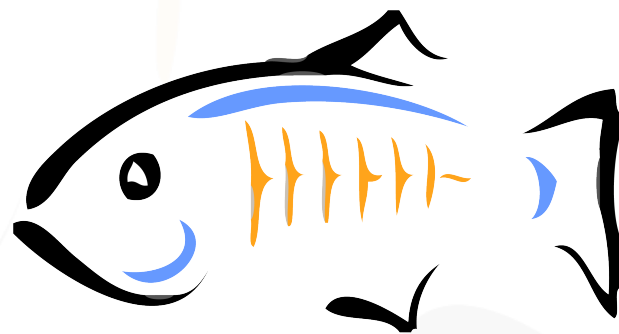


ORACLE®

Glassfish Importer for Eclipse

Michael Tidd

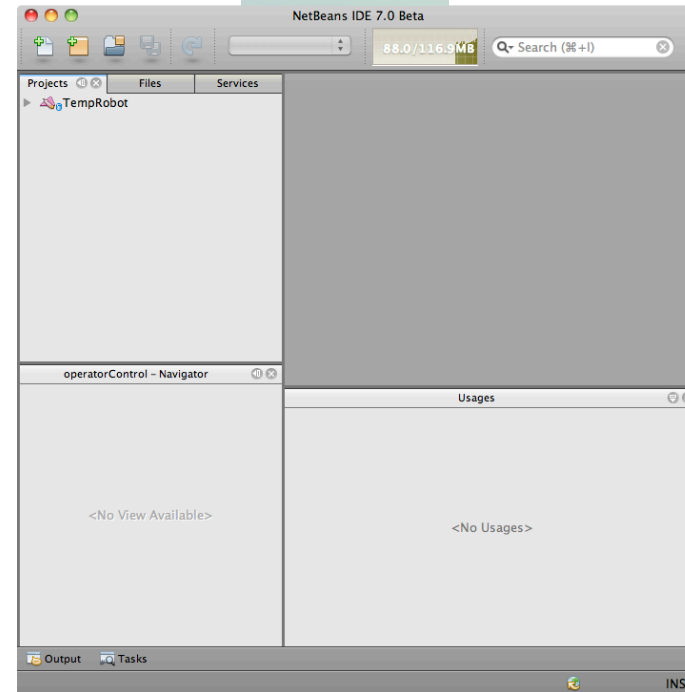
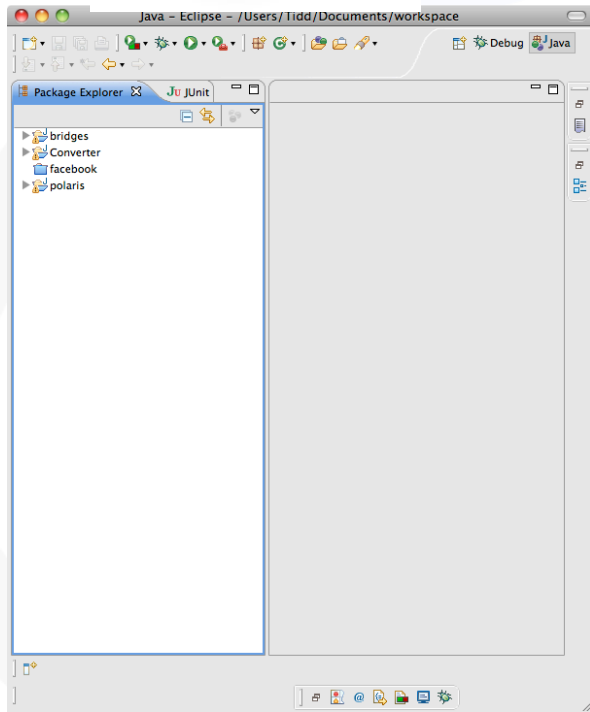


Problem

Import a Glassfish project created
in Netbeans into Eclipse

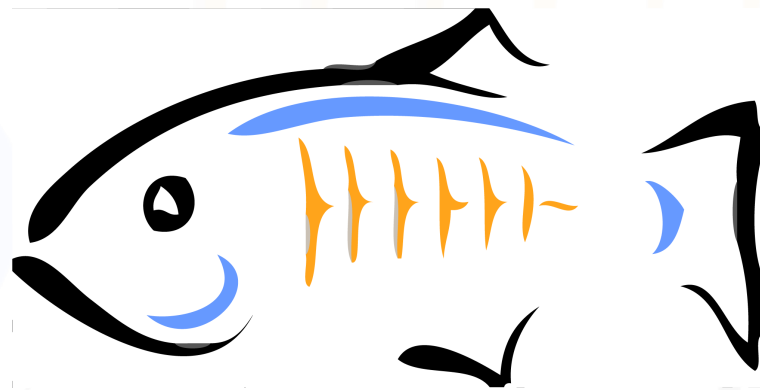


Background



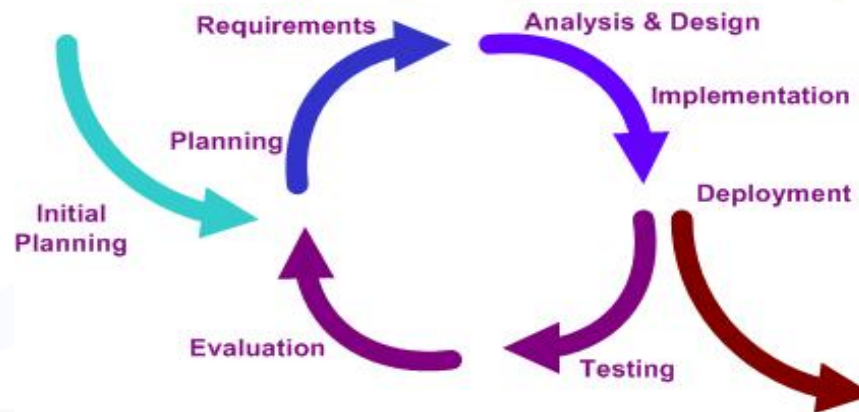
Background

- Glassfish v3



Approach

- Manually Convert Samples
- Stand Alone Converter
- Plug-in



Manual Conversion

- Convert Netbeans projects by hand
 - Project structures mapped
 - Eclipse project files required editing

Translations

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://www.netbeans.org/ns/project/1">
  <type>org.netbeans.modules.web.project</type>
  <configuration>
    <data xmlns="http://www.netbeans.org/ns/web-project/3">
      <name>basic-ajax</name>
      <minimum-ant-version>1.6.5</minimum-ant-version>
      <web-module-libraries/>
      <web-module-additional-libraries/>
      <source-roots>
        <root id="src.dir"/>
      </source-roots>
      <test-roots/>
    </data>
  </configuration>
</project>
```

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?><projectDescription>
  <name>basic-ajax</name>
  <comment/>
  <projects>
  </projects>
  <buildSpec>
    <buildCommand>
      <name>org.eclipse.wst.jsdt.core.javascriptValidator</name>
      <arguments>
      </arguments>
    </buildCommand>
    <buildCommand>
      <name>org.eclipse.jdt.core.javabuilder</name>
      <arguments>
      </arguments>
    </buildCommand>
    <buildCommand>
      <name>org.eclipse.wst.common.project.facet.core.builder</name>
      <arguments>
      </arguments>
    </buildCommand>
    <buildCommand>
      <name>org.eclipse.wst.validation.validationbuilder</name>
      <arguments>
      </arguments>
    </buildCommand>
  </buildSpec>
  <natures>
    <nature>org.eclipse.jem.workbench.JavaEMFNature</nature>
    <nature>org.eclipse.wst.common.modulecore.ModuleCoreNature</nature>
    <nature>org.eclipse.wst.common.project.facet.core.nature</nature>
    <nature>org.eclipse.jdt.core.javanature</nature>
    <nature>org.eclipse.wst.jsdt.core.jsNature</nature>
  </natures>
</projectDescription>
```

