



**@EclipseScout**

**The Future Proof Java Web-framework**

# Agenda

- Why you need «**future-proof**»
- 16 Years of **Scout**
- **Eclipse Scout Neon**: Java and HTML5
  - Model: **Java**
  - Building: **Maven**
  - Theming and Styling: **CSS3**
- Wrap up

**Why you need «Future Proof»**

# Enterprise Applications

## The Good

- Represents **Core Process Knowledge**
- Make business more **efficient**

## The Bad

- Large **initial Costs**
- Large **running Costs**

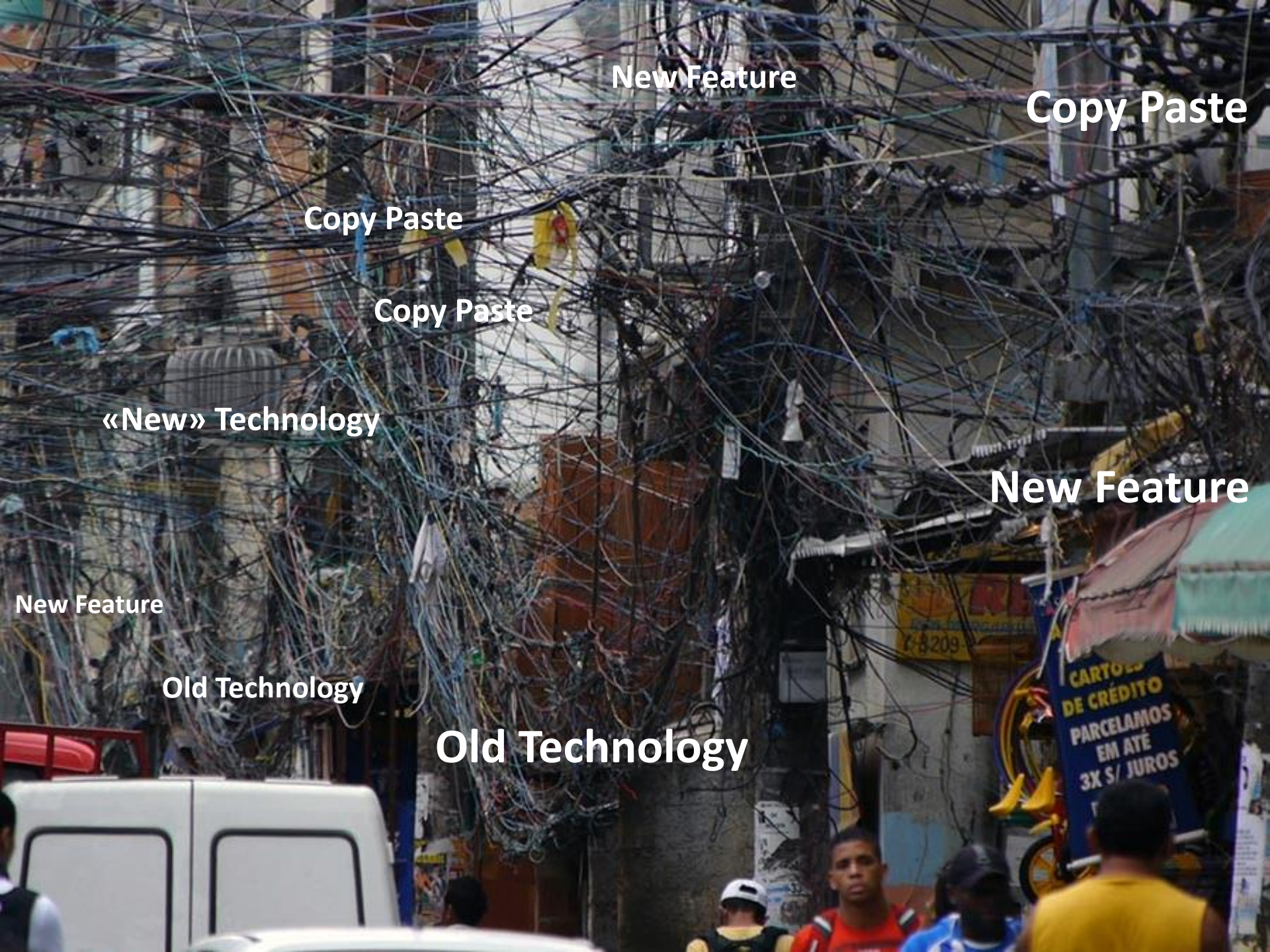
# Enterprise Applications

## The Ugly

- Include **Legacy** Technologies
- **Risk** and **Cost** increasing
- Look **old**

«Now, let's look at a typical example»





New Feature

Copy Paste

Copy Paste

Copy Paste

«New» Technology

New Feature

New Feature

Old Technology

Old Technology

CARTÃO DE CREDITO  
PARCELAMOS  
EM ATÉ  
3X S/ JUROS

# What did go wrong?

- Focus on **latest technology**
- **Keep adding** new technologies
- **Fail to remove** legacy technologies

# Can we do better?

- Think **long term**
- Choose **boring\*** technology
- Keep technology stack **minimal**
- **Keep business logic separate** from technology

«And, what do we get in return?»

