ADF Code Corner

049. How-to skin ADF Faces component label

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Abstract:

ADF Faces components use default labels, tool tips and validation messages that are not customizable through the component properties.

To customize the default labels, developers need to implement a custom skin, which for this use case does not have to define a custom look and feel. To change the default messages, like the initial "Loading..." message shown with the splash screen, you need to know about the message keys used by the components. The keys, as well as skinning guides, are available online at otn.oracle.com/products/jdev, but for the special usecase of changing the default messages, this how-to is all you need.

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Introduction

The first experience users get with a new web application is the user interface. No matter how good the application's codeline quality is, how many Java EE design patterns and object oriented principles developers were able to built in, if the user interface doesn't pass the first impression, users wont like the application as a whole. While this statement greatly expresses the primary responsibility of skinning in ADF Faces RC, there is a second functionality in skinning: customizing the default component labels.

Configuring Custom Skins

To apply a custom skin to an ADF Faces RC application, you

- create a styles sheet file (CSS) containing ADF Faces RC component selectors
- create a file trinidad-skins.xml located in the WEB-INF directory of the view layer
- change the configuration in trinidad-config.xml to points to the new skin

The trinidad-skins.xml file is a registry file of all custom skins available to an application. The file doesn't exist by default as it is not needed when using the Oracle look and feel.

To create this file, choose **New** from the project's context menu and create a new XML document in the view layer WEB-INF directory.

In the current release of JDeveloper 11g there exists no a dialog to help creating this document, which is why a copy and paste approach from an existing trinidad-skins.xml file is best practice to do.

The following code example shows a custom skin entry in the trinidad-skins.xml file

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<skins xmlns="http://myfaces.apache.org/trinidad/skin">
    <skin>
        <id>coffee_sample.desktop</id>
        <family>coffee_sample</family>
        <render-kit-id>
```

```
          org.apache.myfaces.trinidad.desktop
        </render-kit-id>
        <style-sheet-name>
          skins/coffee_sample.css
        </style-sheet-name>
        <bundle-name>
           fnimphiu.sample.skin.StringBundleOverride
        </bundle-name>
        <extends>blafplus-rich.desktop</extends>
    </skin>
</skins>
```

The custom skin is defined by the style sheet referenced through the **style-sheet-name** element. The CSS file must be located relative to the view layer project's public_html directory. In the above example, the file is in the public_html\skins directory.

If only the message bundle should be changed then the CSS file is empty, otherwise it contains the ADF FAces RC component selectors with the custom style definitions. The skinning framework doesn't work with the file directly but accesses it through its **id** and **family** element.

The **id** element is used when referencing existing skins that the custom skin is supposed to extend. For the usecase to only customize some or all default messages, the look and feel should be kept to the default.

The **extends** element in trinidad-skins.xml thus references **blafplus-rich.desktop**, the id element value of the Oracle default skin.

The **family** name is used to configure the custom skin so it gets applied to the running application. This can be done as a static configuration or dynamically using Expression Language.

The **bundle-name** element is key to the usecase explained in this how-to. The bundle-name element points to a custom Java class that extends ListBundle to provide the custom labels.

The custom skin is configured in the trinidad-config.xml file as

