FI Enhancement Technique – How-To-Guide on the Usage of Business Transaction Events (BTE)

Applies to:

SAP 4.6C and Above

Summary:

This article provides a step-by-step guide on the usage of Business Transaction Events, as an Enhancement technique in the Financial Accounting Module of the SAP R/3 system.

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Table of Contents

What are Business Transaction Events

> ➤ The enhancement technique (Open FI) that were developed for Financial Accounting component.
> ➤ Open FI is based upon the following principles:
> Application developers must define their interface in a function module, an assignment table is read in the accompanying (generated) code, and the customer modules assigned are called dynamically.
> ➤ This technique differentiates between enhancements that are only allowed to have one implementation and enhancements that can call multiple implementations in any sequence desired. Both industry-specific and country-specific enhancements may be defined.
> ➤ This can be easily adopted / customized to the business needs wherein SAP does not provide the standard functionality through customization or enhancements. This functionality is primarily used in FI in the areas of dunning, credit management, banking etc. For Example: Standard Dunning functionality in SAP sends the notice to the Pay to partner function (based on the partner functions in SD module i.e. pay to hits the books in Accounts Receivable in FI module), whereas the requirement could be to send the same to Bill to party, based on the premise that the original invoice was sent to him as per the partner functions in SD.

Difference between BADI's and BTE's

The concepts behind the Business Add-Ins enhancement technique and Open FI are basically the same. However, the two enhancement techniques do differ from each other in the following points:

> ➤ Open FI can only be used to make program enhancements, that is, you can only enhance source code using Open FI. You cannot enhance user interface elements with Open FI like you can with Business Add-Ins.
> ➤ Open FI assumes that enhancement will only take place on three levels (SAP - partners - customers), whereas with Business Add-Ins you can create and implement enhancements in as many software layers as you like.
> ➤ Open FI uses function modules for program enhancements. With Business Add-Ins, ABAP Objects are used enhance programs.

Types of Interfaces

There are two types of interface available

        a) **Publish and Subscribe Interface**
        b) **Process Interface**

in the General Ledger Accounting (FI-GL), Accounts Receivable and Accounts Payable (FI-AR/FI-AP) and Sales and Distribution (SD) components.

Publish and Subscribe Interface

Publish & Subscribe interfaces (also called "informing interfaces" in the following)

> These should inform you about particular events (such as a document being entered) in the SAP standard application and make the data generated as a result available to the external software. The external software does not return any data to the standard R/3 System. Examples of such events in the R/3 System are:
> - Master record was created, changed, or blocked
> - Document was entered, parked, changed, or reversed
> - Items were cleared or reset

Additional processing can be caused in the additional component on the basis of these events and data:

- Starting a workflow
- Generating or changing additional data
- Requesting correspondence

Process Interface

Process interfaces (also referred to as "process" in the following)

> Process interfaces are used to submit business processes to a different control which cannot be realized with the standard system, that is process interfaces replace standard processes.
> Here you can structure determination of individual field contents or of specific reactions to process flows individually. It is possible to connect different external developments to the standard R/3 System. The additional developments are generally carried out using the ABAP/4 Development Workbench.
> > - This way you can, for example, influence the control of payment transactions. Selection of payment method, house bank and partner bank can be made using the payment data (currency, amount, and payee) according to a selection logic which you have defined.

Finding Business Transaction Events

➢ SAP Reference IMG -> Financial Accounting -> Financial Accounting Global Settings -> Business Transaction Events

- For Publish and Subscribe Interfaces, Environment - > Info system (P/S)

- For Process Interfaces, Environment -> Infosystem(Processes)

➢ Find for Character String "OPEN_FI_PERFORM" in source code

Basic Steps in Configuring Business Transaction Events

➢ Make sure the application is active for Business Transaction Events.
➢ Identify the BTE
➢ Copy the sample interface function module into a "Z" or "Y" function module.
➢ Write the ABAP code into the source code section of the new "Z" or "Y" function module. You may choose to create a "Z" or "Y" program to enter the code into and then insert the "Z" or "Y" program into your function module source code.
➢ Save and activate the function module.
➢ Assign the function module to the event, country and application.

