

# Developing mobile applications with Eclipse Scout

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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
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  - 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



BSI CRM INTEGRATION - kie

bsi-crm

Standard view | My view | Reports | Marketing | Contact Center | Human Resources | BSIIT | Administration

Search | Simple | Detailed | Advanced | Categories

Last name	First name	Company	Language	Function	Level	Main representative	Phone	Mobile phone	E-mail	ZIP	City
Simpson	Bart		English			Lee, Ken					Springfie
Simpson	Lisa		English			Lee, Ken					Springfie
Simpson	Maggie		English			Lee, Ken					Springfie
Simpson	Marge		English			Lee, Ken					Springfie

Person

Name \* Simpson  
First name Marge  
Company  
Main representative \* Lee, Ken  
 Active  
 No personal contact

Information on person

Department Title  
Language \* English Job description Housewife  
Salutation \* Ms. Birthdate  
Function / Level

Address \* Notes Marketing Social media Informationen Documents Changes

Home address  
 Vacation address

Additional name  
Street 742 Evergreen Terrace  
P.O. Box  
City \* Springfield (USA)  
Phone  
Fax  
Mobile phone  
VoIP  
E-mail

Default  Alternative  Mailing

Already exists? OK Cancel

4 objects, 1 selected

Reset Search

# A Story about UI Evolution



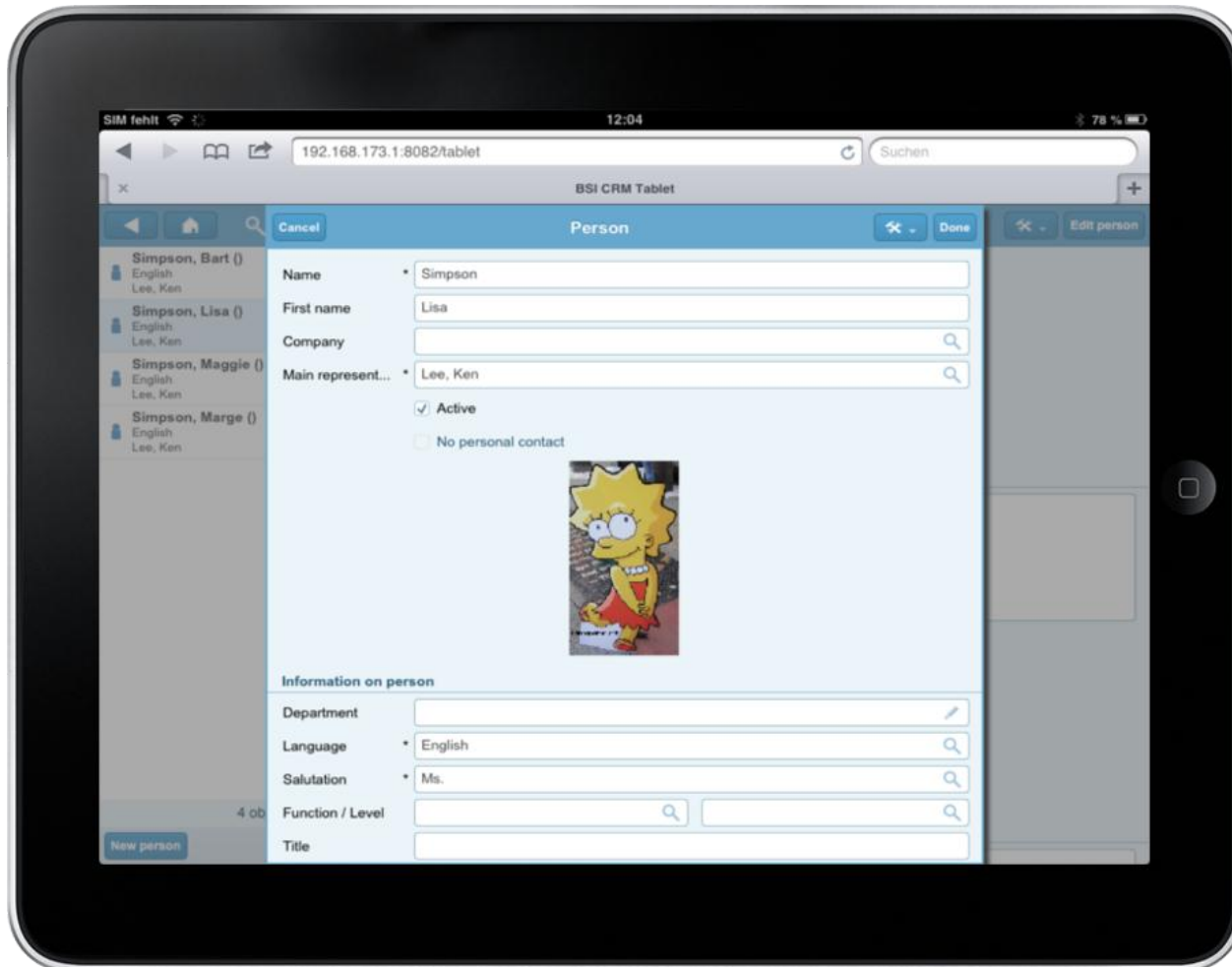
The screenshot displays a CRM application interface. At the top, there's a browser window with the URL [https://partner.bsiag.com/int/bsicrm\\_12\\_8/web](https://partner.bsiag.com/int/bsicrm_12_8/web). Below the browser, a navigation bar contains tabs for 'Standard view', 'My view', 'Reports', 'Marketing', 'Contact Center', 'Human Resources', 'BSI IT', and 'Administration'. A search bar is located on the right side of this bar.

