



# Eclipse RCP -

Rich Client Entwicklung mit Eclipse 3.0

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# Tutorial Outline

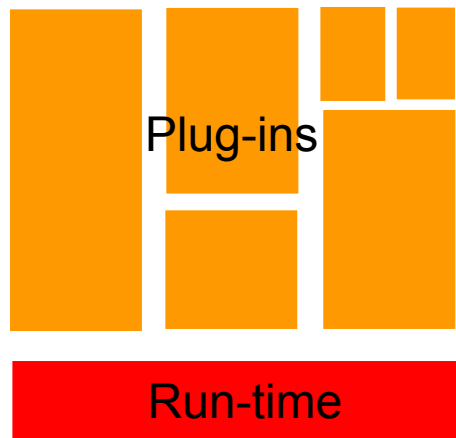
- Einführung und Überblick
- Eclipse Architektur
- Ein erstes kleines Beispiel
- Tracing
- Branding
- Distribution und Update
- Definierung eines Extensionpoints
- Classloading zwischen Plugins
- Einfacher PDE-Junit Test
- Fragen & Antworten

# Overview

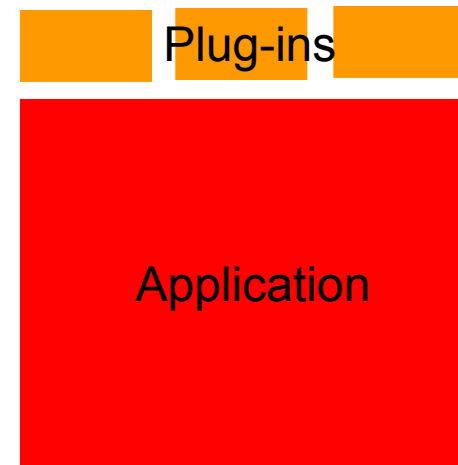
- Eclipse ist mehr als „nur“ eine IDE
- Eclipse hat eine offene, erweiterbare Architektur
- Die Plug-ins bauen wie Schichten aufeinander auf

