

# A Short Introduction to Eclipse

Plug-in Architecture, Workbench, Important Technologies

Christoph Daniel Schulze

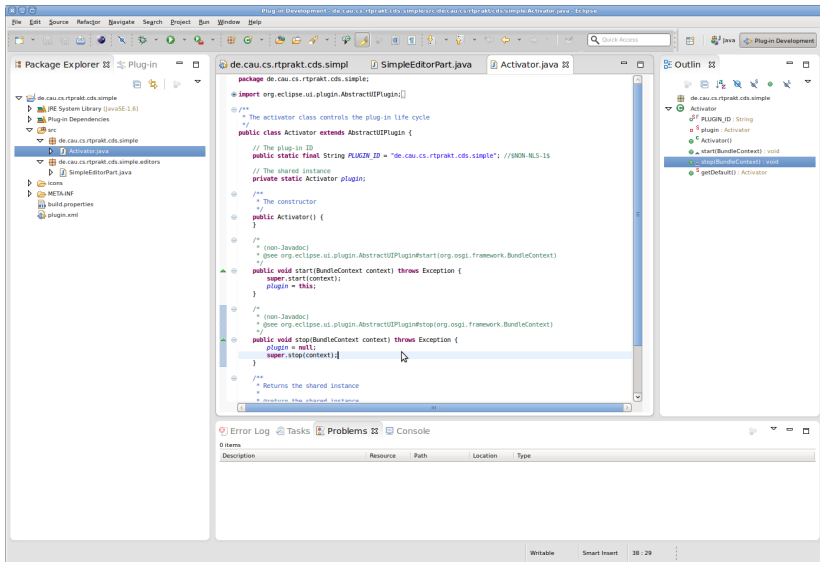


Real-Time Systems and Embedded Systems Group  
Department of Computer Science  
Faculty of Engineering  
Christian-Albrechts-Universität zu Kiel

October 24th, 2012

# Introducing Eclipse

Overwhelming Newcomers since 2004



# Outline

① Plug-ins and Extensions

② The Eclipse Platform

③ Important Technologies

# Outline


① Plug-ins and Extensions

② The Eclipse Platform

③ Important Technologies

# Basic Architecture

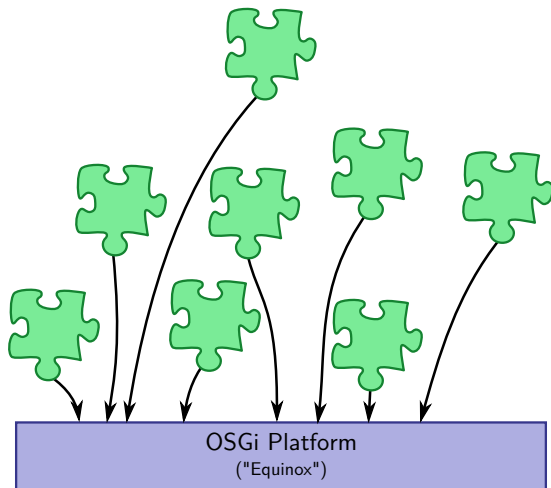
## OSGi and a Heap of Plug-ins



OSGi Platform  
("Equinox")

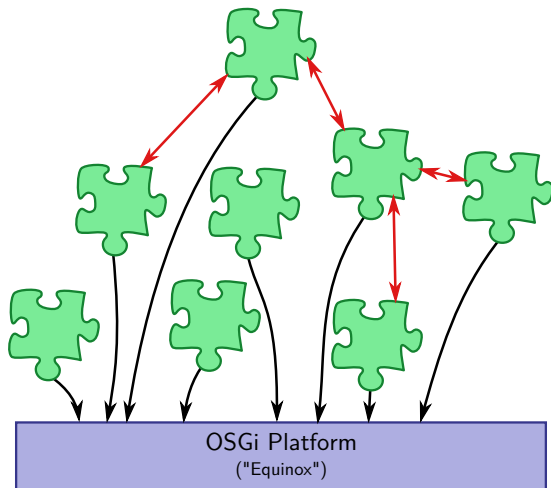
# Basic Architecture

## OSGi and a Heap of Plug-ins



# Basic Architecture

## OSGi and a Heap of Plug-ins



# The Big Deal

What's so Interesting About this Stuff?

We have:

- Core runtime (Equinox)
- Ever changing set of plug-ins
- Plug-ins working together
- A “seamless” user experience



# The Big Deal

What's so Interesting About this Stuff?

