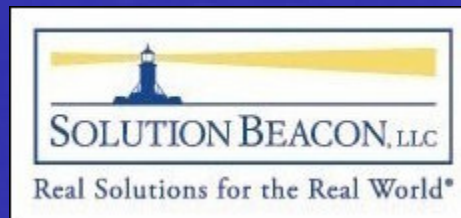


# Advanced Security Rules Without Customizations

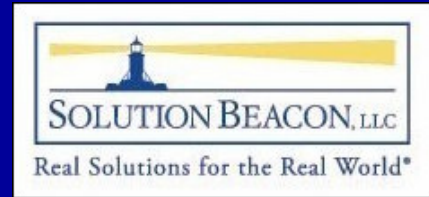
Susan Behn

NEOAUG

November 6, 2006



# Agenda



## ◆ Standard Application Security

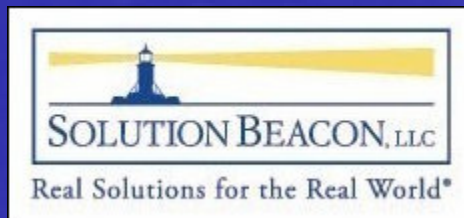
- Menu Driven Security
- HRMS Security Options
- Oracle Label Security (OLS)

## ◆ Personalized and Custom Security Options

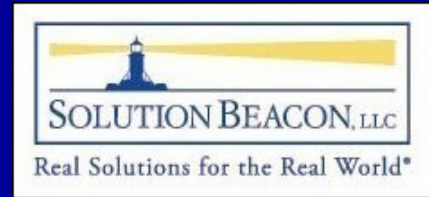
- CUSTOM.pll
- Forms 6i Personalization – New for 11.5.10
- OA Framework Personalization

## ◆ Additional Resources

# Standard Application Security



# Standard Application Security

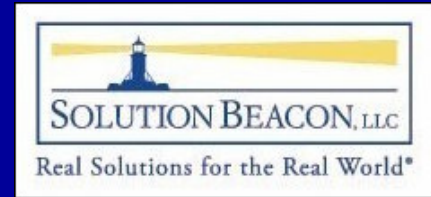


## ◆ Menu Driven Security

- Group functions into logical menu structures
  - ◆ Include all functions for a logical group
  - ◆ Do not include sub functions
  - ◆ Create a functions with the parameter QUERY\_ONLY="YES"
- Group concurrent requests into request groups
- Assign request groups to responsibilities
- Assign menus to responsibilities
- Assign responsibilities to users

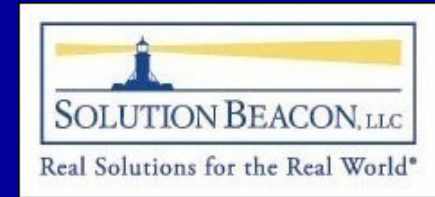
◆ Problem: Seeded menus, request groups and responsibilities do not always comply with regulations regarding separation of duties

# Standard Application Security



- ◆ Responsibility Level Additional Security Options
  - Function Menu Exclusions – System Administrator excludes functions and subfunctions (form,tab,button)
  - Excluded Items (Self Service Only)
    - ◆ Provides column level security
    - ◆ Exclude specific attributes
  - Securing Attributes (Self Service Only)
    - ◆ Provides row level security
    - ◆ iExpenses example- TO\_PERSON\_ID and ICX\_HR\_PERSON\_ID are set to the employee person id

# Standard Application Security



## ◆ Standard HRMS Security

- User is assigned to a responsibility that is assigned a security profile which included a business group
- Separate responsibilities are required for each security profile

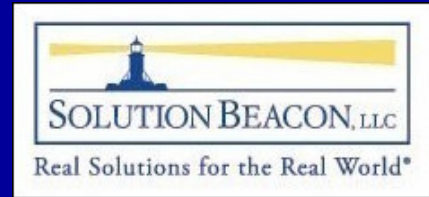
## ◆ Security Groups Enabled Security

- Responsibility = what you can do
- Security Profile = who you can do it to
- A responsibility includes multiple security groups
- Assign Security Profile form - Links a security profile to a user's responsibility and business group

## ◆ Only one business group can be viewed at a time

## ◆ Security profiles are not easily changed

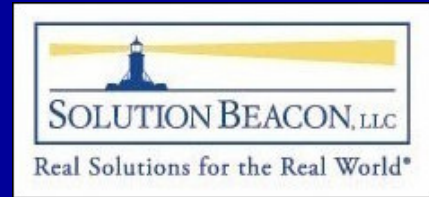
# Standard Application Security



## ◆ Oracle Label Security

- Provides powerful row level security in Oracle9i
- Data is secured with a combination of data labels and up to 3 associated components (levels, compartments, groups)
- Policies define security for a collection of labels
- Requires PL/SQL to design and assign labels and assign them to tables
- Requires significant time to design and maintain
- OLS does not have a front end interface

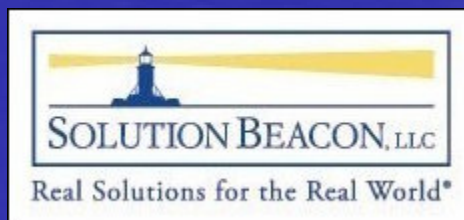
# Security Requirement



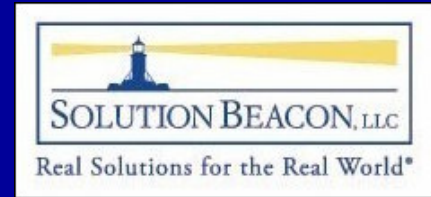
**What do we need?**

**...to be able to secure any data item on any form for any user or group of users**

CUSTOM.pll



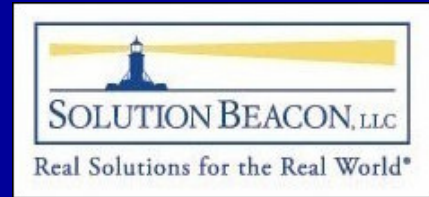
# Advanced Security Solutions



## How can we get item level security?

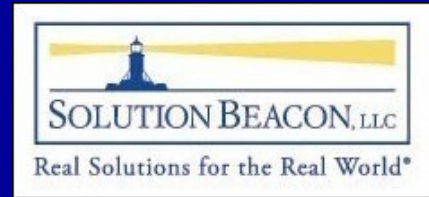
- ◆ CUSTOM.pll - Library available in \$AU\_TOP/resource is modified to provide customizations to Oracle Application forms
- ◆ Forms 6/Personalization – Forms 6/ – 11.5.10
- ◆ OA Framework Personalization – Self-Service

# CUSTOM.pll



- ◆ Library available in \$AU\_TOP/resource is modified to provide customizations to Oracle Application forms
- ◆ Use forms builder 6i to modify package body
- ◆ Examples
  - Hide fields, tabs
  - Make fields required
  - Restrict update or insert
  - Change prompts, tab labels
  - Alter LOVs
  - Create zooms and tool bar menu selections
  - Validate and format
  - Almost anything you can do in PL/SQL
- ◆ Reference: Application Developer Guide – Chapter 28

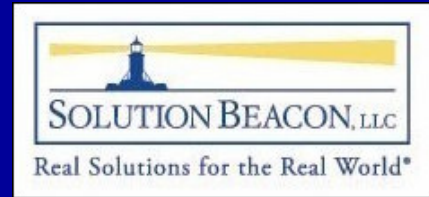
# CUSTOM.pll – Methodology



## ◆ Challenges

- Traditional implementation of customizations in CUSTOM.pll only allows one developer at a time to make modifications
- Size limitations can be an issue
- Keeping code modular is difficult
- Testing requirements can be significant for subsequent modifications to CUSTOM.pll

