

## Summary

---

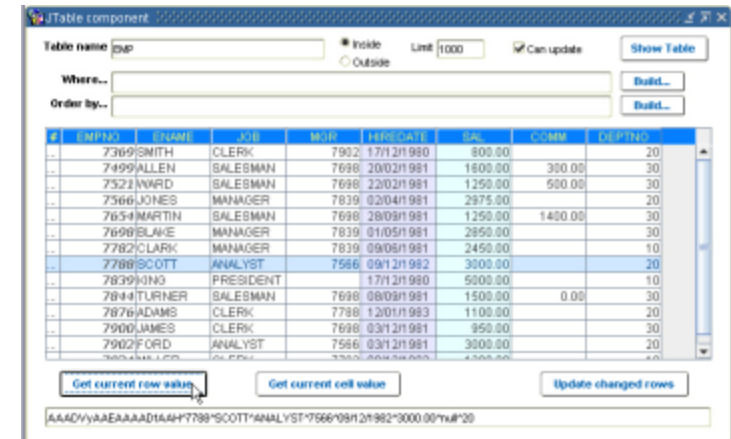
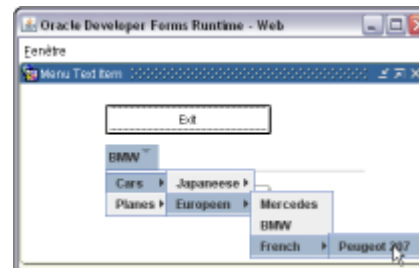
- ☐ Why ? (use Java Beans)
- ☐ What ? (is it)
- ☐ How ? (to use)
- ☐ Where ? (to find -The PJC/Java Beans' library)
- ☐ Case study – the Forms Look and Feel project
- ☐ LAF – The Demo
- ☐ Relevant Links

## ❑ Why ? (use Java Beans)

- Customize, extend the user interface
- Extend existing widget behaviour
- Add new widgets
- Re-implement lost features (mouse, keyboard events)
- Add new features

## □ Some examples

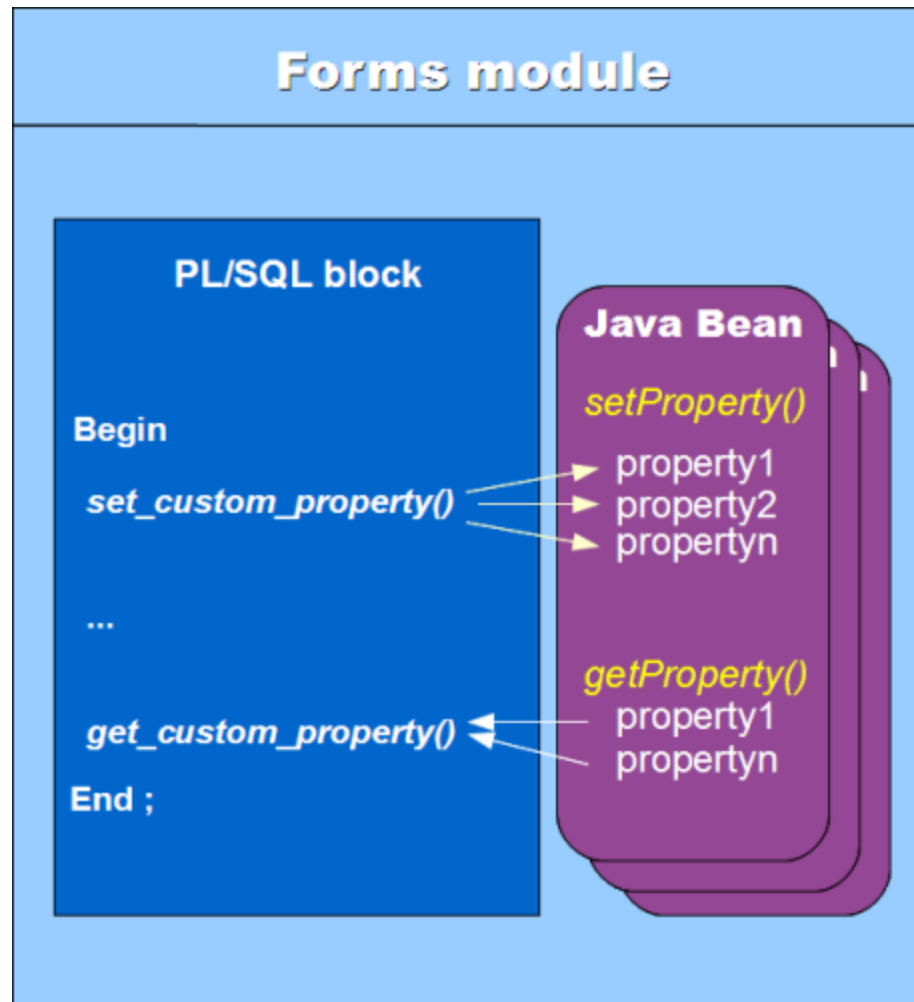
- A « menu » kind of Text Item
- A Java calendar
- An HTML browser
- A Swing Jtable integration
- Direct Print to a local printer
- ...



