

Eclipse 4.x - Past, Present and Future

Tom Schindl - BestSolution Systemhaus GmbH

Cluj June 2012

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About Tom

- ❖ CEO BestSolution Systemhaus GmbH
- ❖ Eclipse Committer
 - ❖ e4
 - ❖ Platform UI
 - ❖ EMF
- ❖ Projectlead: UFaceKit, Nebula
- ❖ Member of the Architectual Council



A bit of history (and future)

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- ❖ Summer `12: Juno release train will ship on Eclipse 4.2 SDK

Reason

Reason

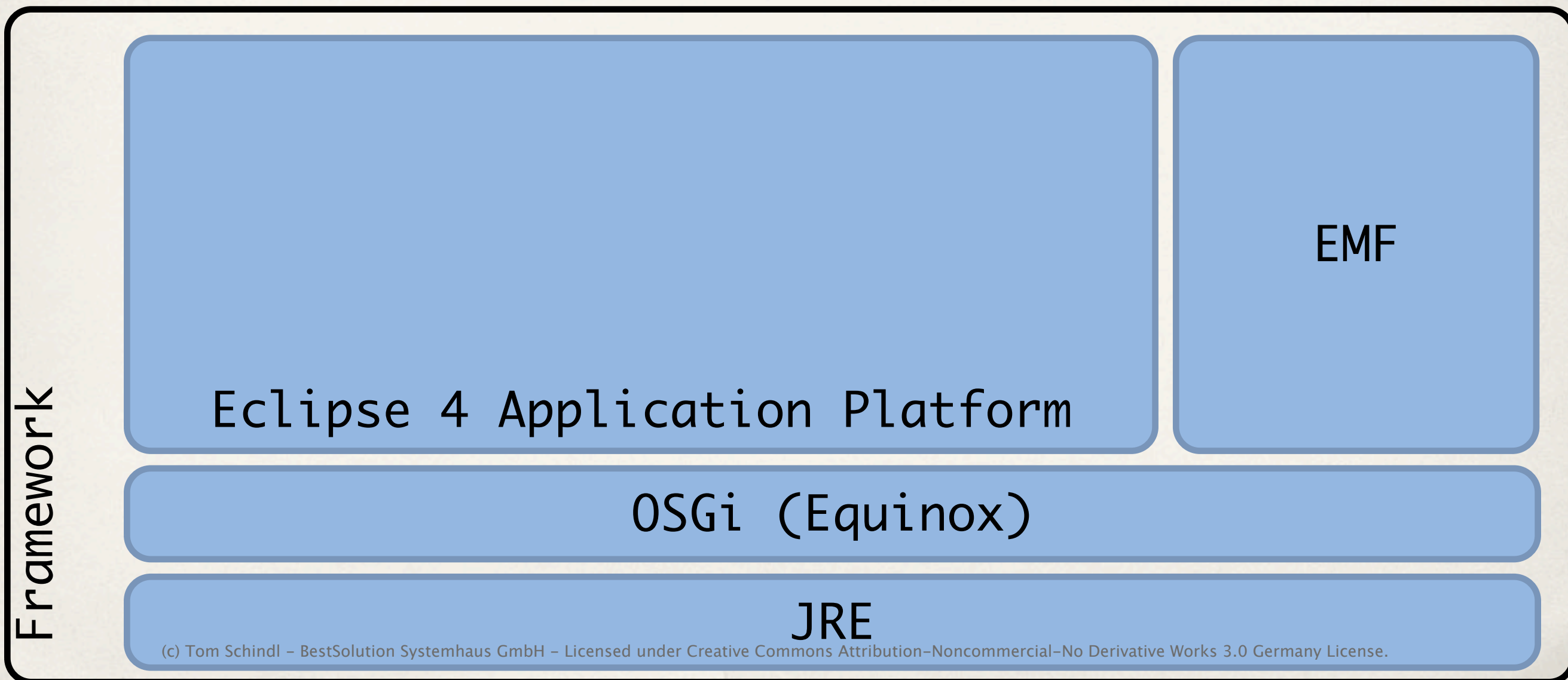
- ❖ Outdated programming pattern patterns
 - ❖ statics & singletons all over
 - ❖ inheritance which binds you to context - e.g. ViewPart can only show in ViewStacks, Editors only in editor area
 - ❖ listener pattern and even worse an inconsistent one