The main content area features a table with columns: Last name, First name, Company, Language, Function, Level, Main representative, Phone, Mobile phone, E-mail, ZIP, and City. The table lists four entries for 'Simpson' with first names Bart, Lisa, Maggie, and Marge, all represented by 'Lee, Ken' and located in 'Springfi'.

A 'Person' dialog box is open, showing the details for Bart Simpson. The form includes fields for Name (Simpson), First name (Bart), Company, and Main representative (Lee, Ken). There are checkboxes for 'Active' (checked) and 'No personal contact'. A small image of Bart Simpson is displayed. Below this, the 'Information on person' section includes fields for Department, Title, Language (English), Job description (Student), Salutation (Mr.), and Birthdate. The 'Address' section has checkboxes for 'Home address' (checked) and 'Vacation address'. It includes fields for Additional name, Street (742 Evergreen Terrace), P.O. Box, City (Springfield (USA)), Phone, Fax, Mobile phone, VoIP, and E-mail. There are also checkboxes for 'Default', 'Alternative', and 'Mailing'.

At the bottom of the dialog, there are 'OK' and 'Cancel' buttons. The status bar at the very bottom indicates '4 objects, 1 selected'.

# A Story about UI Evolution

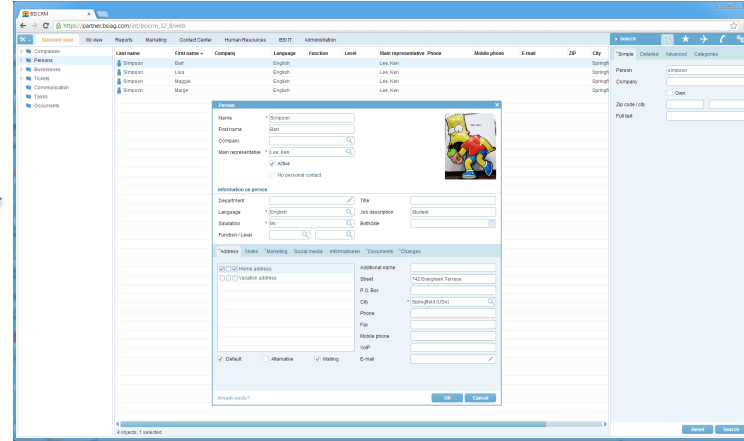
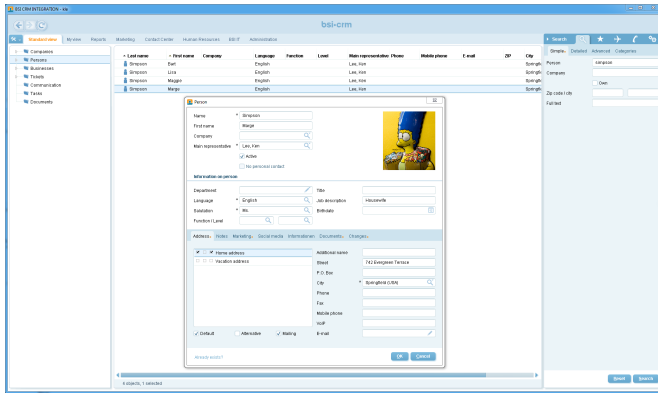