## ❑ What ? (is it)

### External Java Code embeded in the Forms application

- Java Beans  
(an open window to everything possible)
- Pluggable Java Components (PJC's)  
(An access point to the underlying standard widget)



## ❑ How ? (to use)

- Copy the JAR file to the <FORMS\_HOME>/forms/java folder

- Update the <FORMS\_HOME>/server/formsbeb.cfg file

archive=frmall.jar,laf\_11112.jar

archive\_jini=frmall\_jinit.jar,htmlpane.jar

- Update the Forms module  
(Bean Area or Item Implementation Class property)



❑ Where ? (to find - The PJC/Java Beans' library )

<http://www.oracle.com/technetwork/developer-tools/forms/>

<http://forms.pjc.bean.over-blog.com/>

Over 100 free Plug-ins

- How tos / Articles
- Links to other Java Beans' providers





## The Forms Look and Feel Project

The image displays three side-by-side screenshots of Oracle Forms runtime windows, illustrating the 'Forms Look & Feel' project. Each window shows a table of employee data with different visual themes.

**Left Window: Oracle Developer Form**

Menu: Action Edit Query Block  
Forms Look & Feel demo

Buttons: Employees Goodies

Empno	Ename
7369	SMITH
7499	ALLEN
7521	WARD
7566	JONES
7654	MARTIN
7698	BLAKE
7782	CLARK
7788	SCOTT
7839	KING
7844	TURNER

Switch theme Ebay

Record: 1/14

**Middle Window: Oracle Developer Forms Runtime - Web**

Menu: Action Edit Query Block Record Field  
Forms Look & Feel demo

Buttons: Employees Goodies

ORACLE

Oracle BLAF Look and Feel

Empno	Ename	Job
7369	SMITH	CLERK
7499	ALLEN	SALESMAN
7521	WARD	SALESMAN
7566	JONES	MANAGER
7654	MARTIN	SALESMAN
7698	BLAKE	MANAGER
7782	CLARK	MANAGER
7788	SCOTT	ANALYST
7839	KING	PRESIDENT
7844	TURNER	SALESMAN

Switch theme Ebay

Record: 3/14

**Right Window: Oracle Developer Forms Runtime - Web**

Menu: Action Edit Query Block Record Field  
Forms Look & Feel demo

Buttons: Employees Goodies

ebay

Ebay style Look and Feel

Empno	Ename	Job
7369	SMITH	CLERK
7499	ALLEN	SALESMAN
7521	WARD	SALESMAN
7566	JONES	MANAGER
7654	MARTIN	SALESMAN
7698	BLAKE	MANAGER
7782	CLARK	MANAGER
7788	SCOTT	ANALYST
7839	KING	PRESIDENT
7844	TURNER	SALESMAN

Switch theme BLAF

Record: 4/14



- ☐ Introduction
- ☐ What is it ?
- ☐ How it works ?
- ☐ Demo
- ☐ Where to download the project ?