\*<http://mcfunley.com/choose-boring-technology-slides> (oscon '15)



Focus on Business Logic

Modular Architecture

Minimal Stack

«Boring» Technology



# Benefits of «Future Proof» Applications

- **Protect investment** in business logic
- Keep **technology healthy**
- Keep **developers happy**
- Avoid rewrites

## Want this?

- Eclipse Scout can help
- How? Let's look at the Scout story ...

**16 Years of Scout**

**Let's go back to ...**



... 1999

Google!  
B E T A

Search the web using Google!

Google Search

I'm feeling lucky

Special Searches

[Stanford Search](#)

[Linux Search](#)

[Help!](#)

[About Google!](#)

[Company Info](#)

[Google! Logos](#)

Get Google!  
updates monthly:

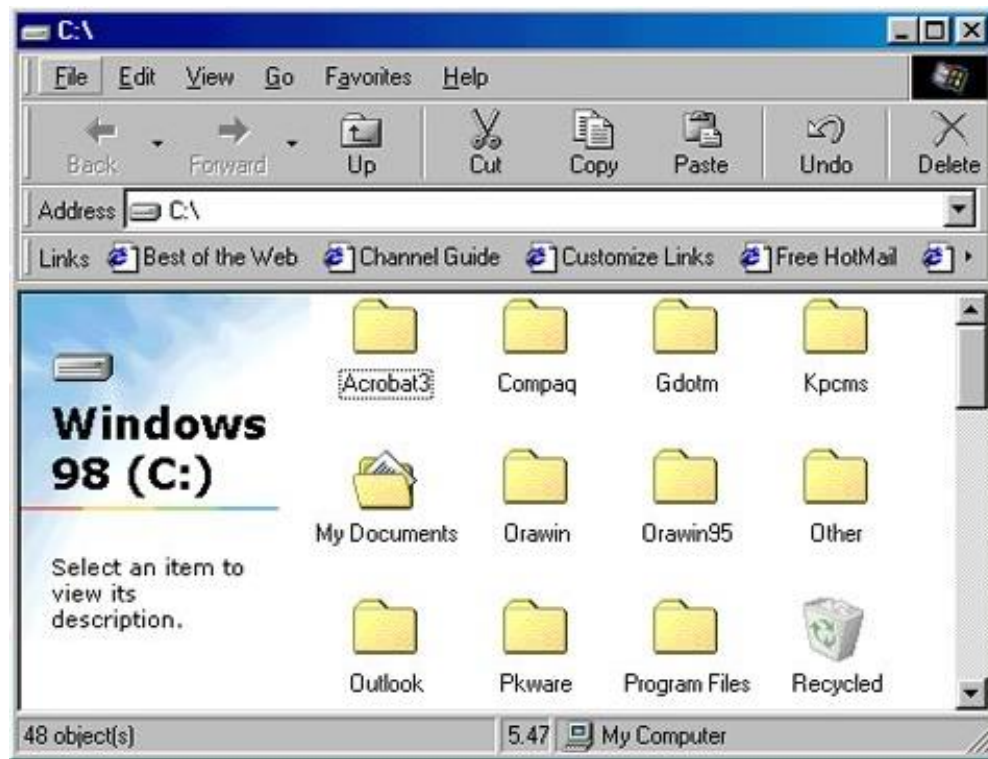
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... 1999



... 1999



... 2002

The screenshot shows the 'ors X' application window. The title bar reads 'ors X'. The menu bar includes 'Datei', 'Extras', and '?'. Below the menu bar is a toolbar with icons for 'Standardsicht', 'Eigene Sicht', 'Mgmt Reports', 'Marketing', 'Intern', and 'Stammdaten'. The main window is divided into a left sidebar, a top table, and a bottom form area. The sidebar shows a tree view for 'Schmidt, Daniel (BSI BADEN)' with sub-items like 'Firmen', 'ARXES', 'Projekte', 'Beziehungen', etc. The top table has columns: 'Kennwort', 'Termin', 'Erledigt am', 'Verantwortlich', 'Projekt', 'Firma', 'Kontaktperson', and 'Telefon'. The bottom form area contains input fields for 'Kennwort', 'Termin von', 'Erledigt am', 'Verantwortlich', and 'Registriert von', along with a 'Pendenztyp' dropdown and checkboxes for 'Nur hohe Priorität', 'Offene', and 'Erledigte'. A white overlay in the center features the Java logo and the XML tag '<xml />'. The status bar at the bottom left shows '1 Datensatz'.