# A Story about UI Evolution



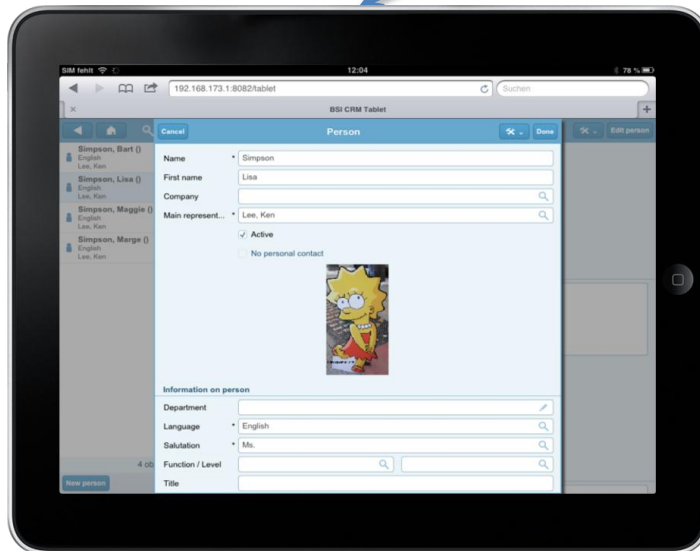


# UI Evolution Summary



Rich Client (Swing / SWT)

Web Client (RAP)