We have:

- Core runtime (Equinox)
- Ever changing set of plug-ins
- Plug-ins working together
- A “seamless” user experience

## How does this work?

# The Big Deal

What's so Interesting About this Stuff?

We have:

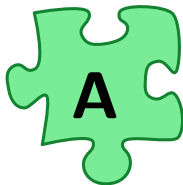
- Core runtime (Equinox)
- Ever changing set of plug-ins
- Plug-ins working together
- A “seamless” user experience

## How does this work?

- Extension points
- Extensions
- Dependencies

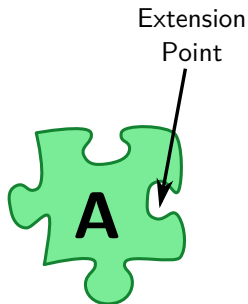
# How Plug-ins Work Together

Extension Points and Extensions (plugin.xml)



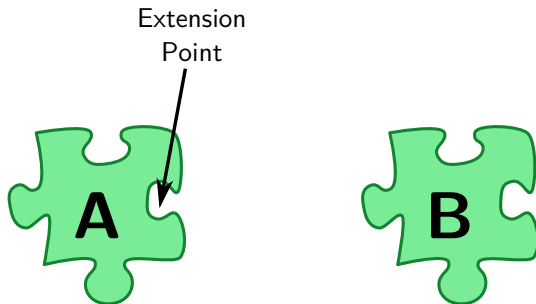
# How Plug-ins Work Together

## Extension Points and Extensions (plugin.xml)



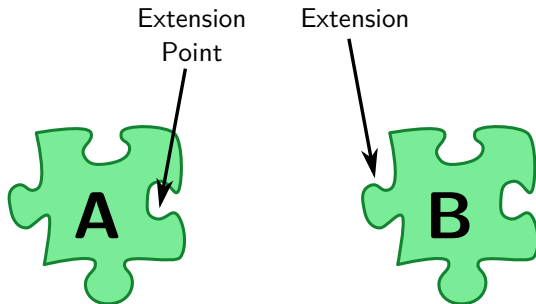
# How Plug-ins Work Together

## Extension Points and Extensions (plugin.xml)



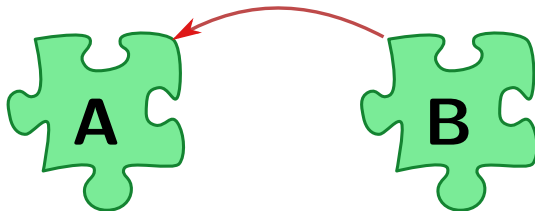
# How Plug-ins Work Together

## Extension Points and Extensions (plugin.xml)



# How Plug-ins Work Together

Dependencies (MANIFEST.MF)



# Outline

① Plug-ins and Extensions

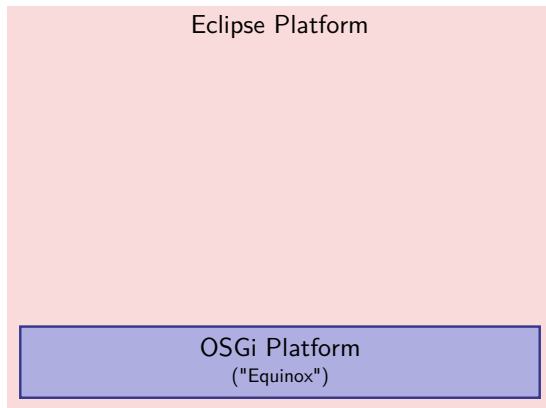
② The Eclipse Platform

③ Important Technologies



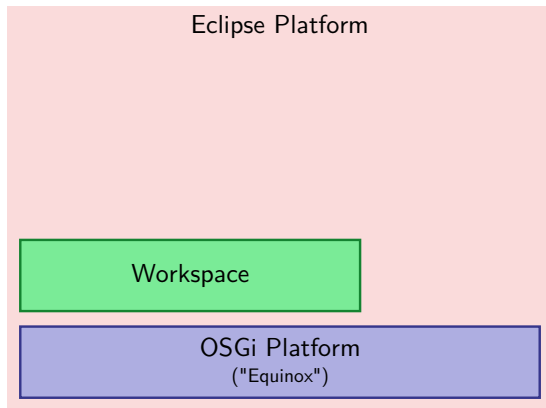
# Eclipse Platform

What Do You Get?



