

Control System Studio Training - Development Setup

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Getting CSS to run from source code

1. Get *Java*, *Eclipse*, *CSS Sources*
2. Start *Eclipse*
3. “Import” *Sources* into *Workspace*
4. Open *CSS *.product* file, *Launch*

Java

- **Check: Is java available?**

```
java -version
```

***Need Sun/Oracle Java 1.6, 1.7;
Not GCJ, OpenJDK***

Eclipse Version

- Eclipse just went from 3.x to 4.x
- Most CSS Sources would ‘work’ with 4.x
 - Except BOY

→ Need Eclipse 3.7.2

Can use Eclipse 4.x as the IDE, but “Target Platform” must be 3.7.2

Start Eclipse

- Run

`eclipse/eclipse`

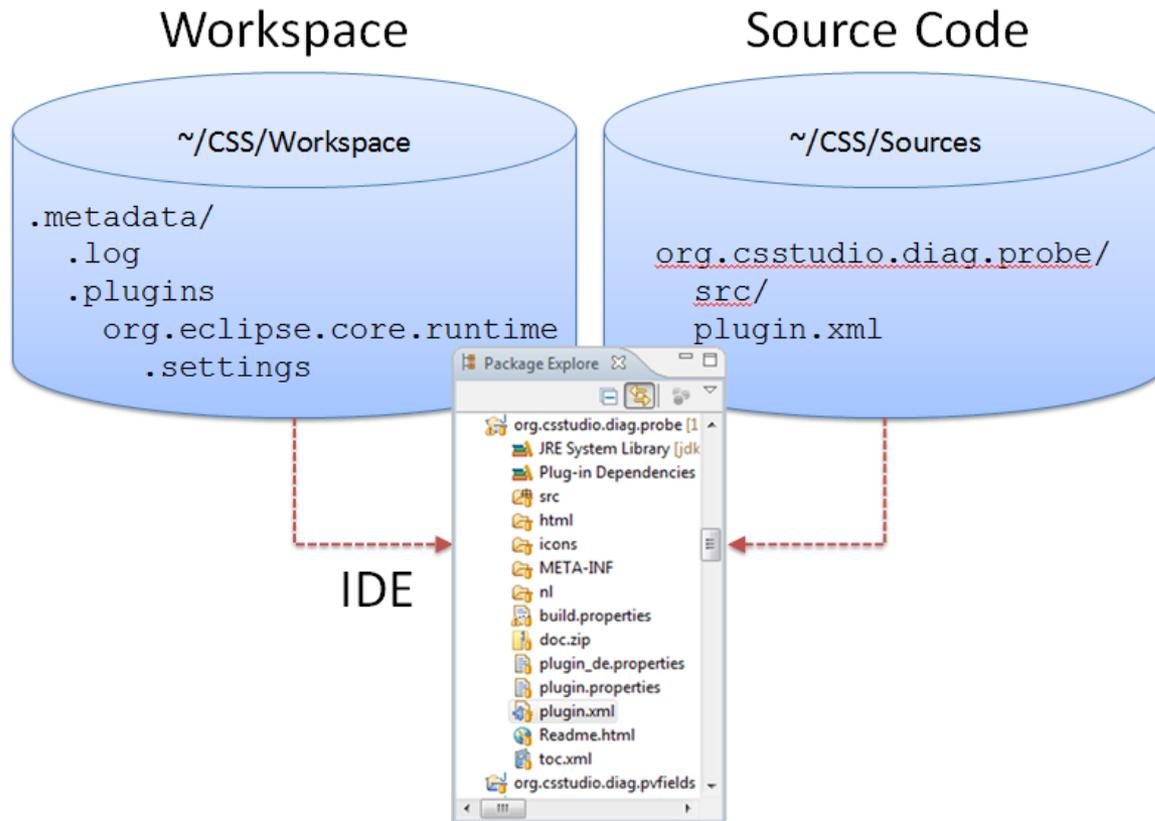
“Workspace”:

use CSS/Workspace in your home directory

- Suggest to check Preferences:

- *Java, Installed JREs: Is it the one you want?*
 - *Eclipse may automatically find a JRE, but you want the JDK for source-level debugging*
- *Usage Data Collector: Disable capture?*
- *Add (older) version of Eclipse as “Target Platform”?*

Source Code vs. Eclipse Workspace



- **Source Code:**
 - Where the sources are
- **Workspace: Directory with “.metadata” subdir.**
 - Tracks currently open window, ...