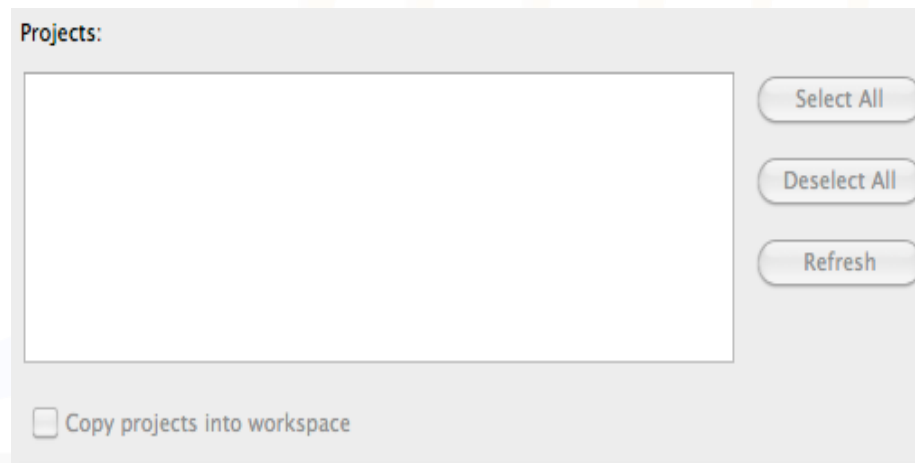
Translations

```
web-app_2_5-0.dtd">  
<sun-web-app error-url="">  
  <context-root>/basic-ajax</context-root>  
  <class-loader delegate="true"/>  
  <jsp-config>  
    <property name="keepgenerated" value="true">  
      <description>Keep a copy of the generated servlet class' java code.</description>  
    </property>  
  </jsp-config>  
</sun-web-app>
```

