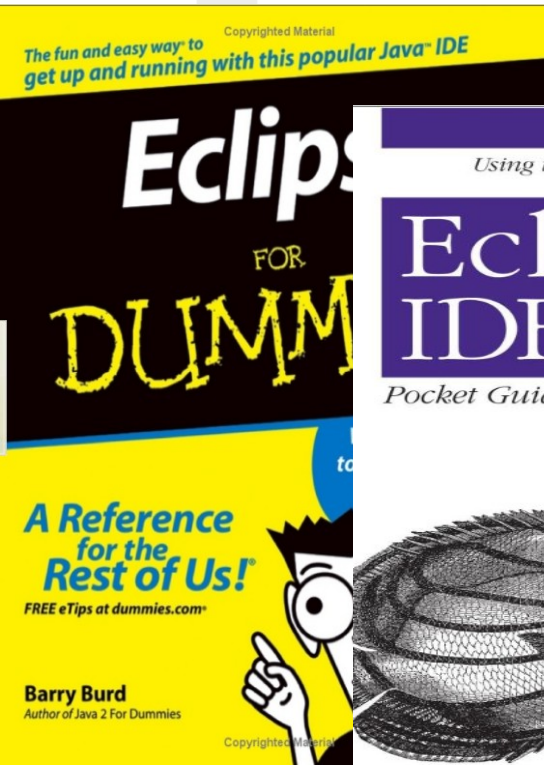


Sito di eclipse



- www.eclipse.org
 - Materiale: tutorial, articoli
 - Software
 - Forum, ...
- Eclipse ECOSYSTEM

Libri



Eclipse italian community



- C'è una comunità di utilizzatori di eclipse:

<http://eclipse.dis.unina.it/>

- Conferenza annuale ECLIPSE IT:

- 06 Roma
- 07 Napoli
- 08 Bari
- 09?





Eclipse come editor Java

Come installarlo



- www.eclipse.org
- Scaricare come zip, unzippare e lanciare
- Basta java
- Mac,linux, window,

START ECLIPSE

Eclipse Downloads

Eclipse Packages

Projects

Galileo Packages (based on Eclipse 3.5 SR1) - [Compare Packages](#)

Looking



Eclipse IDE for Java EE Developers (188 MB)

Tools for Java developers creating Java EE and Web applications, including a Java IDE, tools for Java EE, JPA, JSF, Mylyn and others. [More...](#)

Downloads: 408,639

Windows

Mac Carbon 32bit 64bit

Mac Cocoa 32bit 64bit
Linux 32bit 64bit



Eclipse IDE for Java Developers (92 MB)

The essential tools for any Java developer, including a Java IDE, a CVS client, XML Editor and Mylyn. [More...](#)

Downloads: 213,355

Windows

Mac Carbon 32bit 64bit

Mac Cocoa 32bit 64bit
Linux 32bit 64bit



Eclipse for PHP Developers (138 MB)

Tools for PHP developers creating Web applications, including PHP Development Tools (PDT), Web Tools Platform, Mylyn and others. [More...](#)

Downloads: 98,435

Windows

Mac Carbon 32bit 64bit

Mac Cocoa 32bit 64bit
Linux 32bit 64bit



Eclipse IDE for C/C++ Developers (79 MB)

An IDE for C/C++ developers with Mylyn integration. [More...](#)

Downloads: 95,525

Windows

Mac Carbon 32bit 64bit

Mac Cocoa 32bit 64bit
Linux 32bit 64bit



Eclipse for RCP/Plug-in Developers (182 MB)

A complete set of tools for developers who want to create Eclipse plug-ins or Rich Client Applications. It includes a complete SDK, developer tools and source code, plus Mylyn, an XML editor and the Eclipse Communication Framework. [More...](#)

Downloads: 20,429

Windows

Mac Carbon 32bit 64bit

Mac Cocoa 32bit 64bit
Linux 32bit 64bit



Eclipse Modeling Tools (includes Incubating components) (367 MB)

This modeling package contains a collection of Eclipse Modeling Project components, including EMF, GMF, MDT XSD/OCL/UML2, M2M, M2T, and EMFT elements. It includes a complete SDK, developer tools and source code. Note that the Modeling package includes some **incubating** components, as indicated by feature numbers less than 1.0.0 on the feature list. [More...](#)