Tablet



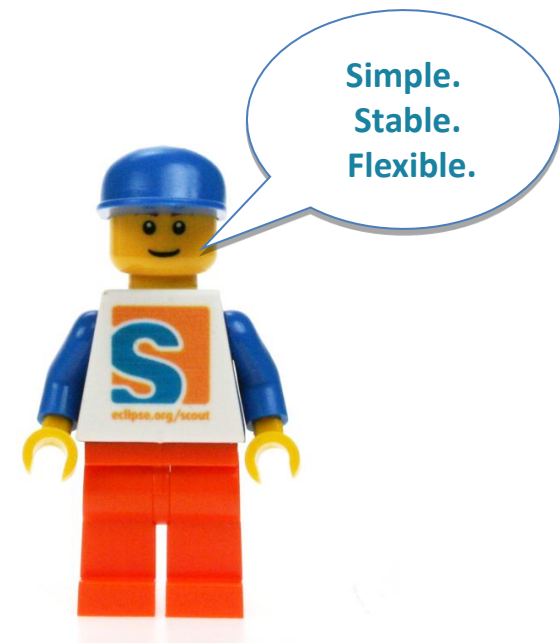
Mobile

# 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



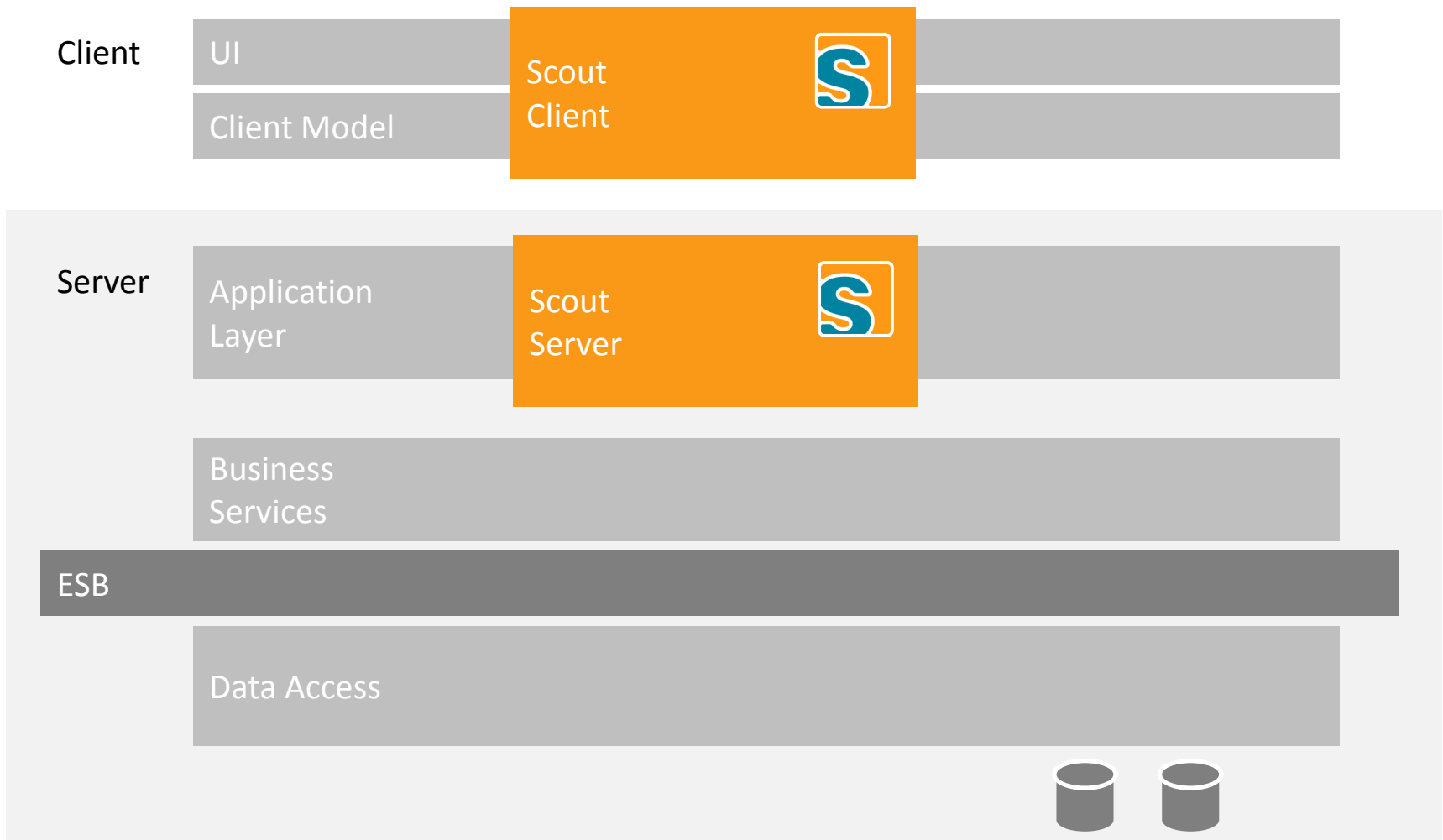