```
<?xml version="1.0" encoding="windows-1252"?>
<trinidad-config
xmlns="http://myfaces.apache.org/trinidad/config">
  <skin-family>cofee_sample</skin-family>
</trinidad-config>
```

Lets assume we run an online coffee shop that wants to have their tag line *"Got time? Get goffee"* shown with the splash screen while the ADF Faces RC application loads. The splash screen is a functionality of the **af|document** component, which has the following message keys defined:

af_document.LABEL_SKIP_LINK_TEXT	Text written out as part of link in screenreader mode to skip to the content on the page.
af_document.LABEL_SPLASH_SCREEN	The label for the splash screen that is displayed the first time a

	page is shown.
af_document.MSG_FAILED_CONNECTION	The error text brought up in an alert box when a connection to the server fails.

The message key highlighted in bold is the key to reference in the custom message*bundle, fnimphiu.sample.skin.StringBundleOverride* used above. The String bundle used with this example looks as follows

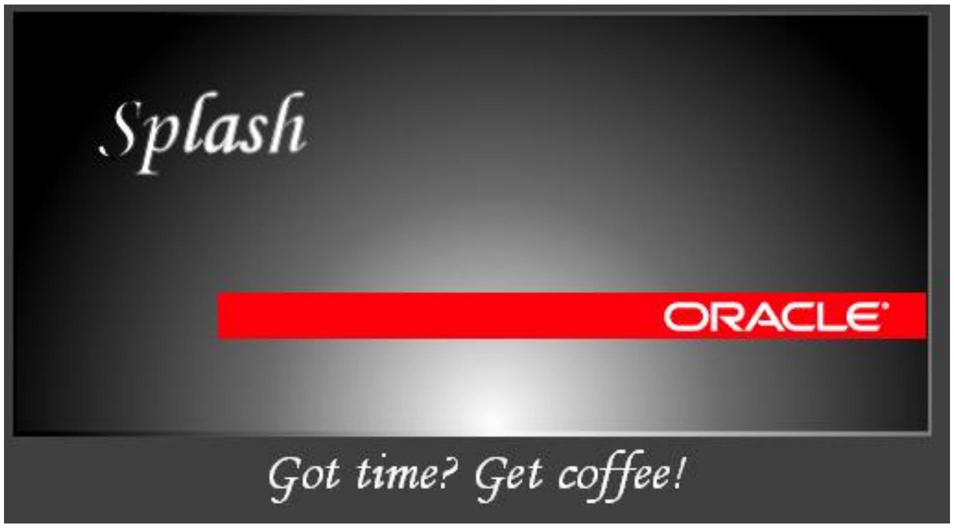
```
package fnimphiu.sample.skin;
import java.util.ListResourceBundle;
public class StringBundleOverride extends ListResourceBundle{

  public StringBundleOverride() {
  }

  @Override
  public Object[][] getContents() {
  return _CONTENTS;
  }

 private static final Object[][] _CONTENTS =
 {
  {"af_document.LABEL_SPLASH_SCREEN", "Got time? Get coffee!"}
 };
}
```

As you can see, only a single component key is defined in the resource bundle, in opposite to all the 200. The other strings are taken from the default definition. This brings up the splash screen as



Extending an already extended string bundle

To implement inheritance and to extend an existing custom string bundle, you use code similar to the one shown below

```
package com.oracle.adcs;

import java.util.HashMap;
import java.util.Iterator;
import java.util.Set;

public class PartialOverrideBundle extends SingleStringBundle {


 public PartialOverrideBundle(){

   super();
  }

 @Override
  public Object[][] getContents()  {

          return getCustomKeys();

  }


  private Object[][] getCustomKeys(){

    Object[][] messages = super.getContents();
    // my overrides
    HashMap hm = new HashMap();
    for (int i = 0; i < messages.length;i++){
       hm.put(messages[i][0],messages[i][1]);
    }
    // add custom strings
    hm.put("af_document.MSG_FAILED_CONNECTION",
            "Crash Boom Bang");


   //renew
   messages = new Object[hm.size()][2];
   Set keySet = hm.keySet();
   Iterator keyIter = keySet.iterator();


   for (int i = 0; i < hm.size(); i++) {
      String keyStr = (String) keyIter.next();
      messages[i] = new Object[]{keyStr,hm.get(keyStr)};
    }

    return messages;

   }

}
```

The above code keeps the custom Splash screen message, but adds "Crash Boom Bang" as the message shown for a failed server connection during the initial loading time. Of course, this message too could have gone into the first example, but keep in mind that this is a simplified example and the extended message bundle may not be available in source code