

How to Make a Variable Even More Flexible in BW-BPS 3.5

Applies to:

BW-BPS 3.5 using the BSP technology for data input (web interface builder).

Summary

With the conception of BW-BPS, we can use variables to offer some flexibility to the end users. Help to a dropdown box, they can swap from a value to another value (from a customer account to another customer account).

It can happen that the company using BPS has two web interfaces that are technically identical but used for different purposes. One is used for the data input where the end users should access only to their own customers. The other is used for displaying the forecast of all the customers. No modification is allowed at all on the second interface. This means that the content of the dropdown box is different depending on which web interface is used.

By default any BPS consultant would create two variables. The first would filter the customers that the users can use for the planning. The second would offer all the customers.

In the BPS customizing, we can use only one variable per planning level. This means that we would need to double all the levels as we have two variables.

This document shows how to avoid plenty of double efforts:

- no more need to double the customizing: a single variable can support more than one behavior
- less effort in designing and maintaining the web interfaces as both would point on the same single BPS customizing (just the settings of the layouts would vary from True to False for the input)

Author(s): Laurent THIBERT

Company: SAP Switzerland

Created on: 13 July 2007

Author Bio



Laurent Thibert is a Senior Business Intelligence Consultant at SAP Switzerland. He has been involved in different BI-SEM projects.

Table of Contents

BPS Customizing	3
The Web Interfaces design	4
Enhancement of the Web Interfaces	6
Modification of the Web Interfaces settings.....	7
The User Exit for the variable	8
The result	9
Related Content.....	10
Copyright.....	11

BPS Customizing

In this demonstration, we need only a planning area with a single variable called **DEMOVAR** and based on the characteristic **0CUSTOMER**. That characteristic uses obligatory a replacement type **User Exit**.

The screenshot displays the SAP BPS Customizing interface for a Planning Area - Basis. The left pane shows a list of planning areas, with 'Planning area for demo about variables' (DEMOVAR) selected. The right pane shows the configuration for this variable, including a table of variables and a list of characteristics.

Planning areas	Technical n...
Planning area for demo about variables	DEMOVAR
Test for BPS	ZTEST2
CPCM: Market&Consumer - Current Data	CPCMP010
PREPARE DEMO IP	USFSPTIP
US Level 1 Sales Forecasting	ULVLSALE
Cost Driver Planning BI IP	UDRIVER1
Multiaera for US Pricing Managemnt - TBI	UPRCMGRM
Cost Driver Planning	UDRIVER
US Pricing Manager IP - TBD	UPRCMGR2
ABC: Activity Based Costing with BW-BPS	ZABC
US Level 1 OPEX	ULVLOPEX