Kennwort	Termin	Erledigt am	Verantwortlich	Projekt	Firma	Kontaktperson	Telefon
unterlagen bsi und projektsteuerung in ors2i	20.07.2004		Schmidt, Daniel		ARXES	Arndt, Detlef	+49 30

1 Datensatz



... 2005

The screenshot shows a Java application window titled "BSI: BSI AG". The interface includes a menu bar (Datei, Extras, Favoriten, 7 - Sample Menu), a toolbar with navigation buttons (Zurück, Vor), and a menu (Standardansicht, Eigene Sicht, Reports, OPM, Marketing, Inlein, Administration). A tree view on the left shows a hierarchy of "Firmen" (BSI BA, BSI BADEN, BSI USA, BSI ZUG) and "Projekt" (Anspruchspartner, Mandate, Konzepte, Marketing, etc.). The main area displays a table of company data:

Firmenkurzname	Firmenname	Firmen-Nr.	Telefon	PLZ	Ort	Land	Region	Branche
BA BSI	Signalling	257	0046 9 691 9501	12096	Stockholm	Schweden	Europa	Industrie
BSI BADEN	BSI Business Systems Integ...	1	055 484 19 20	5405	Dakwei AG	Schweiz	Europa	Informatk.
BSI USA	BSI Business Systems Integ...	583	+1 308 252 0300	NJ 088...	Somerville	U.S.A.	Arnerika	Informatk.
BSI ZUG	BSI Business Systems Integ...	2	055 484 19 20	6340	Basar	Schweiz	Europa	Informatk.

Overlaid on the application are the Eclipse IDE logo (a red flame over a blue cup) and the Java logo. Below the Eclipse logo is the text "eclipse 3.0 THE ECLIPSE PROJECT". Below the Java logo is the XML logo "<xml/>". A "Firmen suchen" dialog box is open at the bottom, with fields for "Firma", "Firmenkurzname", "Firmenname", "Firmen-Nr.", "Hauptbetriebs", "Region", and "Rating". It also has checkboxes for "aktive Firmen" and "inaktive Firmen".

... 2007

The image shows a screenshot of a web-based CRM application titled "BSI CRM". The interface includes a menu bar with "Datei", "Extras", "Prozesse", and "Favoriten". A secondary navigation bar contains icons for "Standardsicht", "Eigene Sicht", "Reports", "CPM", "Marketing", "Contact Center", "Human Resources", "Administration", and "Schnittstellen".

The main content area is divided into three sections:

- Contact Center:** A sidebar with a tree view containing "Geschäftsvorfälle", "Alle", "Eigene", "<Nicht identifiziert>", "Hug, Daniel (I-SOLUTIONS)", "Eskalierete", "Know-How", "Virtuelle Teams", "Prozessverwaltung", and "Statistiken".
- Prozess wählen - 11.04.09 11:25:** A central panel with a "Detail" section containing input fields for "Nachname", "Vorname", "PLZ", and "Ort".
- Process Flow:** A vertical list of five steps: "1 Person wählen" (highlighted in orange), "2 Kundenübersicht", "3 Kundenidentifikation", "4 Prozess wählen", and "5 Prozessschritte unbekannt".

Overlaid on the center is a white dialog box with the Java logo on the left and the Eclipse Galileo logo on the right. The Eclipse logo features the word "eclipse" in white and "GALILEO" in smaller white text below it, set against a dark purple background with a glowing sphere. Small copyright text at the bottom of the Eclipse logo reads: "(c) Copyright Eclipse contributors and others, 2000, 2009. All rights reserved. Java and all Java-related trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. or other countries, or both. Eclipse is a trademark of the Eclipse Foundation, Inc."

At the bottom of the application window, there are buttons for "Telefon", "Abbrechen", "Weiter", and "Abschliessen".