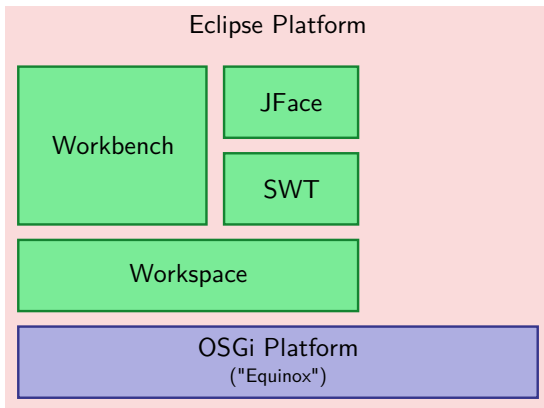
# Eclipse Platform

What Do You Get?



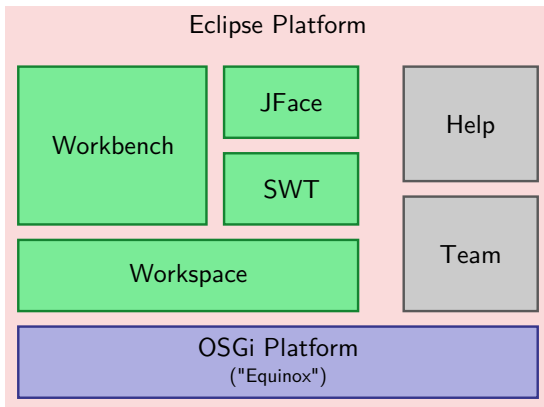
# Eclipse Platform

What Do You Get?



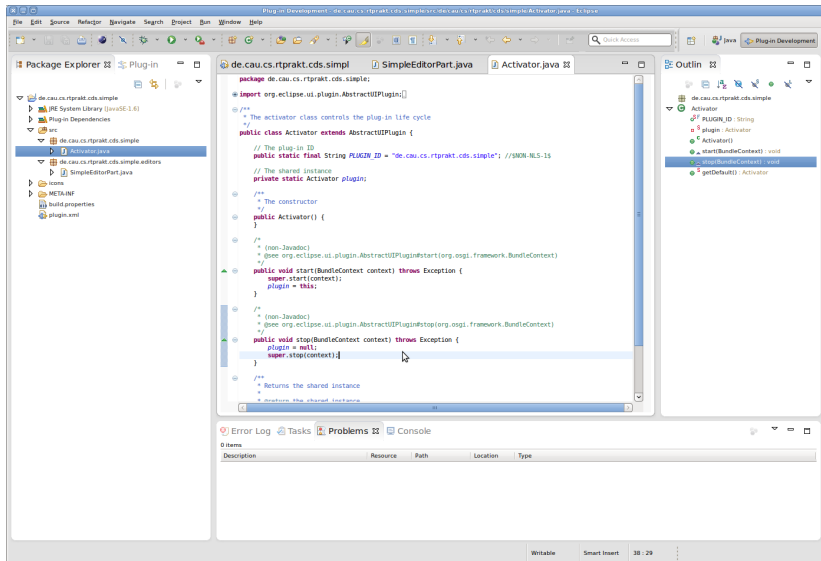
# Eclipse Platform

What Do You Get?



