



IBM Software Group



## Eclipse

An Open Source Tool Framework for the Enterprise

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## In the News...



*“In [...] its most significant announcement in 2001 IBM Corp yesterday donated a claimed \$40 million of software [...] to a new open source application development community called eclipse.org”*



*“Suddenly IBM is cool”*

# Agenda

- Overview of Eclipse
- Community Update



# Eclipse: Establishing a Platform

- **Challenge**
  - Tools from different companies do not work well together
  - Developers have better things to do than integrate tools
  - Tool vendors have better things to do than reinvent wheels
  - No vendor can do everything
- Visual Studio is the tools platform in the Windows® .NET world
- Pre-Eclipse: No credible platform in the Java™ world

# Eclipse: Establishing a Platform

- Eclipse Goals

- Designed to be a highly extensible platform

- Plus out-of-box function and quality to attract developers

- Plus endorsement (i.e, products) by some major tool vendors

- Plus open-source



# What is Eclipse?

- What is Eclipse?

Vision is platform centric, not tool centric

“an IDE for anything, and for nothing in particular”

Teach the platform about your problem

Platform gains new capabilities



# What is Eclipse?

- **A Technology Offering**
  - Universal platform for integrating development tools
  - Its open, extensible architecture is based on plug-ins
  - Licensed for royalty free world-wide distribution
- **An open source project at [eclipse.org](http://eclipse.org)**
  - Delivers and supports the technology
- **A Community**
  - Contributes to the project and technology
  - Delivers commercial and non-commercial offerings



## Why Should You Care?

- As a user

*Portable industry tool platform that provides seamless tool integration*

Assemble tools from different suppliers to make a tool environment the way you want it