# Platform vs. Extensible Application

Platform



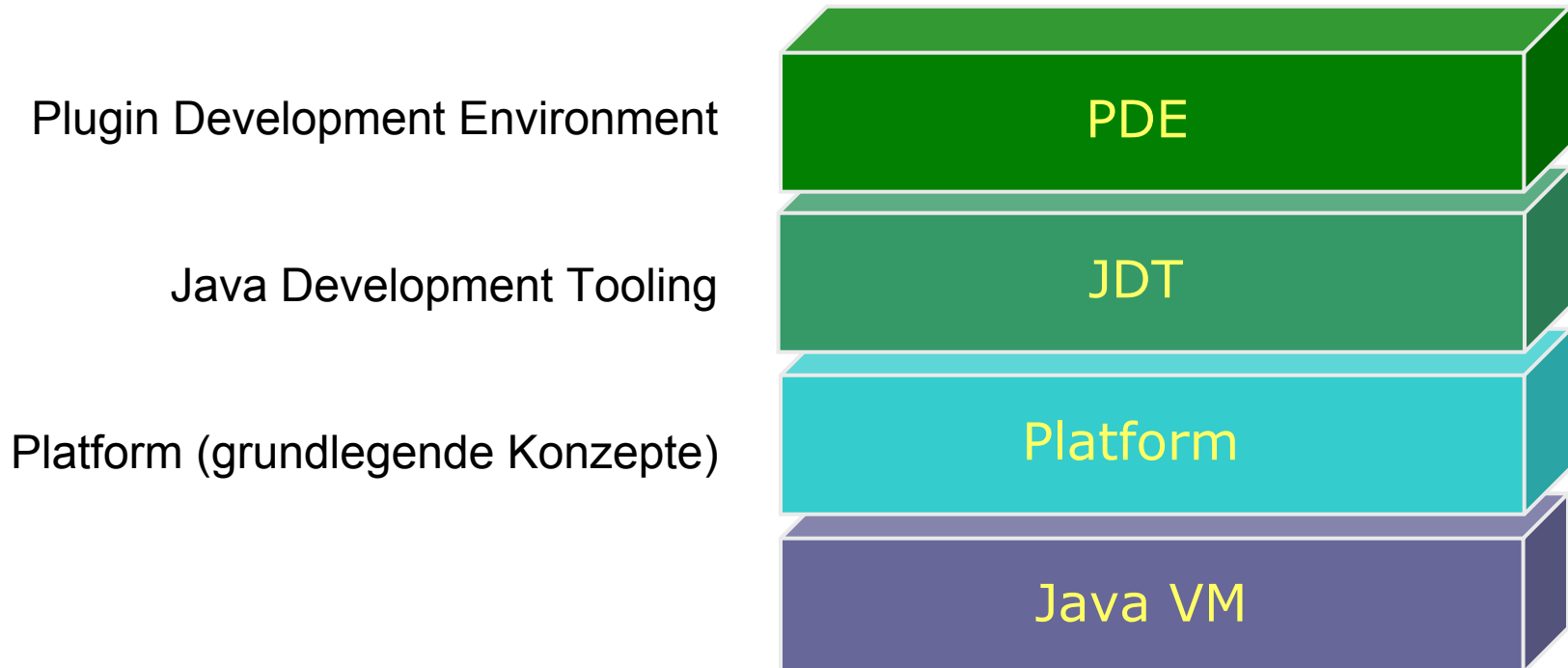
Extensible Application



- Eclipse ist eine Plattform mit einem sehr schmalen Kern

# Historisches

- „Eclipse is a universal platform for integrating development tools“



# Non-IDE Applications

- Viele Konzepte und Frameworks der Eclipse-Plattform sind auch für nicht-IDE-Anwendungen interessant, wie z. B.:
  - Plugin-Modell
  - UI-Frameworks
  - Help-System
  - ...

## Aber...

- ... in Eclipse 2.1 ließ sich die Plattform nicht entkernen:
  - Einige IDE-Konzepte blieben an der Oberfläche weiterhin sichtbar
    - z. B. Project-Menu, Builder, ...

# Bug #36967

The screenshot shows the Eclipse Bugzilla web interface. The top navigation bar includes the Eclipse logo and 'eclipse.org'. A left sidebar contains a menu with items: home, about us, projects, downloads, articles, newsgroups, community, search, and bugs. The main content area is titled 'eclipse bugs bugzilla bug database'. The bug title is 'Bugzilla Bug 36967 [RCP] [Plan Item] Enable Eclipse to be used as a rich client platform'. Below the title are links for 'Bug List: First Last (This bug is not in your list)', 'Show list', 'Query page', and 'Enter new bug'. The bug details are organized into several sections:
 

- Basic Info:** Bug#: 36967, Platform: All, Reporter: jim\_des\_rivieres@ca.ibm.com (Rivieres)
- Product/Component:** Product: Platform, Component: UI
- OS/Version:** OS: All, Version: 2.1
- Priority/Severity:** Priority: P2, Severity: enhancement
- Resolution/Status:** Resolution: FIXED, Status: RESOLVED
- Assigned To/Target Milestone:** Assigned To: nick\_edgar@ca.ibm.com (Nick Edgar), Target Milestone: 3.0
- CC:** alexhudspith@hotmail.com, as@empproject.com, birsan@ca.ibm.com, bugs\_eclipse\_org@..., bugzilla@codex.de
- URL:** (empty field)
- Summary:** [RCP] [Plan Item] Enable Eclipse to be used as a rich client platt
- Keywords:** plan