# CUSTOM.pll – Methodology



## Resolving the Multi-Developer and Size Limitation Problems

- ◆ Create a separate library (.pll) for each form to be customized

### Package Spec

```
PACKAGE XXXXXAPXVDMVX IS
  Procedure event(event_name VARCHAR2);
END;
```

### Package Body

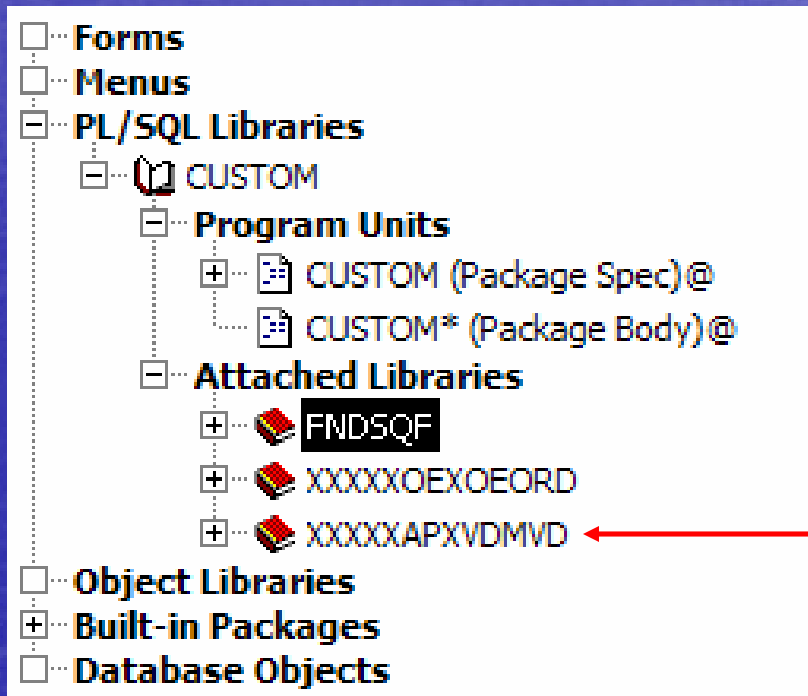
```
PACKAGE BODY XXXXXAPXVDMVX
IS
PROCEDURE event (event_name VARCHAR2) IS
  BEGIN
  IF event_name = 'WHEN-NEW-FORM-INSTANCE' THEN
    \*Make the vendor type field required*\
    APP_ITEM_PROPERTY2.SET_PROPERTY('VENDOR_TYPE_DISP',REQUIRED,PROPERTY_TRUE);
  END IF;
END event;
END XXXXXAPXVDMVX;
```

# CUSTOM.pll – Methodology



Resolving the Multi-Developer and Size Limitation Problems

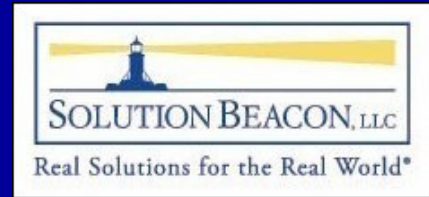
## ◆ Attach your new library to CUSTOM.pll



Navigator view of  
CUSTOM.pll

Your new library

# CUSTOM.pll – Methodology



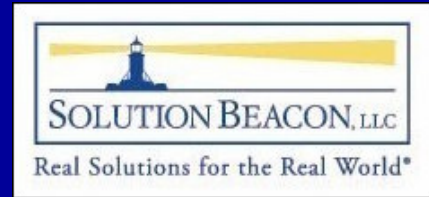
Resolving the Multi-Developer and Size Limitation Problems

◆ Add a call to your new library in CUSTOM.pll

## Package Body of CUSTOM.pll

```
Form_name      varchar2(30) := name_in('system.current_form');  
Begin  
  If form_name = 'APXVDMVD' THEN  
    xxxxxapxvdmvd.event(event_name);  
  Elself form_name = 'OEXOEORD' THEN  
    xxxxxoexoeord.event(event_name);  
  end if;  
end event;
```

# CUSTOM.pll – More Examples



**\\*Force Upper Case for Supplier Name\*\**

```
APP_ITEM_PROPERTY2.SET_PROPERTY('VNDR.VENDOR_NAME_MIR',CASE_RESTRICTION,UPPERCASE);
```

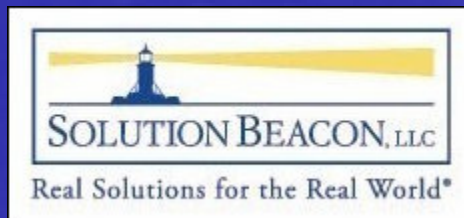
**\\* Hide the tax payer id\*\**

```
APP_ITEM_PROPERTY2.SET_PROPERTY('VNDR.NUM_1099_MIR',DISPLAYED,PROPERTY_OFF)
```

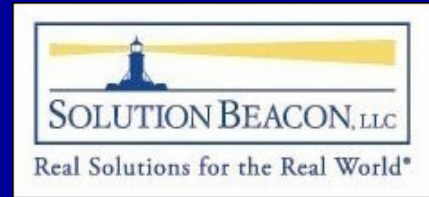
**\\*Change the prompt\*\**

```
APP_ITEM_PROPERTY2.SET_PROPERTY('VNDR.  
END_DATE_ACTIVE_MIR',PROMPT_TEXT,'Inactive Date')
```

# Forms 6/Personalizations

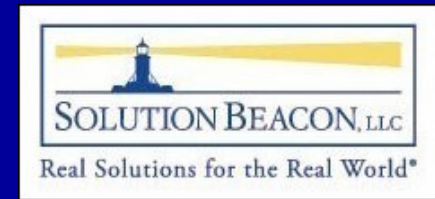


# Forms 6i Personalization



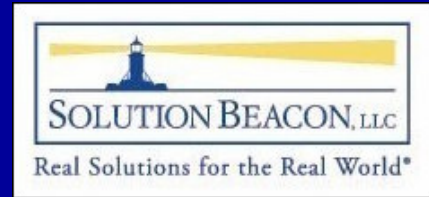
- ◆ Forms 6i Personalizations declaratively alter the behavior of Forms delivered with the E-Business Suite
- ◆ User must understand Forms and PL/SQL
- ◆ Most changes traditionally done using CUSTOM.pll can be accomplished using Forms 6i Personalization
- ◆ Forms 6i Personalizations are effective immediately – no compiling
- ◆ Forms 6i Personalizations fire prior to CUSTOM.pll for the same event