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>  
<project-modules id="moduleCoreId" project-version="1.5.0">  
  <wb-module deploy-name="basic-ajax">  
    <wb-resource deploy-path="/" source-path="/web"/>  
    <wb-resource deploy-path="/WEB-INF/classes" source-path="/src/java"/>  
    <property name="java-output-path"/>  
      <property name="context-root" value="basic-ajax"/>  
  </wb-module>  
</project-modules>
```

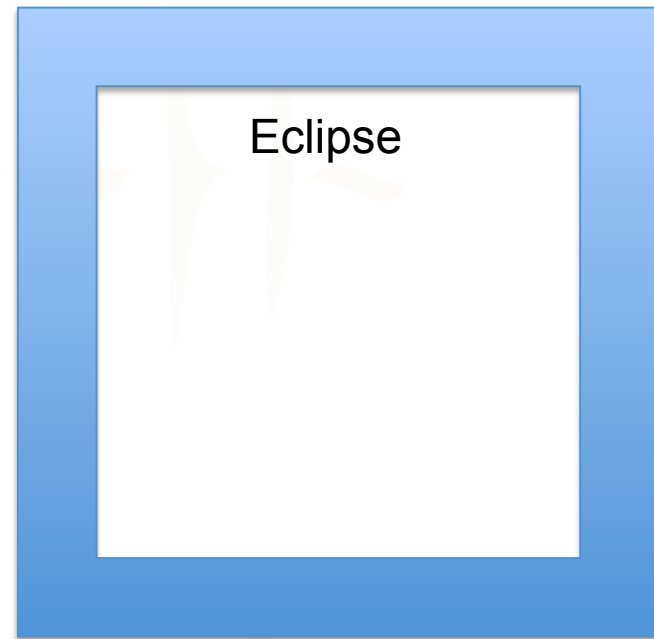
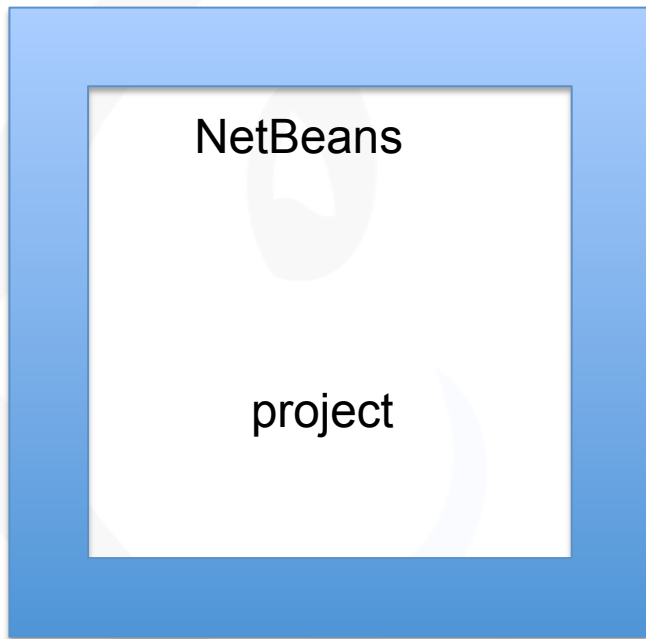

Stand Alone Converter

- Convert from NetBeans to Eclipse
- Prototype
- Copy vs Standard



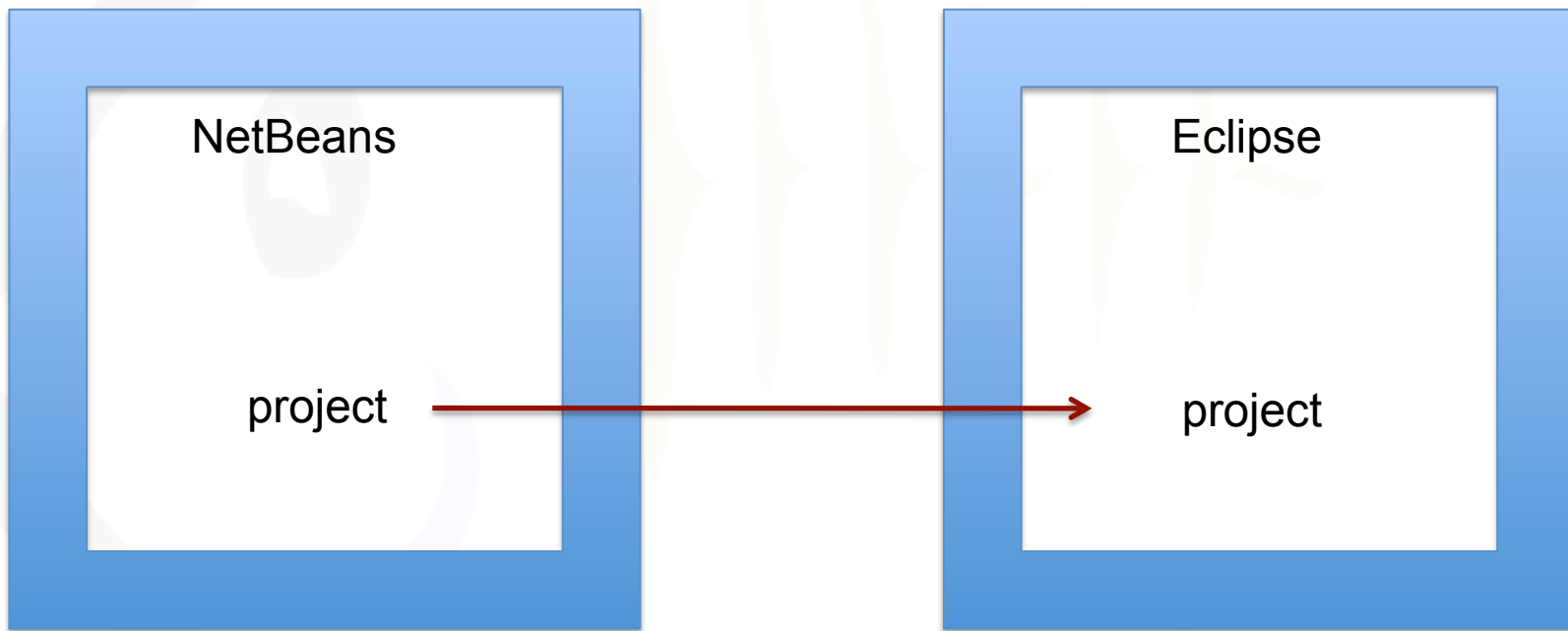
Stand Alone Converter

- Copy



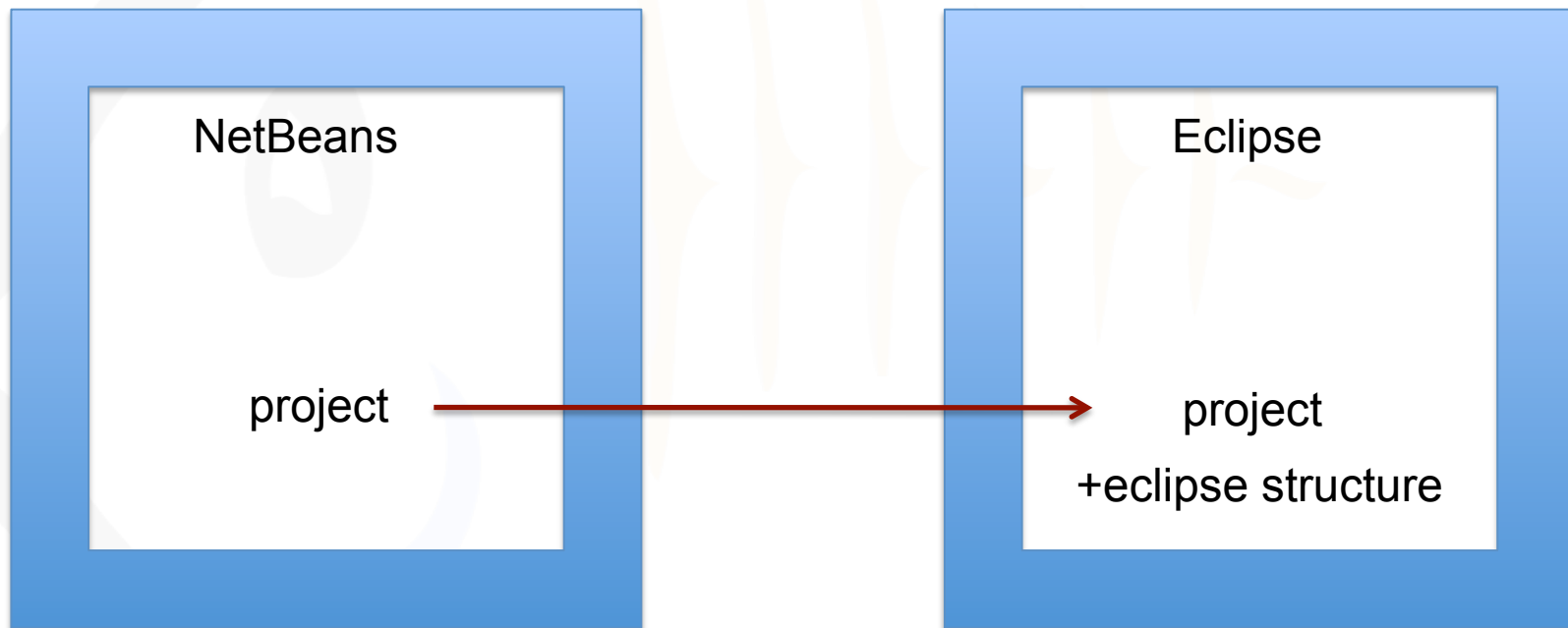
Stand Alone Converter

- Copy



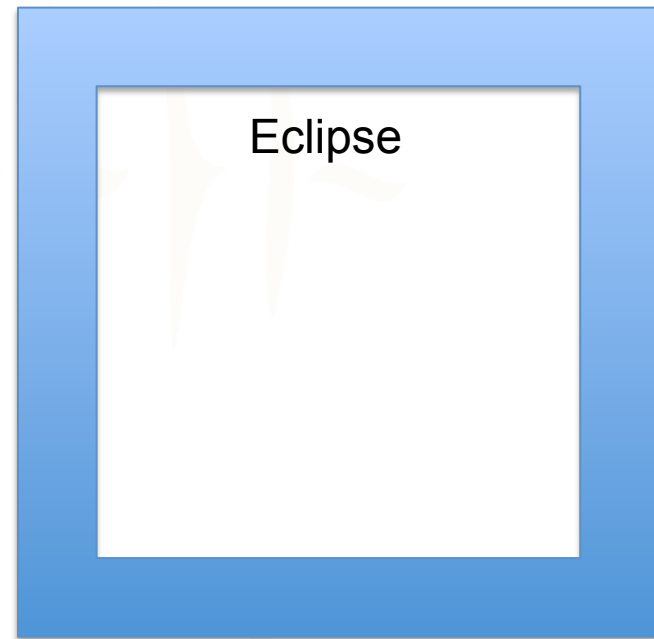
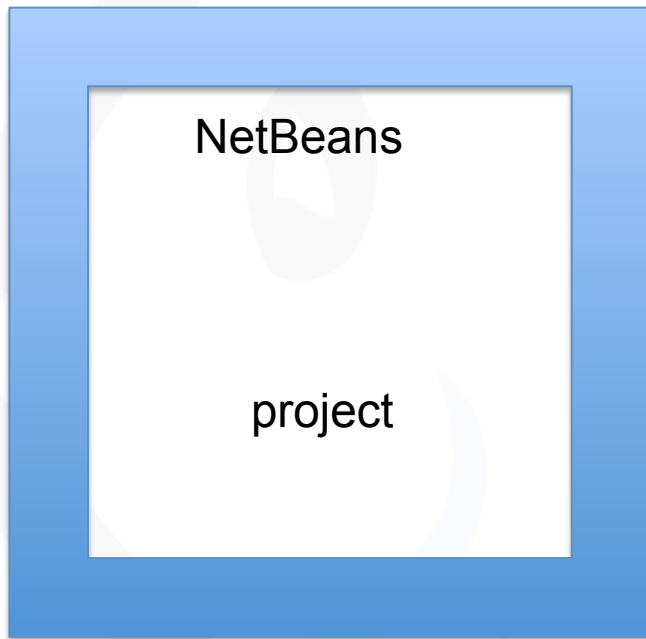