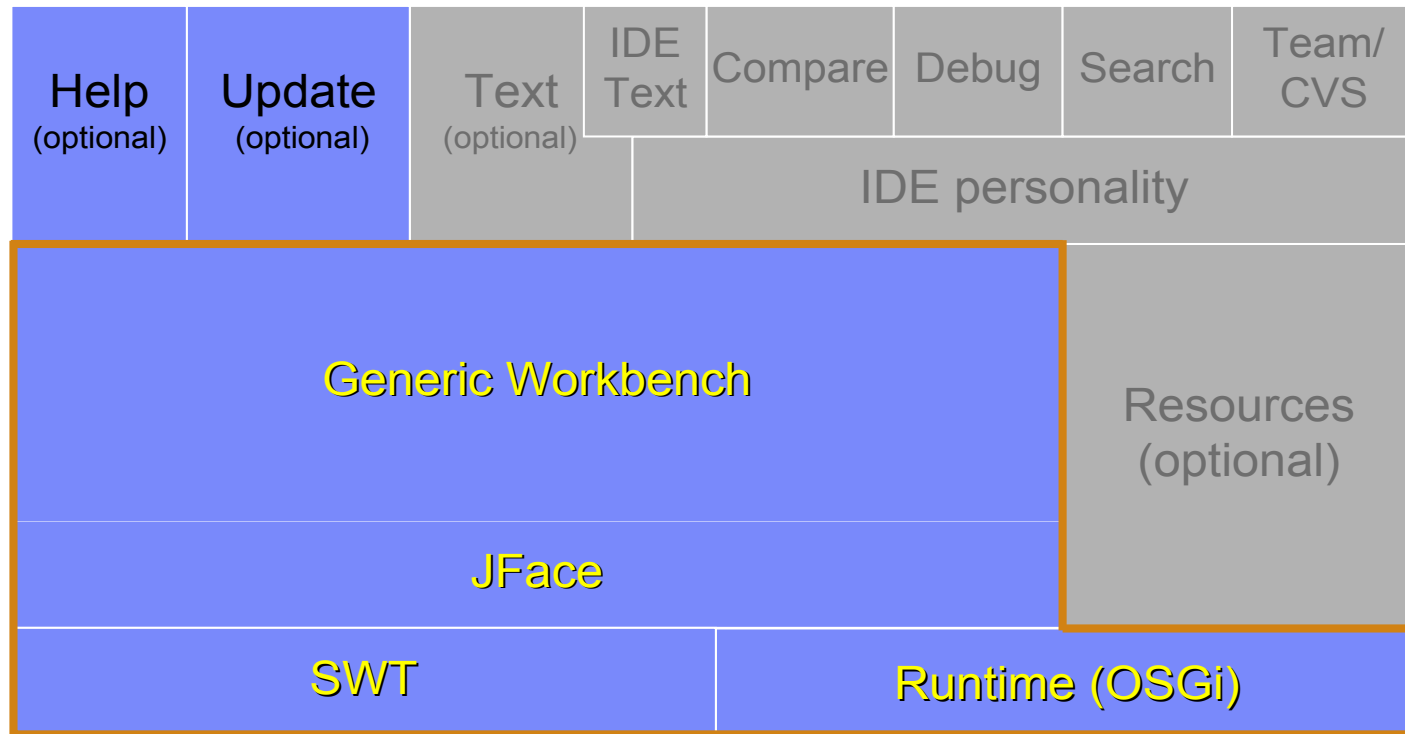
 At the bottom, there is a table header for attachments with columns: Attachment, Type, Modified, Status, and Actions. The status bar at the very bottom shows 'Done'.



# Eclipse als universelle Plattform

- Ein Ziel in Eclipse 3.0 war es, die Plattform aufzuteilen:
  - ➔ Soviel wie möglich von der Plattform nutzbar machen für generelle Applikations-Entwicklung