Application

Scout

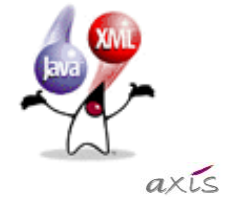
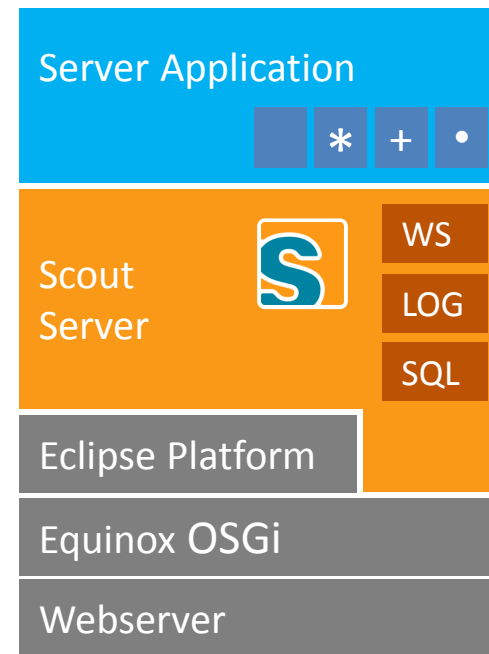
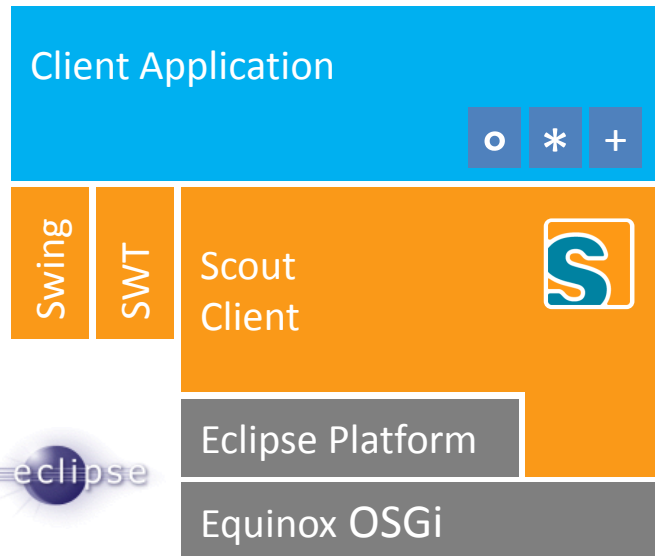