Downloads: 17,360

Windows

Mac Carbon 32bit 64bit

Mac Cocoa 32bit 64bit
Linux 32bit 64bit



Eclipse IDE for Java and Report Developers (219 MB)

JEE tools and BIRT reporting tool for Java developers to create JEE and Web applications that also have reporting needs. [More...](#)

Downloads: 16,693

Windows

Mac Carbon 32bit 64bit

Mac Cocoa 32bit 64bit
Linux 32bit 64bit

Eclipse SOA Platform for Java and SOA Developers (136 MB)

Eclipse SOA Platform is a runtimes and tools integration platform for SOA developers. It

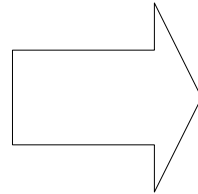
Be



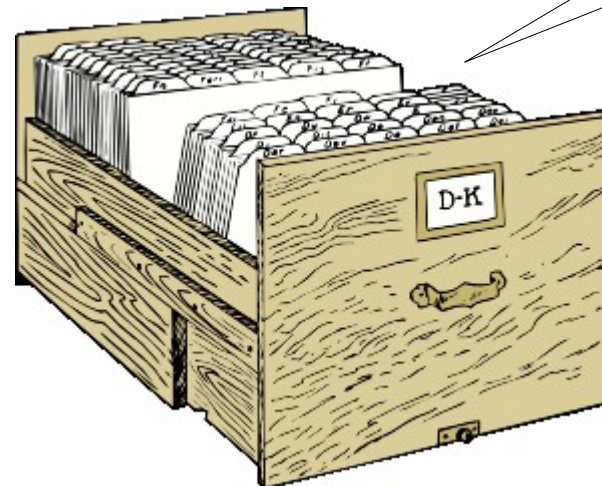
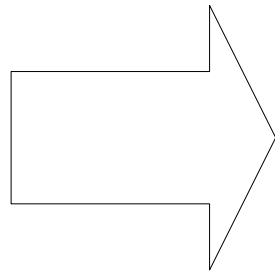
Concetti base



- Workspace



- Project



File Java



Aiuto (1)



- Wizard
 - *es. new class*
- Colorazione della sintassi
- Segnalazione degli errori mentre si scrive
- Browsing della documentazione online

```
/**  
 *  
 */  
public class ExampleClass {  
    public static void main(String[] args) {  
        Integer i = new Intege(1);  
        byte b = i.byteValue();  
    }  
}
```

Tasks (Filter matched 1 of 1 item)			
✓	!	Description	Resource
✓	!	Intege cannot be resolved or is not a type	ExampleClass.java



Aiuti (2)



- Template (es. for)
- Autocompletion
 - *Inizio + CTRL tab*
- Quick fix
 - *SHIFT F1*
- Refactoring



Views

- Hierarchy
- Proprietà
- ...





Esercizio



- A scelta:
 - Calcolo dell'area di un cerchio
 - Calcolo dell'area di un triangolo
 - Formula di Erone
 - Scoperta numeri primi
 - Crivello di Eratostene



Strumenti aggiuntivi: Eclipse plugins



Dove trovarli?



- Centinaia di plugin per eclipse
 - Estendono le funzionalità base
- <http://www.eclipseplugincentral.com>