Reason

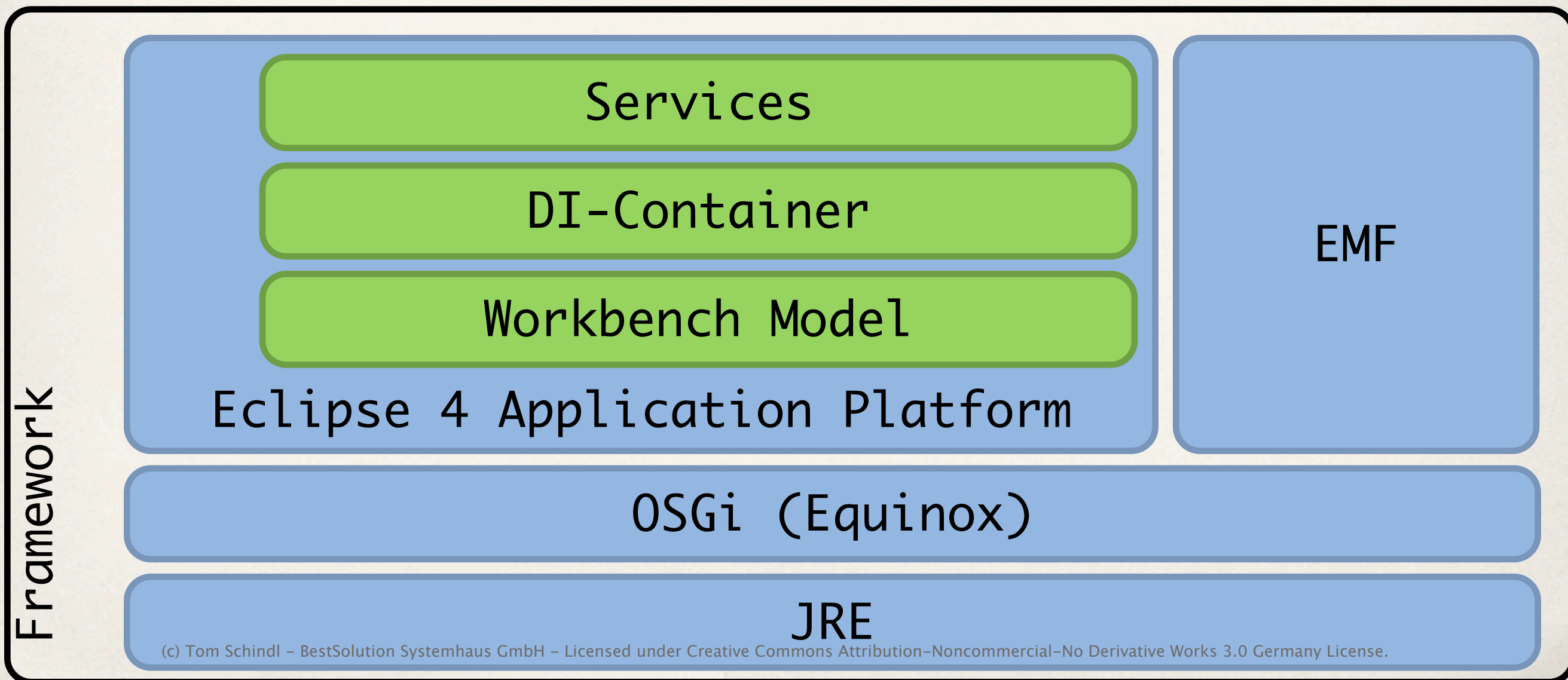
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 - ❖ listener pattern and even worse an inconsistent one
- ❖ **Software architecture made us own all the worlds problems**
 - ❖ e.g. you don't want draggable parts - Platform UI Team has to implement this for you