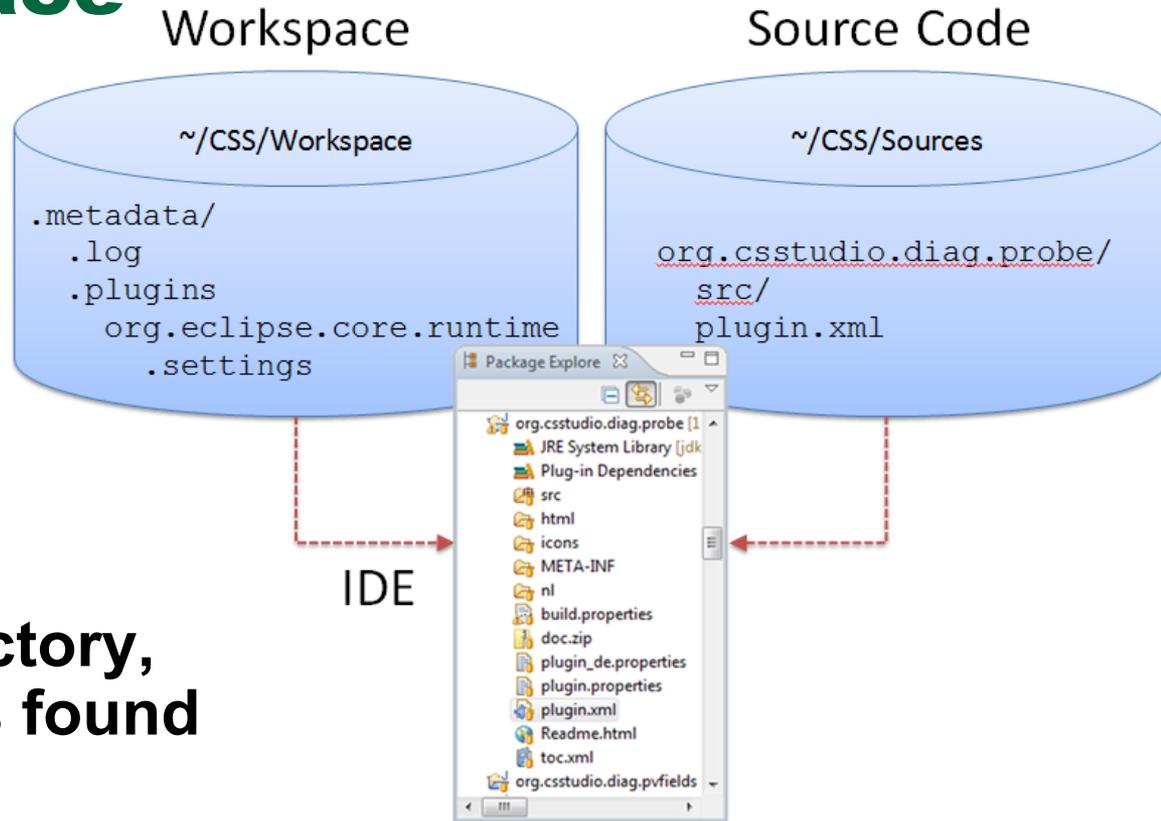
To avoid confusion: Keep Separate!