## Forms 6/Personalization – Profile Options

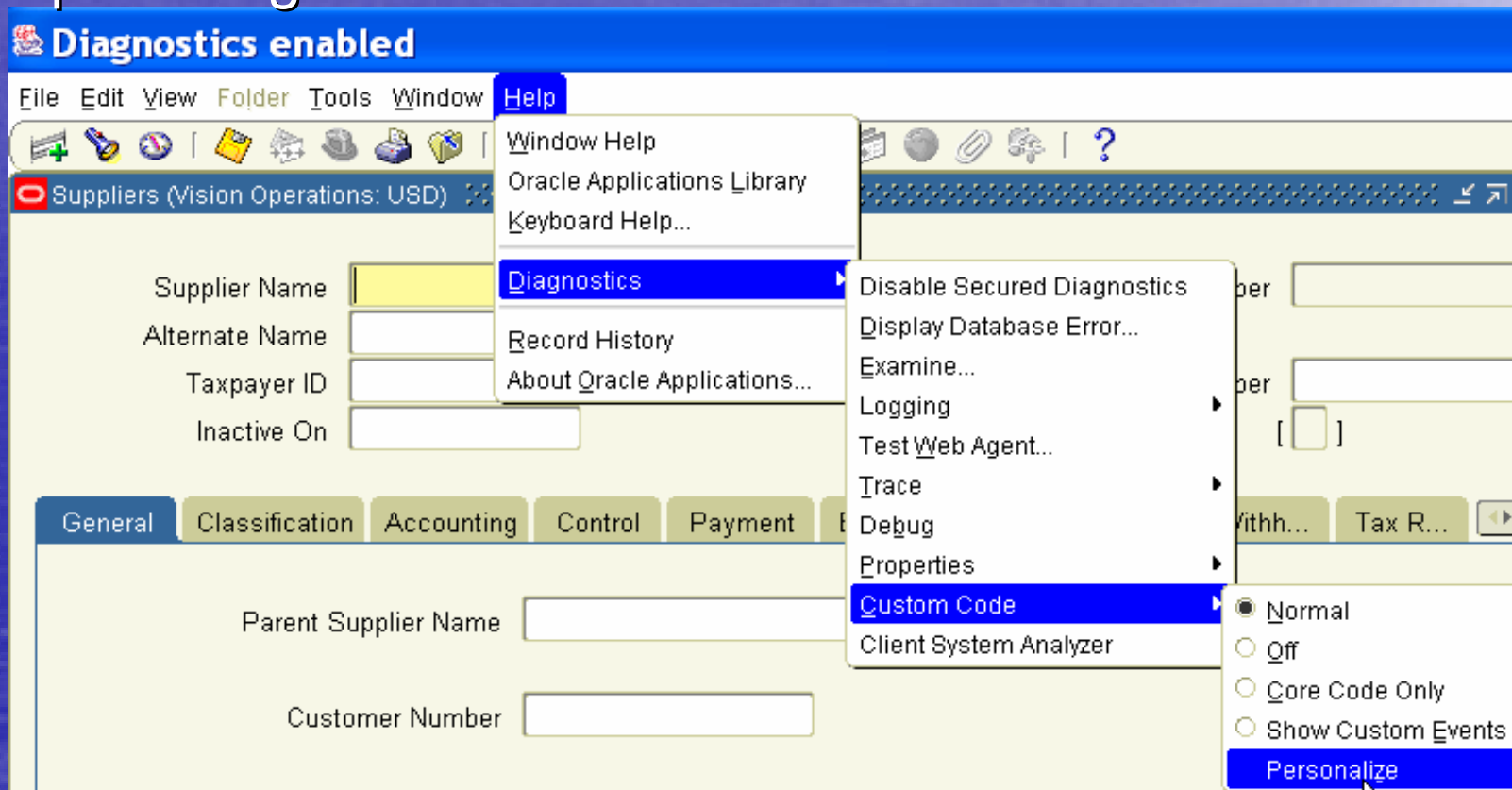


- ◆ Hide Diagnostics menu entry
  - No to display the diagnostics menu
- ◆ Utilities: Diagnostics
  - No to require apps password

# Forms 6/Personalization – Access



- ◆ Access the form or function needing personalization
- ◆ Help → Diagnostics → Custom Code → Personalize



# Forms 6/Personalization



Form Personalizations (Suppliers)

Function Name:  Form Name:  Debug Mode:

Seq	Description	Level	Enabled
10	Susan's Test	Form	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

**Condition** | **Actions**

Trigger Event:  (You can enter additional event names.)

Trigger Object:

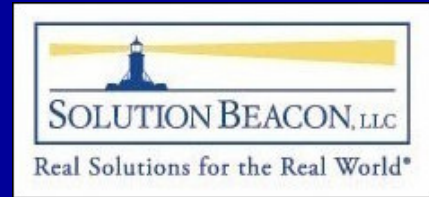
Condition:

Processing Mode:

**Context**

Level	Value
User	SBEHN

# Forms 6/Personalization – Rule Header



## ◆ Debug mode

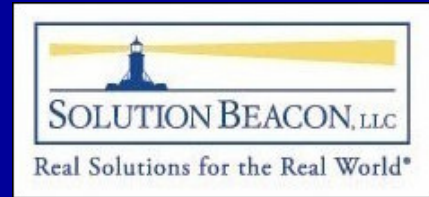
- Off
- Step-by-Step – shows events impacted by rule and evaluation of the rule (CU1 patch)
- Show Debug Messages – shows messages with type = debug

Form Personalizations (Suppliers)

Function Name: AP\_APXVDMVD      Form Name: APXVDMVD      Debug Mode: Show Debug Messages

Seq	Description	Level	Enabled
10	Susan's Test	Form	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

# Forms 6/Personalization – Rule Header



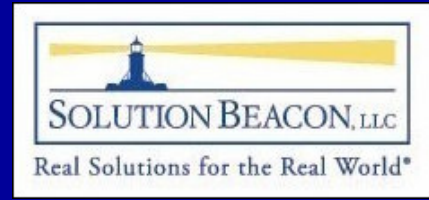
- ◆ Sequence
  - Rules run in sequence
  - Sequence numbers (1-100) are not unique
- ◆ Description – free form entry
- ◆ Level – Form or Function (CU1 patch)
- ◆ Enabled – checked

Form Personalizations (Suppliers)

Function Name: AP\_APXVDMVD      Form Name: APXVDMVD      Debug Mode: Show Debug Messages

Seq	Description	Level	Enabled
10	Susan's Test	Form	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

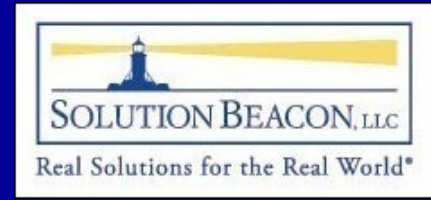
# Forms 6/Personalization – Condition Tab – Trigger Event



- ◆ Use generic trigger events available in most forms
- ◆ Use specific events unique to the form **\*Caution**
- ◆ Find events using Help → Diagnostics → Custom Code → Show Custom Events
- ◆ Trigger Events are not validated from the LOV

The screenshot shows the 'Condition' tab in the Oracle Forms Personalization interface. The 'Trigger Event' dropdown menu is highlighted with a red circle and contains the text 'WHEN-NEW-FORM-INSTANCE'. To the right of the dropdown is the text '(You can enter additional event names.)'. Below the dropdown are fields for 'Trigger Object' and 'Condition'. At the bottom, the 'Processing Mode' dropdown is set to 'Not in Enter-Query Mode'.

# Forms 6/Personalization – Condition Tab – Standard Trigger Events



## ◆ WHEN-NEW-FORM-INSTANCE

- Security rules
- Navigation rules
- Visual attributes

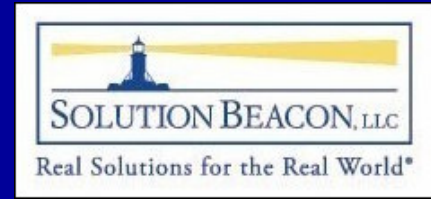
## ◆ WHEN-NEW-BLOCK-INSTANCE

- Same as WHEN-NEW-FORM-INSTANCE
- Message rules

## ◆ WHEN-NEW-RECORD-INSTANCE

- Default values

# Forms 6/Personalization – Condition Tab – Standard Trigger Events



## ◆ WHEN-NEW-ITEM-INSTANCE

- Message rules
- Default values dependent on entry of another item

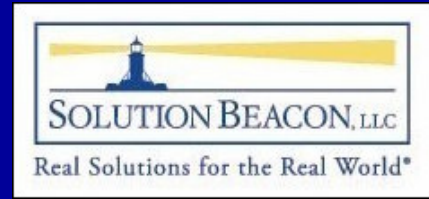
## ◆ WHEN-VALIDATE-RECORD

- Populate hidden fields
- Additional validations

## ◆ SPECIALn

- Populate tools menu (SPECIAL 1-15)
- Populate reports menu (SPECIAL 16-30)
- Populate actions menu (SPECIAL 31-45)

# Forms 6/Personalization – Condition Tab – Standard Trigger Events



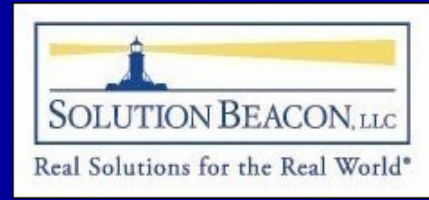
## ◆ MENU<sub>n</sub>

- Populate tools menu (MENU1-15) (CU1 patch)

## ◆ ZOOM– recommend using MENU<sub>n</sub> or SPECIAL<sub>n</sub>

## ◆ Key-Fn

# Forms 6/Personalization – Condition Tab – Trigger Object



- ◆ Required if LOV is available
- ◆ Requires Block Name
  - WHEN-NEW-BLOCK-INSTANCE
  - WHEN-NEW-RECORD-INSTANCE
  - WHEN-VALIDATE-RECORD
- ◆ Requires Block.field name
  - WHEN-NEW-ITEM-INSTANCE

Condition Actions

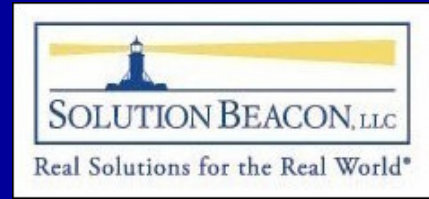
Trigger Event **WHEN NEW FORM INSTANCE** (You can enter additional event names.)