Eclipse 4.2 Application Platform

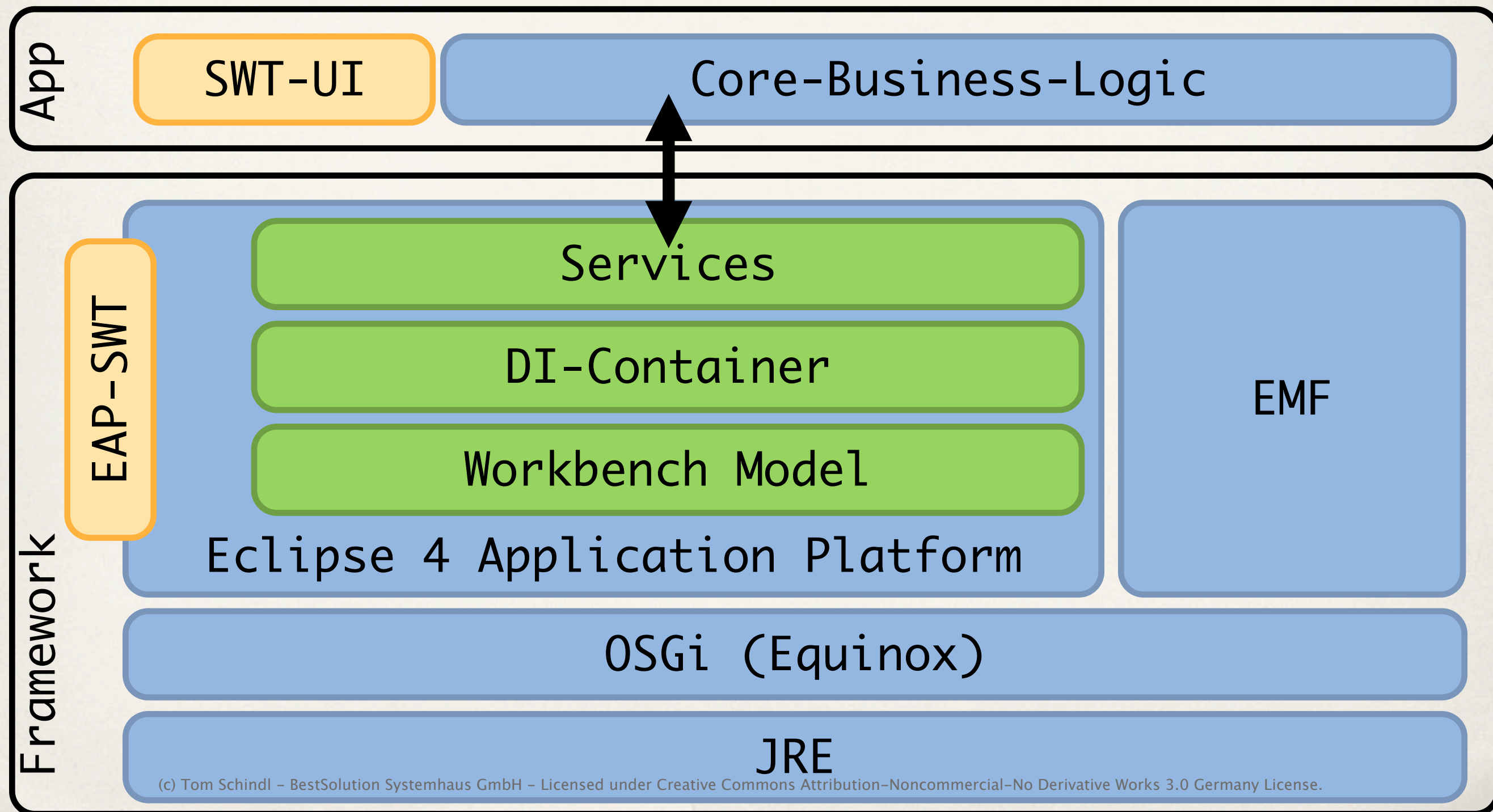
Eclipse 4.2 Application Platform



Eclipse 4.2 Application Platform



Eclipse 4.2 Application Platform



Eclipse SDK 3.x vs 4.x

Past - Eclipse 3.x

**Present & Future
Eclipse 4.x**

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Eclipse SDK 3.x vs 4.x

PDE

JDT

Past - Eclipse 3.x

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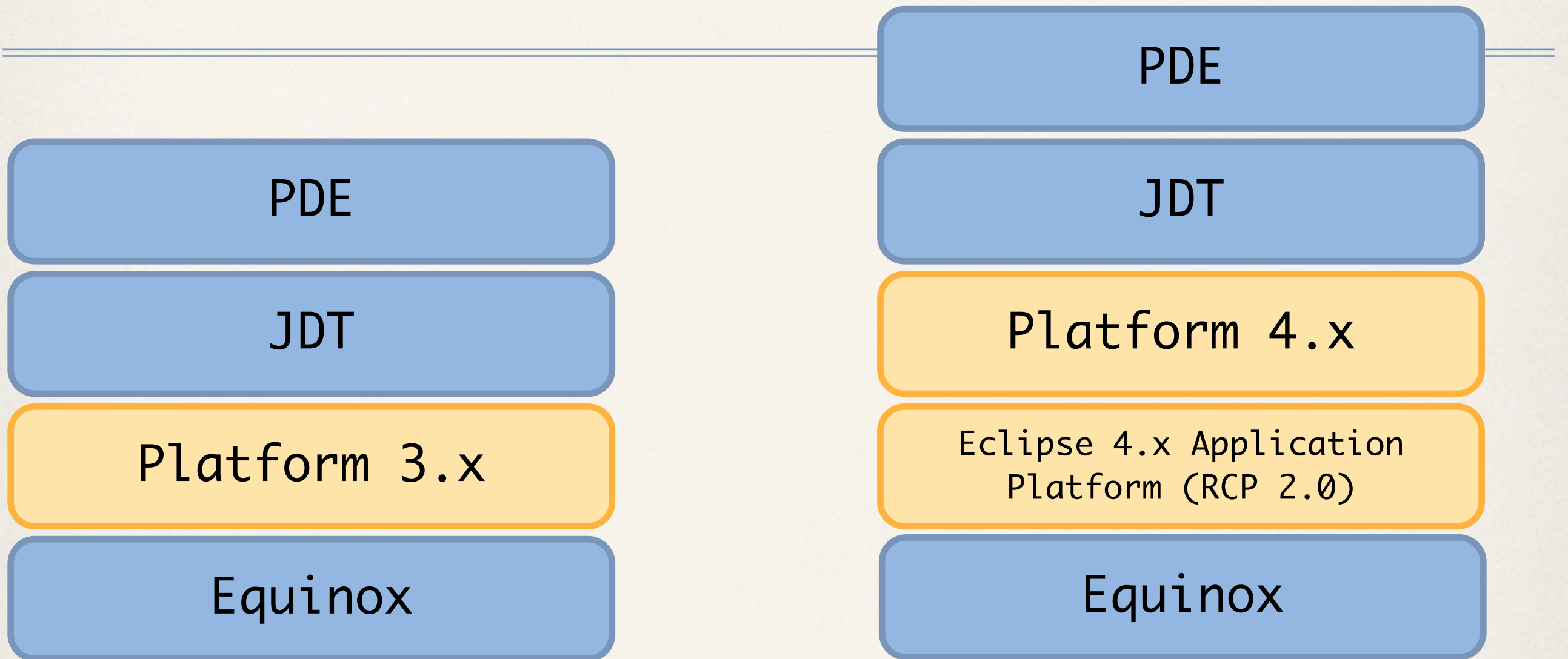
JDT