Eclipse

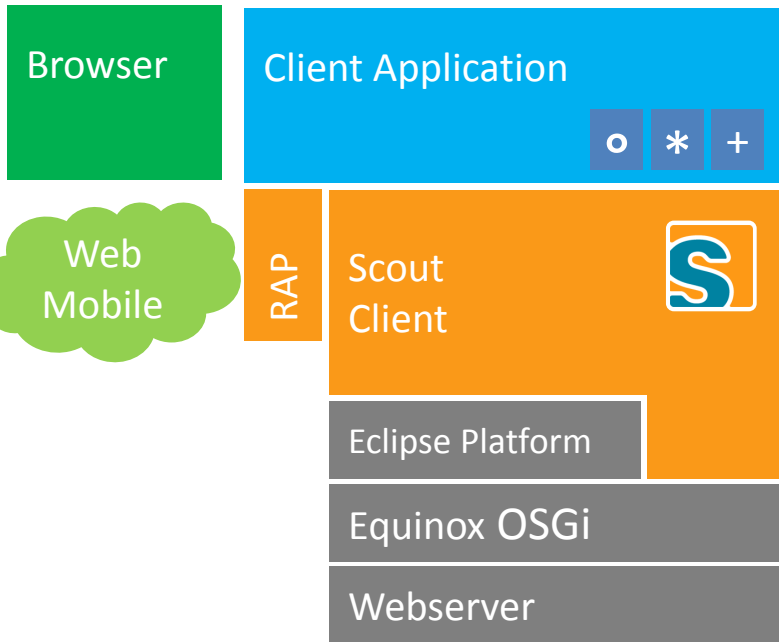
# Integration



# Client-Server Architecture (Desktop)

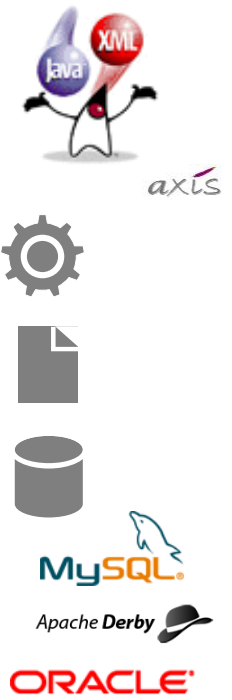
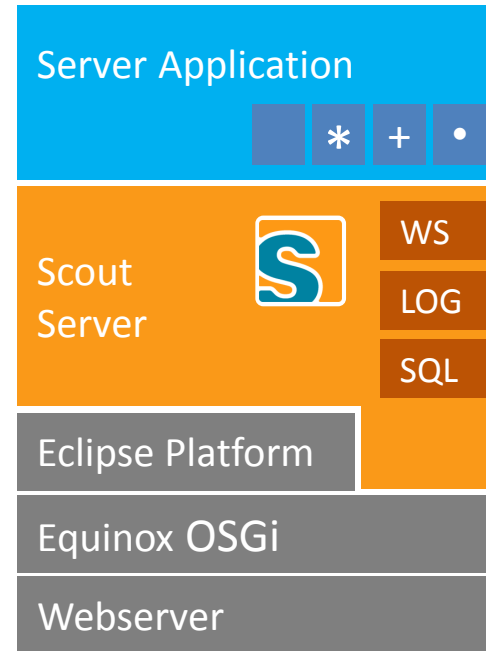