Type	Description of Variable	Variable
Variable	Variable for customer	CUSTOMER

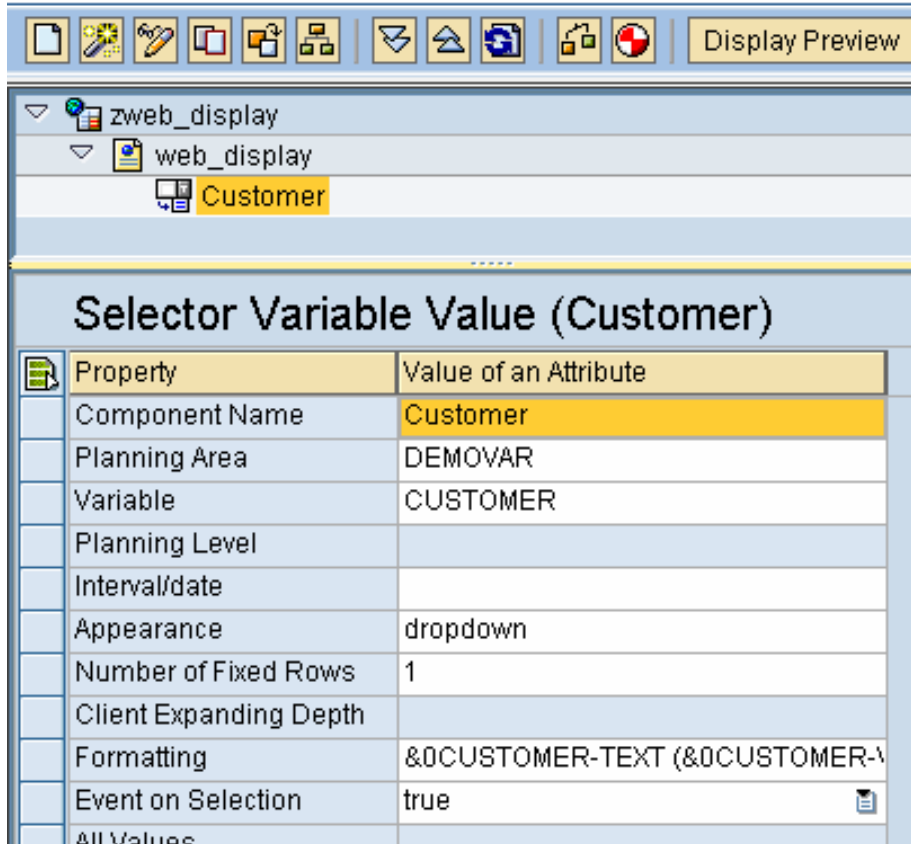
Characteristics	Customer
Text Replacement	Medium txt
Replacement Type	User Exit
Function Module Name	Z_VAR_DEMO_CUSTOMER

The Web Interfaces design

Two interfaces need to be created. The demonstration will cover only the various displaying of the dropdown box content. Only such object will be inserted to the web interfaces.

The first interface is called **ZWEB_DISPLAY**. It contains a web page called **WEB_DISPLAY** and a single component which is the variable.

Web Interface Builder - Edit Web Interfaces



The screenshot shows the Web Interface Builder interface. The tree view on the left shows the following structure:

- zweb_display
 - web_display
 - Customer

The main area displays the 'Selector Variable Value (Customer)' table with the following properties:

Property	Value of an Attribute
Component Name	Customer
Planning Area	DEMOVAR
Variable	CUSTOMER
Planning Level	
Interval/date	
Appearance	dropdown
Number of Fixed Rows	1
Client Expanding Depth	
Formatting	&0CUSTOMER-TEXT (&0CUSTOMER-^
Event on Selection	true
All Values	

The second interface is a true copy of the first one. Only their names are different as the application is now called **ZWEB_CHANGE** and its page is called **WEB_CHANGE**.

Web Interface Builder - Edit Web Interfaces

Property	Value of an Attribute
Component Name	Customer
Planning Area	DEMOVAR
Variable	CUSTOMER
Planning Level	
Interval/date	
Appearance	dropdown
Number of Fixed Rows	1
Client Expanding Depth	
Formatting	&0CUSTOMER-TEXT (&0CUSTOMER-^
Event on Selection	true
All Values	

Enhancement of the Web Interfaces

We need to capture the name of the web interfaces as soon as it is executed so that the variable can contain different entries. It is possible to enhance these interfaces by using a copy of the object class **CL_UPWB_BSP_APPL**. This exit is provided by SAP in order to check the user's input when using the planning in the web (references at the end of this document).

Here the copy is called **Z_WEB_DEMO**. Instead of using its methods to check the user's entries, we can use another method to export the name of the web page so the variable can catch it when it is applied.

The method **LOAD** is called only once when the web interface is loaded. We can use it to insert the following ABAP statements which will export the name of the page (or the name of the application if needed) to the SAP memory.