# Eclipse Scout 2011

BSI CRM - zhu

bsi-crm

Standard view Personal view Reports Marketing Contact Center Human Resources Administration CPM BSI IT

Name	Given name	Language	Main account manager	Phone	Mobile phone	E-mail
Fleseriu	Gabriel	Deutsch	Pedersen, Morten	+41 (56) 484 1...	+41 (79) 321 ...	gabriel.fleseriu@bsiag.com
Frei	Pascale	Deutsch	Isler, Claudia	+41 (56) 484 1...	+41 (79) 474 ...	pascale.frei@bsiag.com
Funk	Uwe	Deutsch	Pedersen, Morten	+41 (56) 484 1...	+41 (78) 920 ...	uwe.funk@bsiag.com
Geissmann	Matthias	Deutsch	Bernold, Martin	+41 (56) 484 1...		matthias.geissmann@bsia...
Gerhard	L David					lavid.gerhard@bsiag.com
Guglielmo	Audio					audio.guglielmo@bsiag.c...
Hansen	Anders					anders.hansen@bsiag.com
Heymanns	Volger					volger.heymanns@bsiag.c...
Hilpert	Justav					justav.hilpert@bsiag.com
Hitz	Oger					oger.hitz@bsiag.com
Hochuli	Nuriel					nuriel.hochuli@bsiag.com
Hoegger	Andreas					andreas.hoegger@bsiag.c...
Huber	Mark					mark.huber@bsiag.ch
Hug	Eno					eno.hug@bsiag.com
Huws	Simon					ion.huws@bsiag.com
Isler	Claudia					claudia.isler@bsiag.com
Kirn	Revin					evin.kirn@bsiag.com
Koeflerli	Bruno					bruno.koeflerli@bsiag.com
Kristiansen	Sigrid					sigrid.kristiansen@bsiag.c...
Kristiansen	Ulrik					ulrik.kristiansen@bsiag.com
Leicht	Stephan					stephan.leicht@bsiag.com
Lenz	Alberto					alberto@lenz.net
Meer	Astrid					astrid.meer@bsiag.com
Merkli	Stephan					stephan.merkli@bsiag.com
Mittmann	Johannes Max					max.mittmann@bsiag.com
Mortasawi	Mazda					mazda.mortasawi@bsiag.c...
Moser	Adrian					adrian.moser@bsiag.com
Moser	Samuel					samuel.moser@bsiag.com

85 objects, 1 selected

# Eclipse Scout 2012

The screenshot displays the Eclipse Scout 2012 web application interface. The browser address bar shows the URL: [https://services.bsiag.com/bsicrm/web#com.bsiag.crm.client.core.desktop.PersonalOutline-Zimmermann-Matthias-\(BSI-Z%3%9CRICH\)-Persons-Leicht-Vogt-Stephan-\(BSI-BADEN\)](https://services.bsiag.com/bsicrm/web#com.bsiag.crm.client.core.desktop.PersonalOutline-Zimmermann-Matthias-(BSI-Z%3%9CRICH)-Persons-Leicht-Vogt-Stephan-(BSI-BADEN)). The main content area shows a 'Person' profile for Stephan Leicht Vogt, with fields for Name, First name, Company, and Main representative. A modal dialog box is overlaid on the profile, featuring logos for Scout (a stylized 'S' in orange and blue), Java (the red Java logo), RAP (Rich Ajax Platform), and Eclipse (the Eclipse logo). The dialog also contains a 'Default' checkbox, a 'Correspondence' checkbox, and an 'E-mail' field with the value 'stephan.leichtvogt@bsiag.com'. The background shows a navigation tree on the left and a list of tasks at the bottom.



# Eclipse Scout 2016

The screenshot displays the Eclipse Scout CRM interface. The browser address bar shows the URL <https://services.bsi-software.com/bsicrm/>. The main header includes the company name 'Firma ECLIPSE FOUNDATION' and the user 'Person Stephan Leicht Vogt (BSI BA...)'. The interface is divided into a left sidebar with a navigation menu and a main content area.

**Navigation Menu (Left Sidebar):**

- Daten
- Firmen
- Personen
  - Stephan Leicht Vogt (BSI BADEN)
    - BSI BADEN (Ansprechpartner)
    - Firmen
    - Betreuung
    - Netzwerk
    - Aufträge
    - Marketing
    - Zahlungen
    - Tickets
    - Geschäftsvorfälle
    - Kommunikationen
    - Aufgaben
  - Aufträge
  - Tickets
  - Geschäftsvorfälle
  - Kommunikationen
  - Aufgaben
  - Dokumente

**Main Content Area:**

The main content area shows a form for editing the company profile. The form includes fields for 'Kurzname' (ECLIPSE FOUNDATION) and 'Name 1' (Eclipse Foundation Inc.). A large image overlay displays the Eclipse Scout logo (a stylized 'S' in orange and blue) and the Eclipse logo (a red flame over a blue coffee cup) with the text 'Java®'. To the right of the Java logo are logos for HTML5, CSS3, and JavaScript (JS).

