IEC 61499

Automation Objects

Architecture of the Eclipse based AutomationObjects Designer

- Eclipse is more than a Java IDE

    – it has an open, extensible architecture

    – built out of large of plugin-ins

    – everybody can contribute plug-ins

- Social implications

    – every programmer can be a tool smith

    – creating opportunities for further extensions makes it possible for the tool smith to benefit from the work of others

    – it has to be easy to install and manage plug-ins

- ***Plugin == Component***

  – set of contributions

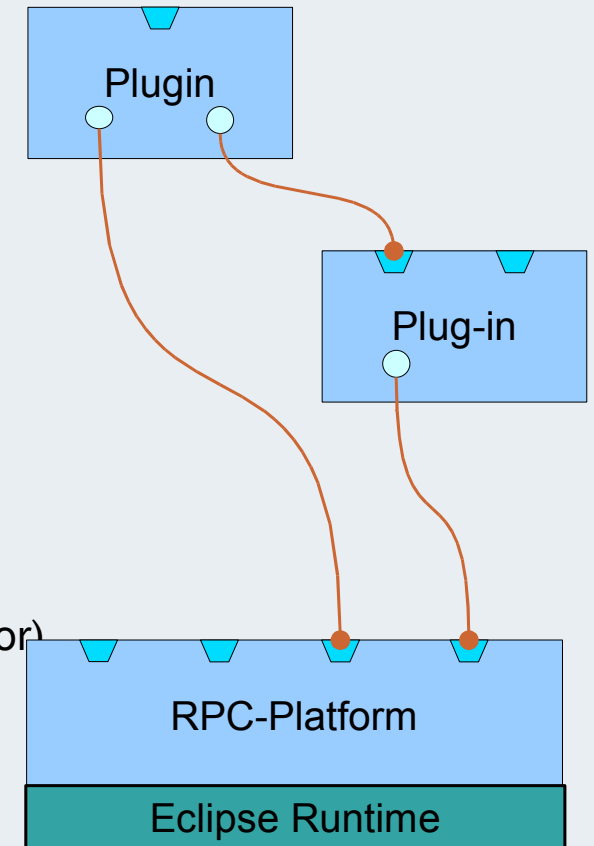 – smalles unit of a Eclipse unit

- ***Extension point***

  – named entity for collection contributions

  (example: extension point to add code converter to the IEC 61499 Editor)