# Client-Server Architecture (Web / Mobile)



Web  
Mobile

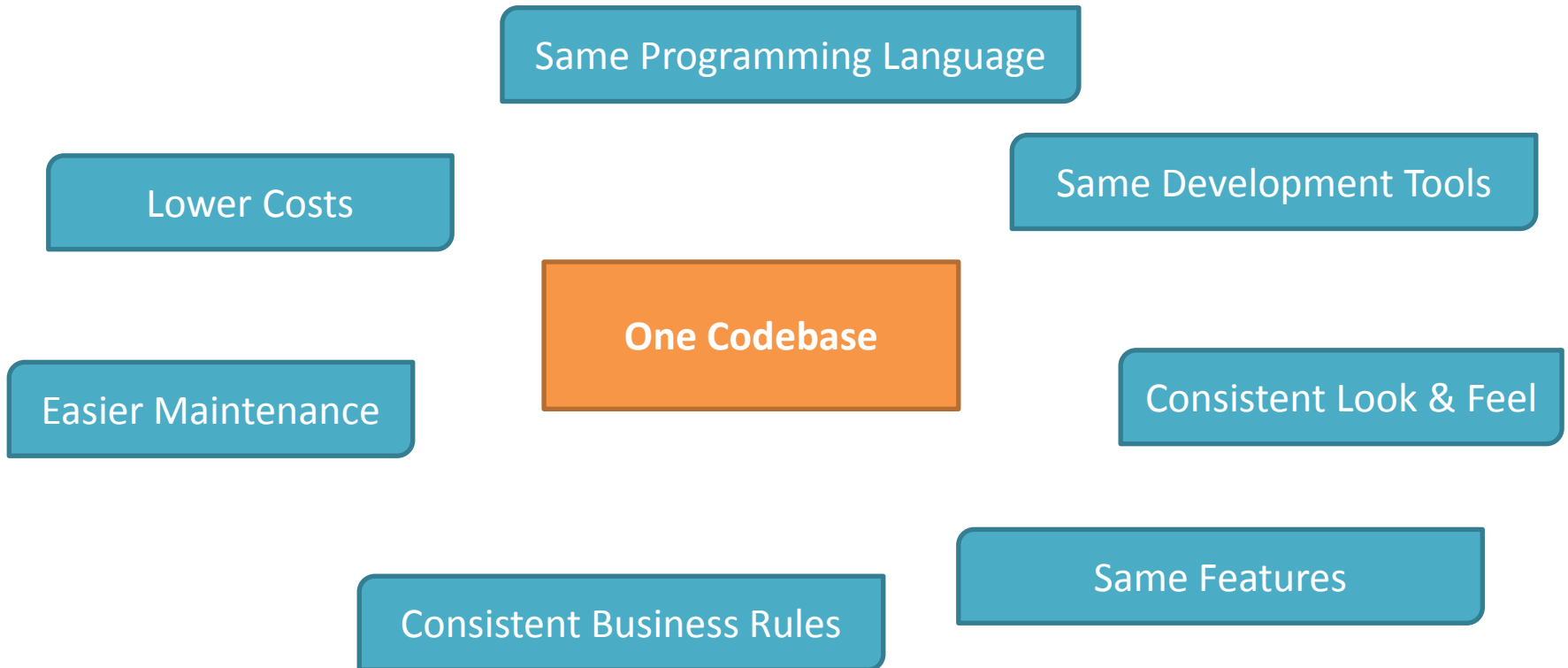
Service  
Tunnel



# Multi-Frontend with a single Codebase



# Multi-Frontend with a single Codebase

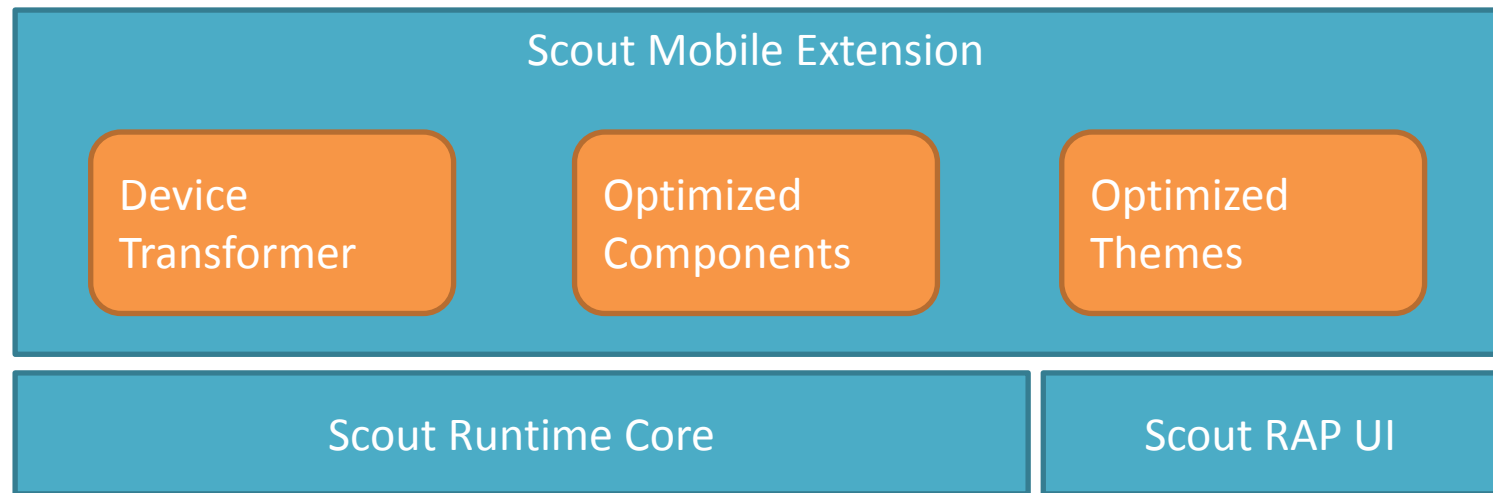


# Showcase

<http://www.youtube.com/watch?v=pjANvfa-phI>

# Mobile / Tablet UI

# Mobile Extension



# Device Transformation



The image illustrates the device transformation of the BSI CRM application. It features three devices displaying the same system:




- Desktop Browser:** Shows the full interface with a navigation tree on the left and a data table. The URL is [https://partner.bsiag.com/int/bsicrm\\_12\\_8/web#com.bsiag.crm.client.core.desktop.StandardOutline-Persons](https://partner.bsiag.com/int/bsicrm_12_8/web#com.bsiag.crm.client.core.desktop.StandardOutline-Persons). The table lists four Simpson family members.
- Smartphone:** Shows a simplified, mobile-optimized view with a vertical list of menu items and a bottom navigation bar.
- Tablet:** Shows a view optimized for a larger screen, with a list of menu items on the right and a main content area.


