Developing mobile applications with Eclipse Scout

Presentation by Ken Lee, Andreas Hoegger
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Overview

- A Story about UI Evolution
- Introduction to Eclipse Scout
- Multi-Frontend with a single Codebase
  - Showcase
- Mobile / Tablet UI
  - Extensions
  - Transformation
  - Optimization
- Scout Mobile in Action
- Development Status
- Live Demonstration
A Story about UI Evolution
A Story about UI Evolution

Once upon a time...
A Story about UI Evolution

Once upon a time...
A Story about UI Evolution
A Story about UI Evolution
A Story about UI Evolution
UI Evolution Summary

- Rich Client (Swing / SWT)
- Tablet
- Mobile
- Web Client (RAP)
Introduction to Scout
What is Scout?

• Open-Source Java/Eclipse Framework
• Designed for Business Applications
• Tooling Support with Scout SDK
• Multi-Frontend (Desktop, Web, Mobile)
• Goals
  • Boost productivity
  • Simple to learn
Scout Overview

Application

Scout

Eclipse
Client-Server Architecture (Desktop)
Client-Server Architecture (Web / Mobile)

Browser

**Client Application**
- Scout Client
- Eclipse Platform
- Equinox OSGi
- Webserver

**Server Application**
- Scout Server
- Eclipse Platform
- Equinox OSGi
- Webserver

**Service Tunnel**

- RAP
- Web Mobile

- Webserver
- Browser

**Tools and Technologies**
- Eclipse Platform
- Equinox OSGi
- Webserver
- RAP
- Scout Client
- Service Tunnel
Multi-Frontend with a single Codebase
Multi-Frontend with a single Codebase

- One Codebase
- Lower Costs
- Easier Maintenance
- Same Programming Language
- Same Development Tools
- Consistent Look & Feel
- Consistent Business Rules
- Same Features
Showcase

http://www.youtube.com/watch?v=pjANvfa-phI
Mobile / Tablet

UI
Mobile Extension

Scout Mobile Extension

- Device Transformer
- Optimized Components
- Optimized Themes

Scout Runtime Core

Scout RAP UI
Device Transformation
Optimized Components

Table

<table>
<thead>
<tr>
<th>Last name</th>
<th>First name</th>
<th>Main representative</th>
<th>City</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simpson</td>
<td>Bart</td>
<td>Lee, Ken</td>
<td>Springfield</td>
<td>United States</td>
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<td>United States</td>
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<tr>
<td>Simpson</td>
<td>Marge</td>
<td>Lee, Ken</td>
<td>Springfield</td>
<td>United States</td>
</tr>
</tbody>
</table>

Smartfield

Choose Language

- Bulgarian
- Croatian
- Czech
- Dutch
- English
- French
- German
- Greek
- English
- Bulgarian
- Croatian
- Czech
- Dutch
- English
* {
  font: 14px Arial, Helvetica, sans-serif;
}

CLabel.mobileFormHeader {
  color: white;
  padding: 3px 0px;
  text-shadow: 0px -1px 0px #2a78a5;
  font: bold 17px Arial, Helvetica, sans-serif;
  background-color: transparent;
}

Button[PUSH]:hover {
  background-image: linear-gradient(
    left top, left bottom, from(#fe9915),
    to(#be7414));
  border: 1px solid #91560a;
}

ScrollBar {
  width: 0px;
}
Scout Mobile in Action
• Include Scout mobile plugins into RAP product

- org.eclipse.scout.rt.client.mobile
- org.eclipse.scout.rt.ui.rap.mobile
- org.eclipse.scout.rt.ui.rap.theme.rayo.mobile
- org.eclipse.scout.rt.ui.rap.theme.rayo
Scout Mobile in Action

- Configure RAP brandings and entrypoints
  - org.eclipse.rap.ui.entrypoint
    - StandaloneRwtEnvironment
    - MobileStandaloneRwtEnvironment
    - TabletStandaloneRwtEnvironment
  - org.eclipse.rap.ui.branding
    - Web -> org.eclipse.scout.rt.ui.rap.theme.rayo
    - Mobile -> org.eclipse.scout.rt.ui.rap.theme.rayo.mobile
    - Tablet -> org.eclipse.scout.rt.ui.rap.theme.rayo.mobile
Scout Mobile in Action

- **Register Dispatcher Servlet**
  
  \[\text{org.eclipse.equinox.http.registry.servlets} \]
  \[\text{DeviceDispatcherServlet}\]

- **Register Device Transformer**

  \[\text{org.eclipse.scout.rt.extension.client.desktopExtensions} \]
  \[\text{DeviceTransformationDesktopExtension}\]

- **Make unnecessary fields invisible**

```java
if (UserAgentUtility.isMobileDevice()) {
    setVisibleGranted(false);
}
```
Development Status
Runs productively at our company
Shipped with Eclipse Scout 3.9 (Kepler M6)
Based on RAP 2.1
Sources on Git
- org.eclipse.scout.rt.client.mobile
- org.eclipse.scout.rt.ui.rap.mobile
- org.eclipse.scout.rt.ui.rap.theme.rayo.mobile
Currently supporting iOS and Android
- May run slow with old phones and browsers
- Windows Phone support not planned yet

http://git.eclipse.org/c/scout/org.eclipse.scout.rt.git
Live Demonstration
Questions
Thank You!