- As a Java developer

State of the art Java IDE that you can customize

Support for variety of operating system platforms

*But Eclipse is much more than a Java IDE*

- As a tool developer

*The “middleware of tooling”*

You no longer have to start from scratch

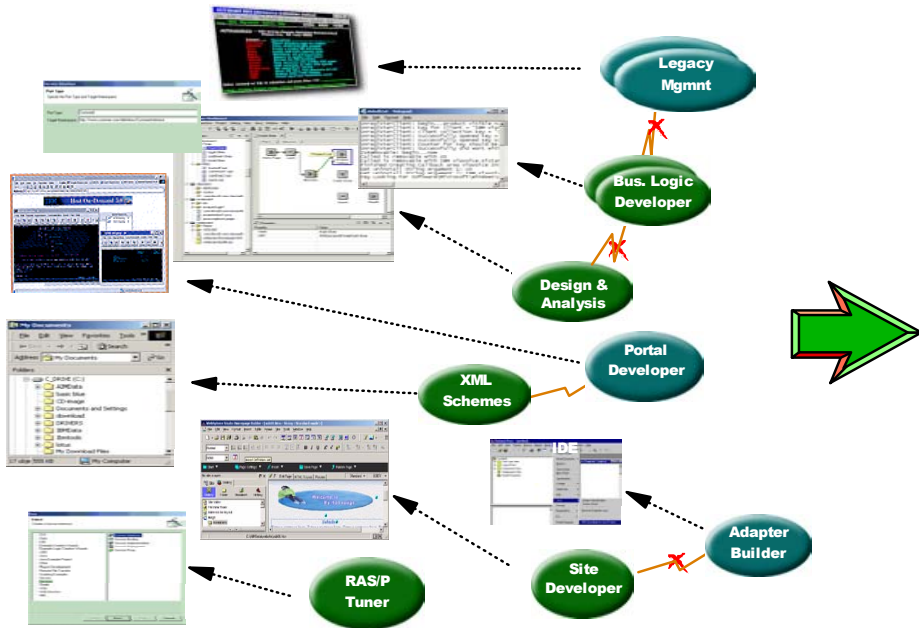
Everyone can be a tool smith

Focus on core competencies

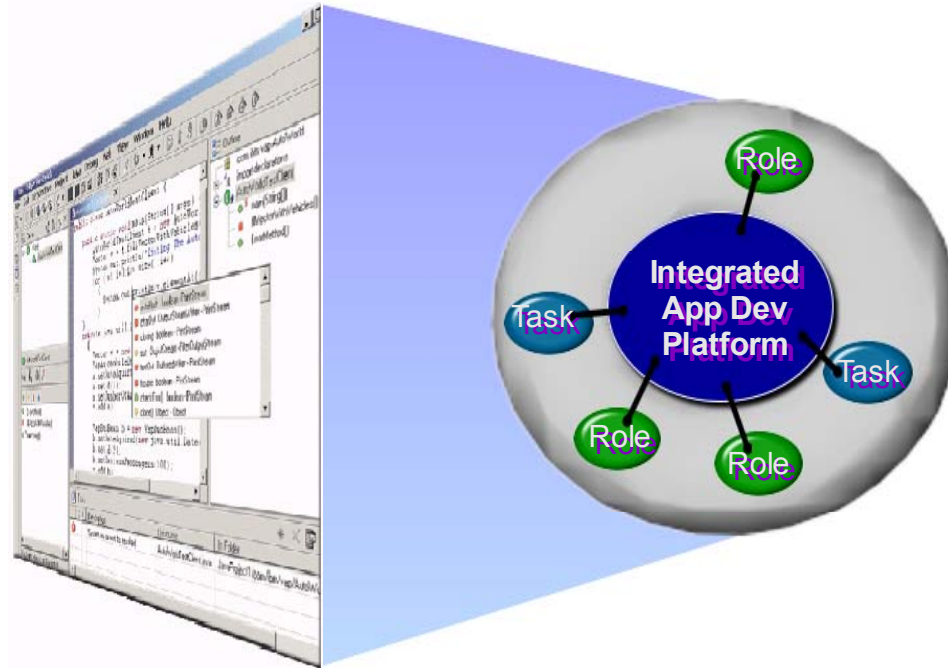




# Integrated Application Development Platform



*Most AD environments involve more than one tool from multiple suppliers*

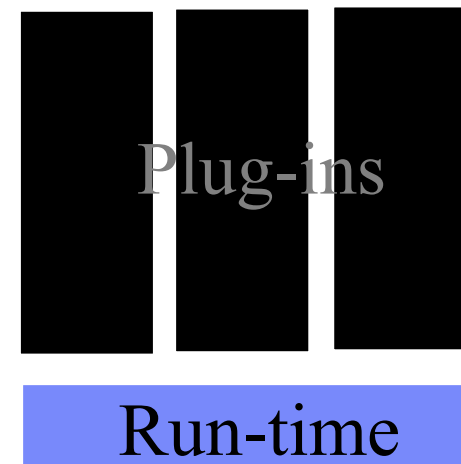


*Best-of-breed tools working together as an integrated environment*



## Architecture: “Everything is a Plug-in”

- Extensible IDE  
“monolithic core plus some extensions”
- Platform  
“everything is a plug-in”



## Plug-in Goals

- **Easy to develop**
  - Java Development Tools + Plug-in development environment
- **Scale-up to hundreds of installed plug-ins**
  - Problem: start-up time
  - Solution: lazy loading
- **Easy to discover, install, and update**
  - Install/update support