Last name	First name	[+] Job description	Main representative	City	Country
Simpson	Bart	Student	Lee, Ken	Springfield	United States
Simpson	Lisa	Student	Lee, Ken	Springfield	United States
Simpson	Maggie		Lee, Ken	Springfield	United States
Simpson	Marge	Housewife	Lee, Ken	Springfield	United States


# Optimized Components





## Table

Last name	First name ^	Main representative	City	Country
 Simpson	Bart	Lee, Ken	Springfield	United States
 Simpson	Lisa	Lee, Ken	Springfield	United States
 Simpson	Maggie	Lee, Ken	Springfield	United States
 Simpson	Marge	Lee, Ken	Springfield	United States


 **Simpson, Bart ()**  
Student  
Lee, Ken

 **Simpson, Lisa ()**  
Student  
Lee, Ken


 **Simpson, Maggie ()**  
Lee, Ken

 **Simpson, Marge ()**  
Housewife  
Lee, Ken

## Smartfield



- Bulgarian
- Croatian
- Czech
- Dutch
- English
- French
- German
- Greek

 Choose Language

- Bulgarian
- Croatian
- Czech
- Dutch
- English

# Optimized Theme



```
* {  
  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: gradient(  
    linear, left top, left bottom,  
    from(#fe9915),  
    to(#be7414));  
  border: 1px solid #91560a;  
}
```

```
ScrollBar {  
  width: 0px;  
}
```

# Scout Mobile in Action



# 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**

🔑 `org.eclipse.equinox.http.registry.servlets`  
 `DeviceDispatcherServlet`

- **Register Device Transformer**

🔑 `org.eclipse.scout.rt.extension.client.desktopExtensions`  
 `DeviceTransformationDesktopExtension`

- **Make unnecessary fields invisible**

```
if (UserAgentUtility.isMobileDevice()) {  
    setVisibleGranted(false);  
}
```

# Development Status

# Development Status



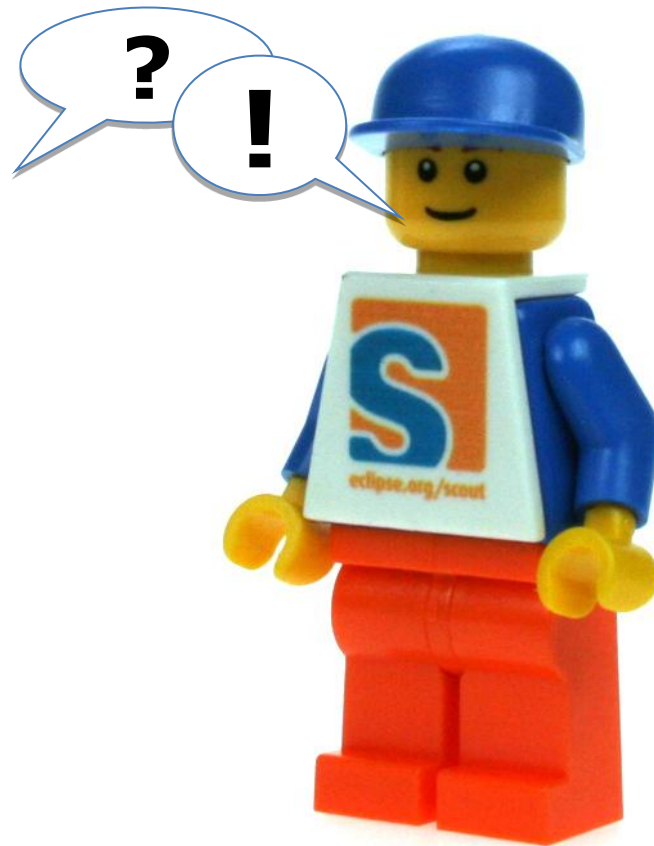
- **Runs productively at our company**
- **Shipped with Eclipse Scout 3.9 (Kepler M6)**
- **Based on RAP 2.1**
- **Sources on Git**
  - org.eclipse.scout.rt.client.mobile
  - org.eclipse.scout.rt.ui.rap.mobile
  - org.eclipse.scout.rt.ui.rap.theme.rayo.mobile
- **Currently supporting iOS and Android**
  - May run slow with old phones and browsers
  - Windows Phone support not planned yet

<http://www.eclipse.org/downloads/packages/eclipse-scout-developers/keplerm6>

<http://git.eclipse.org/c/scout/org.eclipse.scout.rt.git>

# Live Demonstration

# Questions



# Thank You!