Platform 4.x

Equinox

**Present & Future
Eclipse 4.x**

Eclipse SDK 3.x vs 4.x



Past - Eclipse 3.x

**Present & Future
Eclipse 4.x**

Eclipse SDK 3.x vs 4.x

Platform 3.x

jface

core.resources

...

ui.workbench 3.x

Platform 4.x

jface

core.resources

...

ui.workbench 4.x

Eclipse 4
Application Platform

The programming model

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The Past

The past

```
public class MyPart extends ViewPart {  
    @Override  
    void createPartControl(Composite parent) {  
        getSite().getWorkbenchWindow().getSelectionService()....  
    }  
  
    void selChanged(Object value) {  
    }  
  
    @Override  
    void dispose() {  
    }  
  
    @Override  
    void setFocus() {  
    }  
}
```

The Present

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The present

```
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    }  
  
    void setFocus() {  
    }  
}
```

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The present

```
public class MyPart {  
    @PostConstruct  
    void createPartControl(Composite parent) {  
  
    }  
  
    @Inject  
    void selChanged(@Named("selection") Object value) {  
    }  
  
    @PreDestroy  
    void dispose() {  
    }  
  
    @Focus  
    void setFocus() {  
    }  
}
```

The Future

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The present

```
public class MyPart {  
    @PostConstruct  
    void createPartControl(Composite parent, ESelection service) {  
  
    }  
  
    @Inject  
    void selChanged(@Named("selection") Object value) {  
    }  
  
    @PreDestroy  
    void dispose() {  
    }  
  
    @Focus  
    void setFocus() {  
    }  
}
```

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The future - JavaScript?

```
function MyPart() {  
  
    this.createPartControl = function(parent, selectionService) {  
  
    }  
  
    this.selChanged = function(value) {  
    }  
  
    this.dispose = function() {  
    }  
  
    this.setFocus = function() {  
    }  
}
```

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The application model

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The Past

The past



Blackhole
Eclipse
Platform

The past



Blackhole
Eclipse
Platform

Java-Model

WorkbenchWindowAdvisor

ActionbarAdvisor

WorkbenchAdvisor

The past

Blackhole
Eclipse
Platform

Java-Model

WorkbenchWindowAdvisor
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WorkbenchAdvisor

XML

plugin.xml (fixed)