Esempi di plugin

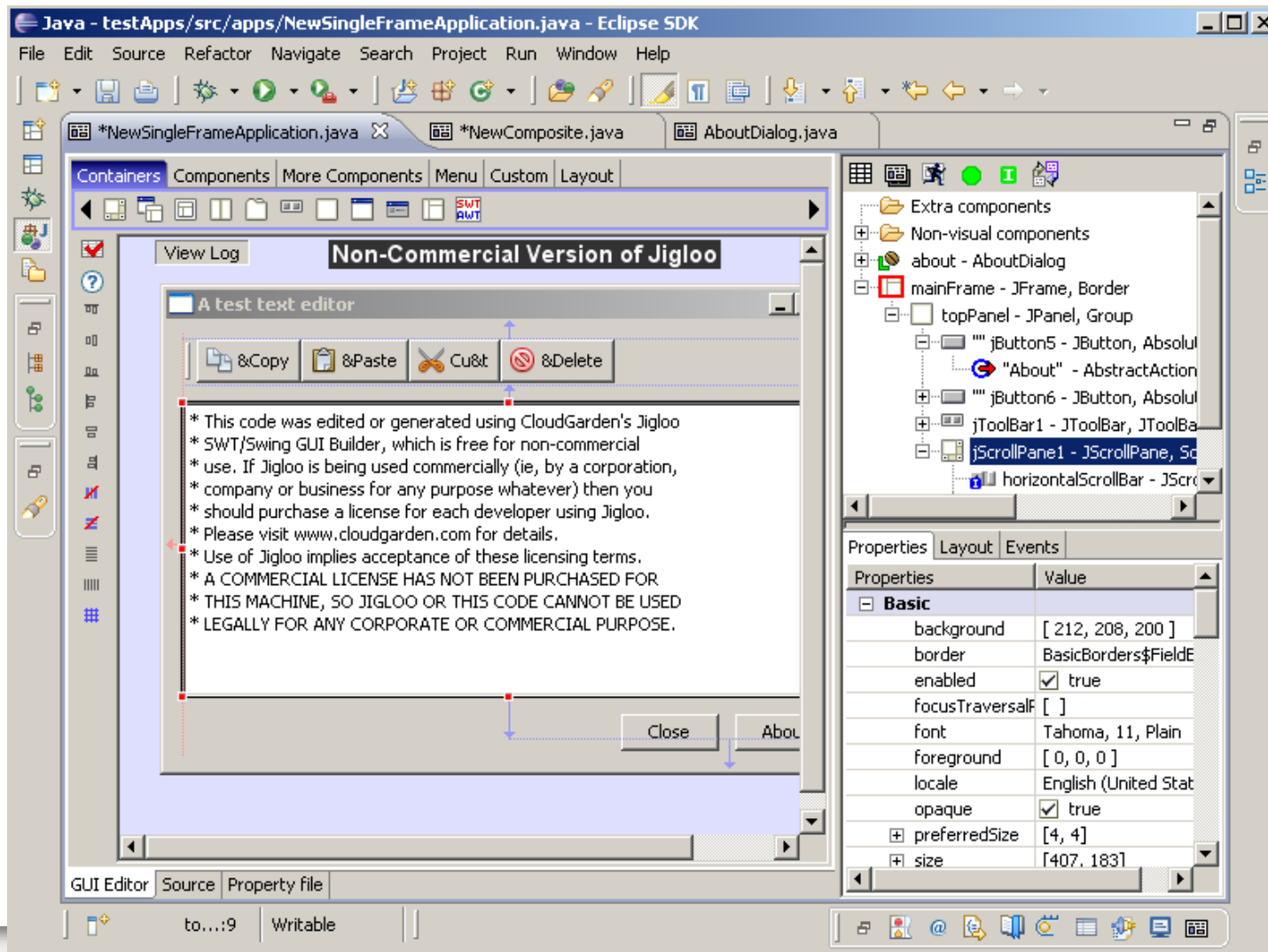


- Open source:
 - EclEmma
 - UMLET per UML
- Commerciali
 - STAN: <http://www.stan4j.com>
 - Interfacce grafiche ...