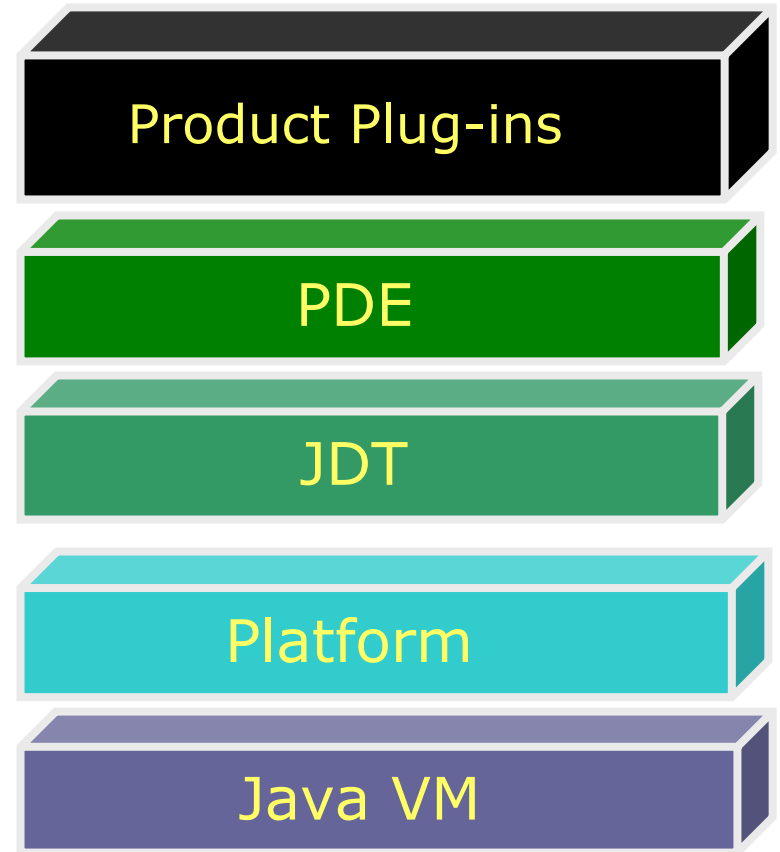
# Eclipse Layers

Plug-in development environment

Java development tools

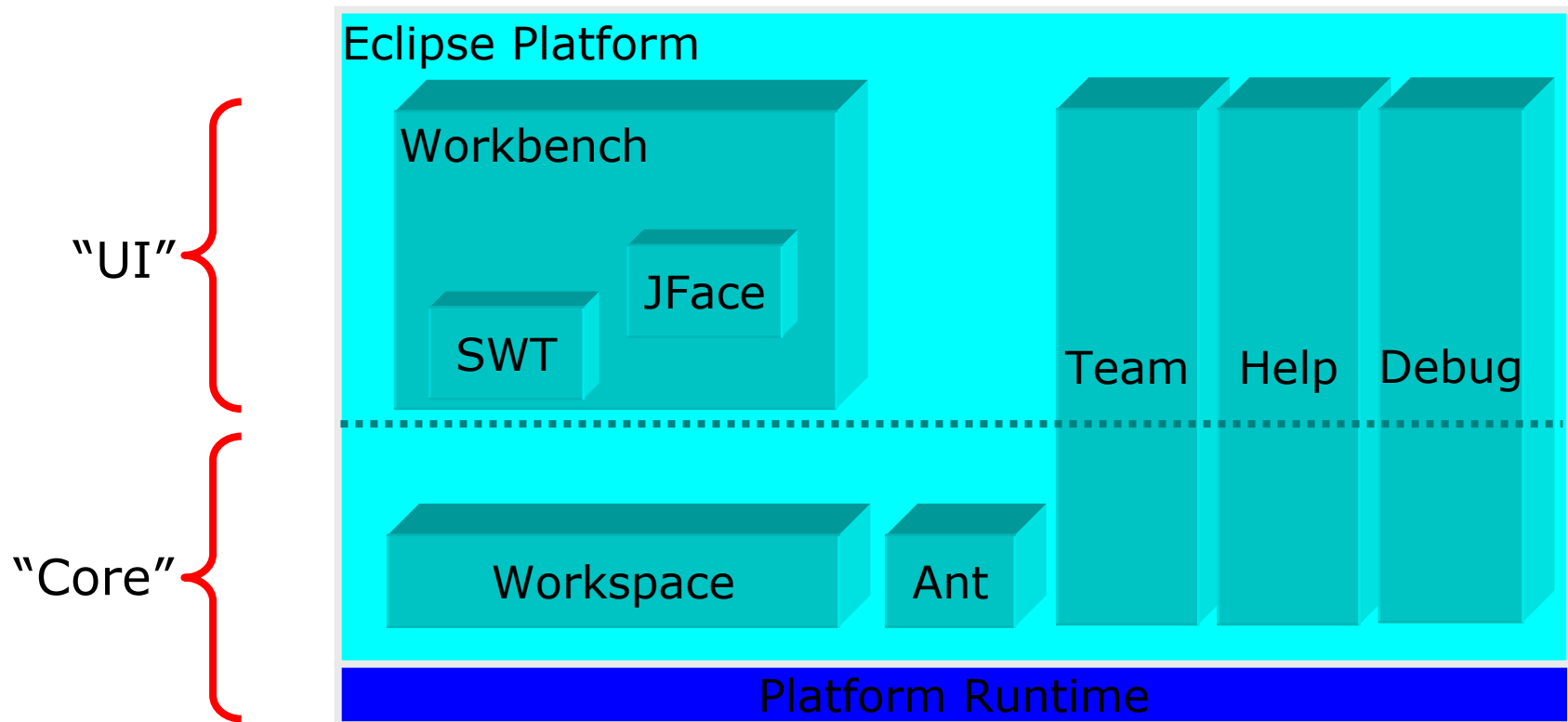
Eclipse Platform

Runs on Standard Java2 VMs



# Eclipse Platform Architecture

- Eclipse Platform is the common base
- Consists of several key components



## Initial 3.0 Plan (Draft status)

- **User Experience** (*Improving Eclipse from the point of view of the end user*)
  - improve the "out of the box" experience so that new users are productive faster
  - find better ways to scale up to large numbers of plug-ins without overwhelming the user.
- **Responsive UI** (*Making it easier to write Eclipse plug-ins that keep the UI responsive*)
  - reduce blocking operations done in the UI thread
  - enable long-running operations like builds and searches to be performed in the background while the user continues to work.
- **Rich Client Platform** (*Enable Eclipse to be used for building non-IDE applications*)
  - factor our IDE-specific facilities
- **Extended Java Family** (*Generalize JDT to handle more members of the Java family*)