## □ Introduction

- Change easily the look of the Forms application.
- Have a more « Web » look.
- Externalize the graphical information.
- Add brand new functions.



- Change easily the look of the Forms application

Change the look of the GUI's elements

Change the look of the Forms' containers

Draw gradient backgrounds, images, shapes and strings on the canvas

Theme #1 for this table block

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Dept
7369	SMITH	CLERK	7902	17/12/1980	915	10	20
7401	ALLEN	SALESMAN	7568	20/03/1981	1600	300	30
7521	WARD	SALESMAN	7568	22/02/1981	1250	500	30
7566	JONES	MANAGER	7369	02/04/1981	2875	0	30
7654	MARTIN	SALESMAN	7568	25/03/1981	1250	1400	30
7693	BLAKE	MANAGER	7369	01/05/1981	2850	0	30
7702	CLARK	MANAGER	7369	09/06/1981	2450	10	10
7799	SCOTT	ANALYST	7568	09/12/1981	3000	20	20
7839	HUNG	PRESIDENT	1712/1981	6000	10	10	10
7844	TURNER	SALESMAN	7568	08/09/1981	1500	0	30

Theme #2 for this table block

Empno	Hiredate	Sal	Comm	Dept
02	17/12/1980	915	10	20
08	20/02/1981	1600	300	30
09	22/02/1981	1250	500	30
29	02/04/1981	2875	0	30
09	25/03/1981	1250	1400	30
09	01/05/1981	2850	0	30
29	09/06/1981	2450	10	10
09	09/12/1981	3000	20	20
09	17/12/1981	6000	10	10
09	08/09/1981	1500	0	30

Give table-blocks an « HTML » style



## ■ Externalize the graphical information

Most of the graphical information is read from an external CSS file.

The painting is made at runtime by reading the required tags, then applying the settings through the Java Bean.

```
canvasEbay {
  type:canvas
  gradient-colors:r255g255b204,r255g255b255
  gradient-vcycle:/2
  gradient-hcycle:0
  image1:/ebay.jpg,10,1,.8
  image2:/ebay_line.jpg,30,74,.6,560,5
}
tableHeaderEbay {
  type:header
  font-family: Arial;
  font-size:12
  font-weight:bold
  frame-color:r250g83b12
  inside-color:r255g204b0
  font-color:r0g0b204
  shade-color:r255g255b204
  frame-width:2
  frame-rounded-border: 10
  transparency:.8
  text-align:left
  text-align-offset:5
}
```





- Have a more « WEB » look on table-blocks

Oracle Developer Forms Runtime - Web

Fenêtre

Forms Look & Feel demo

Block Dynamic Items HTML Map Charts Image Spinner

## Table-block title

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm
7369	SMITH	CLERK	7902	17-DEC-1980	915	10
7499	ALLEN	SALESMAN	7698	20-FEB-1981	1600	300
7521	WARD	SALESMAN	7698	22-FEB-1981	1250	500
7566	JONES	MANAGER	7839	02-APR-1981	2975	
7654	MARTIN	SALESMAN	7698	28-SEP-1981	1250	1400
7698	BLAKE	MANAGER	7839	01-MAY-1981	2850	
7782	CLARK	MANAGER	7839	09-JUN-1981	2450	
7788	SCOTT	ANALYST	7566	09-DEC-1982	3000	
7839	KING	PRESIDENT		17-DEC-1980	6000	
7844	TURNER	SALESMAN	7698	08-SEP-1981	1500	0

Theme #1 Theme #2 Theme #3

Record: 3/14



## ■ Add some new functions

- Handle menus at runtime (add, enable, disable, show, hide, remove options).
- Handle frames at runtime (add, move, modify, hide).
- Play pre-loaded sounds.
- Receive external asynchronous messages.
- Draw graphics anywhere on the screen.
- Display input dialog boxes.
- Color Chooser.
- Add Items at runtime (Text Items, check-boxes, buttons, images, sliders).
- Handle HTML Maps.
- Display Google Charts.
- Display Swing Jtable coloured LOVs.
- Display dynamic popup menus.
- Display popup messages.
- Display Images in a Spinner component.
- ...