**Form Fields:**

- Kurzname: \* ECLIPSE FOUNDATION
- Name 1: \* Eclipse Foundation Inc.
- Name 2: (empty)
- Nummer: (empty)
- Sprache: (empty)
- Rating: (empty)

**Buttons:**

- Speichern
- Abbrechen
- Prüfung auf Doublette vornehmen

**Address Fields (Bottom):**

- Fax: +1 (613) 224-5172
- E-Mail: info@eclipse.org
- Website: www.eclipse.org
- Anschrift: Eclipse Foundation Inc., 102 Centrepointe Drive, Ottawa, Ontario, K2G 6B1
- Adresszusatz 1: (empty)
- Adresszusatz 2: (empty)
- 102 Centrepointe Drive
- Postfachbezeichnung: (empty)
- Postfachnummer: (empty)
- CA, K2G 6B1, Ottawa

# Our learnings from last 16 years

- Zero rewrites
- Many Scout Upgrades
- UI technologies come and go
- **Eclipse Scout** helps to «future proof»

**Eclipse Scout**

# Eclipse Scout

## Framework

- Built for **Enterprise Applications**
- Based on **Java** and **HTML5**
- **Multi Device** support

## Goals

- Support **Long Term** strategy (enterprise apps live > 10 years)
- Boost **productivity** (salaries in Switzerland ...)
- **Easy** to learn (get productive in 1-2 weeks)




Contacts Application

localhost:8082

Person  
David Freitag

Quick access Options mzi

OK Cancel



First name David

Last name Freitag

Date of birth 11/05/1982

Gender  Male  Female

Details Work Events Comments

Street München Phone 089 66 86 49

Location Rosenstrasse DE [Show on map](#) Mobile

E-Mail DaveFreitag@web.de




https://hub.docker.com

Dashboard Explore Organizations Search Create eclipsescout

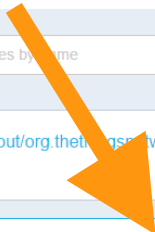
eclipsescout Repositories Stars Contributed Private Repositories: Using 0 of 1 Get more

## Repositories Create Repository +

Type to filter repositories by name

 eclipsescout/org.thetangosteamwork.zrh.monitor public	0 STARS	9 PULLS	<a href="#">DETAILS</a>
 eclipsescout/org.eclipse.scout.contacts public	0 STARS	7 PULLS	<a href="#">DETAILS</a>
 eclipsescout/org.eclipse.scout.widgets public	0 STARS	4 PULLS	<a href="#">DETAILS</a>

https://hub.docker.com/r/eclipsescout/org.eclipse.scout.contacts/



# Eclipse Scout – The Model

# Eclipse Scout Model

## What to model?

- User Interface
- Services
- Security

## Level of Detail?

- Tradeoff flexibility and efficiency
- **DON'T** depend on any **UI technology**
- **DO** allow for **UI rendering**

# String Fields – The last 20 years

Type choices, press Enter.

AS400

From file . . . . . > MYFILE \_\_\_\_\_ Name

Group key

SAP R3

Verwendungszweck (intern)

Test

JSP

Antragsteller

Muster Hans

First name

David

Eclipse Scout

# StringField in Scout

First name

```
@Order(2)
public class FirstNameField extends AbstractStringField {

    @Override
    protected String getConfiguredLabel() {
        return TEXTS.get("FirstName");
    }
}
```