  - handle Java-like languages (such as JSP and SQLj)
  - support non-Java files containing references to Java language elements (such as plug-in manifest files and J2EE deployment descriptors)

## Growth of a Community

- **Eclipse.org established in November 2001**
  - Initial board members: Borland, IBM, Merant, QNX, Rational, RedHat, SuSE, TogetherSoft, WebGain
  - 42 Board members as of May, 2003
  - Feb, 2003 added: Ericsson, Logic Library, SilverMark, M7, QA Systems
  - May, 2003 added: Micro Focus, Wind River, Wasabi Systems, Tensilica, CanyonBlue



# Who's on Board? – 42 Industry Leaders Join Forces





## Growth of a Community

- **Grassroots enthusiasm from developers**

- Eclipse Platform download requests topped 3.1 Million in first year

- To date over 7 Million download requests

- Site continues to see days with downloads in excess of 10,000

- Over ~880K developers, companies, or organizations from over 125 countries

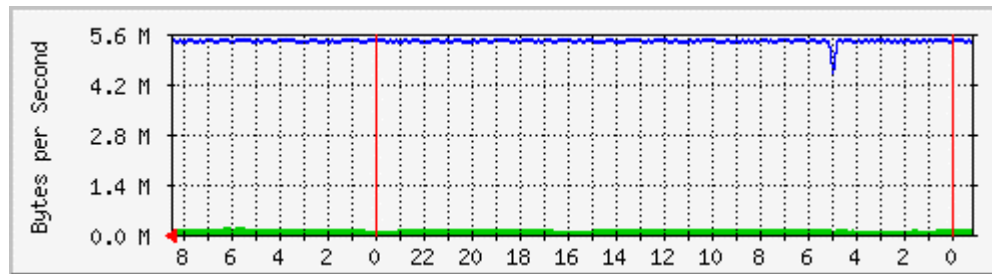
- 15% Linux downloads, 80% Windows downloads, 3% Solaris