## □ What is it ?

- a PL/SQL library

That includes the functions and the procedures to read the tags from the CSS file and decorate the dialogs.

- a JAR file

That includes the Java Beans and the PJC's.

- a CSS file

That includes the tags' sections.





- The PL/SQL library (laf.pll)

It contains the functions and the procedures needed to open the CSS file, read the tags from it, then perform the drawing job through the associated Java Bean's methods.

- Open and read the CSS file.

```
PKG_LOOK_AND_FEEL.Open_Css()
```

- Draw objects on the canvas.

```
PKG_LOOK_AND_FEEL.Paint_Canvas()
```

- Decorate the given table-block.

```
PKG_LOOK_AND_FEEL.Paint_Block()
```

- Set global properties for every GUIs widgets.

```
PKG_LOOK_AND_FEEL.Set_GUI_Properties()
```



## ■ The JAR file (laf.jar)

It contains Java Beans to perform all the graphical operations, and PJC's to overload the common Forms widgets.

The Java Bean allows to manage the following aspects:

- Drawing shapes on the current canvas (images, lines, rectangles and strings).
- Loading and playing sounds.
- Dynamically handling menus - add, remove, enable, disable, show and hide menu options at runtime.
- Dynamically handling frames – add, remove, modify, move, show and hide frames at runtime.
- Display single or multi-line input dialog box.
- Transform the Forms into a Socket Server, able to receive external asynchronous messages.
- Display texts anywhere on the canvas during a given time.
- Change fonts and colors for menu bar, window caption, status bar and tabs.
- Pick a color from a JColorChooser.
- Turn simple images into sensitive areas you can click on.



The PJC's tend to give a more « Windows XP » look with the use of gradients.

They also extend the standard behavior of the common Forms items:

- Buttons with mixed text and image, and mouse-on, mouse-over events.
- Text items that permit sending events back to Forms (last key typed with key char, key code and key modifier).
- Blinking text items.
- Hyperlink sort of text items.
- Extended lists (multiple selection – sorted lists).
- Text items with background gradients.
- Text items able to render HTML contents or handle huge texts like CLOBs or external text files.



## ■ The CSS file

It contains the different tags, grouped in five different section's types:

- type:canvas  
That contains tags to decorate a canvas
- type:title  
That contains tags to draw a table-block title area
- type:header  
That contains tags to draw a table-block header area
- type:body  
That contains tags to draw a table-block body area
- type:gui  
That contains tags to manage the common GUIs elements



## Title section's tags

```
.tableTitleEbay {  
  type:title  
  font-family:Arial  
  font-size:16  
  font-weight:bold  
  /*line-color:r51g102b153  
  /*shadow-line-color:r246g246b230  
  /*line-width:3  
  text-transparency:.8  
  text-color:r255g102b0  
  text-gradient:none  
  text-align:left  
  text-line-Hoffset:0  
  text-line-Voffset:8  
  title-head-offset:-15  
}
```

## Header section's tags

```
.tableHeaderEbay {  
  type:header  
  font-family: Arial;  
  font-size:12  
  font-weight:bold  
  frame-color:r250g83b12  
  inside-color:r255g204b0  
  font-color:r0g0b204  
  shade-color:r255g255b204  
  frame-width:2  
  frame-rounded-border: 10  
  transparency:.8  
  text-align:left  
  text-align-offset:5  
}
```

## Body section's tags

```
.tableBodyEbay {  
  type:body  
  font-family:Arial  
  font-size:8  
  font-weight:bold  
  frame-color:r250g83b12  
  inside-color:r255g255b220  
  shade-color:r255g255b220  
  frame-width:2  
  transparency:.8  
  frame-rounded-border:10  
  /*odd-foreground-color:r128g128b255  
  /*even-foreground-color:r0g0b255  
  odd-background-color:r255g255b220  
  even-background-color:r255g255b220  
}
```

### Theme #1 for this table block

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm
7369	SMITH	CLERK	7902	17/12/1980	915	10
7499	ALLEN	SALESMAN	7698	20/02/1981	1600	300
7521	WARD	SALESMAN	7698	22/02/1981	1250	500



## □ How it works?

### ■ The Forms side

Read the CSS file, then decorate the elements by calling the Java methods - *Set\_Custom\_Property()*.