Example Business Scenario for BTE - Process Interface

Company A would like to the copy the *Assignment* field with custom value 'Demo BTE' when an accounting document is posted for a certain Company Code for accounting purposes to analyze the data. To accomplish this requirement, Company A will use the Business Transaction Event 1120, Post Document: SAP Internal Field Substitution. Depending on the business scenarios, generally the reference document number field and assignment number field will be populated with a unique identifier for analyzing the accounting data. For the purpose of this document, I have used a scenario of populating the text field while creating accounting document.

Steps

1. IMG Menu Path: Financial Accounting ->Financial Accounting Global Settings->Business Transaction Events-> Environment-> Infosystem (Processes).
2. Find the correct Business Event. You are updating a field, so you need to select the Processes Info System instead of the Publish and Subscribe Info System.
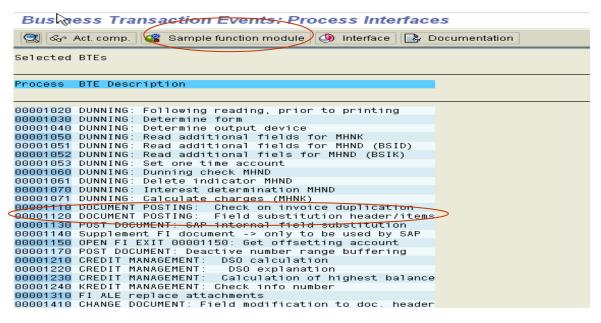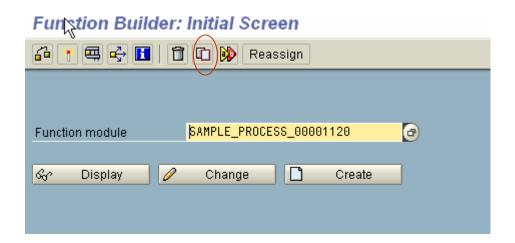3. Execute the search with the defaults.

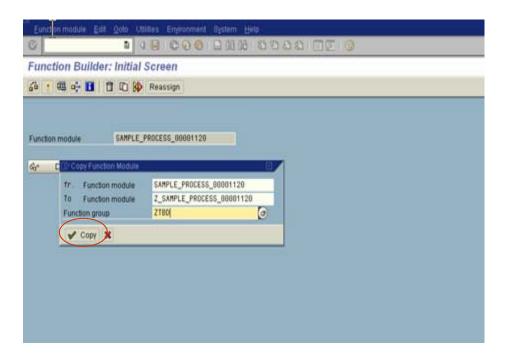4. Find the correct interface for updating a document: Document Posting: Field Substitution header/items

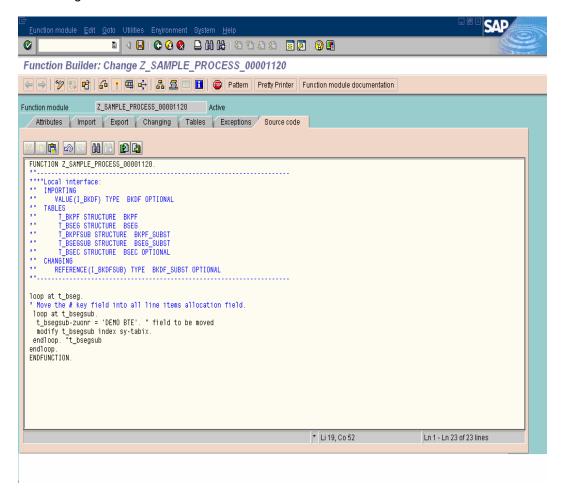5. Place cursor on the event 1120 and click on the Sample Function Module.

6. You are now in transaction SE37 – Function Builder. This is the function module (SAMPLE_PROCESS_00001120) you will need to copy into a "Z" or "Y" name function module for your coding
7. Click on the Copy button.

8. Specify the "Z" or "Y" function module name in the To Function Module field
9. Specify a Function Group. If you need to create a "Z" or "Y" function group, go to transaction code SE37 and follow menu path: Go to Function Groups Create Group. A function group is a logical grouping of function modules, and the ABAP code is generated for function groups. You will be prompted for a development class and transport when creating the function group.