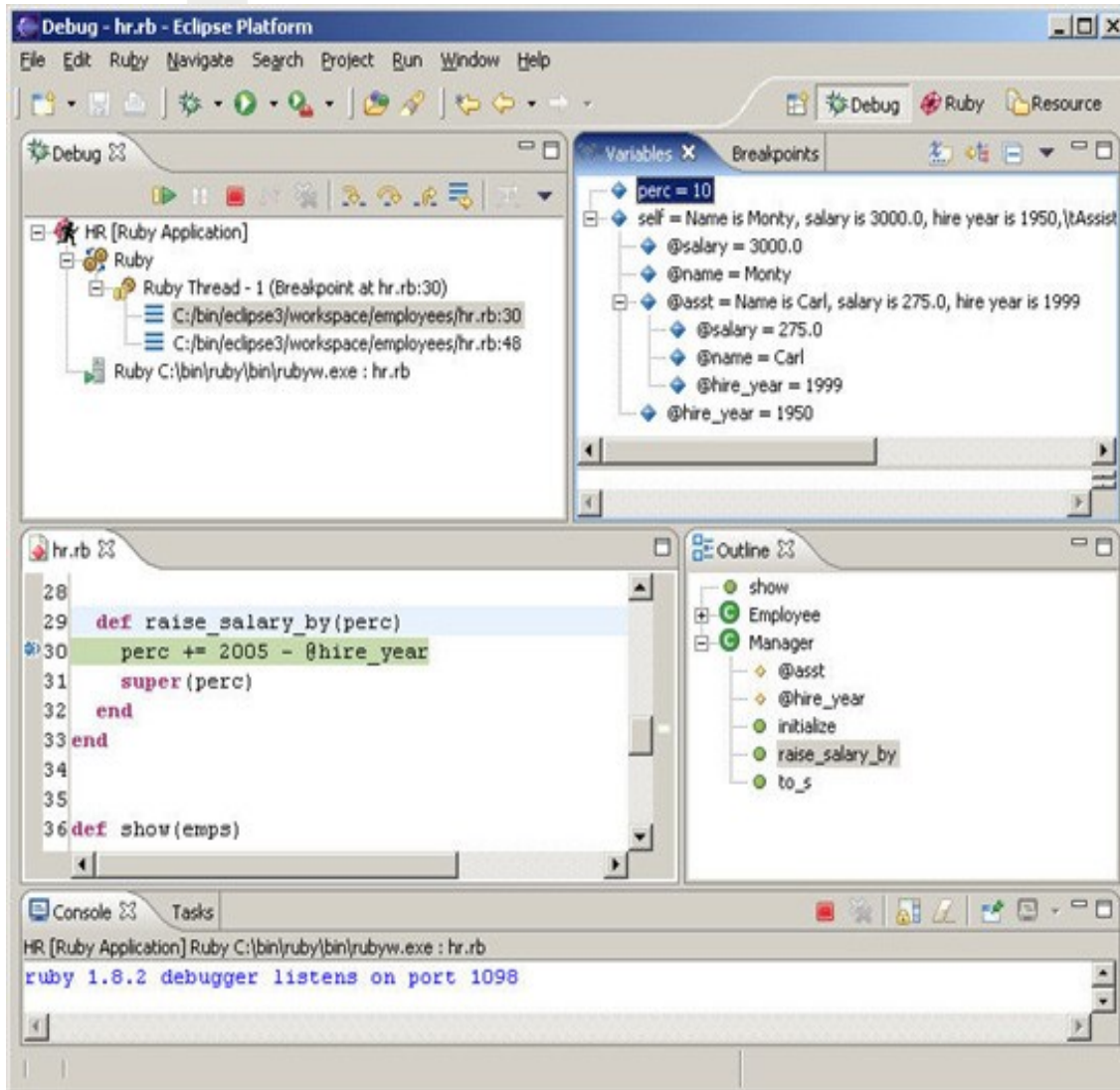
jigloo





Eclipse come editor di altri linguaggi

Eclipse for Ruby





Altri linguaggi

- Per pascal (diversi)
- Per xyz ...





Eclipse come framework per sviluppare plugin



Demo



- Editor per un linguaggio (linux day)
 - Usando il wizard



Eclipse come framework per sviluppare applicazioni



Demo per RCP

- Applicazione demo



Pannello di controllo



The screenshot shows a window titled "RCP Toolbox Samples" with several sub-panels:

- ScrollingText**: A text area with scrollbars.
- PropagateGroup**: A group of widgets.
- CoolGauge**: A circular gauge with a needle pointing to approximately 35.
- CoolSlider**: A vertical slider with a blue bar and a red knob.
- GoogleMap**: A map of South Africa with various cities labeled.
- Duallist Samples View**: A list of names (Graem, AB, Hersch, Justin, Mark, Shaun, Albie, Vernon, Johan, Andre) with "Add", "Remove", "Add All", and "Remove All" buttons. Below the list is a "Number of cricketers selected:" label.
- CoolButtons**: A set of buttons including "Push Buttons" (red, green, blue, red), a "Toggle Button" (checkbox), and "Hot Spot" options.
- DigitalClock**: A digital clock showing "00:01:42" with "start" and "stop" buttons, and "Background Colour" and "Foreground Colour" change buttons.
- ImageSequencer**: A sequence of images with "Stop", "Start", and "Reset" buttons.