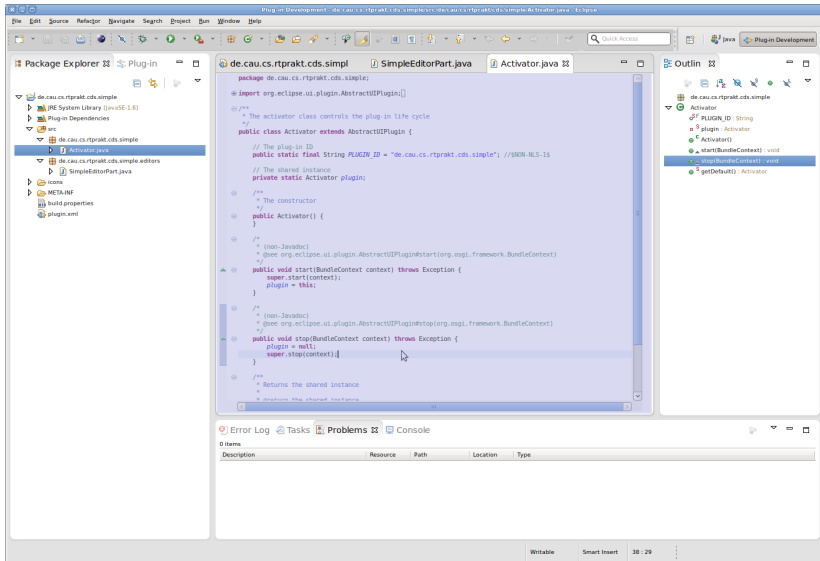
# Workbench Components

## What's in a Window



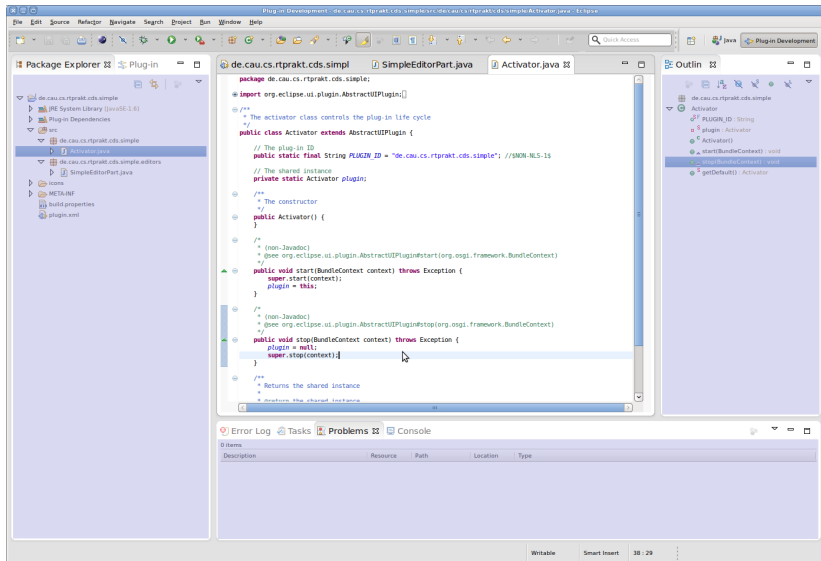
# Workbench Components

## What's in a Window



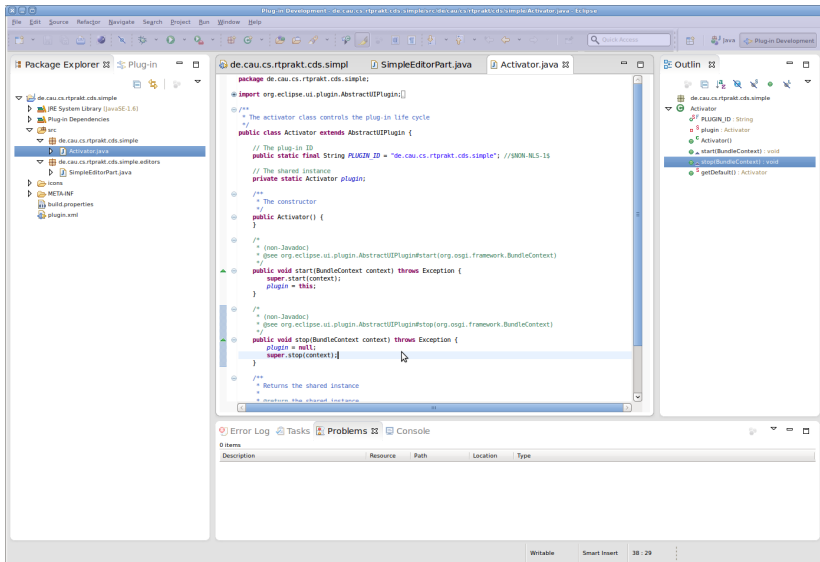
# Workbench Components

## What's in a Window



# Workbench Components

## What's in a Window





# Outline

① Plug-ins and Extensions

② The Eclipse Platform

③ Important Technologies

# Some Keywords

To Be Researched on the Internet

- User Interface Building
  - SWT (Standard Widget Toolkit)
  - JFace

# Some Keywords

To Be Researched on the Internet

- User Interface Building
  - SWT (Standard Widget Toolkit)
  - JFace
- Modeling
  - EMF (Eclipse Modeling Framework)
  - Xtend

# Some Keywords

To Be Researched on the Internet

- User Interface Building
  - SWT (Standard Widget Toolkit)
  - JFace
- Modeling
  - EMF (Eclipse Modeling Framework)
  - Xtend
- Domain Specific Languages
  - Xtext
  - Xtend

# Some Keywords

To Be Researched on the Internet

- User Interface Building
  - SWT (Standard Widget Toolkit)
  - JFace
- Modeling
  - EMF (Eclipse Modeling Framework)
  - Xtend
- Domain Specific Languages
  - Xtext
  - Xtend
- Graphical Editors
  - GEF (Graphical Editing Framework)
  - GMF (Graphical Modeling Framework)
  - Graphiti