# Eclipse Scout – Java and Building /w Maven

# Until Eclipse Mars ...



myapp-server.product



<bundle>



<bundle>.test



P2 Update Site



plugin.xml



myapp.target

MAVEN TYCHO








MANIFEST.MF



... With Neon



MAVEN

# Maven Standard

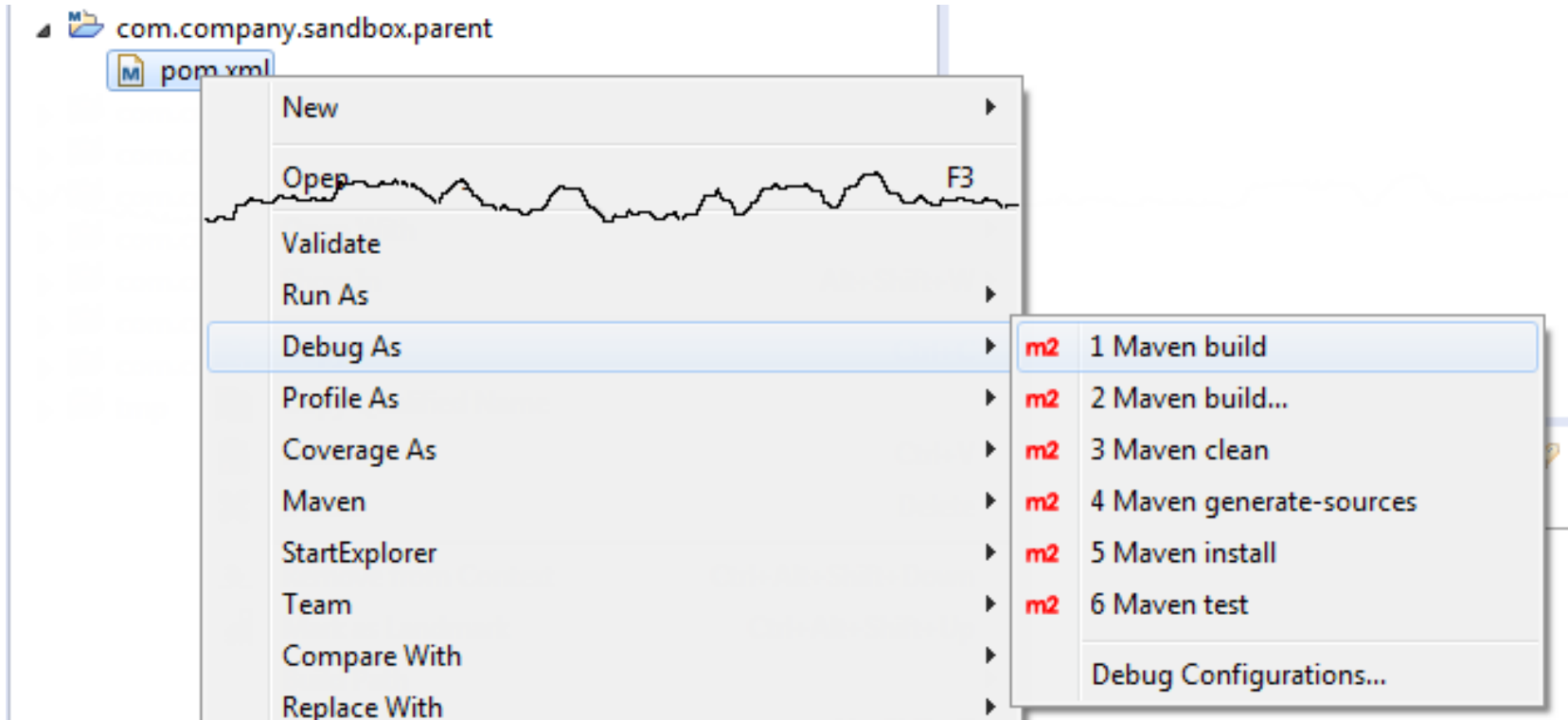
## Multi Module Projects

-  → {project name}
-  → {project name}.server
-  → {project name}.shared
-  → {project name}.client
-  → {project name}.ui.html