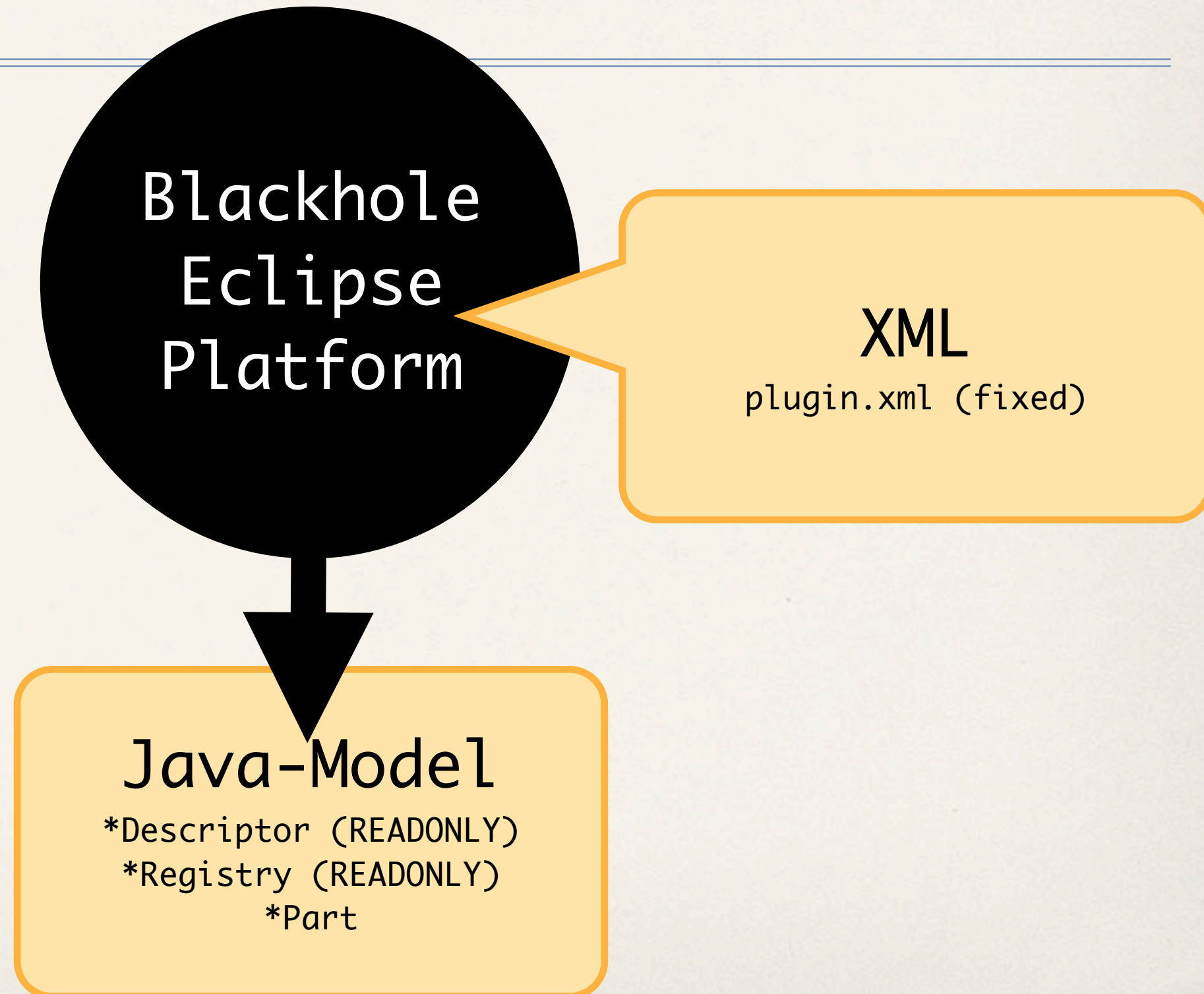
The past

Blackhole
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XML

plugin.xml (fixed)

The past



The Present

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The present

The screenshot displays the Eclipse IDE interface. The top toolbar shows three open files: 'Application.e4xmi', 'MyPart.java', and 'ch.sbb.e4.basic.app.product'. On the left, the 'Project Explorer' shows a tree structure of the application. The 'Part' editor on the right is configured for 'My Part'.

Project Explorer (Left):

- BindingTables
- Handlers
- Part Descriptors
- Commands
- Command Categories
- Windows
 - Trimmed Window - ch.sbb.e4.basic.app
 - Main Menu
 - Handlers
 - Windows
 - Controls
 - Perspective Stack
 - Label
 - Windows
 - Controls
 - PartSashContainer
 - Part Stack
 - Part - My Part**

Part Editor (Right):

Part

- Id:
- Label:
- Accessibility Phrase:
- Tooltip:
- Icon URI:
- Class URI:
- ToolBar: ☐
- Container Data:
- Closeable: ☐
- To Be Rendered: ☒
- Visible: ☒
- Binding Contexts:

Default | Supplementary

Form | XMI

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The present

```
public class ClosePart {  
    @Execute  
    public void execute(EModelService s, MPerspective p) {  
        MPartStack stack = (MPartStack) s.find("right", p);  
        stack.getChildren().remove(0);  
    }  
}
```

```
public class ChangeTitlePart {  
    @Execute  
    public void execute(EModelService s, MPerspective p) {  
        MPartStack stack = (MPartStack) s.find("right", p);  
        ((MPart)stack.getChildren().get(0)).setLabel("Hello");  
    }  
}
```

The present

- ❖ Request to NOT autocollapse Stackfolders when last ViewPart is closed

213,645 & 355,750

VS

355,763

The present

The present

	213,645 & 355,750	355,763
--	-------------------	---------

The present

	213,645 & 355,750	355,763
Classes	7	2

The present

	213,645 & 355,750	355,763
Classes	7	2
LoC	~130	~5

The present

	213,645 & 355,750	355,763
Classes	7	2
LoC	~130	~5
Time	? + 3-4 days	5 minutes

```

import org.eclipse.e4.ui.model.application.ui.basic.MWindow;
import org.eclipse.e4.ui.model.application.ui.menu.MMenuItem;
import org.eclipse.e4.ui.model.application.ui.menu.MToolBar;
import org.eclipse.e4.ui.workbench.IPresentationEngine;
import org.eclipse.e4.ui.workbench.UIEvents;
import org.eclipse.e4.ui.workbench.modeling.EModelService;
import org.eclipse.e4.ui.workbench.renderers.swt.SashLayout;