bioclipse



The screenshot displays the Bioclipse application window with the following components:

- FileView:** A file browser showing a directory structure with files like `naphtalene.cml`, `viagra.xyz`, `zif268.pdb`, and a subdirectory `my_mols` containing `thiamin.mol`, `reserpine.mol`, and `polycarpol.mol`.
- PDB Viewer:** A text window displaying the header and remarks of the `zif268.pdb` file. The header includes: `HEADER DNA-BINDING PROTEIN 17-SEP-`, `COMPND ZIF268 IMMEDIATE EARLY GENE (KROX-24) COMPLEX W`, `COMPND 2 11 BASE PAIR DNA FRAGMENT`, `SOURCE MOUSE (MUS MUSCULUS)`, `AUTHOR N.P.PAVLETICH,C.O.PABO`, `REVDAT 1 31-OCT-93 IZAA 0`, `JRNL AUTH N.P.PAVLETICH,C.O.PABO`, `JRNL TITL ZINC FINGER-DNA RECOGNITION: CRYSTAL`, `JRNL TITL 2 OF A ZIF268-DNA COMPLEX AT 2.1 ANGSTRO`, and `JRNL REF SCIENCE V. 252`. Remarks include: `REMARK 1`, `REMARK 2 RESOLUTION. 2.1 ANGSTROMS.`, `REMARK 3 REFINEMENT.`, `REMARK 3 PROGRAM 1 X-PLOR`, `REMARK 3 AUTHORS 1 BRUNGER`, `REMARK 3 PROGRAM 2 TNT`, `REMARK 3 AUTHORS 2 TRONRUD,TEN EYCK,`, `REMARK 3 R VALUE 0.182`, `REMARK 3 RMSD BOND DISTANCES 0.014 ANGSTROMS`, `REMARK 3 RMSD BOND ANGLES 2.34 DEGREES`, `REMARK 3`, `REMARK 3 NUMBER OF REFLECTIONS 9047`, `REMARK 3 RESOLUTION RANGE 7.0 - 2.1 ANGSTROMS`, `REMARK 3 DATA CUTOFF 2.0 SIGMA(F)`, `REMARK 4`, and `REMARK 4 THE STRUCTURE CONTAINS THREE ZN2+ IONS AND 129`, `REMARK 4 MOLECULES.`
- Jmol View:** A 3D ball-and-stick model of the protein-DNA complex, showing atoms in various colors (red, blue, grey, yellow) and their spatial arrangement.
- Properties:** A table listing molecular properties:

Property	Value
CDK	
Atom count	1290
Bond count	0
Formula	C645N237O378S7P20Zn3
Mass	18139.797
Natural mass	18154.566
Smiles	O.C.C.O.C.O.C.C.N.C.N.C.C.N
General	
description	Bioclipse Molecule
name	zif268.pdb
path	/home/ola/data/testmols/zif268.pdb
- Console:** A text area showing the message: `Bioclipse console` and `Console initiated`.



Catalogo per pezzi di ricambi



Details - IBM Lotus Notes

File View Tools Window Help

Home * Dirk Rüdiger - Mail * PLM Cockpit *

All Calendars Search

*LegoTruck *

Assembly: (ID=A4000100000)

- A4000100000/0001,2 (Tregpo)
 - A400040000/0001,2/1 (Milde)
 - A400005502/0001,1/1 (Muldenträger kurz)
 - A400005502/0001,1/2 (Muldenträger kurz)
 - A400005601/0001,1/1 (Muldenträger)
 - A400005601/0001,1/2 (Muldenträger)
 - A400005901/0001,1/1 (Muldenschwier)
 - A400005901/0001,1/2 (Muldenschwier)
 - A400010000/0001,1/1 (Fahrerhaus)
 - A400003301/0001,1/1 (Fahrerhauslagerung)
 - A400003401/0001,1/1 (Fahrerhausboden)
 - A400003501/0001,1/1 (Fahrerhausvorderwand)
 - A400006401/0001,1/1 (Fahrerhausseitenwand links)
 - A400006501/0001,1/1 (Fahrerhausseitenwand rechts)