10. In Function Builder (transaction SE37), enter the new "Z" or "Y" function module. Click on the Change button.
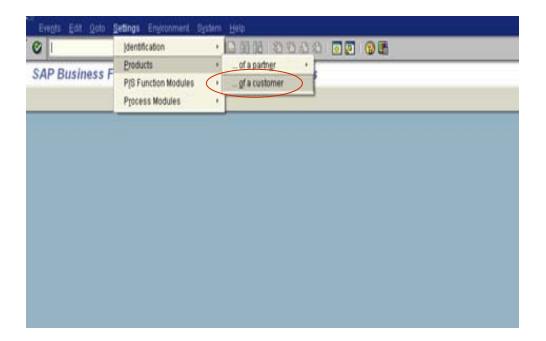

11. The system will default into the source code screen where you may enter your ABAP code.
12. Notice the tables available for the code. Additional tables may be declared if necessary.
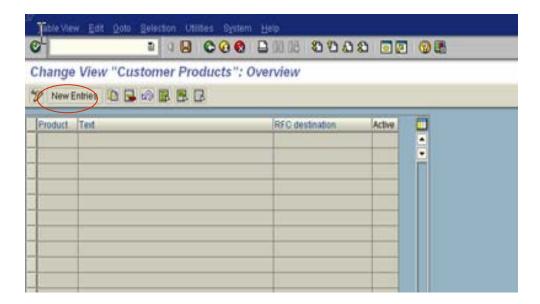13. Enter the source code as per the requirement:

```
Loop at t_bseg.

* Move the Text into all line items allocation field.

 Loop at t_bsegsub.

  t_bsegsub-zuonr = 'Demo BTE'.

  Modify t_bsegsub index sy-tabix.

 endloop. "t_bsegsub

endloop. "t_bseg
```

14. Save and activate the function module.
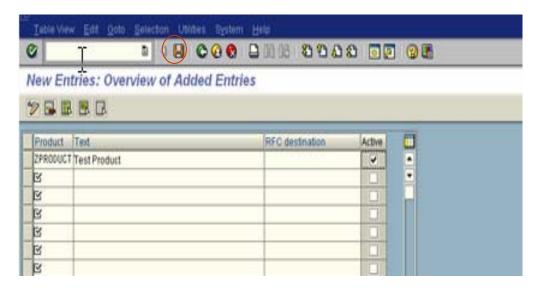15. To assign Function module to the Event, first create a product say "ZPRODUCT"
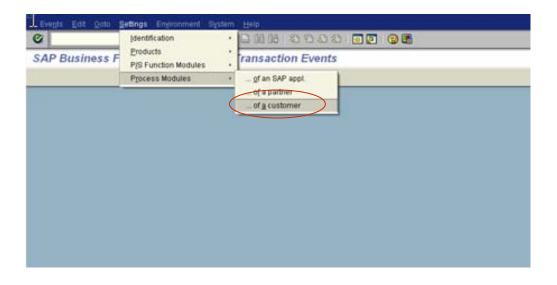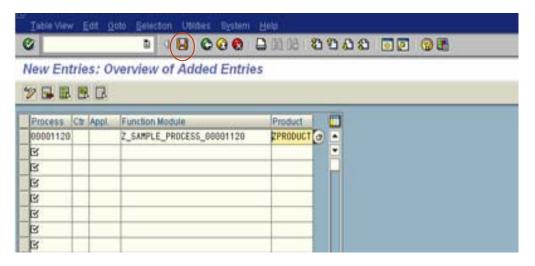
Click on the "New Entries" button.

Enter the Product name and make sure you select the "Active" check box, otherwise the BTE will not trigger.
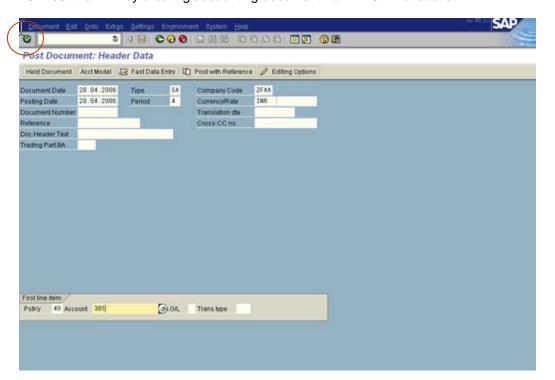

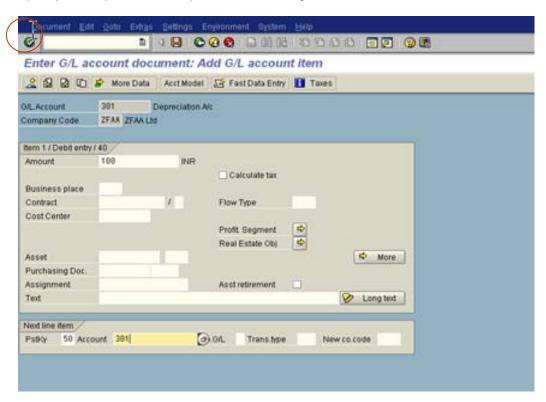Now assign the function module "Z_SAMPLE_PROCESS_00001120" create in step 7 to the Event.