- Number of testers grew approx. 10x from version 1.0 to 2.0



# Lights Dimmed When Eclipse 2.1 Went Live

Daily Five Minute Average:



- The T3 was saturated for the 1<sup>st</sup> 60 hours  
That is 1.2 TB of Eclipse downloads!
- Now have a mirror program in place  
24 sites around the world

## Growth of a Community

- Vendors are committing to Eclipse
  - Over 175 vendors including significant commitments from Rational, TogetherSoft, Serena, QNX, Merant
  - C/C++ IDE plug-in for Linux being led by QNX with RedHat, Rational, and Montavista
- Over 600 open source or freeware plug-in projects available
  - 335** Plug-Ins tracked at: **eclipse-plugins.2y.net**
  - 130** Plug-Ins tracked at: **eclipse-workbench.com**
  - 100+** Active projects at **SourceForge.net**
  - 28** Eclipse projects active at **freshmeat.net**
    - Including a Tetris plug-in!
- 50 Eclipse Innovation Grants Approved



# Sampling of Eclipse-based Open Source Projects

- Languages

- C#

- C/C++

- Python

- Php

- Several XML

- Several UML

- Programming Tools

- Graphical Editing Framework (GEF)

- AspectJ tools

- ANTLR Parser Generator

- Several DB tools

- Jalopy Java Source Code Formatter

- Japple – RAD

- Jasper report designer

- Lomboz

- Java Spider

- Source & configuration mgt.

- Perforce

- Microsoft® VSS Plugin

- Stellation

- Clearcase

- Web development

- Sysdeo - Eclipse Tomcat Launcher

- WebLogic manager

- Several Struts

- Spindle for Tapestry

- Testing / Performance

- Resin Plugin

- MockCreator

- Solex

<http://www.eclipse.org/community/plugins.html>

# Eclipse Organization: Projects

- **Eclipse Project** *the platform*
  - Platform
  - JDT: Java Development Tools
  - PDE: Plug-in Development Environment
- **Eclipse Tools** *plug-ins ready additions to the platform*
  - GEF: Graphical Editing Framework
  - EMF: Modeling Framework
  - CDT: C/C++ development tools
  - Cobol development tools
  - Haydes Automated Testing Framework
- **Technology** *experimental/research efforts*
  - AspectJ, Stellation, Equinox, Koi, XSD and GMT



## Eclipse Organization: Projects

- Eclipse Web Tools Platform Project



Brand new project launched by eclipse.org on June 9, 2003

Goal is to build an extensible tool platform for web applications targeted at J2EE™ servers

Get involved!

# Joining the Eclipse Community

- **Formal Membership**
  - Election to the Board of Stewards
- **Informal Collaboration**
  - Tradeshows
  - Press and Analysts
  - Project and application briefs
  - Articles and Books
- **Project Participation**
  - Newsgroup discussions
  - Bug catching and fix contribution
  - Core technology contribution
  - Plug-in contribution



## Future: Eclipse 3.0

- Enabling using Eclipse as a general rich client application platform
- Advanced desktop applications have the same needs as an IDE
  - open architecture
  - efficient, configurable, portable UI
  - supports product branding, install/update support
  - integrated help, user configuration/preferences

“Eclipse all over” - as the tool, the tool platform **and** as the application platform



# IBM Leveraging Eclipse Technology

- IBM WebSphere Studio product family
  - partner opportunities
- IBM WebSphere Studio Workbench
  - supported Eclipse platform for partners



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