How to be happy

The Fraunhofer FIRST's Brazilian Student Way

by Taciano Tres

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und Softwaretechnik

Life objectives

A lot of girls at your feet

A happy family

 The fastest sport car in the world

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Problem

- How to get money to:
  - Have a lot of girls at your feet?

  - To construct a happy family?

  - To buy the fastest car in the world?

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Solutions

- Win on the lotery 🙂

- Robery a bank ☠

- Get well payed on your job

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Best option

- Make money for your boss

How

- Take something your boss do, do it better and sell for twice the price (or, at least, put a price)

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What my boss do?

- J/Art

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J/Art

- Java Automated Refactoring Tool
- Analyze Java code looking for structural weaknesses
- Present possible solutions
- Allow the solutions to be executed

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How to do J/Art better?

- Making it easy enough to be used by weekend programmers

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How to make it easy?

- Put a beautiful GUI

- Make it iteractive

- Make it intuitive

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Problems

- How get the java files been developed?

- The programmer will have to learn another software/GUI

- Development of an entire tool is difficult and time consuming

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Solution

- Put it inside an existing IDE

Emacs/ vi?

Borland Delphi/Kylix?

Sun NetBeans/ Forte?

Which one?

Microsoft .NET?

IBM WebSphere/ Eclipse?

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Eclipse

- IBM open-source IDE
- Developed in Java
- Extensible by plug-ins (also in Java)
- Consortium members:
  - Borland, OMG, Ericsson, RedHat, SAP, HP, Fujitsu, SuSe, Intel and Fraunhofer FOKUS, among others.
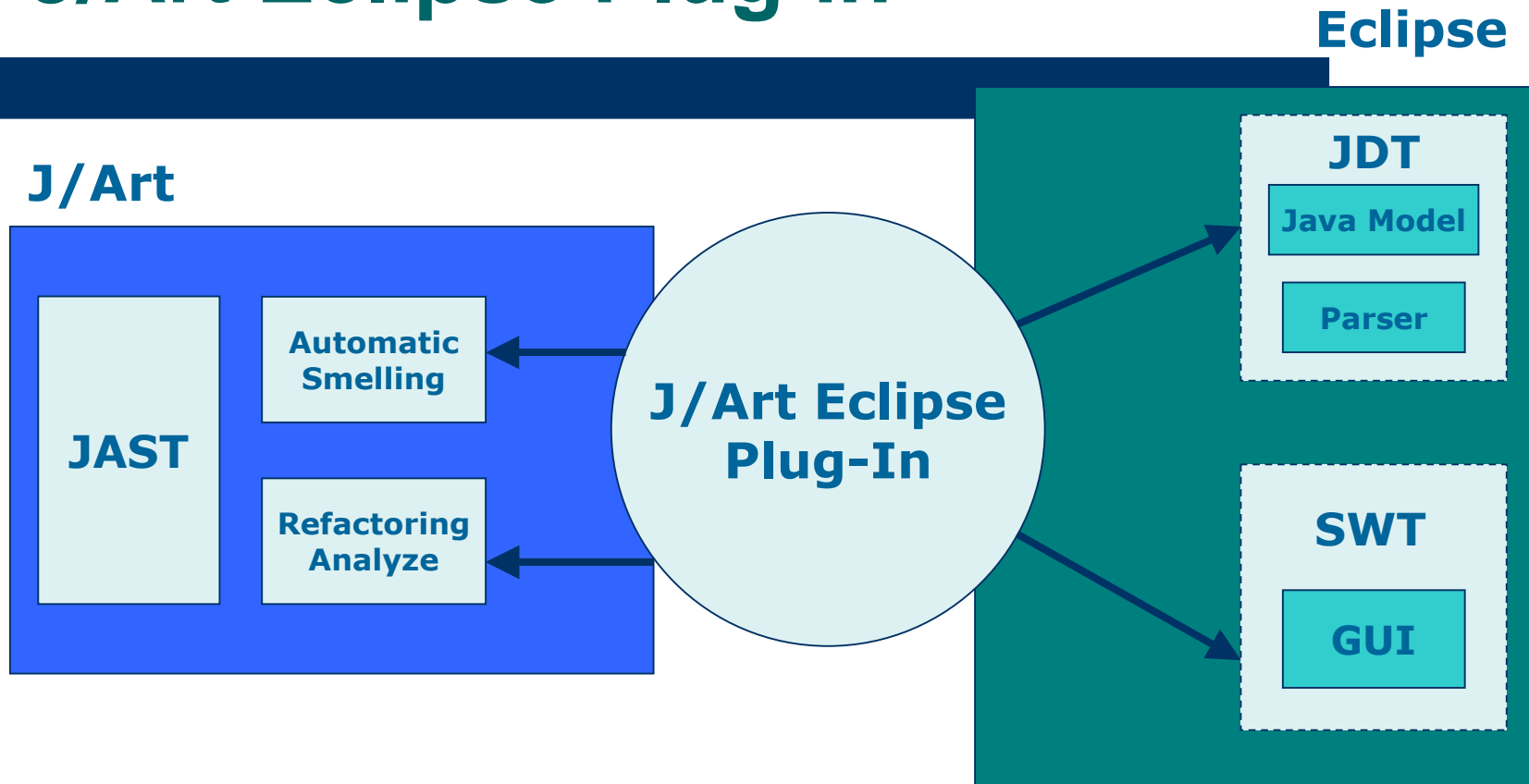
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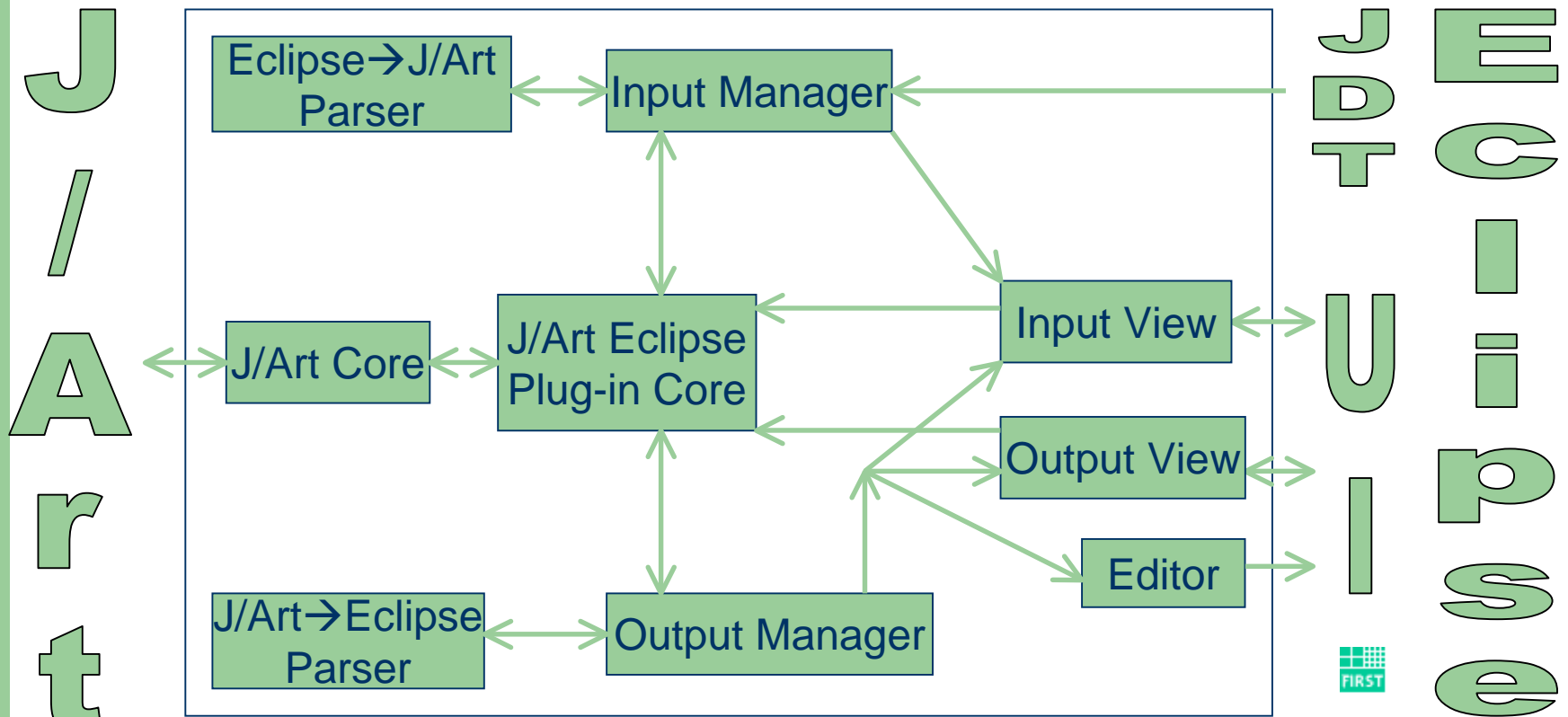
How to do this?