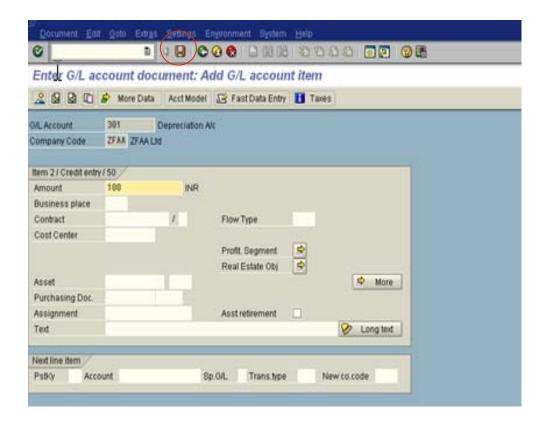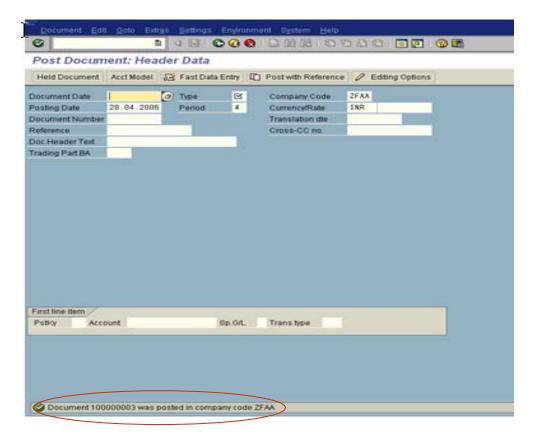Depending on the requirement, Country and Application has to be specified.

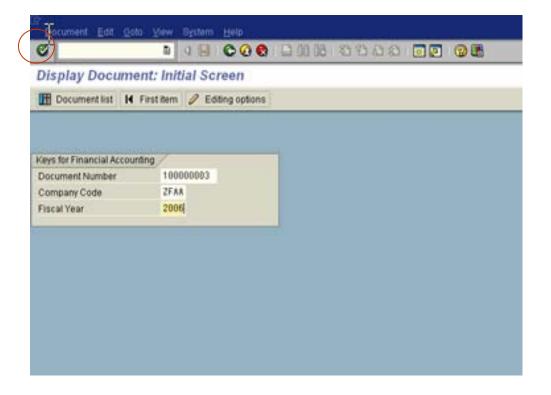16. Test the BTE by creating accounting document from FB01 Transaction

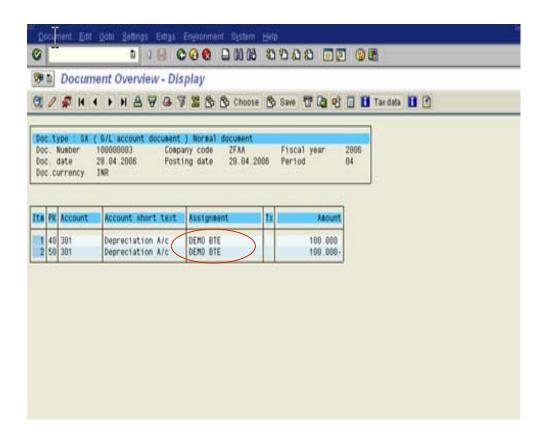Specify the required fields to post the accounting document.

17. To check whether the Assignment field is populated with "Demo BTE", display the created accounting from FB03 and check for the Assignment value.

Related Transaction Codes

FIBF   Maintenance transaction BTE

BERE   Business Event Repository

BERP   Business Processes

BF31   Application modules per Event

BF32   Partner Modules per Event

BF34   Customer Modules per Event

BF41   Application Modules per Process

BF42   Partner Modules per Process

BF44   Customer Modules per Process

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