Eclipse Scout goes Java & HTML5

Daniel Wiehl, Matthias Zimmermann
Agenda

➡ What’s Scout
➡ 16 Years of technology
➡ The new HTML5 UI
➡ The new Scout Java Platform
Eclipse Scout

**Scout Framework**

- Built for **Business Applications**
- **Multi Device** support
- Based on **Java** and **HTML5, CSS3, JS**

**Framework Goals**

- **Long term** strategy (enterprise apps live > 10 years)
- Boosts **productivity** (producing software in Switzerland ...)
- **Easy** to learn (new team members productive in 1-2 weeks)

Visit us at Booth #8 – next to the coffee cart ☺️
Back to the Future ...
Let’s go back ...
1999
... 1999
... 1999
... 2002
... 2005
... 2007
Eclipse Scout 2011
**Eclipse Scout 2012**

![Eclipse Scout 2012 screenshot](image-url)
Eclipse Scout 2015/16
Eclipse Scout Neon
The new HTML5 UI
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Eclipse Scout Neon
Styling and Themes
Themes and Styling with Scout

Technology

- CSS3 + Less

CSS Organisation

- Global Less files (colors, fonts, sizes, ...)
- Component specific Less files (Form, Field, Button...)
- Optional: Project specific Less files
- Theme: Named set of Less files

From Less to final CSS

1. Project specific files override Scout defaults
2. Single big CSS is assembled, processed and minified
Theming
Switching Themes dynamically
Theming
Default Theme
Theming
«Dark» Theme
Theming
«Rayo» Theme
Eclipse Scout Neon
Global Styling + Component Styling
Styling with Global Properties
colors.css, fonts.css, sizes.css ...

Use Case
- Styling of general appearance
  - Colors
  - Fonts
  - Sizes
- Low effort with upgrades
- Simple and efficient

Example
- Control colors
Changing a Custom Theme
@control-background-color = #fa1;
Changing a Custom Theme

@control-background-color = #fa1;
Styling Individual Components
Forms.css, Menu.css, Desktop.css ...

Use Cases
→ Modify appearance of individual component
→ Override component Less/CSS3 files
→ Additional efforts for Scout upgrades

Example
→ Dialog properties

Please note
→ Current state (Nov 2015) is work in progress
→ There are still 7 months until Neon M7
Styling Individual Components .dialog class
Styling Individual Components

.dialog – change some attributes
Styling Individual Components and reload ...
Eclipse Scout Neon
The new Java Platform
➡️ What motivated us to become a vanilla Java framework
➡️ What does the new application platform look like
➡️ How we replaced OSGi services and Eclipse extension registry
Motivation in making Scout a vanilla Java framework

- bring simplicity back to Scout;
- express project dependencies with Maven only;
- build projects with Maven only;
- integrate third party libraries directly via Maven Central;
- integrate easier with Java EE containers.
Eclipse Scout Application Platform

Platform

application lifecycle

creates

Bean Manager

uses

Class Inventory
Jandex (Wildfly)

notifies

Platform Listener

Implementor discovery

Java SPI API
META-INF/services/o.e.s.r.p.IPlatform
Eclipse Scout Bean Manager

What is a bean?

- simple Java class;
- is annotated with @Bean;
- does not require you to implement an interface;
- has either application or instance scope.
Eclipse Scout Bean Manager

What does an ‘instance scoped’ bean look like?

```java
@Bean
public class HelloBean {

    public void sayHello() {
        System.out.println("Hello Ludwigsburg");
    }
}
```

How to lookup that bean?

```java
BEANS.get(HelloBean.class).sayHello();
BEANS.get(HelloBean.class).sayHello();
```

Different object reference

HelloBean@1f32e575
HelloBean@279f2327
Eclipse Scout Bean Manager

What does an ‘application scoped’ bean look like?

```java
@ApplicationScoped
class HelloBean {
    public void sayHello() {
        System.out.println("Hello Ludwigsburg");
    }
}
```

How to lookup that bean?

```java
BEANS.get(HelloBean.class).sayHello();
```

Same object reference

```java
HelloBean@1f32e575
```
Eclipse Scout Bean Manager

What makes Scout Bean Manager so great?

- any object can be a bean;
- a bean can be provided dynamically;
- a bean can be replaced;
- a bean is registered on all its supertypes and interfaces.
Eclipse Scout Bean Manager

Some examples

```
BEANS.all(ICar.class);  # Passat, EGolf

BEANS.get(ICar.class);  # Passat

BEANS.get(VW.class);    # Exception

BEANS.get(Golf.class);  # EGolf

BEANS.get(Passat.class);  # Passat

BEANS.get(Polo.class);  # Exception

BEANS.opt(Polo.class);   # null
```
Eclipse Scout Bean Manager

How are beans discovered?

- it’s like magic!
- beans are discovered only by their presence;
- for that to work, Jandex is used to calculate a class inventory index by spidering for classes during Maven build.
Summary
Take Home Message

Neon Release

→ **Eclipse Scout** == Vanilla Java Framework
  - Powerful Platform
  - Maven by the Books

→ **Eclipse Scout UI** == HTML5, JS, CSS3
  - Custom Themes
  - Custom Styling
Thanks
@EclipseScout
{daniel.wiehl|matthias.zimmermann}@bsi-software.com