- **Example: Use CSS/Sources , CSS/Workspace**

Eclipse Workspace

“Import” Sources into Workspace:

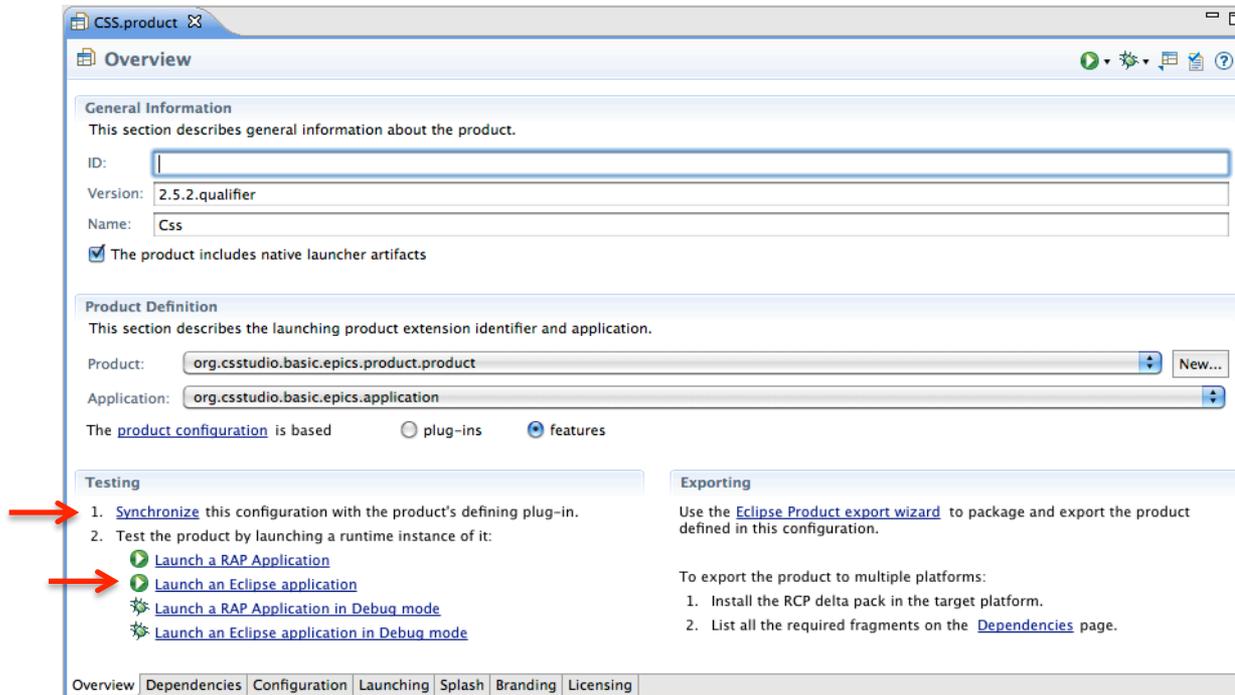
- *File/Import..., General, Existing Projects into Workspace*
- **Select “root” directory, import all projects found**
- **Do not “Copy projects into Workspace”**



Note: Need to “Import” even if sources are already located in workspace directory

Run Product

Open `org.csstudio.basic.epics.product/*`.product



Press

1. Synchronize

2. Launch an Eclipse application

3. Later, re-run via the  Run button in toolbar

Fundamentally, that's *it*

- **Product:**
 - List of plugins
 - *.product file to run the product
 - IDE can also 'export' product binary
- **Feature:**
 - Logical group of plugins
 - Allows online 'install', automated 'update'

“Headless Build”

- **Command-line process to turn *.product or *.feature into binary**
- **Can be scripted, launched from Hudson, ...**
- **Sadly, somewhat in parallel to IDE:**
 - **Specific directory layout**
 - **Need to copy sources into plugins/ and features/ folders**
 - **Additional build.properties file**
 - **Target platform, Java object code level, ..**

“Update Site”

- **Fundamentally, just a build option to create “P2 Metadata Repository” for products and features**
- **Published on web site**
- **Products can then**
 - **Install features from repository**
 - **Automatically update to latest version**
- **Requires careful setting of dependencies and version numbers**