Stand Alone Converter

- Copy



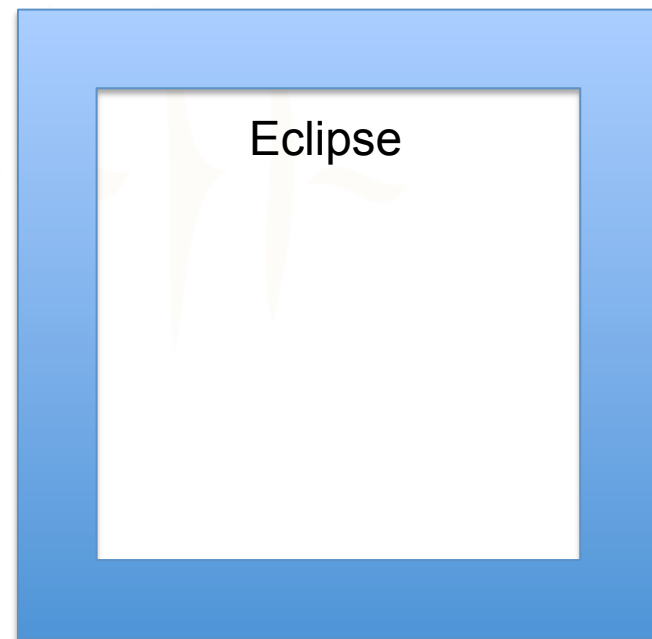
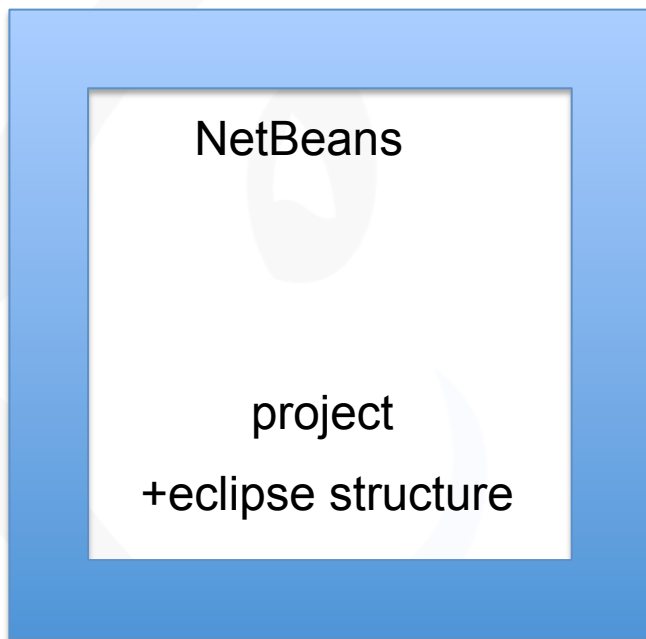
Stand Alone Converter

- Standard



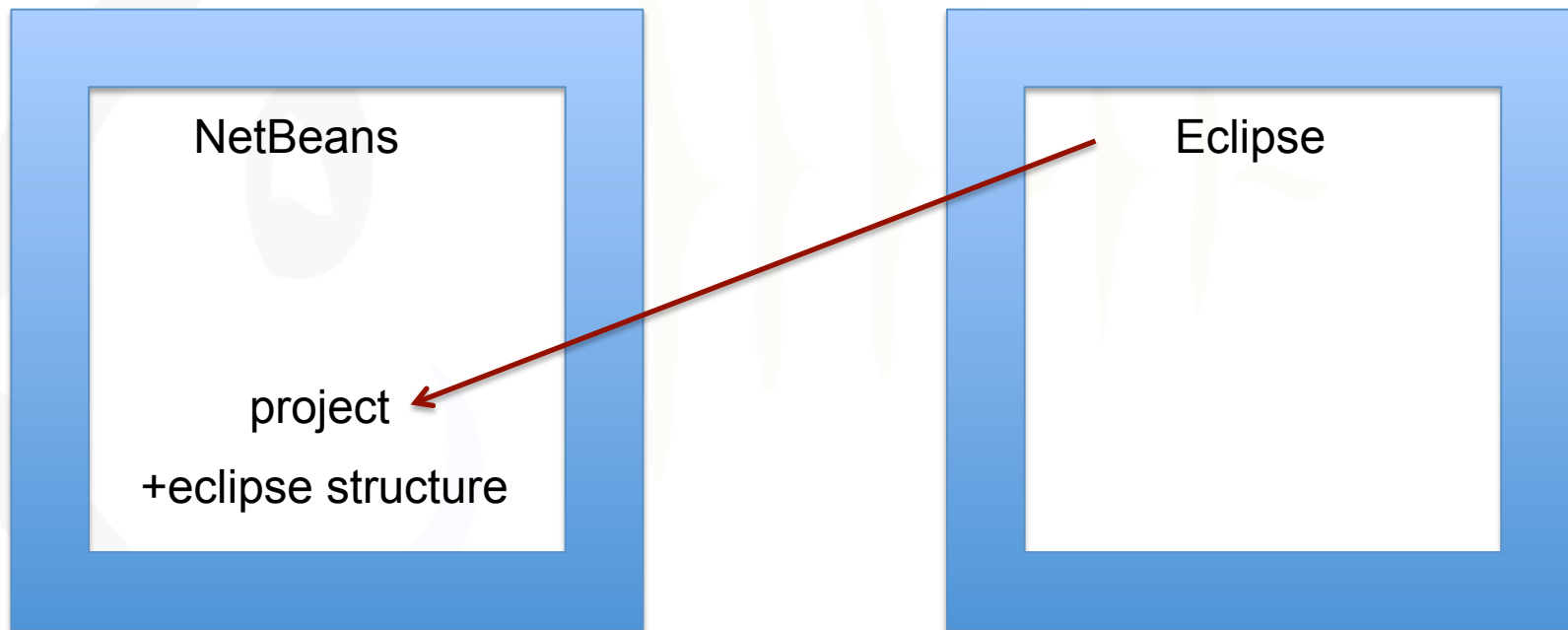
Stand Alone Converter

- Standard



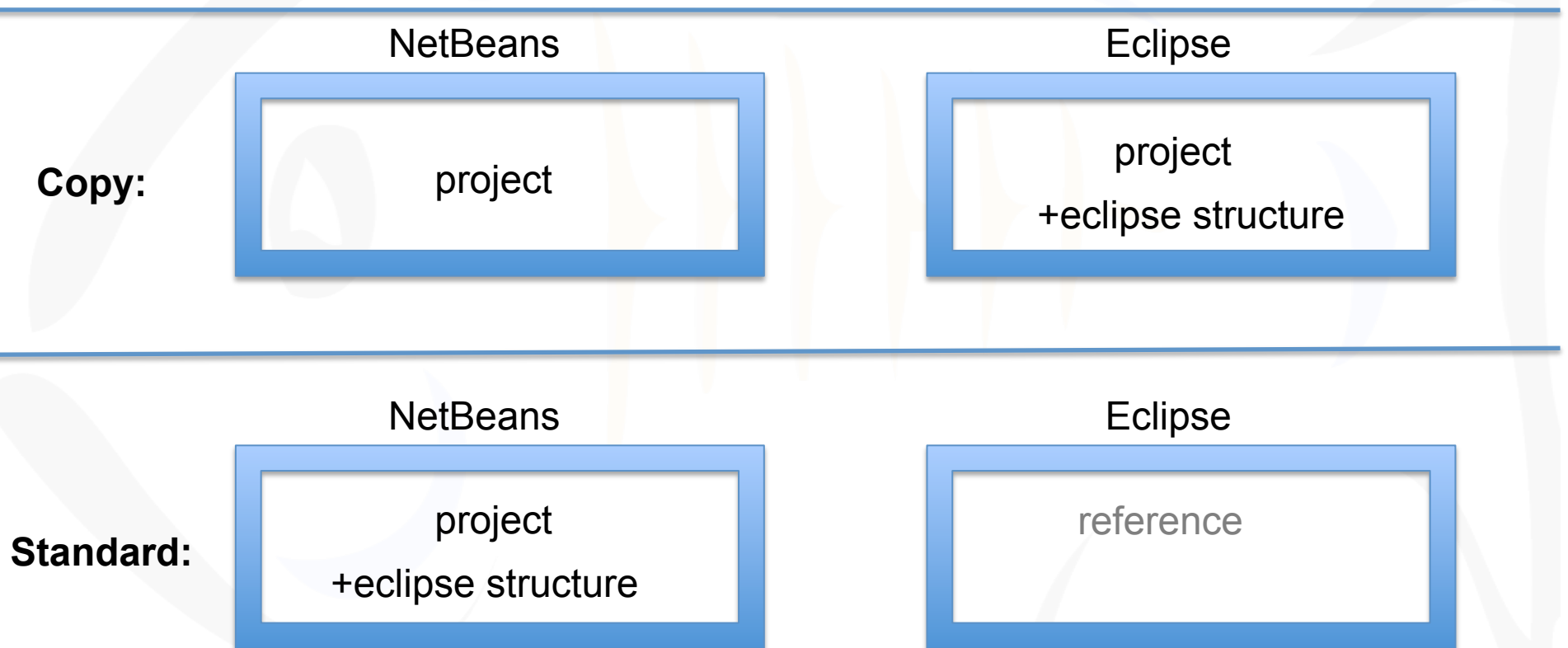
Stand Alone Converter

- Standard



Stand Alone Converter

- Standard vs. Copy



Stand Alone Converter

- Prototype