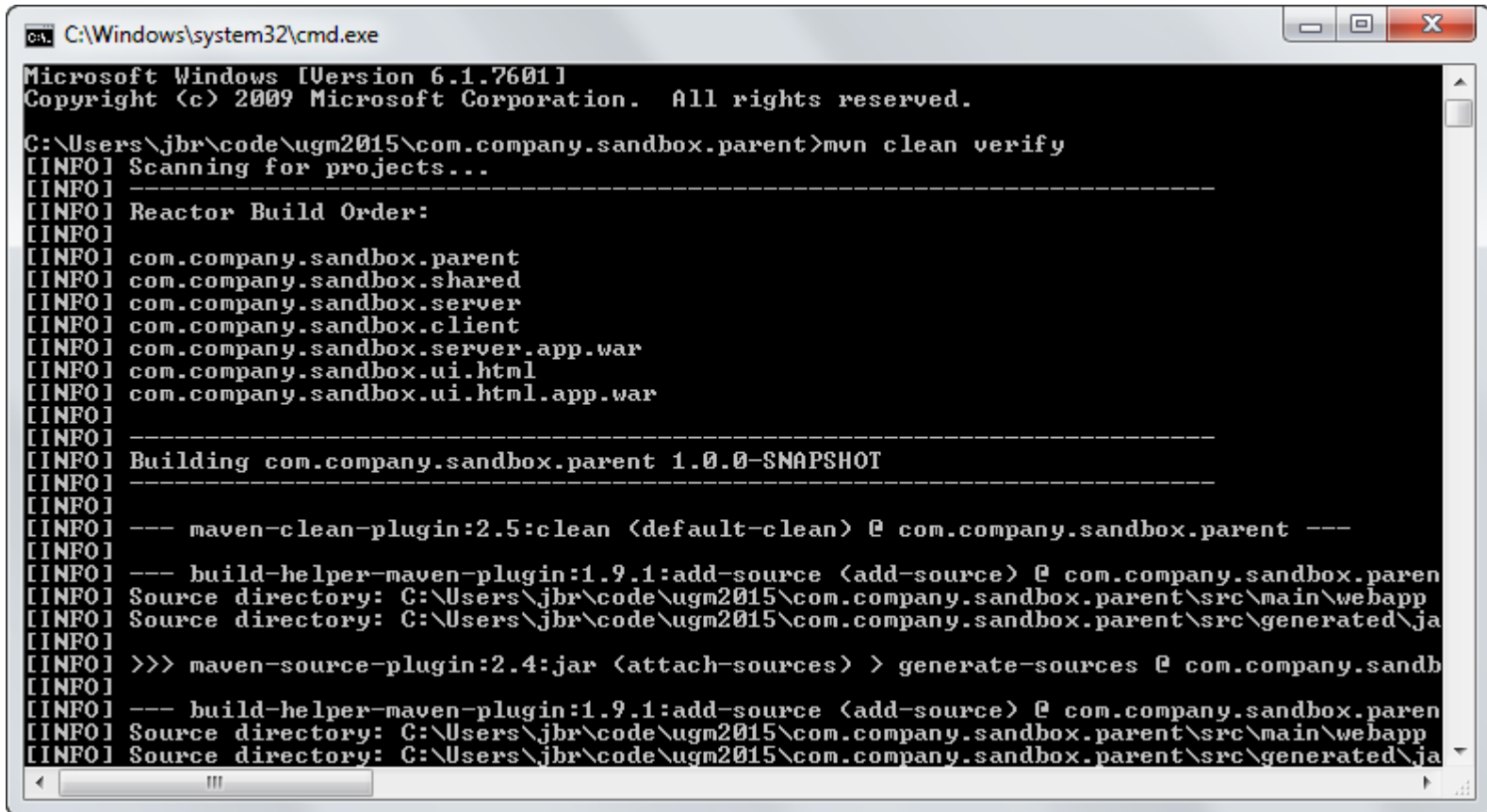
-  → {project name}.server.app.dev
-  → {project name}.ui.html.app.dev