Class Builder: Change Class Z_WEB_DEMO

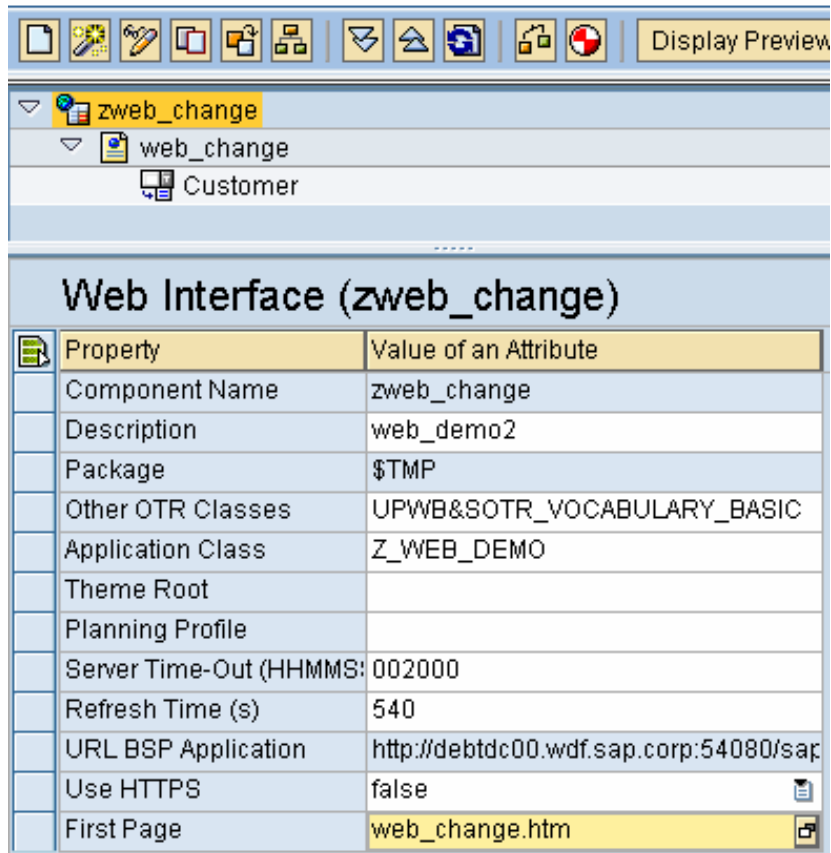
Method	Level	Visibility	Meth...	Description
DISPATCH	Instance Method	Protected		Dispatch single event to component
INITIALIZATION	Instance Method	Public		Is Called Up During Event of Same Name of BSP Page
REGISTER_HANDLER	Instance Method	Public		Registers Event Handler on BSP page (See Constants)
INPUTPROCESSING	Instance Method	Public		Is Called Up During Event PAI of BSP Page
CONSTRUCTOR	Instance Method	Public	☒	Constructor
LOAD	Instance Method	Protected		Loads the Application
FILTER_MESSAGES	Instance Method	Public		Standard Filter

```
*****
* Some data to store and export the right data
  DATA: wa_handler TYPE upwb_ys_handler,
         zweb_page  TYPE memory_id VALUE 'ZWEB_PAGE'.
*****
* Export of the page name
  READ TABLE mt_handler INTO wa_handler INDEX 1.
  EXPORT bsp_page = wa_handler-page_name TO MEMORY ID zweb_page.
*****
```

Modification of the Web Interfaces settings

We need to change one setting in both interfaces. The property of the **Application Class** must be set to **Z_WEB_DEMO**.

Web Interface Builder - Edit Web Interfaces



The screenshot shows the 'Web Interface Builder - Edit Web Interfaces' tool. The tree view on the left shows the following structure:

- zweb_change
 - web_change
 - Customer

The main area displays the 'Web Interface (zweb_change)' properties table:

Property	Value of an Attribute
Component Name	zweb_change
Description	web_demo2
Package	\$TMP
Other OTR Classes	UPWB&SOTR_VOCABULARY_BASIC
Application Class	Z_WEB_DEMO
Theme Root	
Planning Profile	
Server Time-Out (HHMMSS)	002000
Refresh Time (s)	540
URL BSP Application	http://debtcd00.wdf.sap.corp:54080/sap
Use HTTPS	false
First Page	web_change.htm