Trigger Object

Condition

Processing Mode **Not in Enter-Query Mode**

# Forms 6/Personalization – Condition Tab – Condition



- ◆ Optional SQL code fragment for additional validations
- ◆ Evaluates to True or False
- ◆ References bind variables (:block.field) or SPEL format \${ps.org\_id.value} for some variables such as profile options, global and local variables
- ◆ Example - Require bank account number if payment method is EFT

Condition Actions

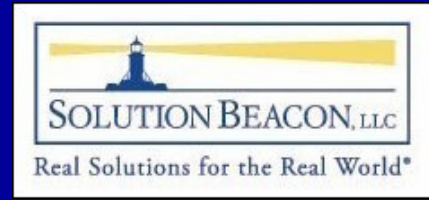
Trigger Event **WHEN\_VALIDATE\_RECORD** (You can enter additional event names.)

Trigger Object **INV\_SUM\_FOLDER**

Condition **:PAYMENT\_SCHEDULE.PAYMENT\_METHOD\_LOOKUP\_CODE = 'EFT' AND :PAYMENT\_SCHEDULE.BANK\_ACCOUNT\_NUM IS NULL**

Processing Mode **Not in Enter-Query Mode**

# Forms 6/Personalization – Condition Tab – Context

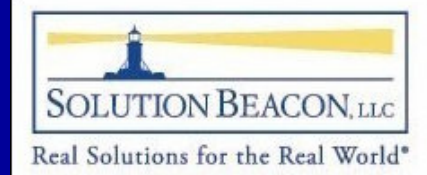


- ◆ Who does this rule apply to?
- ◆ Level at which rule will apply
  - Site
  - Responsibility
  - User – Use this for testing rules
  - Industry (For future use)

**Tip:** For initial development, set scope to your user id

– Context	
Level	Value
Industry	SBEHN
Site	
Responsibility	
User	

# Forms 6/Personalization – Property Actions



Form Personalizations (Suppliers)

Function Name:  Form Name:  Debug Mode:

Seq	Description	Level	Enabled
10	Supplier Rules	Form	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

Condition: **Actions**

Seq	Type	Description	Language	Enabled
	Property		All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Select By Text...

Object Type:

Target Object:

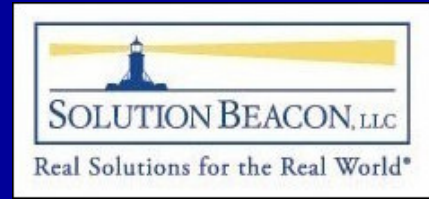
Property Name:

Value:

Get Value

Insert 'Get' Expression...    Insert Item Value...    Validate    Apply Now

# Forms 6/Personalization – Property Actions



## ◆ Sequence

- Rules will run in sequence
- Sequence number not unique

## ◆ Type

- Property
- Message
- Built-in
- Menu

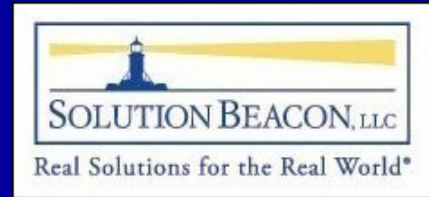
Seq	Type	Description	Language	Enabled
10	Property		All	<input checked="" type="checkbox"/>
	Message			<input type="checkbox"/>
	Builtin			<input type="checkbox"/>
	Menu			<input type="checkbox"/>

## ◆ Description

## ◆ Language – use to change prompts for a specific language

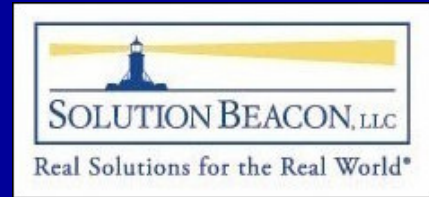
## ◆ Enabled – checked

# Forms 6/Personalization – Property Actions



- ◆ Changing Properties Allow Security and control down to the Item Level
- ◆ Typical Properties to alter (partial list)
  - CASE\_RESTRICTION
  - CONCEAL\_DATA – Displays asterisks in place of data
  - DISPLAYED
  - ENABLED
  - INSERT\_ALLOWED
  - UPDATE\_ALLOWED
  - REQUIRED
  - VALUE

# Forms 6/Personalization – Property Actions



## ◆ Choose Object Type

- Item , Window, Block, Tab Page,
- Parameter, Radio Button, View,
- :GLOBAL Variable, Canvas,
- LOV, Local Variable (CU1 patch)

\*\*\*These prompts will vary for each action type\*\*\*

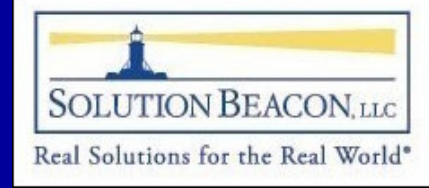
The screenshot shows the Oracle Forms Personalization interface. On the left is a table with columns: Seq, Type, Description, Language, and Enabled. The first row is highlighted with Seq=10, Type=Property, Description=Vendor Type Requir, Language=All, and Enabled checked. On the right is the configuration panel for the selected action. It includes a 'Select By Text...' button, a dropdown for 'Object Type' (set to 'Item'), a 'Target Object' field, a 'Property Name' field (set to 'PROMPT\_TEXT'), a 'Value' field, and a 'Get Value' button. A red circle highlights the configuration fields, and a red arrow points from the text box above to this circle.

Seq	Type	Description	Language	Enabled
10	Property	Vendor Type Requir	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Configuration fields:

- Select By Text...
- Object Type: **Item**
- Target Object: [ ]
- Property Name: **PROMPT\_TEXT**
- Value: [ ]
- Get Value

# Forms 6/Personalization – Property Actions



- ◆ Select by Text button - selects the target object by prompt name
- ◆ Optionally use LOV to choose by object name

The screenshot shows the Oracle Forms Personalization Actions window. The 'Actions' tab is active, displaying a table with columns: Seq, Type, Description, Language, and Enabled. The first row is highlighted with a blue selection bar.

Seq	Type	Description	Language	Enabled
10	Property	Vendor Type Requir	All	<input checked="" type="checkbox"/>

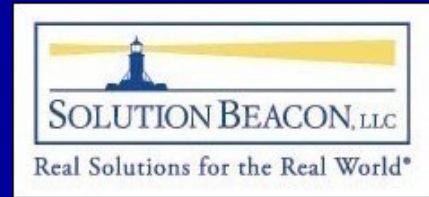
To the right of the table, the 'Object Type' is set to 'Item', 'Target Object' is empty, and 'Property Name' is 'PROMPT\_TEXT'. A button labeled 'Select By Text...' is circled in red.

The 'Select By Text' dialog box is open, showing a search field 'Find %' and a list of objects:

Text	Type	Object Name
Toggle Query Coordination (Supplier Sites)	CHECKBOX	CTRL_SITE_COORD
OK (Expired Values)	BUTTON	CTRL.ERROR_OK
Supplier Name (Find Suppliers)	TEXT ITEM	VNDR_QF.VENDOR_NAME
Supplier Number (Find Suppliers)	TEXT ITEM	VNDR_QF.VENDOR_NUMBER

Buttons for 'Find', 'OK', and 'Cancel' are at the bottom of the dialog.

# Forms 6/Personalization – Property Actions



- ◆ Property Name – Use the LOV to choose which property to personalize

The screenshot shows the Oracle Forms Personalization Properties dialog box. The main dialog has a table with the following data:

Seq	Type	Description	Language	Enabled
10	Property	Vendor Type Required	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

The 'Properties' dialog box is open, showing a list of properties:

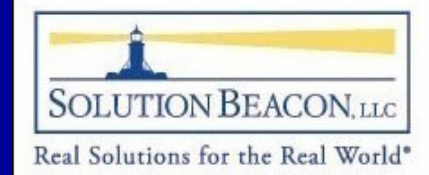
- QUERYABLE
- REQUIRED**
- REQUIRED (APPLICATIONS COVER)
- REQUIRED (ITEM-INSTANCE)

The main dialog also shows the following fields:

- Object Type: Item
- Target Object: VNDR.VENDOR\_TYPE\_DISP\_MIR
- Property Name: PROMPT\_TEXT
- Value: (empty)

Buttons: Select By Text..., Get Value, Validate, Apply Now, Find, OK, Cancel.