```
Console 
<terminated> Converter [Java Application] /System/Library/Frameworks/JavaVM.framework/Versions/1.5/Home/bin/java (Apr 11, 2010 1:57:47 PM)
Enter the Netbeans project's path: /Users/Tidd/NetBeansProjects/glassfish-samples/ws/javaee6/web/jsf/basic-ajax
Completed in 1 seconds
```

Stand Alone Converter

- Prototype Feedback
 - XML Parser
 - New Test Cases

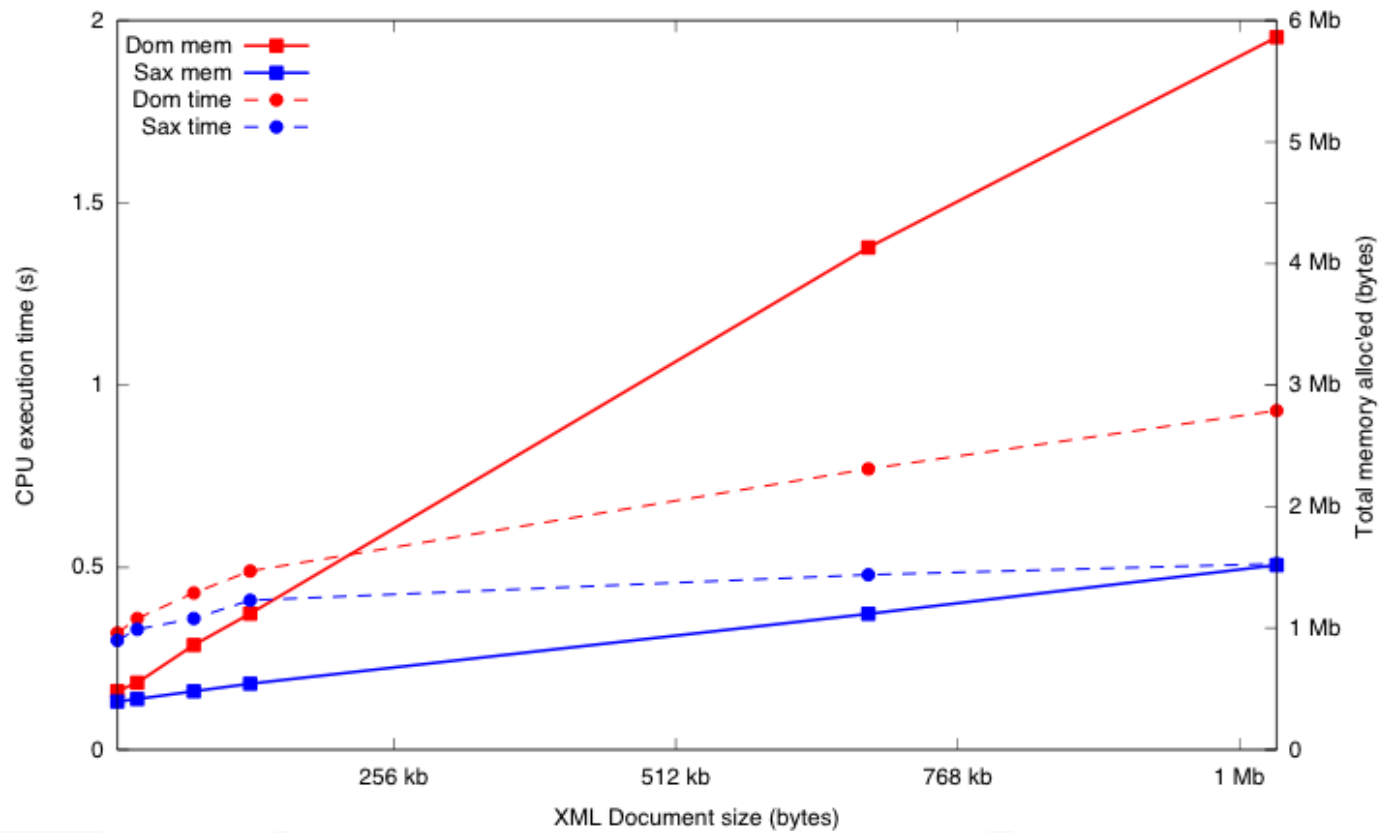
XML Parsing

- Document XML Parsing
 - Full Document Parse
 - Simple for developers
 - Slow

XML Parsing

- Simple API for XML Parsing
 - Node Pull-based Parse
 - More Efficient

XML Parsing



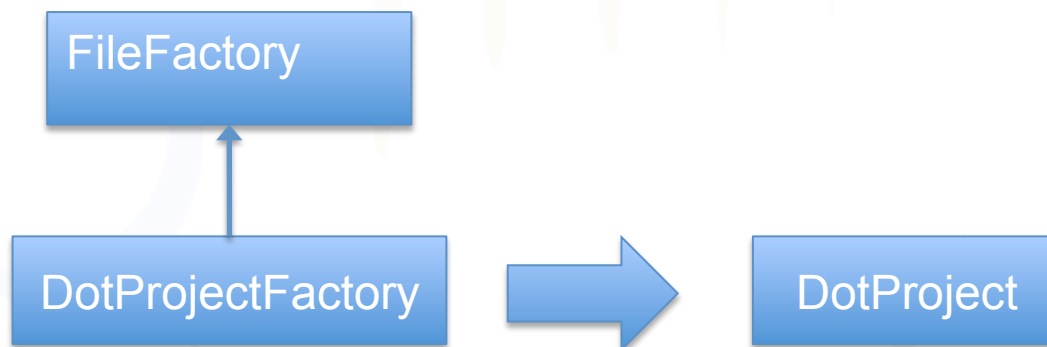
<http://tech.inhelsinki.fi/2007-08-29/>

Factory Pattern

- FileFactory
 - retrieves xml from file