### ■ The Java side

Use the Java methods to paint the Forms elements.  
*setProperty()* and *getProperty()*



- The Forms side

### When-New-Form-Instance trigger

```
-----  
--      form main initializations      --  
-----  
If PKG_Look_And_Feel.Open_Css(:PARAMETER.PM$CSS_FILENAME) Then  
  
    -- read the global GUI properties --  
    PKG_LOOK_AND_FEEL.Set_GUI_Properties( '.GUIProperties1', 'LAF_BLOCK.LAF_BEAN' ) ;  
  
    -- paint the canvases --  
    PKG_LOOK_AND_FEEL.Paint_Canvas(:PARAMETER.PM$CANVAS, 'LAF_BLOCK.LAF_BEAN' ) ;  
  
    -- paint the blocks --  
    PKG_LOOK_AND_FEEL.Paint_Block  
    (  
        PC$Block      => 'EMP'  
        ,PC$BeanName   => 'LAF_BLOCK.LAF_BEAN'  
        ,PC$VA_Name    => :PARAMETER.PM$VA  
        ,PC$HeadClass  => :PARAMETER.PM$HEADER  
        ,PC$BodyClass  => :PARAMETER.PM$BODY  
        ,PC$TitleClass => :PARAMETER.PM$TITLE  
        ,PC$Title      => 'Theme #1 for this table block'  
        ,PB$ScrollBar  => True  
    ) ;  
  
    go_block('EMP') ;  
    Do_Key('EXECUTE_QUERY') ;  
  
End if ;
```



- The Java side

Colorize  
widgets

Draw images

Re-draw  
buttons

Oracle Developer Forms Runtime - Web

Action Edition Interrogation Bloc Enregistrement Champ Aide Fenêtre

Forms Look & Feel demo

Employees Goodies

ORACLE

Oracle BLAF Look and Feel

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Dept
7369	SMITH	CLERK	7902	17/12/1980	915	10	20
7499	ALLEN	SALESMAN	7698	20/02/1981	1600	300	30
7521	WARD	SALESMAN	7698	22/02/1981	1250	500	30
7566	JONES	MANAGER	7839	02/04/1981	2975		20
7654	MARTIN	SALESMAN	7698	28/09/1981	1250	1400	30
7698	BLAKE	MANAGER	7839	01/05/1981	2850		30
7782	CLARK	MANAGER	7839	09/06/1981	2450		10
7788	SCOTT	ANALYST	7566	09/12/1982	3000		20
7839	KING	PRESIDENT		17/12/1980	6000		10
7844	TURNER	SALESMAN	7698	08/09/1981	1500	0	30