# Forms 6/Personalization – Property Actions



- ◆ Use Get Value button to get the current value if needed
- ◆ Change the value if desired

Condition Actions

Seq	Type	Description	Language	Enabled
10	Property	Vendor Type Required	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Select By Text...

Object Type: **Item**

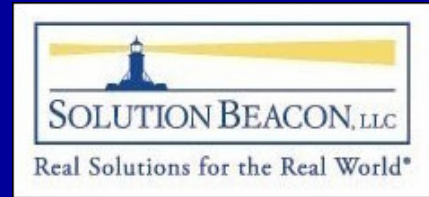
Target Object: **VNDR.VENDOR\_TYPE\_DISP\_MIR**

Property Name: **REQUIRED**

Value: **FALSE**

**Get Value**

# Forms 6/Personalization – Property Actions Example



Force Upper Case for the Vendor Name

- ◆ Type = Property
- ◆ Object Type = Item
- ◆ Target Object = VNDR.VENDOR\_NAME\_MIR
- ◆ Property Name = CASE\_RESTRICTION
- ◆ Value = UPPERCASE

Seq	Type	Description	Language	Enabled
10	Property	Vendor Name Upper	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Select By Text...

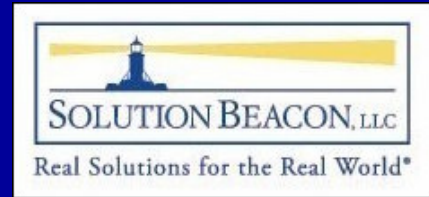
Object Type: **Item**

Target Object: **VNDR.VENDOR\_NAME\_MIR**

Property Name: **CASE\_RESTRICTION**

Value: **UPPERCASE**

# Forms 6/Personalization – Property Actions Example



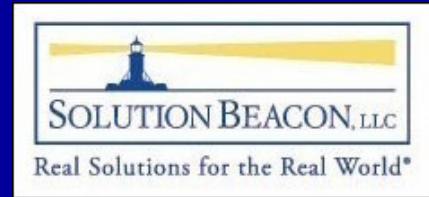
Prevent Insert in the Bank Accounts Tab

- ◆ Type = Property
- ◆ Object Type = Block
- ◆ Target Object = VNDR\_USES
- ◆ Property Name = INSERT\_ALLOWED
- ◆ Value = False

A screenshot of a configuration form for a property action. The form has a light yellow background and contains the following fields:

- A button labeled "Select By Text..."
- A dropdown menu for "Object Type" with "Block" selected.
- A text input field for "Target Object" containing "VNDR\_USES".
- A text input field for "Property Name" containing "INSERT\_ALLOWED".
- A dropdown menu for "Value" with "False" selected.
- A button labeled "Get Value" at the bottom.

# Forms 6 / Personalization – Variables



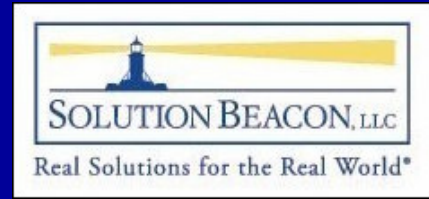
## ◆ Global Variables

- Used to pass values between forms
- Max length is 255 bytes
- Prepend the name of the variable with XX

## ◆ Local variables

- Used when you need to refer to a variable multiple times
- Specific to local form
- Max length is 4000 bytes
- Prepend the name of the variable with XX

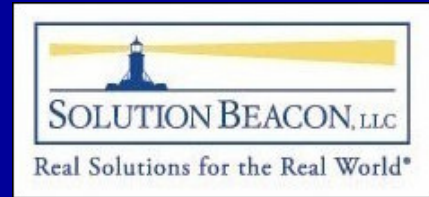
# Forms 6/Personalization – Property Actions Example



Set a global variable to the value of the email address in FND\_USERS and display this value in a message

- ◆ Type = Property
- ◆ Object Type = :GLOBAL Variable
- ◆ Target Object = XX\_USER\_EMAIL
- ◆ Property Name = VALUE
- ◆ Value = =SELECT  
Nvl(Email\_Address,'NO\_EMAIL')  
FROM fnd\_user  
WHERE user\_id = fnd\_global.user\_id

# Forms 6/Personalization – Strings



## ◆ Start with =

- String evaluated at run time
- Can use bind variables, operators, etc
- Can use server side functions without out variables
- Prior to CU1 patch, SQL statements starting with =Select require "A" alias (=Select meaning A from fnd\_lookups where...\_

## ◆ Does not start with =

- String is taken as a literal exactly as you type it

# Forms 6/Personalization – Property Actions Example



## GLOBAL Variable

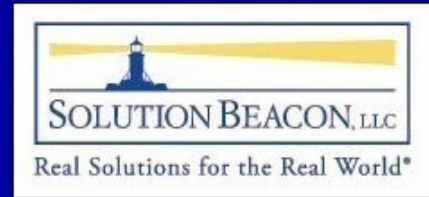
The screenshot shows the 'Actions' tab in the Oracle Forms Personalization window. A table lists the configuration for a global variable:

Seq	Type	Description	Language	Enabled
10	Property	Global variable	All	<input checked="" type="checkbox"/>

Below the table, a 'Global Variable' dropdown is set to 'XX\_USER\_EMAIL'. The 'VALUE' field contains the SQL query: `=SELECT Nvl(Email_Address,'NO_EMAIL') FROM fnd_user WHERE user_id = fnd_global.` The 'Validate' button at the bottom right is circled in red.

◆ Use the Validate button to validate your string

# Forms 6/Personalization – Messages



## ◆ Message Type Fields

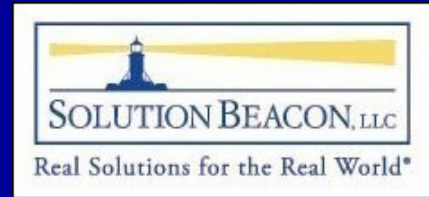
### ● Message Type

- ◆ Show – Informational Message
- ◆ Hint – Appear on status bar
- ◆ Error – Requires user response – raises `form_trigger_failure`
- ◆ Debug – Only displays if debug mode is set to Show Debug Messages
- ◆ Warn – Informational message with caution symbol – raises `form_trigger_failure`

### ● Message Text

## ◆ Do not use messages for WHEN-NEW-FORM events

# Forms 6/Personalization – Message Example



- ◆ Message to display global variable to show email address when form opens

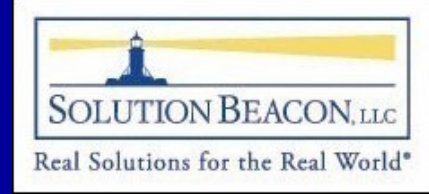
Condition    Actions

Seq	Type	Description	Language	Enabled
10	Property	Global variable	All	<input checked="" type="checkbox"/>
15	Message	Show email	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Message Type: Show

Message Text: `::global.xx_user_email`

# Forms 6/Personalization – More Message Examples



## ◆ Prevent entry of invoice for yourself

The screenshot shows the Oracle Forms personalization editor for a function named "Prevent entry of invoice related to user id". The "Condition" tab is active, showing a table with one row:

Seq	Type	Description	Language	Enabled
10	Property		All	<input checked="" type="checkbox"/>

An "Editor" dialog box is open, showing the following SQL query:

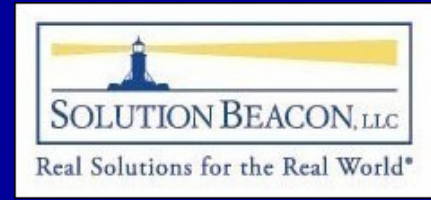
```
vendor_id NOT IN  
(SELECT vendor_id  
FROM po_vendors pv,  
fnd_user fusr  
WHERE fusr.user_id = fnd_profile.value('USER_ID')  
AND fusr.employee_id = pv.employee_id)
```

The "Value" field in the editor is populated with the same SQL query. The "Insert 'Get' Expression..." button at the bottom left is circled in red. A red arrow points from this button to the SQL query in the editor.