 - extracts project name

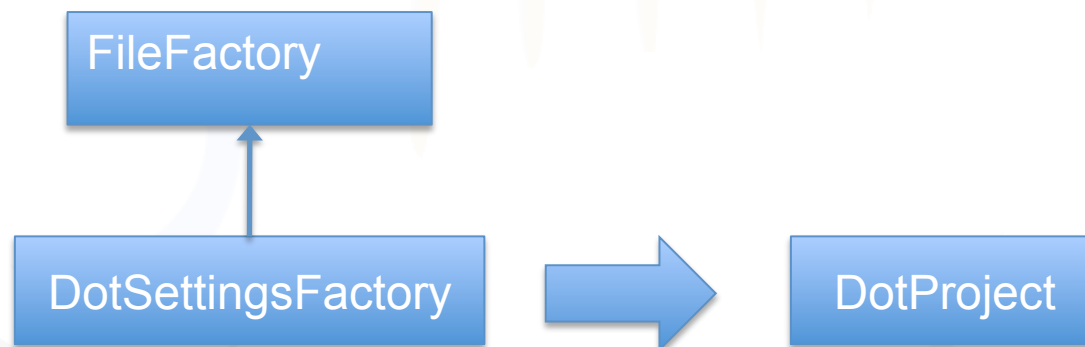
Factory Pattern

- DotProjectFactory
 - copying the .project template
 - editing the .project template



Factory Pattern

- DotSettingsFactory
 - copying the .settings templates
 - extracts the context root
 - edits the .settings template



Results

- Manually Convert Samples
- Stand Alone Prototype
- Stand Alone Converter

Iteration 3

- Multiple Projects
- Eclipse Plug-in

Eclipse Plug-in

- Encapsulate Stand Alone within an Eclipse plug-in
- Utilized the Import Wizard
 - Activator
 - Bundle

Eclipse Plug-in

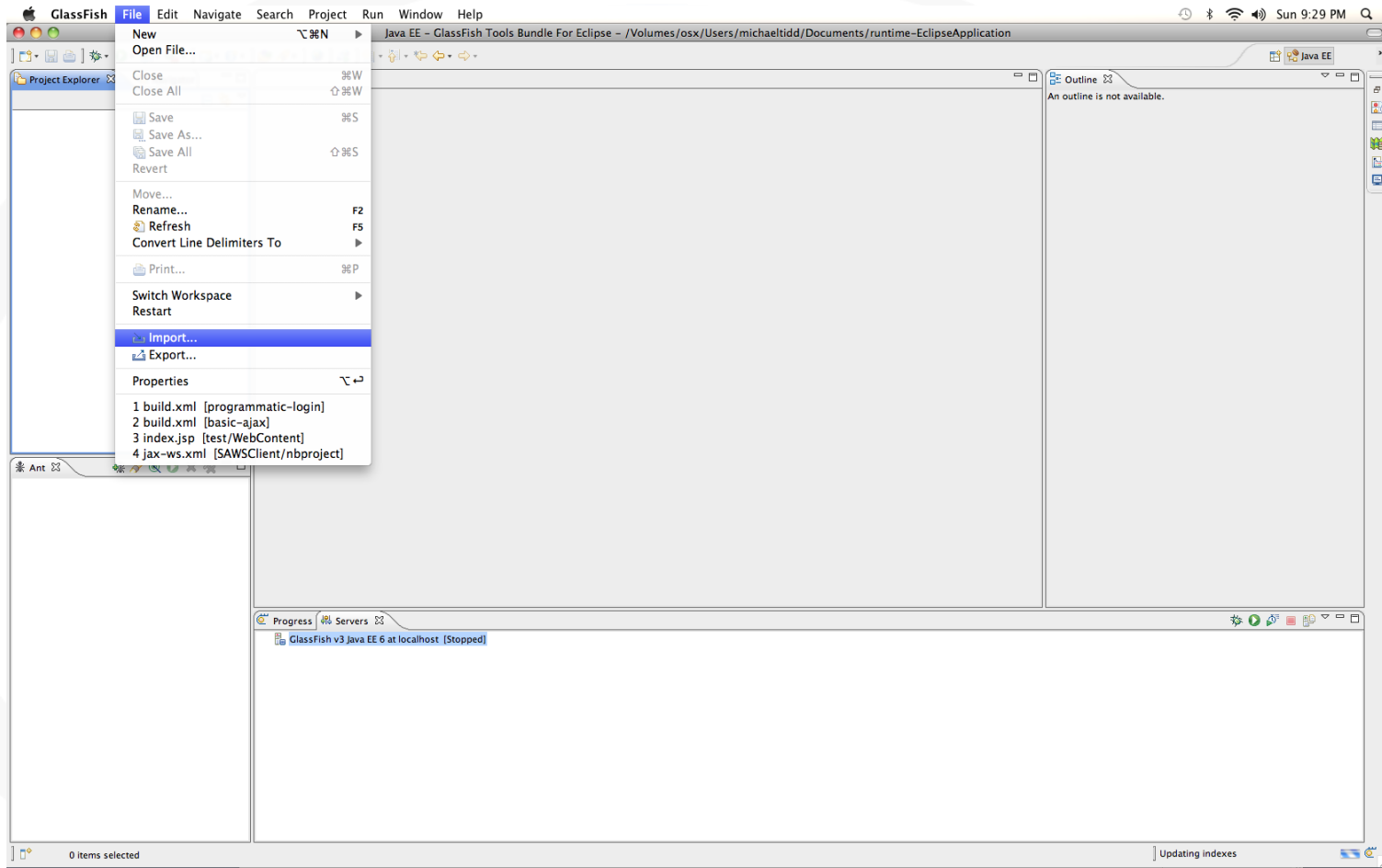
- Template File Access

Default File IO does not work for plug-ins

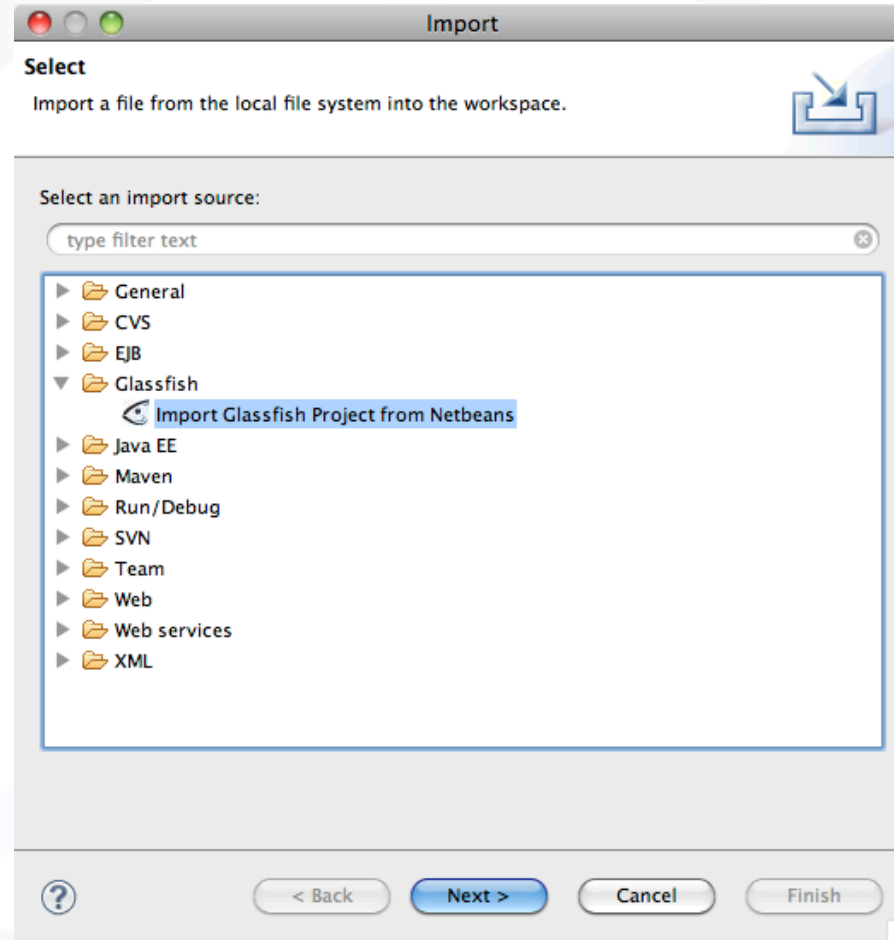
- URL object
- Manifest.mf