The User Exit for the variable

The following ABAP statements are needed to read the page name that are exported to the SAP memory:

```
DATA : l_eto_charsel_wa TYPE upc_ys_charsel,
      zweb_page        TYPE memory_id VALUE 'ZWEB_PAGE',
      page_name        TYPE string.
* Get the name of the page
IMPORT bsp_page = page_name FROM MEMORY ID zweb_page.
```

The next statements help determining the behavior of the variable depending on the page name. Here we want to authorize the access to customers 1000, 1001, 1009 and 1010 when displaying the forecasts. However we authorize only the access to the customers 1009 and 1010 when using the input interface.

```
* clear export table
CLEAR eto_charsel.

* Some common values
l_eto_charsel_wa-chanm = i_chanm.
l_eto_charsel_wa-sign  = 'I'.
l_eto_charsel_wa-opt   = 'EQ'.

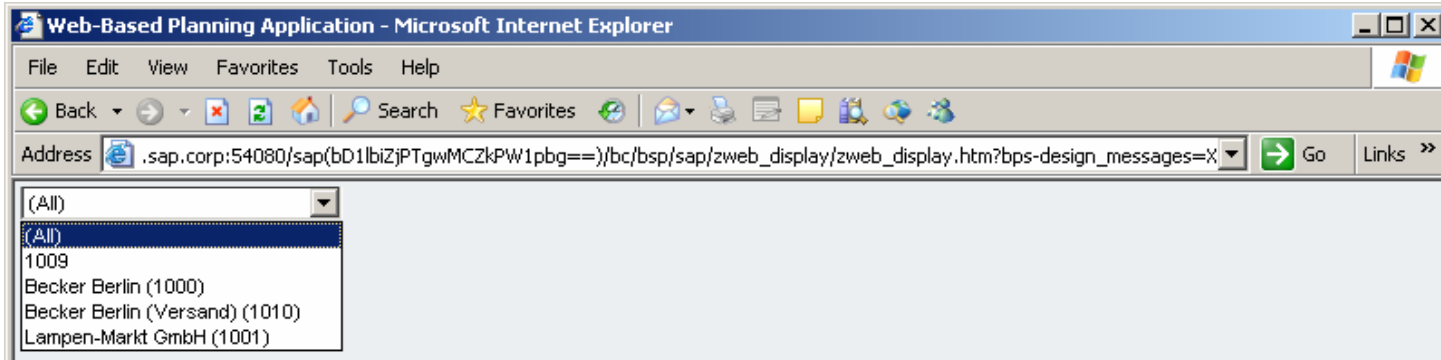
* Different customers accounts depending on the name of the page
case page_name.

* We can display customers 1000, 1001, 1009 and 1010
when 'web_display.htm'.
  add 1 to l_eto_charsel_wa-seqno.
  l_eto_charsel_wa-low  = '0000001000'.
  INSERT l_eto_charsel_wa INTO TABLE eto_charsel.
  add 1 to l_eto_charsel_wa-seqno.
  l_eto_charsel_wa-low  = '0000001001'.
  INSERT l_eto_charsel_wa INTO TABLE eto_charsel.
  add 1 to l_eto_charsel_wa-seqno.
  l_eto_charsel_wa-low  = '0000001009'.
  INSERT l_eto_charsel_wa INTO TABLE eto_charsel.
  add 1 to l_eto_charsel_wa-seqno.
  l_eto_charsel_wa-low  = '0000001010'.
  INSERT l_eto_charsel_wa INTO TABLE eto_charsel.

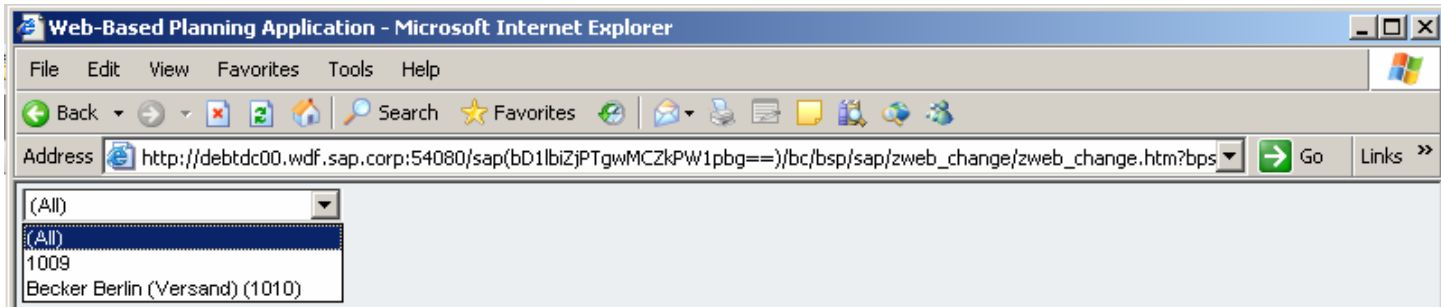
* We can input data only for customers 1009 and 1010
when 'web_change.htm'.
  add 1 to l_eto_charsel_wa-seqno.
  l_eto_charsel_wa-low  = '0000001009'.
  INSERT l_eto_charsel_wa INTO TABLE eto_charsel.
  add 1 to l_eto_charsel_wa-seqno.
  l_eto_charsel_wa-low  = '0000001010'.
  INSERT l_eto_charsel_wa INTO TABLE eto_charsel.
endcase.
```