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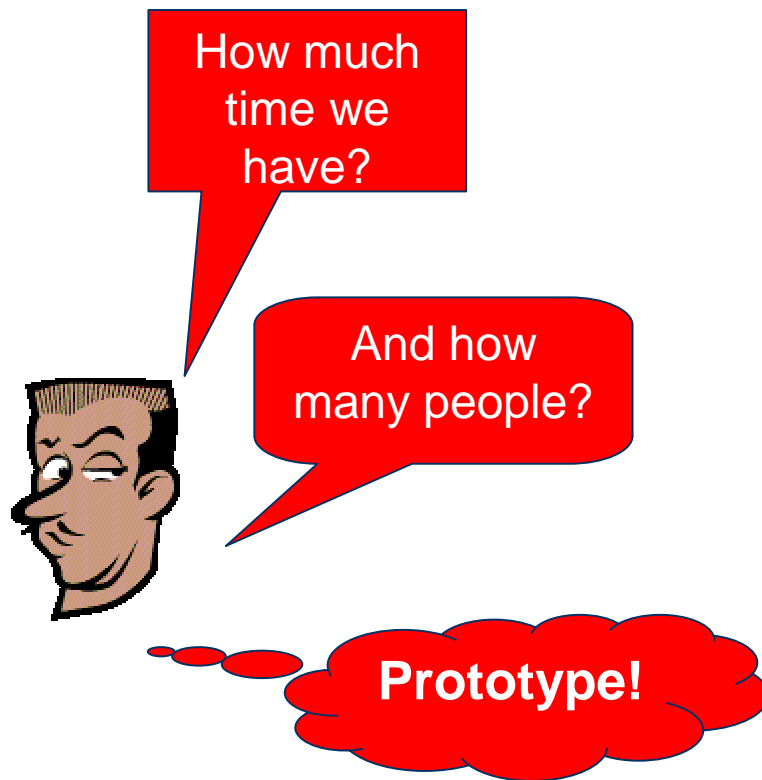
J/Art Eclipse Plug-in

- Integrates the J/Art tool in the Eclipse Workbench

- Provide interactions between Eclipse UI and the J/Art kernel

- Allow the Eclipse JDT user to analyze the code been developed and apply refactoring actions