## ◆ Note format to retrieve profile value

## ◆ Use *Insert 'Get' Expression* button for SPEL format used in conditions

# Forms 6/Personalization – Menu Example



Create a menu entry to submit report

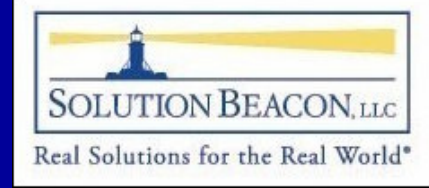
- ◆ Type = Menu (Prior to CU1 patch, Type = Special)
- ◆ Menu Entry = MENU1 – MENU15 or SPECIAL1-45
- ◆ Menu Label = Supplier Payment History
- ◆ Icon = null
- ◆ Enabled in Blocks = VNDR, SITE

Seq	Type	Description	Language	Enabled
10	Menu	Payment History	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Menu Entry	<input type="text" value="MENU1: Supplier Payment History"/>
Menu Label	<input type="text" value="Supplier Payment History"/>
	<input type="checkbox"/> Render line before menu
Icon Name	<input type="text"/>
Enabled in Block(s)	<input type="text" value="VNDR , SITE"/>
	<input type="button" value="Add Block..."/>

# Forms 6/Personalization – Menu Example



Create a menu entry to submit report

◆ Use Add Block Button to choose blocks

The screenshot shows the Oracle Forms personalization interface. The 'Actions' tab is active, displaying a table of menu entries:

Seq	Type	Description	Language	Enabled
10	Property	Global variable	All	<input checked="" type="checkbox"/>
15	Message	Show email	All	<input checked="" type="checkbox"/>
20	Menu		All	<input checked="" type="checkbox"/>

The 'Menu' entry (Seq 20) is selected. To its right, the configuration fields are:

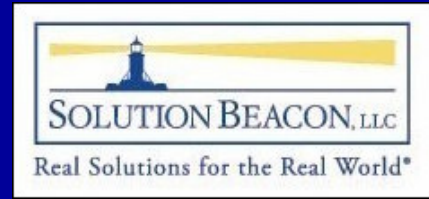
- Menu Entry: MENU1
- Menu Label: Supplier Payment History
- Render line before menu
- Icon Name: (empty)
- in Block(s): (empty)
- Add Block...** (circled in red)

A 'Blocks' dialog box is open, showing a search field with 'Find %' and a list of block names:

- Block Name
- VNDR\_QF
- VNDR
- VNDR\_USES
- SITE

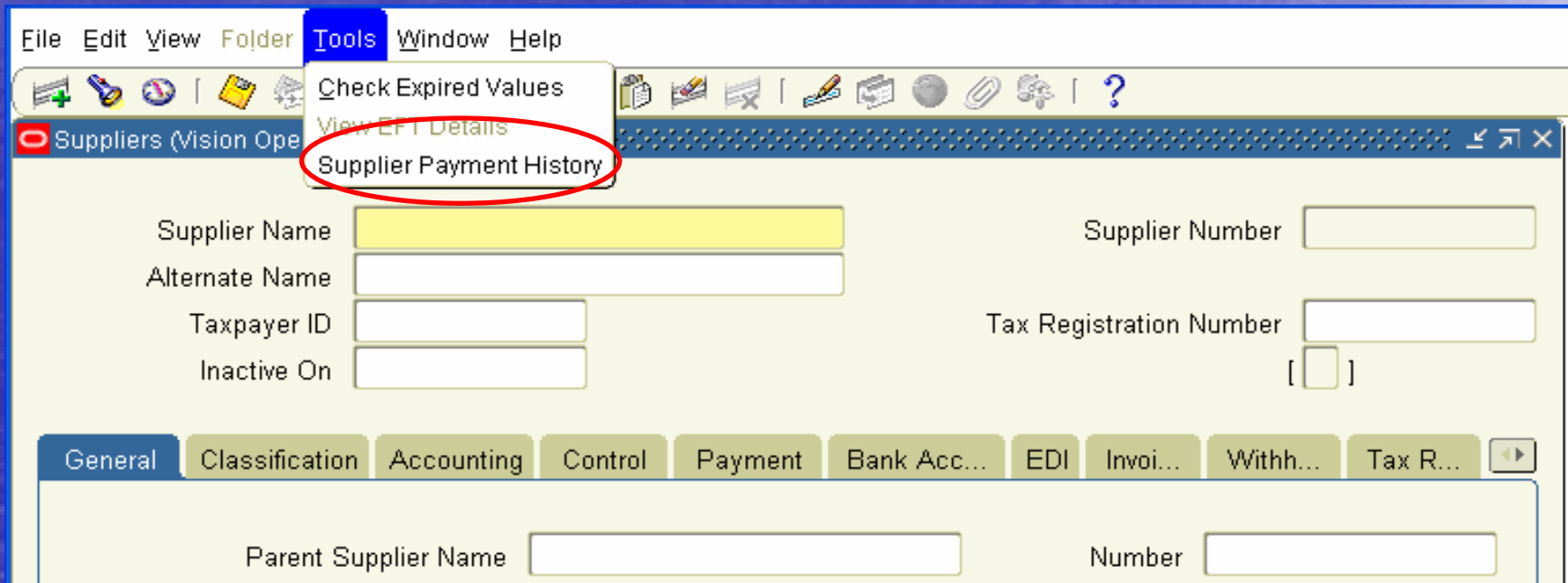
Buttons at the bottom of the dialog include 'Find', 'OK', and 'Cancel'. At the bottom of the main form, there are 'Validate' and 'Apply Now' buttons.

# Forms 6/Personalization – Menu Example

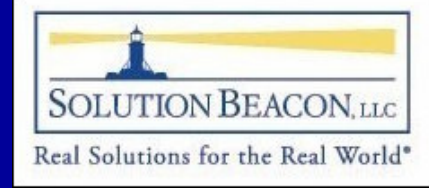


Create a menu entry to submit report

**Note** – this action only displays the menu entry - functionality behind the menu entry is the next step



# Forms 6/Personalization – Built-in Example



Activate the menu entry to execute the concurrent request  
*Supplier Payment History*

◆ Trigger Event = MENU1

Form Personalizations (Suppliers)

Function Name: APXVDMVD    Form Name: APXVDMVD    Debug Mode: Off

Seq	Description	Level	Enabled
20	Property changes	Form	<input checked="" type="checkbox"/>
30	Show error message	Form	<input type="checkbox"/>
40	Menu entries	Form	<input checked="" type="checkbox"/>
50	Built in	Function	<input checked="" type="checkbox"/>

Condition    Actions

Trigger Event: MENU1 (You can enter additional event names.)

Trigger Object:

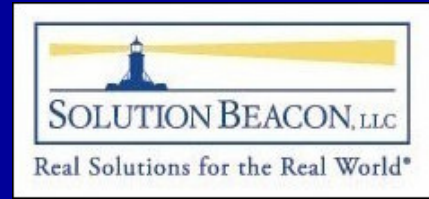
Condition:

Processing Mode: Not in Enter-Query Mode

Context

Level	Value
User	SBEHN

# Forms 6/Personalization – Built-in Example



Activate the menu entry to run Supplier Payment History Report

- ◆ Type = Builtin
- ◆ Builtin Type = Launch SRS Form (CU1 patch)
- ◆ Program Name = Supplier Payment History

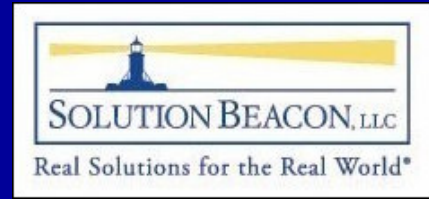
Seq	Type	Description	Language	Enabled
10	Builtin	Menu1	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Builtin Type:

Program Name:

**Hint:** Use global variables to pass parameters

# Forms 6/Personalization – Built-in Example



Open a url

- ◆ Trigger Event = WHEN-NEW-FORM-INSTANCE
- ◆ Establish menu entry

Seq	Type	Description	Language	Enabled
10	Menu	Open a url	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Menu Entry: MENU2

Menu Label: Google

Render line before menu

Icon Name:

Enabled in Block(s):

