Advanced Rendering

Exploiting Eclipse 4 advanced rendering
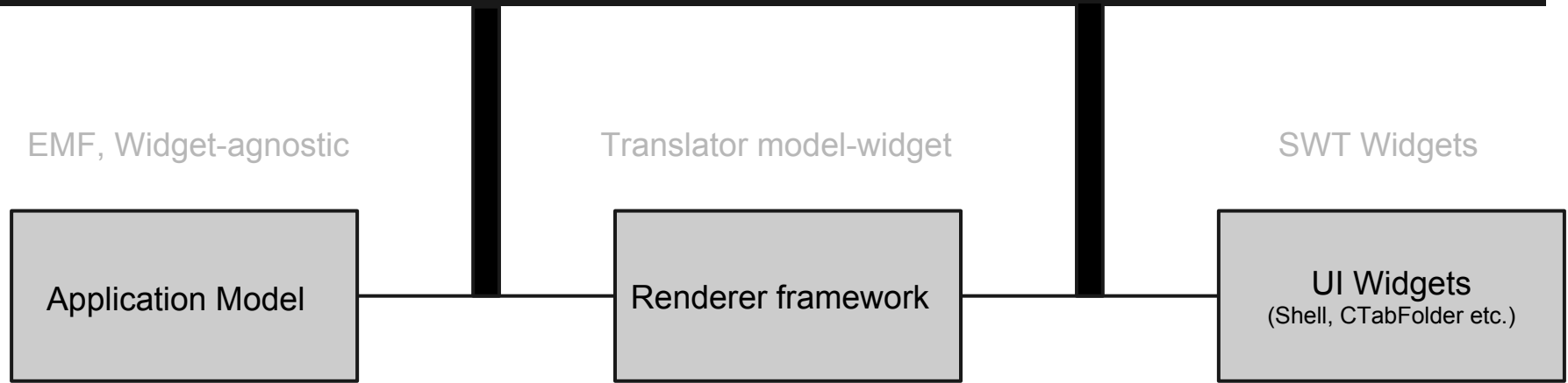
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- Application R&D at Petrotechnical Data Systems

- Committer
  - Eclipse e4
  - Vaaclipse
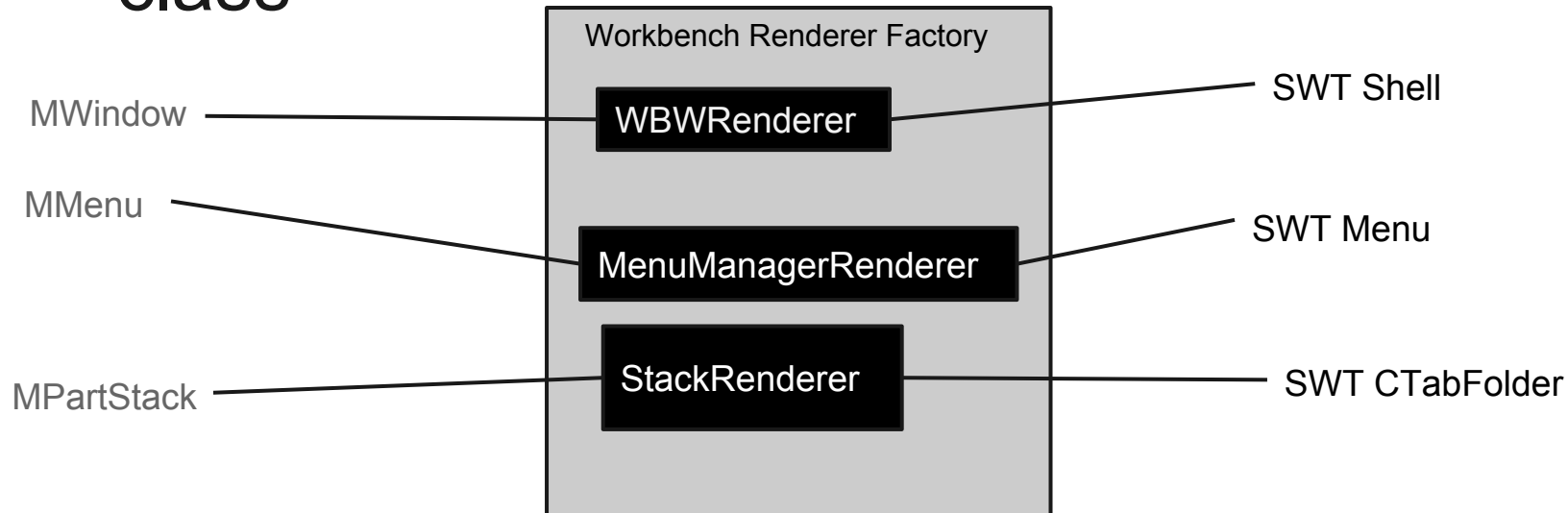

- Contributor
  - Platform UI

Agenda

- Quick overview of the architecture
- Customize default SWT renderer
  - Ex. 1: Customize Window renderer
  - Ex. 2: Customize Sash renderer
  - Ex. 3: Customize Stack renderer (dirty indicator)

- Cool demo

Renderer framework

EMF, Widget-agnostic

Translator model-widget

SWT Widgets

| Application Model | Renderer framework | UI Widgets
(Shell, CTabFolder etc.) |

Renderer framework inside

- Every UI model element has a renderer class

Workbench Renderer Factory

MWindow —— WBWRenderer —— SWT Shell

MMenu —— MenuManagerRenderer —— SWT Menu

MPartStack —— StackRenderer —— SWT CTabFolder

The "Dispatcher"

```java
public AbstractPartRenderer getRenderer(MUIElement uiElement, Object parent) {
    if (uiElement instanceof MArea) {
        if (areaRenderer == null) {
            areaRenderer = new AreaRenderer();
            initRenderer(areaRenderer);
        }
        return areaRenderer;
    } else if (uiElement instanceof MPart) {
        if (contributedPartRenderer == null) {
            contributedPartRenderer = new ContributedPartRenderer();
            initRenderer(contributedPartRenderer);
        }
        return contributedPartRenderer;
    } else if (uiElement instanceof MMenu) {
        if (menuRenderer == null) {
            menuRenderer = new MenuManagerRenderer();
            initRenderer(menuRenderer);
        }
        return menuRenderer;
    } else if (uiElement instanceof MToolBar) {
        if (toolbarRenderer == null) {
            toolbarRenderer = new ToolBarManagerRenderer();
            initRenderer(toolbarRenderer);
        }
        return toolbarRenderer;
    } else if (uiElement instanceof MMenuSeparator
            || uiElement instanceof MToolBarSeparator) {
        if (separatorRenderer == null) {
            separatorRenderer = new SeparatorRenderer();
            initRenderer(separatorRenderer);
        }
        return separatorRenderer;
    } else if (uiElement instanceof MPlaceholder) {
```

Hands On

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