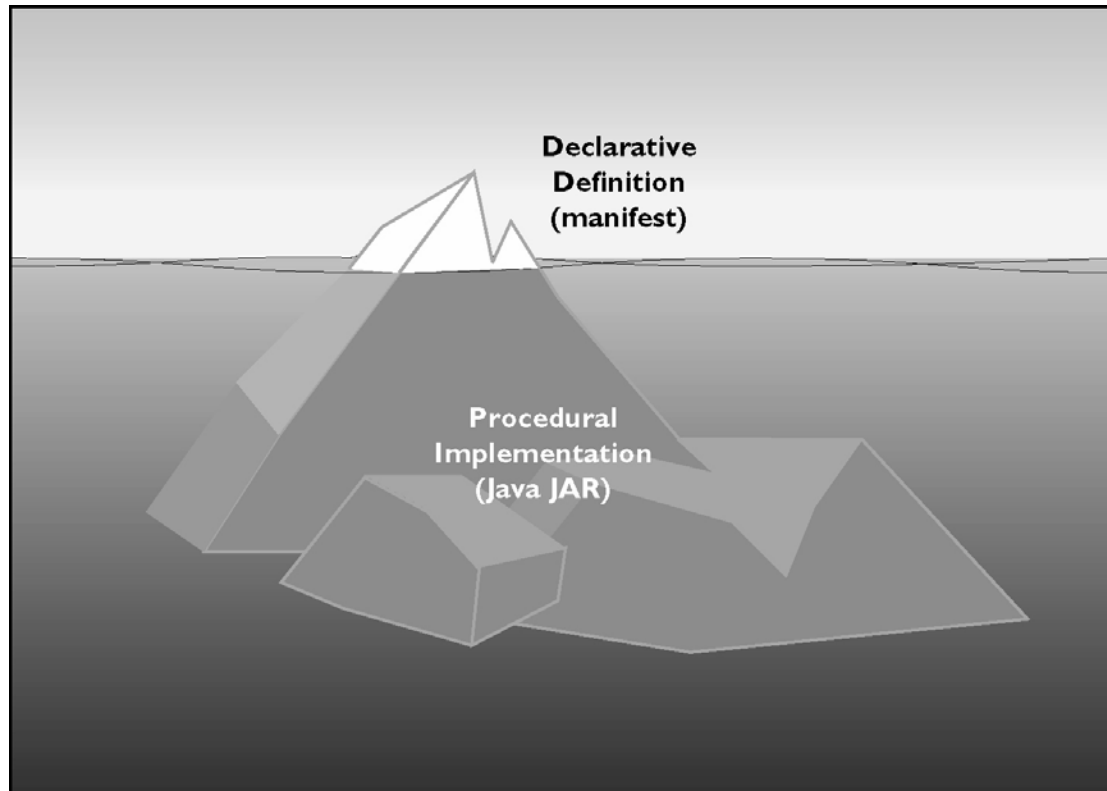
# Eclipse 3.0 Rich Client Platform



# Eclipse Plug-in Architektur

- Durch die Trennung von Deklaration und Implementierung ist ein lazy loading der Plugins möglich:
  - Deklaration der Plug-in Contributions
    - Beschreibt die Funktionen des Plugins
    - Beschreibt die UI-Elemente des Plugins
    - Spezifiziert die Implementierungsklassen
  - Implementierung der Plug-in Contributions
    - Implementiert in Java und als JAR zur Verfügung gestellt
    - Wird nachgeladen wenn
      - ein Extension-Point des Plug-ins benutzt wird
      - Code des Plugins benötigt wird.