```

[Link Here](#)

```

        // Determine the elements that should *not* ever be auto-destroyed
        if (container instanceof MApplication || container instanceof MPerspectiveStack
            || container instanceof MMenuItem || container instanceof MTrimBar
            || container instanceof MToolBar || container instanceof MArea
            || container.getTags().contains(IPresentationEngine.NO_AUTO_COLLAPSE))
        {
            return;
        }

```

[Link Here](#)

```

        if (!container.isToBeRendered())
            container.setToBeRendered(true);
    } else {
        // Never hide the container marked as no_close
        if (container.getTags().contains(IPresentationEngine.NO_AUTO_COLLAPSE)) {
            return;
        }

```

```

        int visCount = modelService.countRenderableChildren(container);

```

```

        // Remove stacks with no visible children from the display (but not the

```

lines)

[Link Here](#)

```

    public static final String NO_CLOSE = "NoClose"; //$NON-NLS-1$

```

```

    /**

```

```

        * Don't remove the element from the display even if it has no displayable children
        */

```

```

    public static final String NO_AUTO_COLLAPSE = "NoAutoCollapse"; //$NON-NLS-1$

```

```

    /**

```

```

        * When applied as a tag to an MUIElement inhibits moving the element (ie. through DnD...

```

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Demo

LiveEditor

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The Future

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The future

8,009

The future



Bugzilla – Bug 8009

[Editor Mgmt] Split File Editor

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First Last Prev Next This bug is not in your last search results.

Bug 8009 - [Editor Mgmt] Split File Editor ([edit](#))

Status: ASSIGNED ([edit](#))

Product: Platform

Component: Text

Version: 2.0

Platform: PC Windows 2000

Importance: P3 enhancement with [203 votes](#) ([vote](#))

Target Milestone: ---

Assigned To: Platform-Text-Inbox ([edit](#))

QA Contact:
☐ Reset QA Contact to default

URL:

Whiteboard:

Report
Modi
CC

[See A](#)

Flags:
documentation
indigo
iplog
juno
pmc_approved
review

The future

[Editor Mgmt] Split File Editor

[\[?\]](#) | [Reports](#) | [My Requests](#) | [Preferences](#) | [Help](#) | [Log out](#) tom.schindl@bestsolution.at | [Terms of Use](#) | [Copyright Agent](#)

results.

or ([edit](#))

Reported: 2002-01-22 11:33 EST by [Anshu Prasad](#)

Modified: 2012-03-16 17:51 EDT ([History](#))

CC List: ☒ Add me to CC list
100 users ([edit](#))

See Also: Add Bug URLs:

t with [203 votes](#) ([vote](#))

x ([edit](#))

ct to default

Flags:

documentation ☐

indigo ☐

iplog ☐

juno ☐

pmc_approved ☐

review ☐

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Demo

SplitMe

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The future

We will be able to solve problems
unsolveable in 3.x (in a reasonable
amout of time)