- ◆ Trigger Event = MENU2

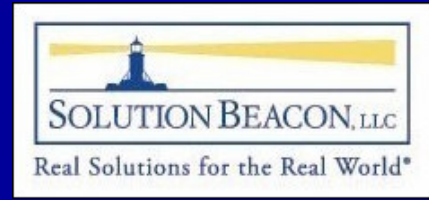
Seq	Type	Description	Language	Enabled
10	Builtin	open google	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Builtin Type: Launch a URL

Argument: www.google.com

Target: \_BLANK

# Forms 6/Personalization – Built-in Example



Launch a function (CU1 patch) to view payment history form

## ◆ Establish the Menu entry

- Trigger Event = WHEN-NEW-FORM-INSTANCE
- Action Type = Menu
- MENU3 = Payment History

Seq	Type	Description	Language	Enabled
10	Menu	Payment History	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Menu Entry:

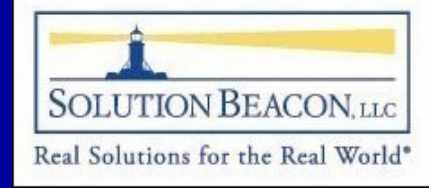
Menu Label:

Render line before menu

Icon Name:

Enabled in Block(s):

# Forms 6/Personalization – Built-in Example



Launch a function to view payment history form

- ◆ Trigger Event = MENU3
- ◆ Set the :GLOBAL Variable

Condition Actions

Seq	Type	Description	Language	Enabled
10	Property	Global - vendor id	All	<input checked="" type="checkbox"/>
20	Builtin	Payment inquiry	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Select By Text...

Object Type: **:GLOBAL Variable**

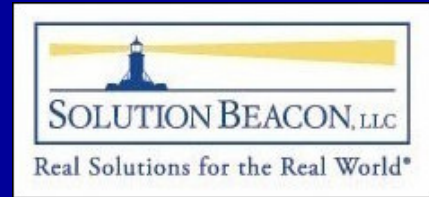
Target Object: **XX\_VENDOR\_NAME**

Property Name: **VALUE**

Value: **=:VNDR.VENDOR\_NAME\_MIR**



# Forms 6/Personalization – Built-in Example



Launch a function to view payment history form

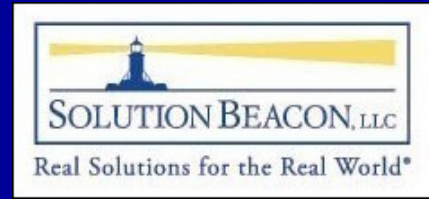
- ◆ Trigger Event = MENU3
- ◆ Launch a Function
  - Function Code = Name of form function
  - Function Name = Populates automatically

Seq	Type	Description	Language	Enabled
10	Property	Global - vendor id	All	<input checked="" type="checkbox"/>
20	Builtin	Payment inquiry	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Builtin Type	Launch a Function
Function Code	AP_AXPWALL_VIEW
Function Name	View Payment Overview
Parameters	

# Forms 6/Personalization – Built-in Example



Launch a function – target function rules

- ◆ Populate query find variable if the global variable is not null
  - Trigger Event = WHEN-NEW-ITEM-INSTANCE
  - Trigger Object = use the first item on the form

Form Personalizations (View Payment Overview)

Function Name: **AP\_APXPWALL\_VIEW**    Form Name: **APXPWALL**    Debug Mode: **Off**

Seq	Description	Level	Enabled
10	Execute query if vendor id is populated	Form	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

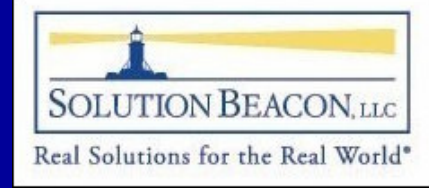
Condition    Actions

Trigger Event: **WHEN-NEW-ITEM-INSTANCE** (You can enter additional event names.)

Trigger Object: **PAYMENT\_QF.START\_CHECK\_NUMBER**

Condition: **:global.XX\_VENDOR\_NAME IS NOT NULL**

# Forms 6/Personalization – Built-in Example



Launch a function – target function rules

- ◆ Populate query find variable Trigger Event = WHEN-NEW-BLOCK-INSTANCE
  - Action Type = Property

Seq	Type	Description	Language	Enabled
10	Property		All	<input checked="" type="checkbox"/>
20	Builtin		All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Select By Text...

Object Type: **Item**

Target Object: **PAYMENT\_QF.DISPLAYED\_VENDOR\_NAME**

Property Name: **VALUE**

Value: **=\${global.xx\_vendor\_name.value}**

Get Value

Insert 'Get' Expression...    Insert Item Value...    Validate    Apply Now

CU1 Patch



# Forms 6/Personalization – Built-in Example



Launch a function – target function rules

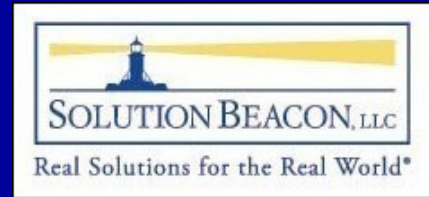
- ◆ Execute the DO\_KEY('NEXT\_BLOCK') built in to force query execution
  - Trigger Event = WHEN-NEW-BLOCK-INSTANCE
  - Action Type = Builtin

Condition Actions

Seq	Type	Description	Language	Enabled
10	Property	populate vendor id	All	<input checked="" type="checkbox"/>
11	Builtin	force query exec	All	<input checked="" type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

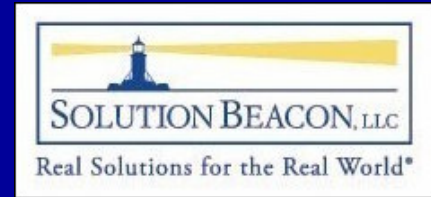
Builtin Type: DO\_KEY  
Argument: NEXT\_BLOCK

# Forms 6/Personalization – Other Built-ins



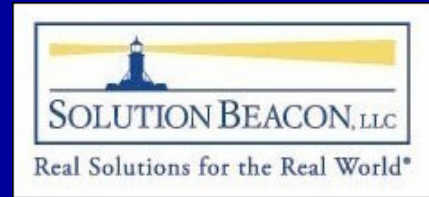
- ◆ GO\_BLOCK
- ◆ GO\_ITEM
- ◆ RAISE\_FORM\_TRIGGER\_FAILURE
- ◆ FORMS\_DDL
- ◆ EXECUTE\_TRIGGER (CU1 patch)
- ◆ SYNCHRONIZE (CU1 patch)

## Forms 6/Personalization – Tips



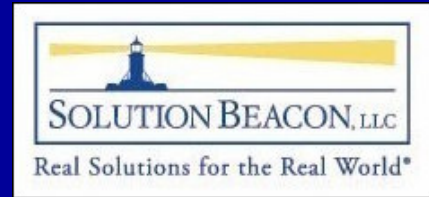
- ◆ If you disable a tab page, you may need to disable items on the tab page
- ◆ Exit and re-open the form to see personalization changes
- ◆ Help → Diagnostics → Custom → Show Custom Events - shows what events are firing
- ◆ After upgrades, go to the personalization for each form and choose Tools → Validate All
- ◆ Use debug messages before and after events
- ◆ Initialize global variables to null in the navigator form using the WHEN-FORM-NAVIGATE trigger event

## Forms 6/Personalization – Tips



- ◆ Use the Validate button to validate strings
  - Conditions will return true, false or error
  - Values will return the resulting string or an error
- ◆ Apply Now button - see the results (does not always work if dependant on the results of another action)
- ◆ Insert 'Get' Expression button - get any property of an item (CU1 patch)
- ◆ Turn custom code off - Help → Diagnostics → Custom Code → Off

# Customizations / Personalizations



## WARNING

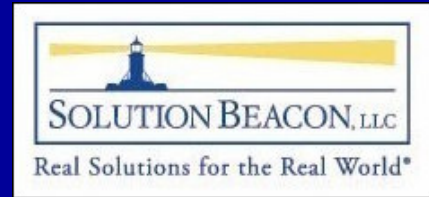
Customizations or Personalizations, whether they are protected or non protected, allow you to fundamentally change the behavior of the application.

This could interfere with intended functionality.