- ***Extension***

  – a contribution
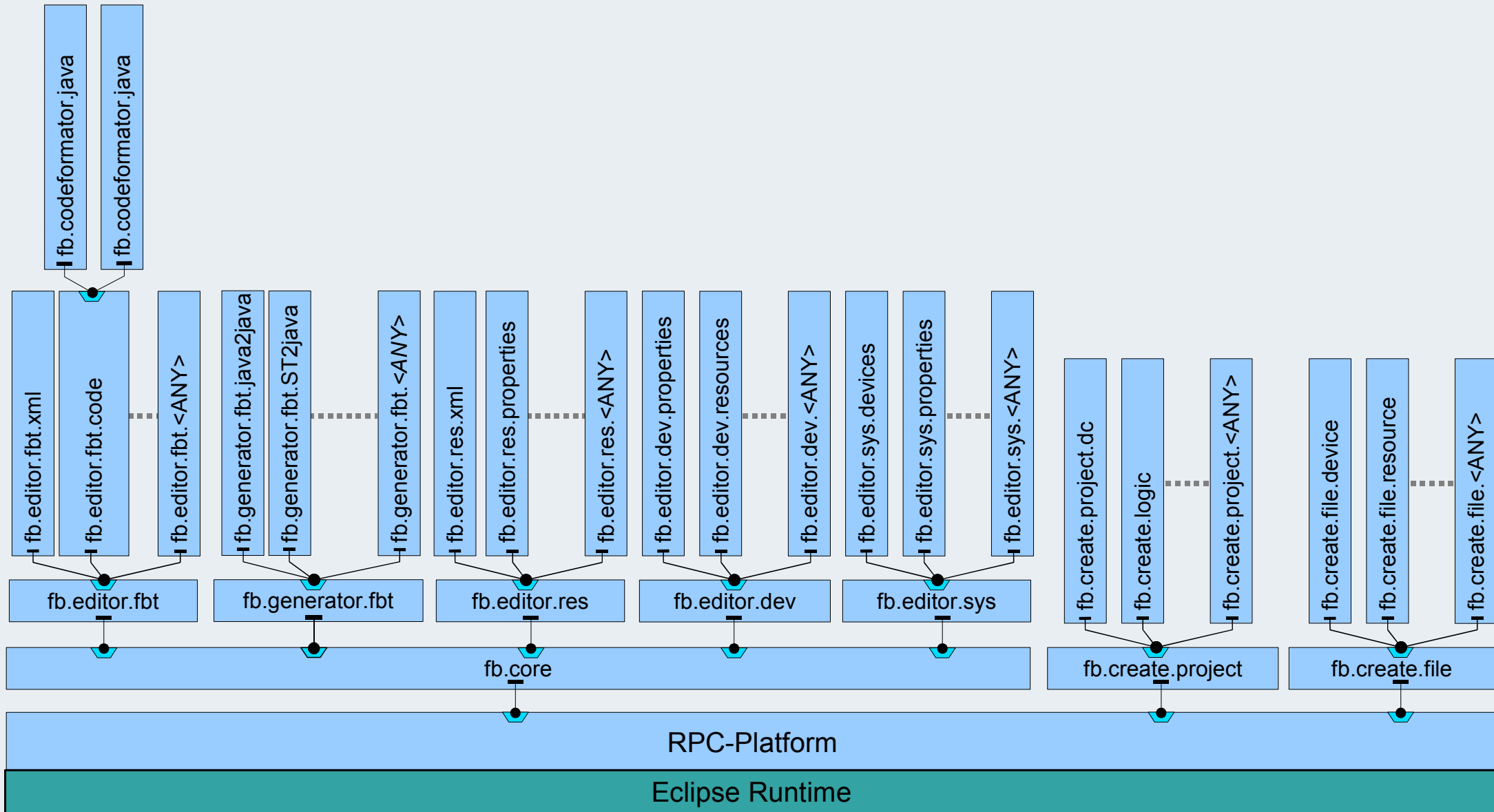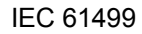
  (example: a code converter from ST to Java)

Plugin

Plug-in

RPC-Platform

Eclipse Runtime

○ Extension

▽ Extensionpoint

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AO Designer Architecture

fb.codeformator.java
fb.codeformator.java

fb.editor.fbt.xml
fb.editor.fbt.code
fb.editor.fbt. <ANY>

fb.generator.fbt.java2java
fb.generator.fbt.ST2java
fb.generator.fbt. <ANY>

fb.editor.res.xml
fb.editor.res.properties
fb.editor.res. <ANY>

fb.editor.dev.properties
fb.editor.dev.resources
fb.editor.dev. <ANY>

fb.editor.sys.devices
fb.editor.sys.properties
fb.editor.sys. <ANY>

fb.create.project.dc
fb.create.logic
fb.create.project. <ANY>

fb.create.file.device
fb.create.file.resource
fb.create.file. <ANY>

fb.editor.fbt

fb.generator.fbt

fb.editor.res

fb.editor.dev

fb.editor.sys

fb.create.project

fb.create.file

fb.core

RPC-Platform

Eclipse Runtime

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- Development

  - IEC 61499 Designer has an open, extensible and clean architecture

  - No or less code dependencies

  - everybody can contribute plug-ins

- Social implications

  - every programmer can be a tool smith.

  - vendors can customize the AO Designer to there products.

  - loose coupling of vendors which developed for the AO Designer.