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J/Art Eclipse Plug-in

Eclipse

J/Art

JAST	Automatic Smelling
	Refactoring Analyze

J/Art Eclipse Plug-In

JDT

Java Model

Parser

SWT

GUI

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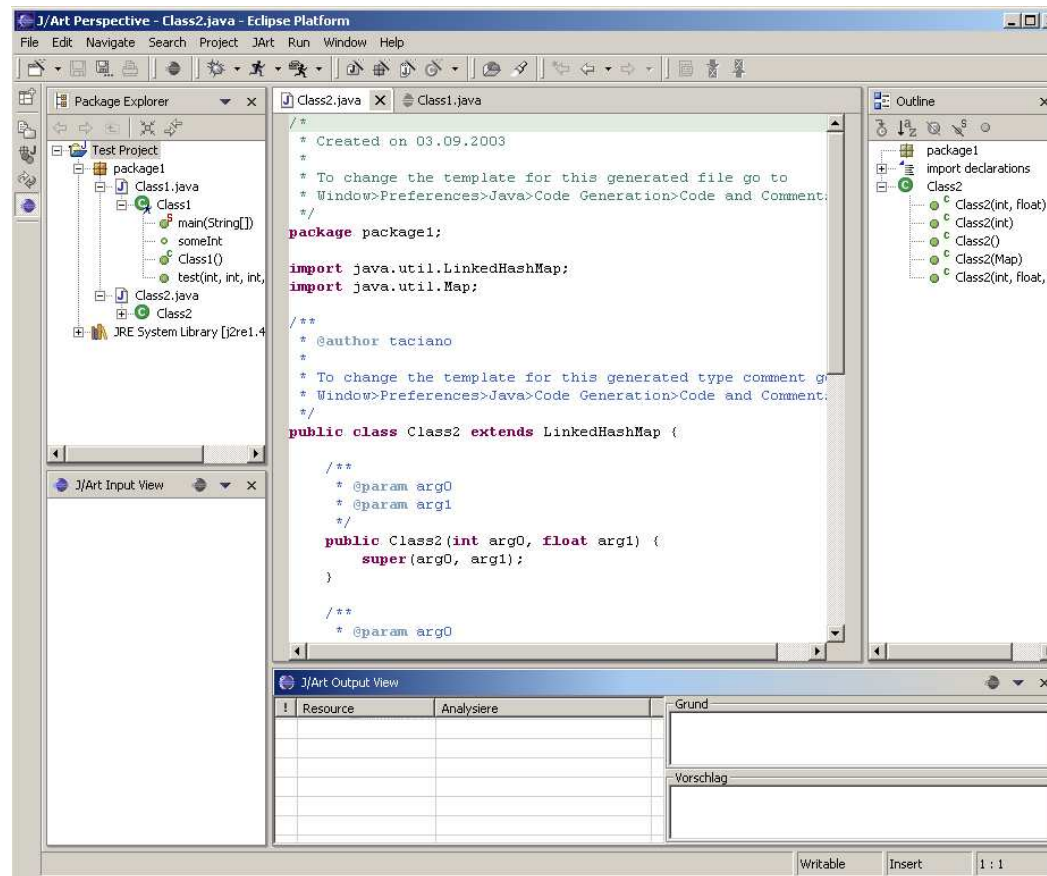**Fraunhofer** Institut
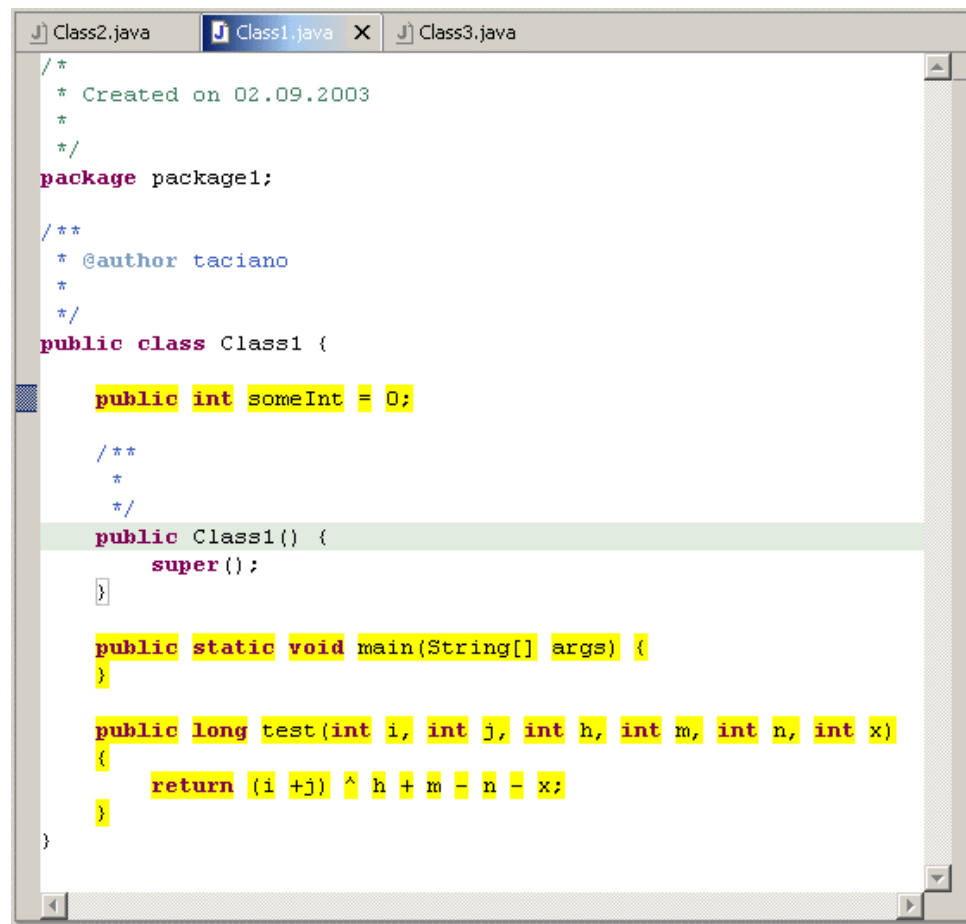Rechnerarchitektur
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J/Art Eclipse Plug-in - Inside