The future

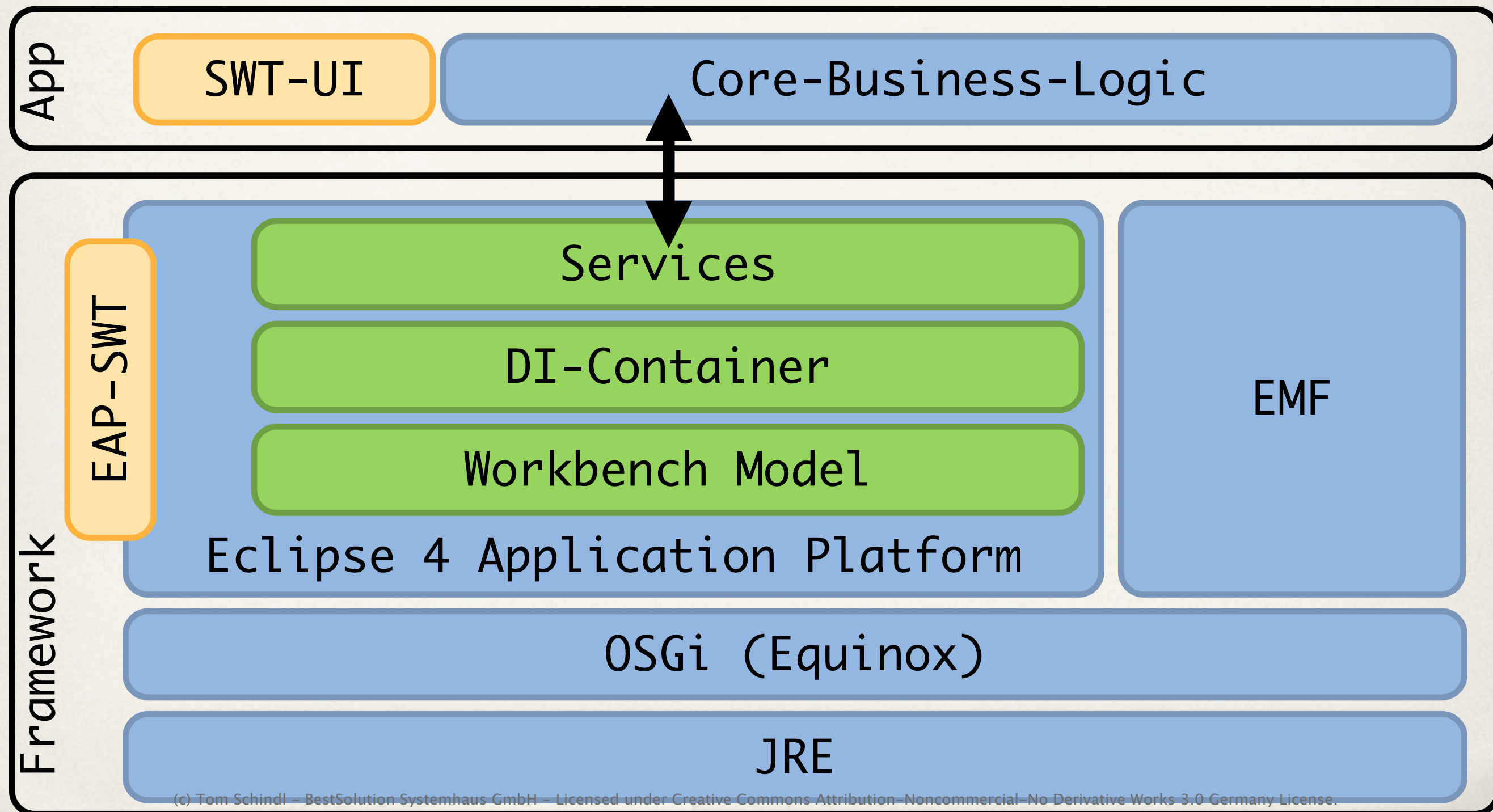
will be able to solve problems
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The future

You will be able to solve problems
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amout of time)