-  → {project name}.server.app.war
-  → {project name}.ui.html.app.war

# Maven Build m2e for Eclipse IDE



# Maven Build Command Line



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\jbr\code\ugm2015\com.company.sandbox.parent>mvn clean verify
[INFO] Scanning for projects...
[INFO] -----
[INFO] Reactor Build Order:
[INFO]
[INFO] com.company.sandbox.parent
[INFO] com.company.sandbox.shared
[INFO] com.company.sandbox.server
[INFO] com.company.sandbox.client
[INFO] com.company.sandbox.server.app.war
[INFO] com.company.sandbox.ui.html
[INFO] com.company.sandbox.ui.html.app.war
[INFO] -----
[INFO] Building com.company.sandbox.parent 1.0.0-SNAPSHOT
[INFO] -----
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ com.company.sandbox.parent ---
[INFO]
[INFO] --- build-helper-maven-plugin:1.9.1:add-source (add-source) @ com.company.sandbox.paren
[INFO] Source directory: C:\Users\jbr\code\ugm2015\com.company.sandbox.parent\src\main\webapp
[INFO] Source directory: C:\Users\jbr\code\ugm2015\com.company.sandbox.parent\src\generated\ja
[INFO]
[INFO] >>> maven-source-plugin:2.4:jar (attach-sources) > generate-sources @ com.company.sandb
[INFO]
[INFO] --- build-helper-maven-plugin:1.9.1:add-source (add-source) @ com.company.sandbox.paren
[INFO] Source directory: C:\Users\jbr\code\ugm2015\com.company.sandbox.parent\src\main\webapp
[INFO] Source directory: C:\Users\jbr\code\ugm2015\com.company.sandbox.parent\src\generated\ja
```

# Eclipse Scout – Themes and Styling



# Themes and Styling with Scout

## Technology

→ **CSS3 + Less**

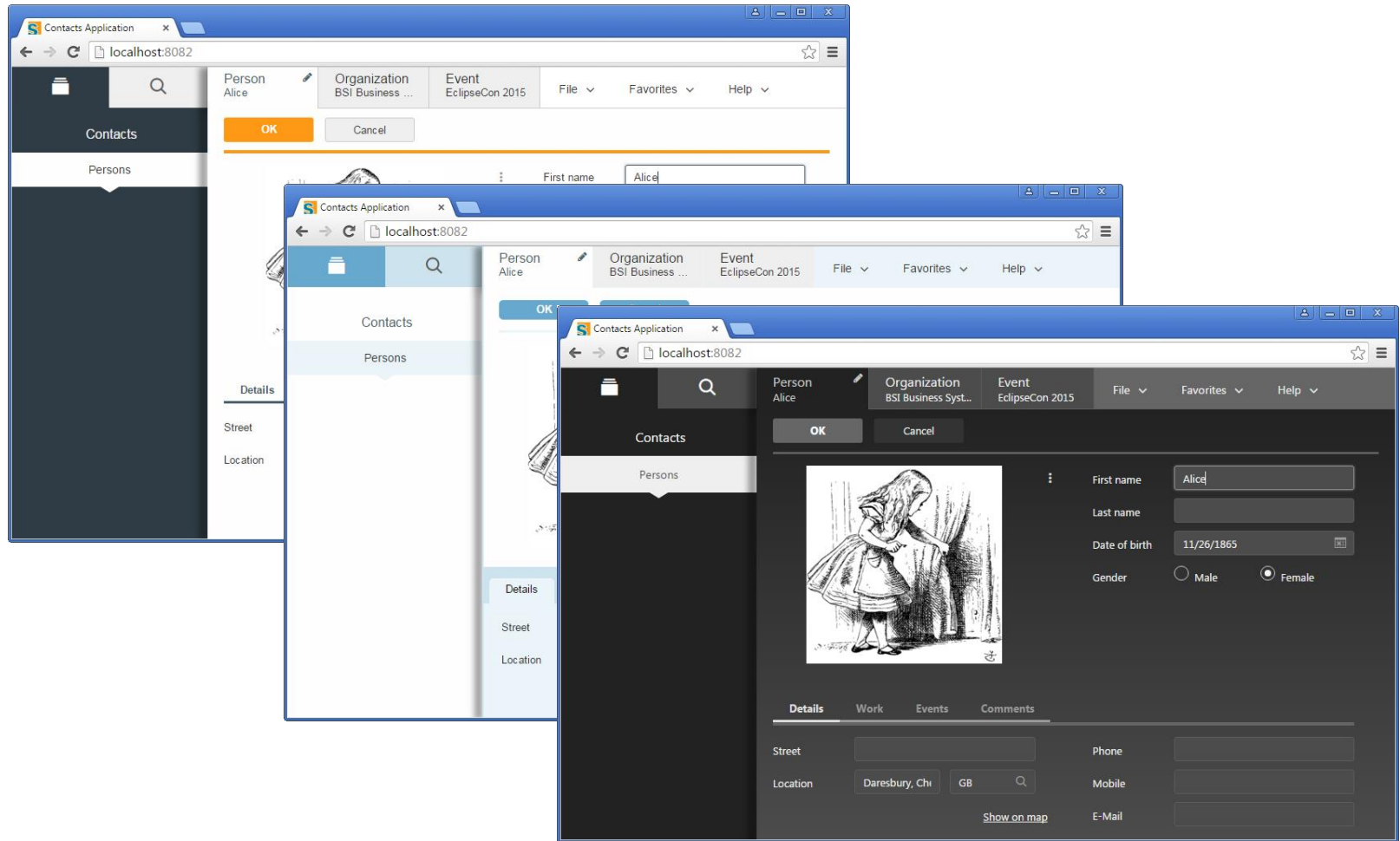
## CSS Organisation

- 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

# Scout Theming



# Scout Styling

## Global Styling

- Globally change application colors, fonts, ...
- Simple and low effort
- **Example**: Color of data fields

## Styling of Components

- Change individual elements
- Powerful but more CSS knowledge required
- **Example**: Appearance of dialogs

**Wrap up**

## Wrap up

- Enterprise Apps: **Long Life** (> 10 years)
- UIs Technologies: **Short Life** (<5 years)
- Think Longterm

## Eclipse Scout

- Helps «**future proofing**» your enterprise apps
- Based on **Java** and **HTML5**
- Styling with **CSS3** is simple

# Thanks

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