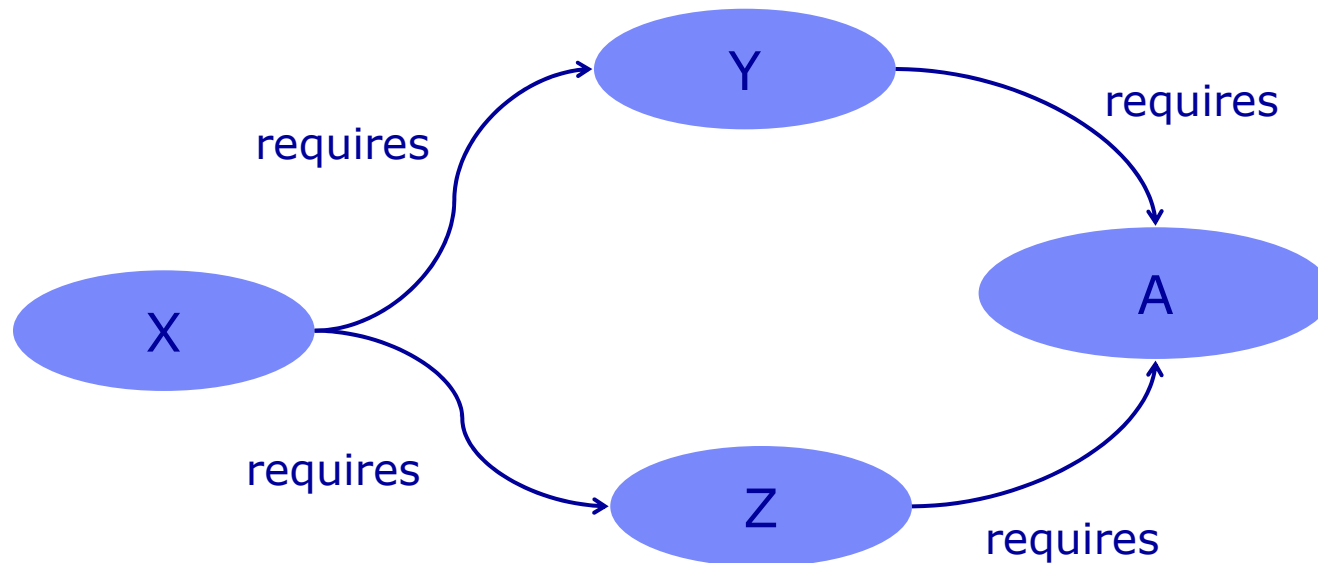
## Die Spitze des Eisbergs



- Startup time:  $O(\# \text{used plug-ins})$ , not  $O(\# \text{ installed plug-ins})$