Assembly Project Activity Change Request Change Order Document

baa20506.wrl Tregpo.wrl

Details

General

A4000100000/0001,2 (Tregpo)

uid	AssemblyDefinition1170
alias	
name	Tregpo
description	Virtual assembly of the Tregpo Truck
id	A4000100000
version	0001,2
definition	pv0002
id owner	DC (DaimlerChrysler AG)
role	id owner
id	DAI
name	Daimler AG
type	AG
is applied to	Assembly_definition
creation	Nov 15, 2007 1:23:57 AM
update	Nov 15, 2007 1:37:58 AM
Date	Nov 15, 2007
Time	1:37:58 AM
Description	Refined composition

Online



IPE (2007.9.0)

File Edit Navigate Search Project Window Help

Project Explorer

- maststatistics.cross
- glirpt.cross
- zfxmigjr.cross**
- geom.cross
- 3D.rpt
- zfxmigjr.seis
- 3D.gdb

Map

- Time
- KFO
- RFD
- RST

Outline

- Leaf1
 - Leaf11
 - Leaf12
- Leaf2
 - Leaf21
 - Leaf22
 - Leaf23
- Leaf3
 - Leaf31
- Leaf4
 - Leaf41
 - Leaf42
 - Leaf43
 - Leaf44

zfxmigjr.cross

glirpt.cross

6208000

40

6207000

30

My customized RCP Product

rich client 2.0

zdt

File Edit Window Help

Card: 4 Left: 26

筷子
kuàizi

- chopsticks
- sale
- definite
- suitable

Hide Pinyin Next

Characters	Pinyin	Definition
经济	jīngjì	economy
中餐	zhōngcān	Chinese Food
比较	bǐjiào	to compare
长大	chángdà	to grow up
肯定	kěndìng	certainly
老婆	lǎopó	wife
凶	xiōng	fierce
租	zū	to rent
现实	xiánsí	realistic
蛋糕	dāngāo	cake
饮食	yǐnshí	food and drink
不重要	bùyàojiàn	unimportant
合适	héshì	suitable
合理	hélǐ	rational

newsinchinese.com Dictionary View

Search: computer

Characters	Pinyin	Definition
笔记本电脑	bǐjìběndiànnǎo	notebook computer
超高速巨型计算机	chāogāosùjùxíngjìsuànjī	supercomputer
超级电脑	chāojīdiànnǎo	super computer
超巨型计算机	chāojùxíngjìsuànjī	supersupercomputer
戴尔电脑	dàierdiànnǎo	Dell Computer
单机	dānjī	single computer
电脑纸	diànnǎozhǐ	computer paper
电脑病毒	diànnǎobìngdú	computer virus
电脑病毒发作	diànnǎobìngdúfāzuò	computer virus production
电脑彩屏	diànnǎocǎibǐng	computer monitor
电脑城	diànnǎochéng	Computer City
电脑犯罪	diànnǎofǎnzù	computer crime
电脑辅助软件工程	diànnǎofùzhùruǎntǐngōngchéng	computer aided software engineering
电脑辅助设计与绘图	diànnǎofùzhùshèjì	computer-aided design and drawing
电脑课	diànnǎokè	computer class

Page 1 of 3: First 1 2 3 Last

Overview

- Leaf1
 - Leaf11
 - Leaf12
- Leaf2
 - Leaf21
 - Leaf22
 - Leaf23
- Leaf3
 - Leaf31
- Leaf4
 - Leaf41
 - Leaf42
 - Leaf43
 - Leaf44

Subelements

View Children of Leaf1

Id	Details 1
Leaf11	
Leaf12	
item11	This is a test11
item12	Another test
item13	This is a test12
item14	This is a test12
item15	This is a test12

Details

Id	item12
Details 1	Another test
Details 2	Some description

Dummy Job



Riassumendo



- Un ide free per Java
- Con tante estensioni (troppe?)
- A cui si può contribuire in modo semplice
- Anche per costruire applicazioni complesse
- Vi ringrazio ...
 - angelo.gargantini@unibg.it