J/Art Eclipse Plug-in – Overview

- Perspective
- Editor
- Views
- Internationalized
- Input
- Output
- Update Site

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J/Art Eclipse Plug-in – Perspective

J/Art Eclipse Plug-in – Editor

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J/Art Eclipse Plug-in – Input View

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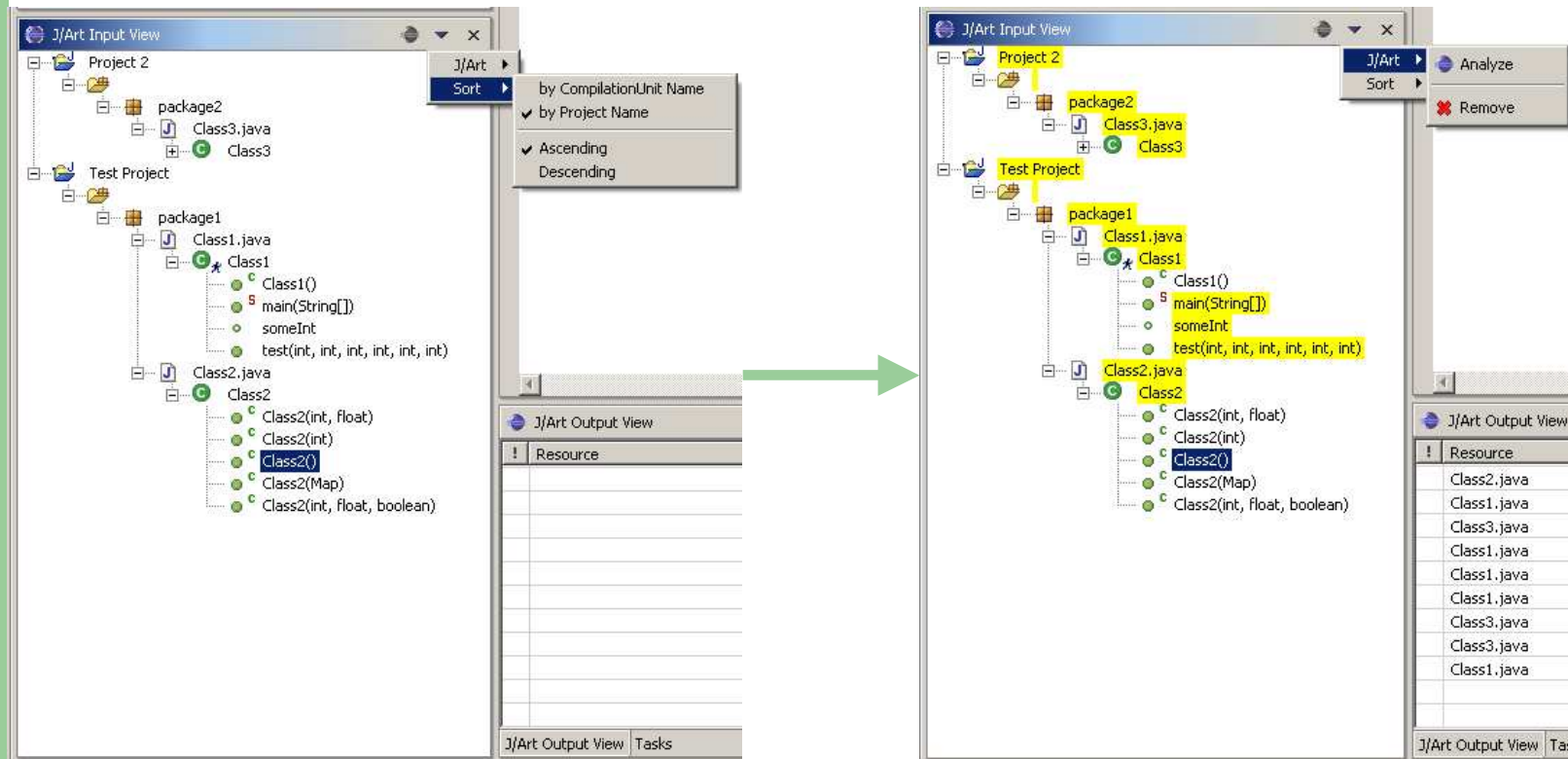
J/Art Eclipse Plug-in – Output View
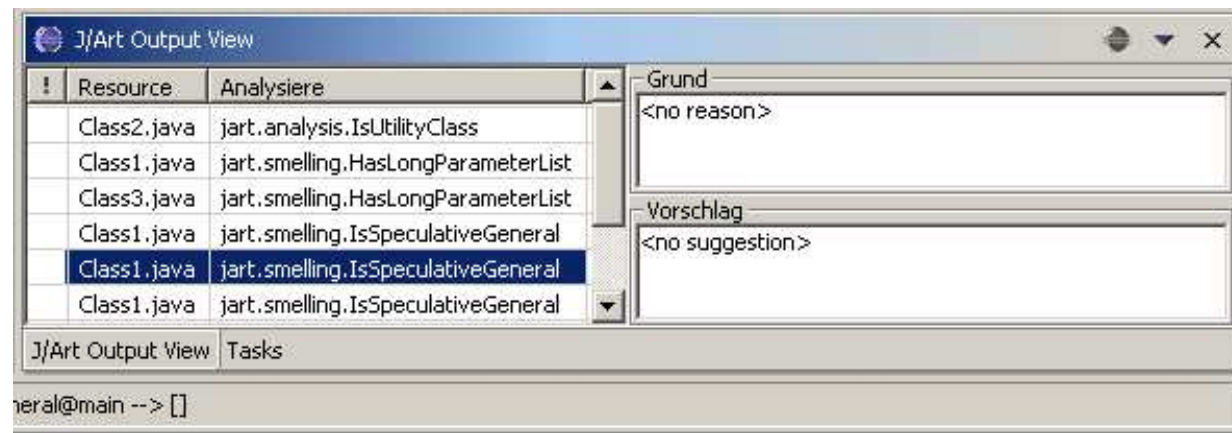
J/Art Eclipse Plug-in – Input

- Parser to convert from Eclipse objects to J/Art objects
  - From Eclipse AST representation to JAST representaion

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J/Art Eclipse Plug-in – Output