Switch theme Ebay

Enreg. : 1/14

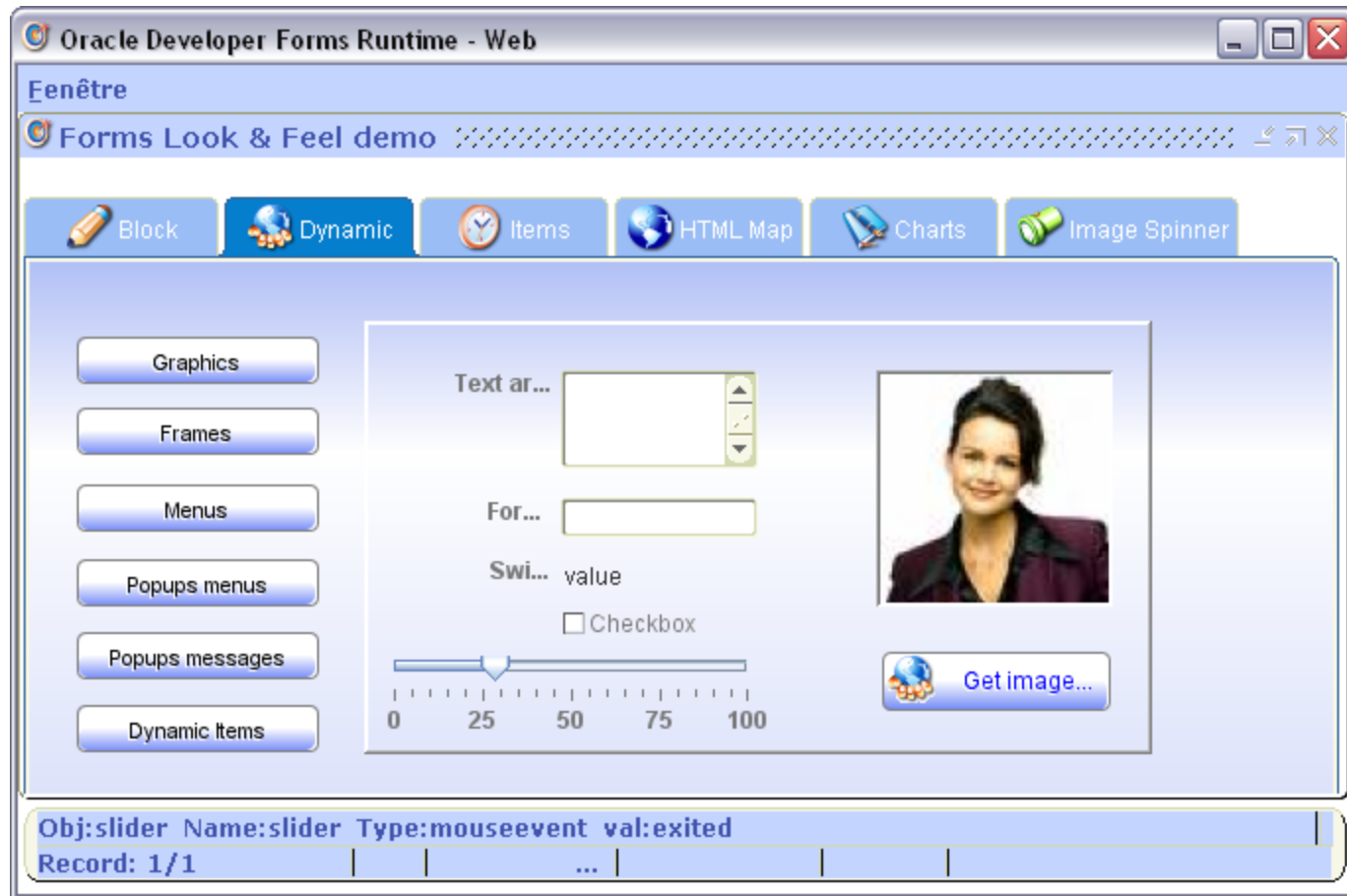
Draw shapes

Paint gradients





## Look and Feel Project Demo





## □ Some links

- **Oracle Forms Look and Feel project Web site** (documentation and download)  
[http://fdtool.free.fr/LAF/doc/Oracle\\_Forms\\_Look\\_and\\_Feel\\_project.htm](http://fdtool.free.fr/LAF/doc/Oracle_Forms_Look_and_Feel_project.htm)
- **Look and Feel project dedicated forum**  
<http://forms-pjc-bean.space-forums.com/look-and-feel-project-f4.html>
- **Forms Java Beans and PJC's library**  
<http://forms.pjc.bean.over-blog.com/>
- **Francois Degrelle's blog**  
<http://fdegrelle.over-blog.com/>

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Questions

THANK YOU