The result

When we use the WEB_DISPLAY interface we have the choice between the four concerned customers.



When we use the WEB_CHANGE interface we have the choice between only the two concerned customers.



Related Content

The [How to Validate Key Figure Values in Manual Planning](#) paper explains clearly the functionalities for enhancing the web interfaces.

Copyright

© Copyright 2007 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

Microsoft, Windows, Outlook, and PowerPoint are registered trademarks of Microsoft Corporation.

IBM, DB2, DB2 Universal Database, OS/2, Parallel Sysplex, MVS/ESA, AIX, S/390, AS/400, OS/390, OS/400, iSeries, pSeries, xSeries, zSeries, z/OS, AFP, Intelligent Miner, WebSphere, Netfinity, Tivoli, Informix, i5/OS, POWER, POWER5, OpenPower and PowerPC are trademarks or registered trademarks of IBM Corporation.

Adobe, the Adobe logo, Acrobat, PostScript, and Reader are either trademarks or registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Oracle is a registered trademark of Oracle Corporation.

UNIX, X/Open, OSF/1, and Motif are registered trademarks of the Open Group.

Citrix, ICA, Program Neighborhood, MetaFrame, WinFrame, VideoFrame, and MultiWin are trademarks or registered trademarks of Citrix Systems, Inc.

HTML, XML, XHTML and W3C are trademarks or registered trademarks of W3C®, World Wide Web Consortium, Massachusetts Institute of Technology.

Java is a registered trademark of Sun Microsystems, Inc.

JavaScript is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.

MaxDB is a trademark of MySQL AB, Sweden.

SAP, R/3, mySAP, mySAP.com, xApps, xApp, SAP NetWeaver, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world. All other product and service names mentioned are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.

These materials are subject to change without notice. These materials are provided by SAP AG and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

These materials are provided "as is" without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement.

SAP shall not be liable for damages of any kind including without limitation direct, special, indirect, or consequential damages that may result from the use of these materials.

SAP does not warrant the accuracy or completeness of the information, text, graphics, links or other items contained within these materials. SAP has no control over the information that you may access through the use of hot links contained in these materials and does not endorse your use of third party web pages nor provide any warranty whatsoever relating to third party web pages.

Any software coding and/or code lines/strings ("Code") included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended better explain and visualize the syntax and phrasing rules of certain coding. SAP does not warrant the correctness and completeness of the Code given herein, and SAP shall not be liable for errors or damages caused by the usage of the Code, except if such damages were caused by SAP intentionally or grossly negligent.