- Parser to convert from J/Art results objects to J/Art-Eclipse objects
  - Structural weakness information
  - Structural weakness location
  - Refactoring option

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J/Art Eclipse Plug-in – Update Site
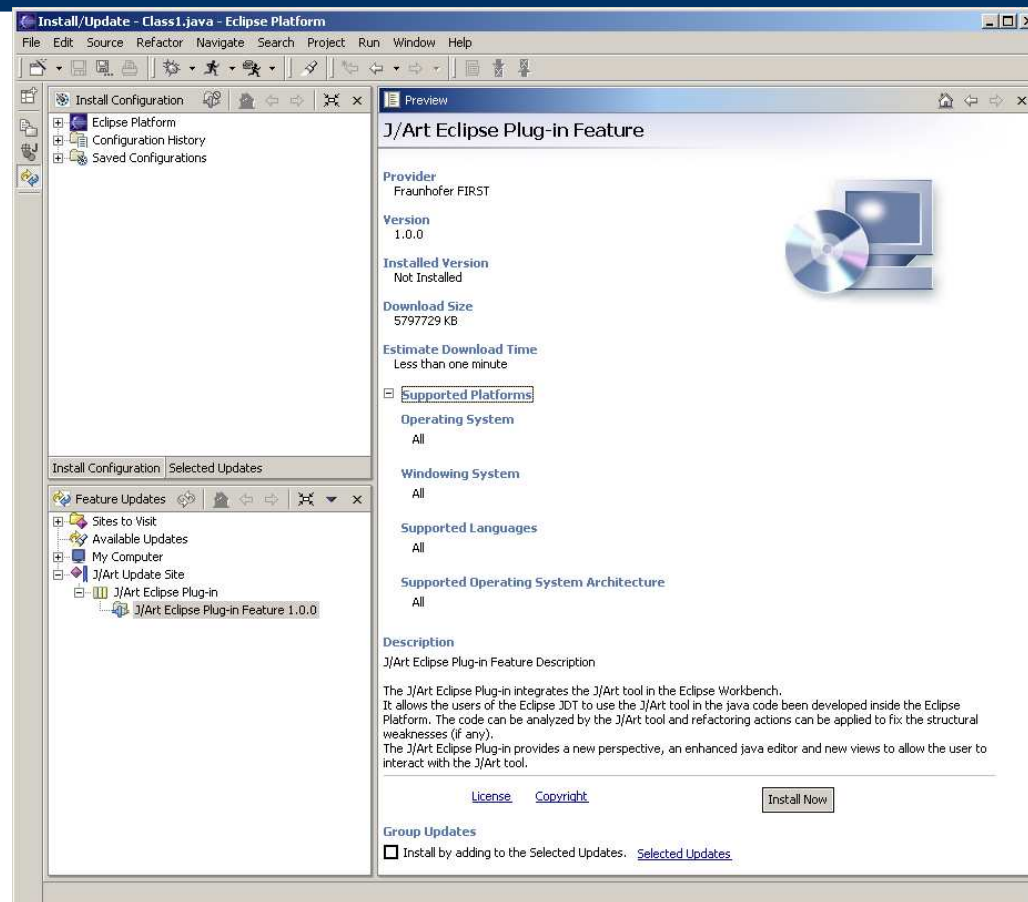
J/Art Eclipse Plug-in – Results

An usefull J/Art Eclipse Plug-in prototype

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J/Art Eclipse Plug-in – Enhancements

- Preference page
- Input as Eclipse Working Set
- Allow Drag and Drop in the input view
- Provide extension points for J/Art input and output (filters, for instance)
- Editor creating markers
- Extract the J/Art Core

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Not more prototype?

- Pack and sell! (or at least distribute)

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The next release?

- More analyzes
- More refactorings options
- Better suggestions
- Work with other languages:
  - C
  - C++
  - JSP

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Questions

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?
?
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But, how to be happy?

Do what you like
(or love) to do,
and your work
will be a hobby

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And how about the money?

The money come
as return of a work
well done

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Thank you!

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