**Use with caution!**

**TEST! TEST! TEST! TEST! TEST!**

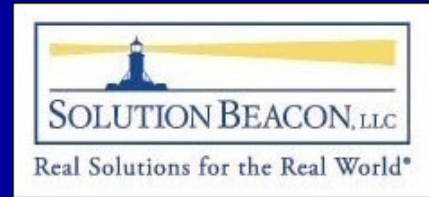
# Customizations / Personalizations



**...THEN TEST IT AGAIN!**

**\*\*\*BUT NOT IN PRODUCTION\*\*\***

# Forms 6/Personalization – Moving to Another Instance



## ◆ Download for a specific form:

```
FNDLOAD <userid>/<password> 0 Y DOWNLOAD  
$FND_TOP/patch/115/import/affrmcus.lct <filename.lct>  
FND_FORM_CUSTOM_RULES form_name=<form name>
```

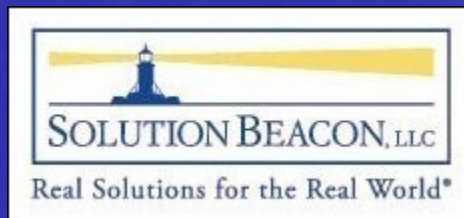
## ◆ Download all personalizations

```
FNDLOAD <userid>/<password> 0 Y DOWNLOAD  
$FND_TOP/patch/115/import/affrmcus.lct <filename.lct>  
FND_FORM_CUSTOM_RULES
```

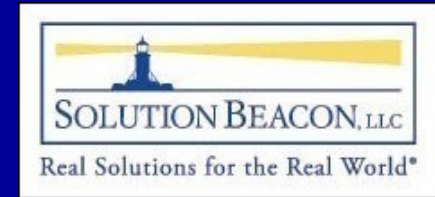
## ◆ Upload

```
FNDLOAD <userid>/<password> 0 Y UPLOAD  
$FND_TOP/patch/115/import/affrmcus.lct <filename.lct>
```

# OA Framework Personalizations



# Profile Options – OA Framework Personalizations



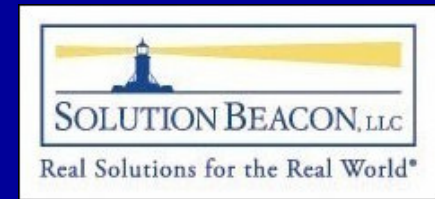
## ◆ Personalize Self-Service Defn

- Yes to allow personalizations

## ◆ FND: Personalization Region Link Enabled

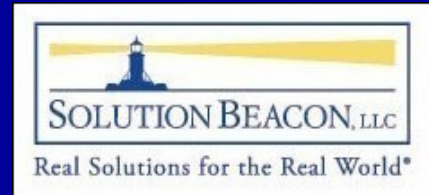
- Yes to display the regional links to the personalization pages in the Self-Service applications

# How Can I Use OAF Personalizations?



- ◆ Remove Buttons and Change Button Names
- ◆ Change Page and Section Headers
- ◆ Hide Columns
- ◆ Change Field and Column Names
- ◆ Set Initial Values
- ◆ Hide a Train Link
- ◆ Change Field Attributes
- ◆ Reorder Columns
- ◆ Add Items such as Buttons, Fields and Messages

# Prevent user from changing Reimbursement Currency



◆ Click the Personalize Page button

**ORACLE** Expense Reports [Home](#) [Logout](#) [Preferences](#) [Contact Us](#) [Global Policy](#) [Personalize Page](#)

**Expenses**

Expenses Home | **Expense Reports** | Credit Card Transactions | Expenses Preferences | Projects and Tasks

● — ○ — ○  
General Information   Cash and Other Expenses   Review

---

### Create Expense Report: General Information

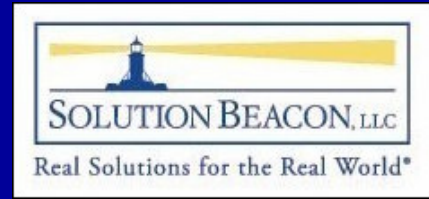
\* Indicates required field

Name <b>Behn, Susan (1290)</b>	<input type="button" value="Save"/> <input type="button" value="Cancel"/> Step 1 of 3 <input type="button" value="Next"/>
* Expense Cost Center <input type="text"/>	Purpose <input type="text"/>
Reimbursement Currency <b>USD - US dollar</b> ▼	* Approver <b>Brownfield, Ms. Karen</b>
Expense Template <b>Travel</b>	<input type="checkbox"/> Includes Foreign Currency Receipts

Step 1 of 3

[Expenses](#) | [Home](#) | [Logout](#) | [Preferences](#) | [Contact Us](#) | [Global Policy](#) | [Personalize Page](#)

# Prevent user from changing Reimbursement Currency



- ◆ Find the item for the item you want to change and click the pencil to edit
- ◆ Change the Read Only property to true

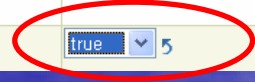


Message Choice: Reimbursement Currency	Yes							
--	-----	--	--	--	--	--	--	--

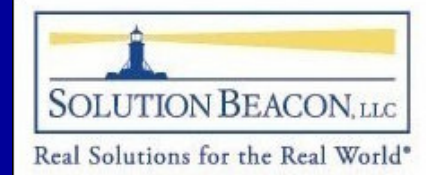
**Personalization Properties**

Clear Personalization

	Original Definition	Function: OIE Main Page	Site	Organization: Vision Services	Responsibility: iExpenses, Vision Services (USA)	Result / Source
Access Key	Default	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Default / Original Definition
Add Blank Value	true	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	true / Original Definition
Additional Text	Reimbursement currency	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Reimbursement currency / Original Definition
Admin Personalization	true	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	true / Original Definition
CSS Class	OraFieldText	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	OraFieldText / Original Definition
Destination Function	Default	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Default / Original Definition
Export View Attribute	Default	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Default / Original Definition
Initial Value	Default	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Default / Original Definition
Long Tip Region	Default	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Default / Original Definition
Prompt	Reimbursement Currency	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Reimbursement Currency / Original Definition
Read Only	false	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	Inherit <input type="text"/> 5	<b>true <input type="text"/> 5</b>	true / Responsibility



# Prevent user from changing Reimbursement Currency



## ◆ Reimbursement Currency is now read only

**ORACLE** Expense Reports [Home](#) [Logout](#) [Preferences](#) [Contact Us](#) [Global Policy](#) [Personalize Page](#)

**Expenses**

Expenses Home | **Expense Reports** | Credit Card Transactions | Expenses Preferences | Projects and Tasks

● — ○ — ○  
General Information    Cash and Other Expenses    Review

---

### Create Expense Report: General Information

\* Indicates required field

Name <b>Behn, Susan (1290)</b>	Purpose <input type="text"/>
* Expense Cost Center <input type="text"/>	* Approver <input type="text" value="Brownfield, Ms. Karen"/>
Reimbursement Currency <b>USD - US dollar</b>	<input type="checkbox"/> Includes Foreign Currency Receipts
Expense Template <b>Travel</b>	

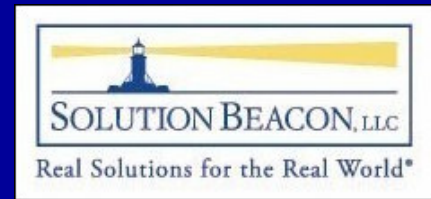
Step 1 of 3

Step 1 of 3

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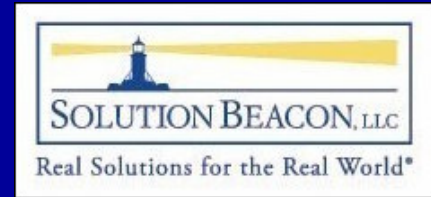


## Other Sources of Information



- ◆ Oracle Applications User Interface Standards for Forms-Based Products
- ◆ Oracle Applications Developer's Guide
- ◆ Oracle Applications System Administrator's Guide
- ◆ Oracle Applications User Guide
- ◆ MetaLink note 279034.1 – Forms 6/Personalization
- ◆ [www.solutionbeacon.com](http://www.solutionbeacon.com) – newsletters, free tools, white papers and presentations, Vision access

# Questions and Answers



Thank you!

Susan Behn

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[www.solutionbeacon.com](http://www.solutionbeacon.com)

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BY BARBARA MATTHEWS, JOHN STOFFER,  
RANDY GIEFER AND BRUNO COON