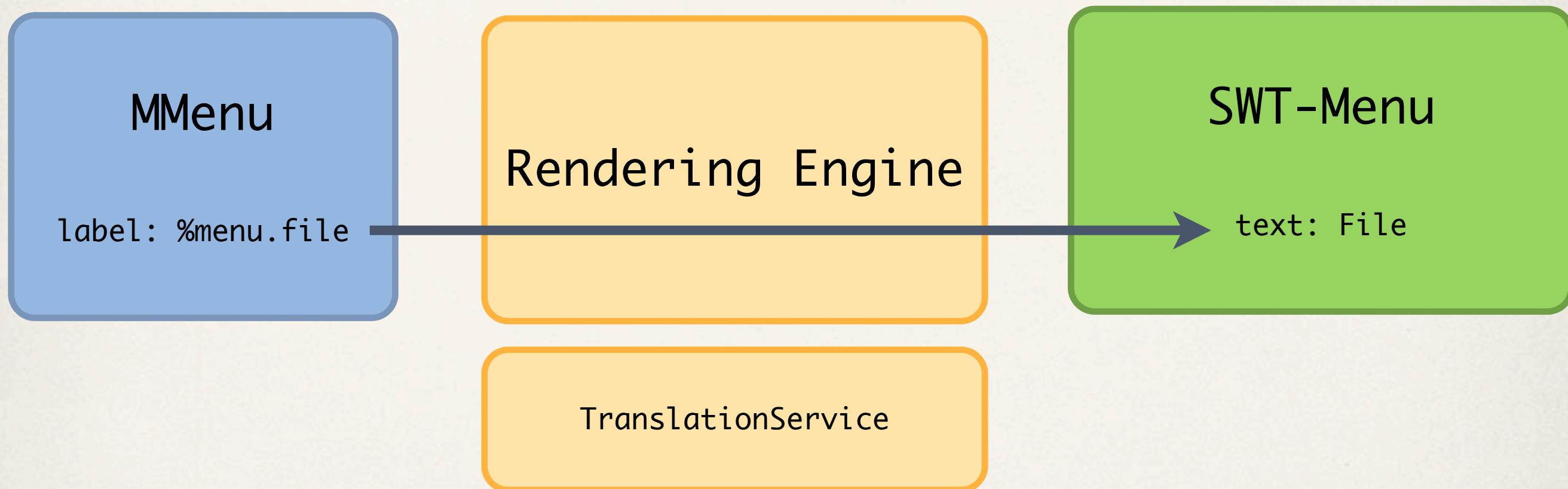
Cool stuff

The cool stuff



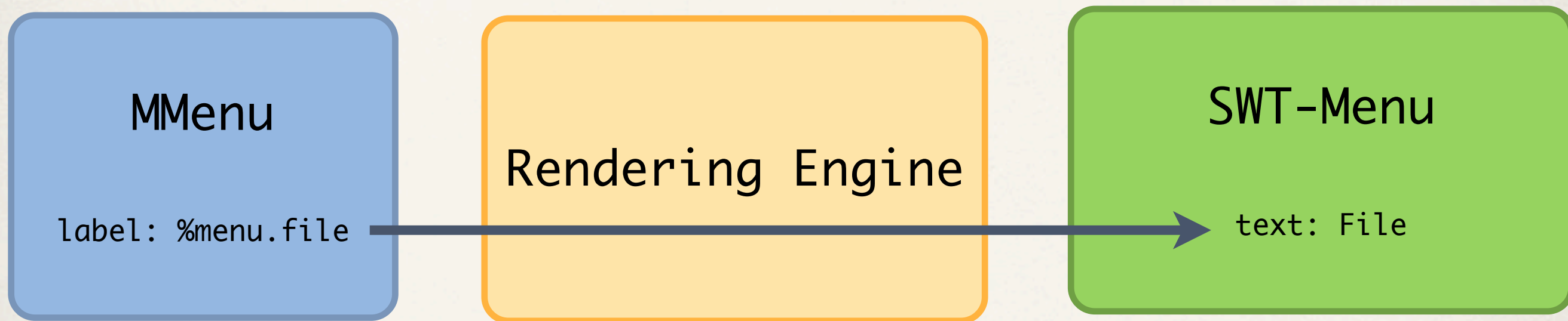
The future?

✧ Translations



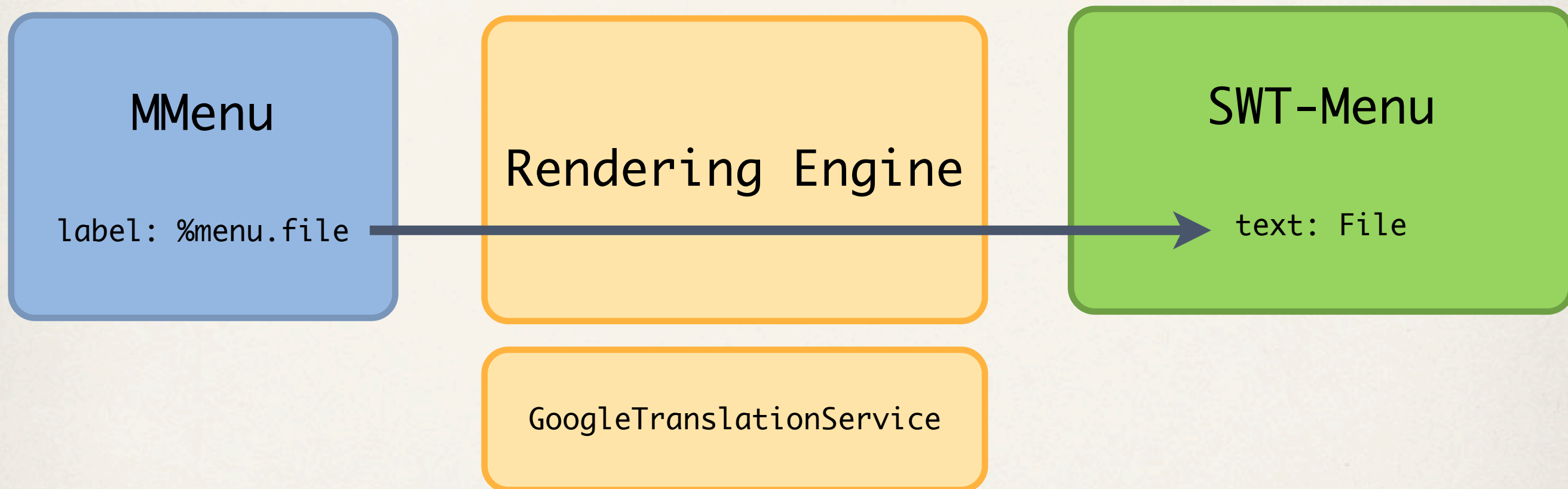
The future?

✧ Translations



The future?

✧ Translations



Demo Translate

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e4 & CDO

Resources

- ❖ My blog: <http://tomsondev.bestsolution.at>
- ❖ e4-Wiki: <http://wiki.eclipse.org/e4>
- ❖ e4-newsgroup: eclipse.e4
- ❖ e4-mailinglist: e4-dev@eclipse.org
- ❖ twitter: @tomsontom