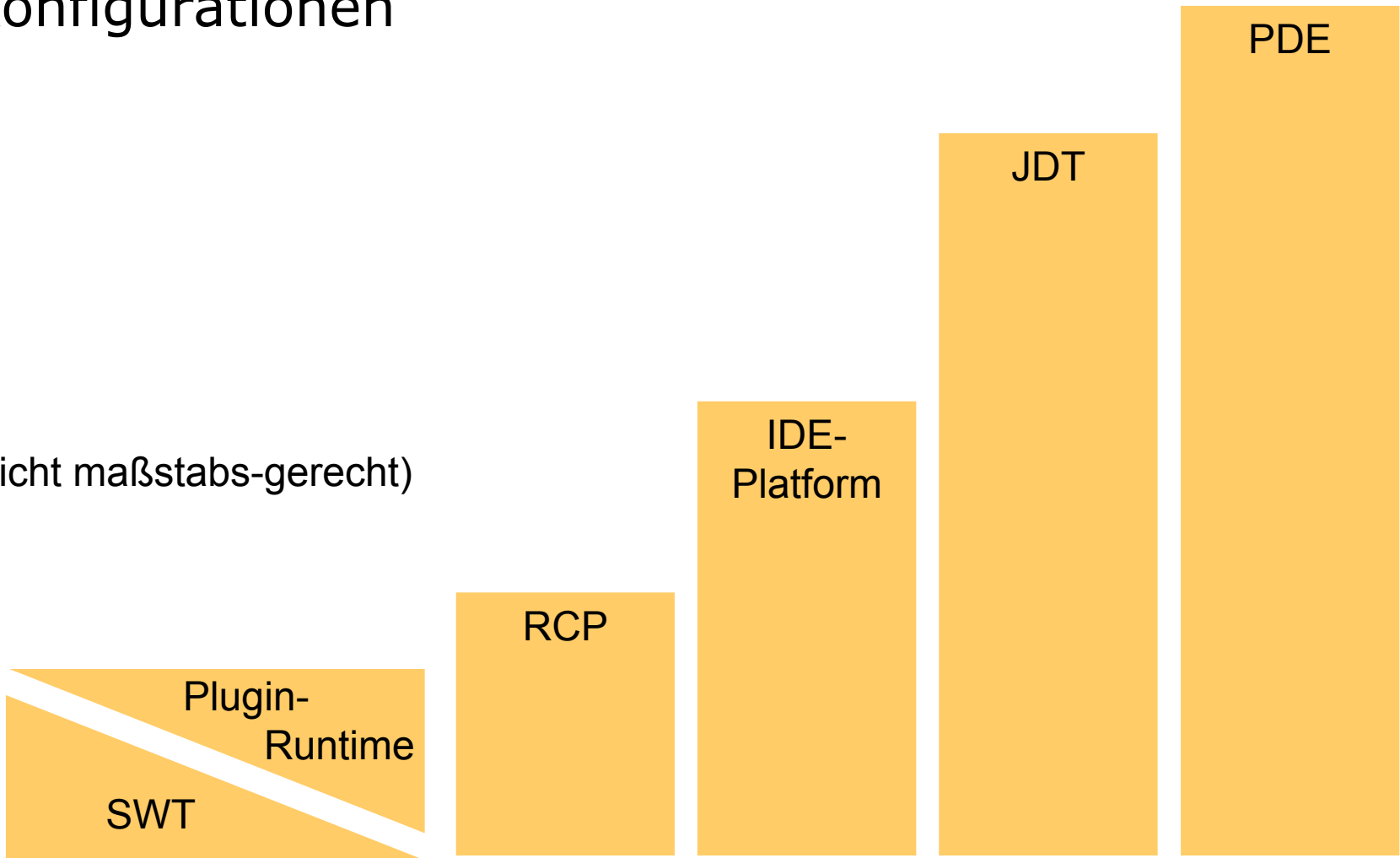
## Plug-in Namespaces

- Jede Plug-in hat seinen eigenen Classloader
  - Anfragen werden an die jeweiligen Plug-ins delegiert



# Konfigurationen

(nicht maßstabs-gerecht)



# IBM Lotus Workplace Client

The screenshot displays the IBM Lotus Workplace Client interface. The window title is "IBM Lotus Workplace". The menu bar includes "File", "Edit", "View", "Actions", "Tools", and "Help". The search bar shows "Selected Mail Folder" and "Search for:". The interface is divided into several panes:

- Messages:** A list of folders including Inbox, Drafts (1), Sent (7), Outbox (1), All Documents (9), Trash, Chats, Address Book, and Calendar.
- Document Libraries:** A list of libraries including Performance and Tuning, Rick's Documents, and Technical Papers.
- Links:** A list of links including Web Conferences, Teamspaces, and Learning.
- Instant Contacts:** A section showing "Connecting to server ...".
- Message List:** A table of messages in the "Inbox" folder.
 

From	Subject	Date
IBM	IBM Lotus Workplace Messaging (TM)	5/27/04
Richard Wilson	Wow, the IWCT Rocks!	5/27/04
Richard Wilson	Multi-Build Prototype: documents for your review	5/27/04
wps-admin	Fw: Eclipse Use Grows By More Than 75% In Europe	5/27/04
Susan Adam's1	Fw: EclipseCon technical track presentations now av	5/27/04
rwilson2@us.ibm.com	Workplace Client Technology Rocks!	5/28/04
- Message Content:** The selected message is from "wps-admin" with the subject "Fw: Eclipse Use Grows By More Than 75% In Europe, Asia And North America". The date is "Thu, 5/27/04 11:41 PM".
- Calendar:** A calendar view for Thursday, May 27, 2004. It shows events such as "WSRP Synch-up" at 10:00, "Architecture Board Meeting" at 11:00, and "IBM Workplace Technology" at 2:00. A monthly calendar for May 2004 is also visible at the bottom right.