```
Manifest-Version: 1.0
Bundle-ManifestVersion: 2
Bundle-Name: %Bundle-Name
Bundle-SymbolicName: glassfish_import;singleton:=true
Bundle-Version: 1.0.0.qualifier
Bundle-Activator: org.sun.Activator
Require-Bundle: org.eclipse.ui,
org.eclipse.core.runtime,
org.eclipse.ui.ide,
org.eclipse.core.resources
Bundle-ActivationPolicy: lazy
Bundle-RequiredExecutionEnvironment: JavaSE-1.6
Import-Package: org.eclipse.jdt.core
Export-Package: org.sun,
org.sun.gf.nbecl.converter,
org.sun.gf.nbecl.factory,
org.sun.gf.nbecl.utils,
org.sun.importWizards,
utils
```

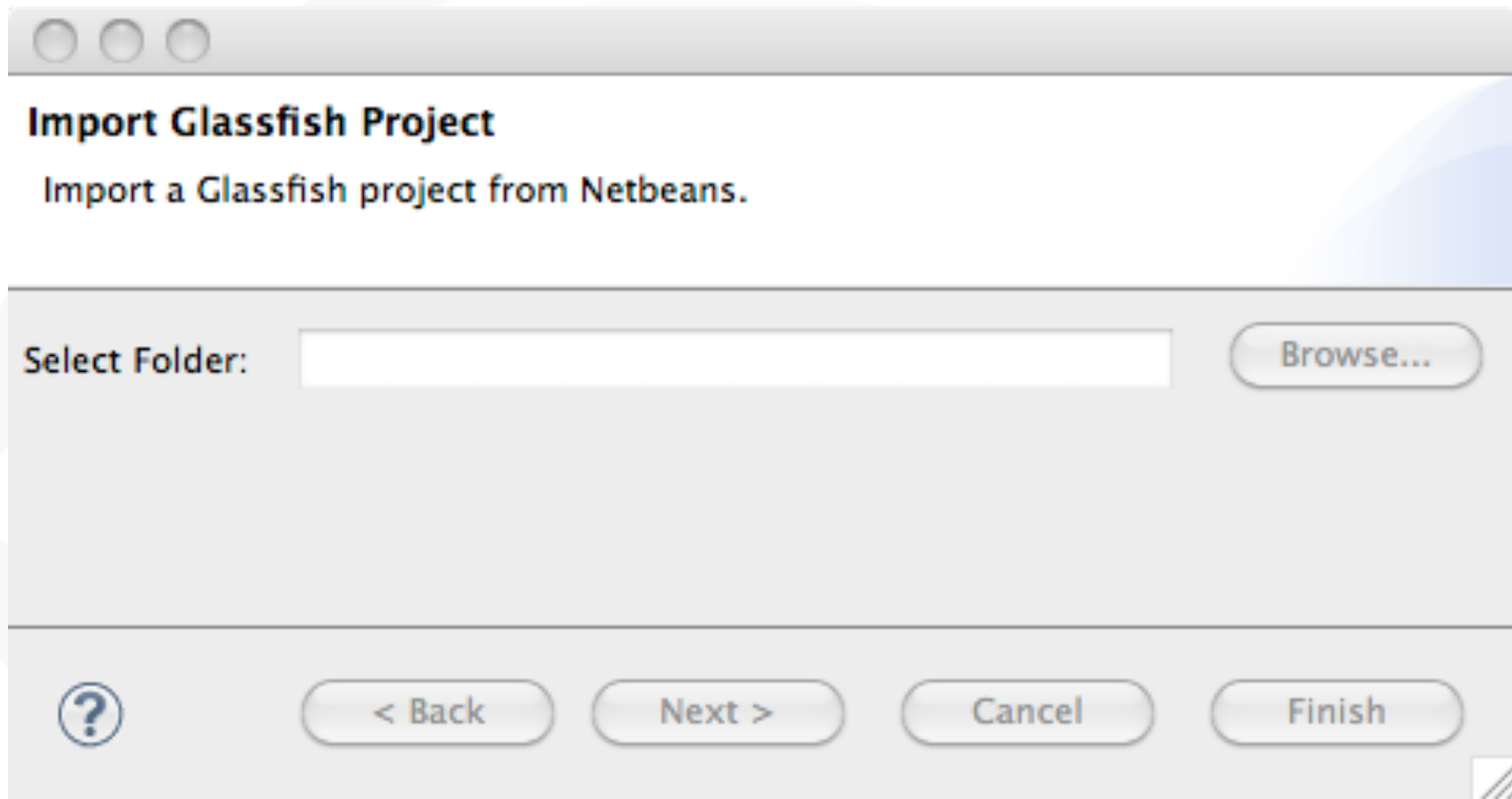
Eclipse Plug-in



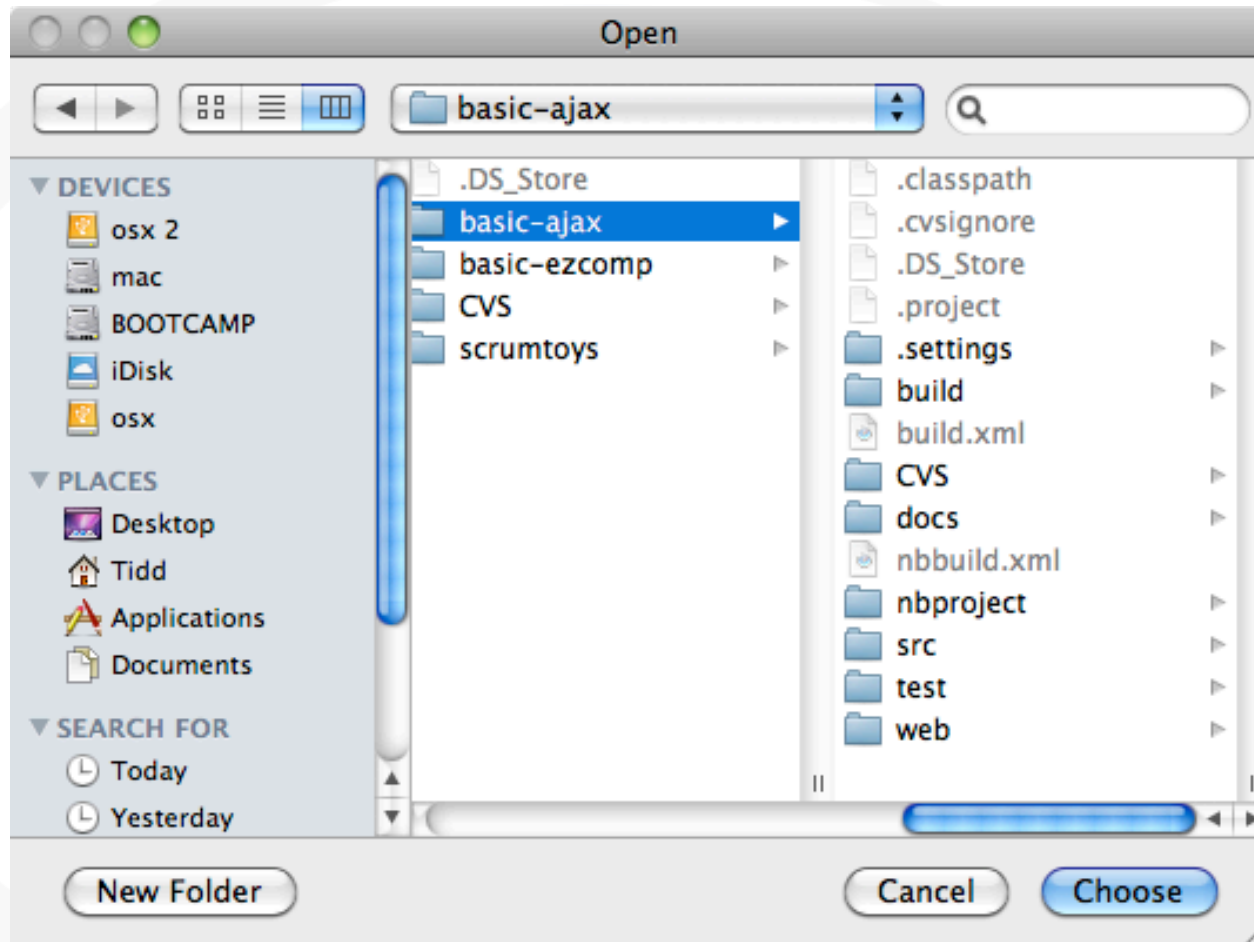
Eclipse Plug-in



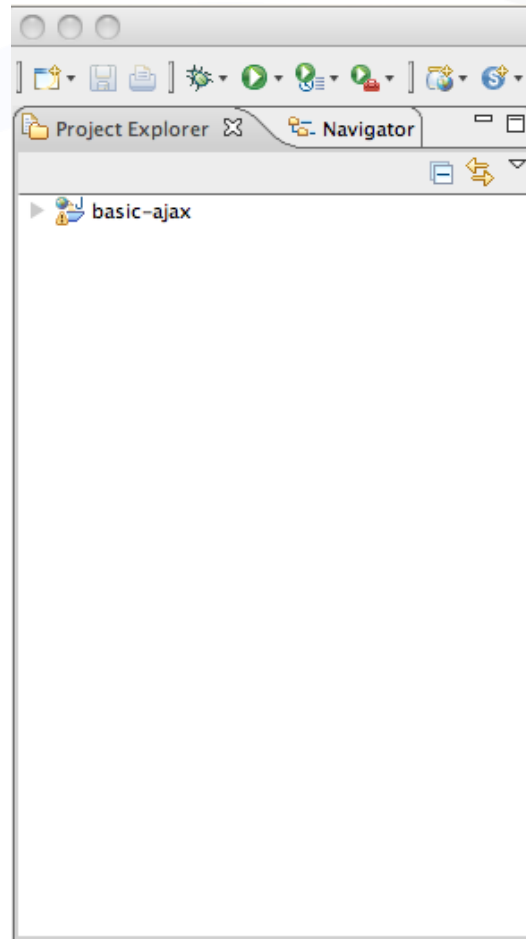
Eclipse Plug-in



Eclipse Plug-in



Eclipse Plug-in



Summary

- Manual Conversion
- Prototype Converter
 - Standard vs Copy
- Stand-Alone Converter
 - DOM vs SAX
 - File Factory
- Eclipse Plug-in
 - Template File Access

Acknowledgments

- In collaboration with Sun (now Oracle)
- Worked with Glassfish team
 - Ludovic Champenios
 - Vince Kraemer
- Advisor
 - Gary Pollice

<https://glassfishplugins.dev.java.net/converter/index.html>