How to Develop Smart Forms

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Migration to Smart Forms

If you have many forms already built in SAPscript, you may migrate them into Smart Forms to avoid building the Smart Forms from scratch and save development time. Two types of migration are available: individual migration and mass migration. You can migrate a SAPscript form into a Smart Form and convert a SAPscript style into a Smart Style.

Smart Styles contain the formatting information for the text. In Smart Style, you take the smaller components (paragraph and character formats) for conversion individually, whereas for Smart Forms, you take the entire Smart Form for conversion. Each conversion of a Smart Form requires a separate conversion of the accompanying Smart Style; some of the steps, however, are the same. The first phase of the migration is the download. Use program **RSTXSCRP** to download SAPscripts to your local hard disk (**Figure 1**).
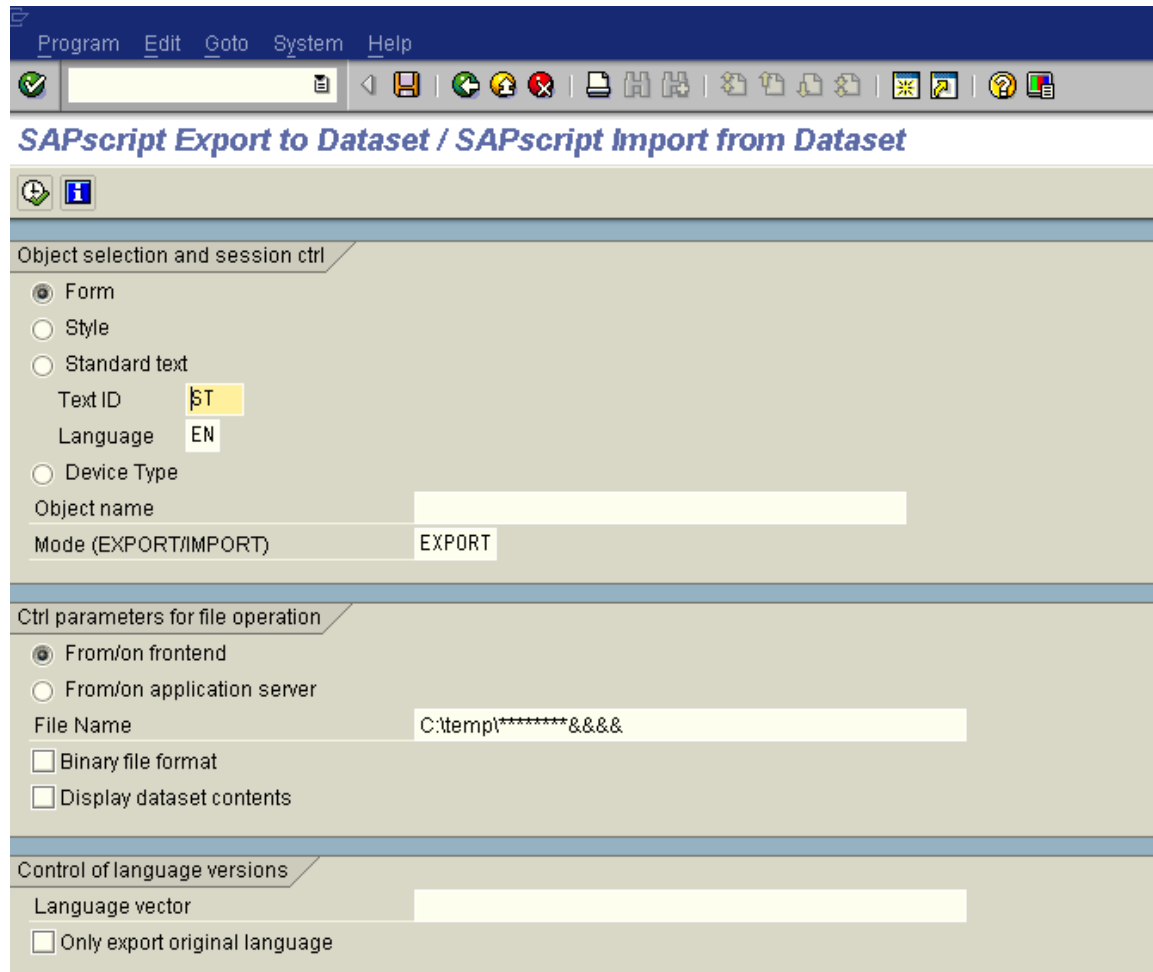
Figure 1: Program to download and upload SAPscripts to and from your local drive

Simply select the object, based on **Form**, **Style**, **Standard Text**, or **Device Type**. You may **EXPORT** to download to the local drive and **IMPORT** to upload a SAPscript into the system.

You can also specify file selection from your desktop or from a server.

(**Note:** When you convert a SAPscript style into a Smart Style, the system converts all paragraphs and character formats with all their properties and attributes intact. Therefore, you can use the converted Smart Style without making any adjustments.)

When migrating a SAPscript form into a Smart Form or Smart Style, the system executes the following steps:

    1. Copies the language attributes and the output options

2. Migrates the layout information including pages and windows, as well as their attributes and positions on the page

3. Copies the texts in the form

4. Displays the fields (SAPscript notation: program symbols) in the texts

5. Converts the SAPscript commands (such as **NEW-PAGE** or **IF...ENDIF**) to comment lines and displays them in the texts

Repeat the above steps for the Smart Style accompanying the form.

Smart Form Conversion

The second phase of migration is conversion. Though the download phase (step 1) is the same, conversion for Smart Styles must be done differently than conversion for Smart Forms. I explain steps for Smart Styles later.

For converting forms, you have a template that you can enhance and modify according to your needs. Adapt the form logic by specifying the commands that the system converted to comment lines. The work involved is similar to any form development; each element, window, page, text, logo spacing, and data mapping has to be validated, but the conversion tool makes it easier. Follow these steps for SAPscript form conversion:

Step 1. Access the initial screen. Choose **Tools>Forms printout>Smart Forms** (transaction **SMARTFORMS**) from the **SAP Easy Access Menu**. The dialog window **SAP Smart Forms: Initial Screen** appears.

Step 2. Name the form. In the **Form Field**, enter field name you want to give, for example ZTF_GR_## (based on your company standard starting with Z to identify this as a customized form, where "##" is the group number).

Step 3. Access the migrate function. Go to **Utilities>Migrate SAPscript Form**. In the dialogue window enter the SAPscript form name, for example Y_SAPSCRIPT_STD. Choose the **Check** button.

Step 4. View the migrated layout. On the screen that appears, the SAPscript form is migrated into a rough Smart Form (**Figure 2**). Click on **Form Painter** to see an overview of the form layout.
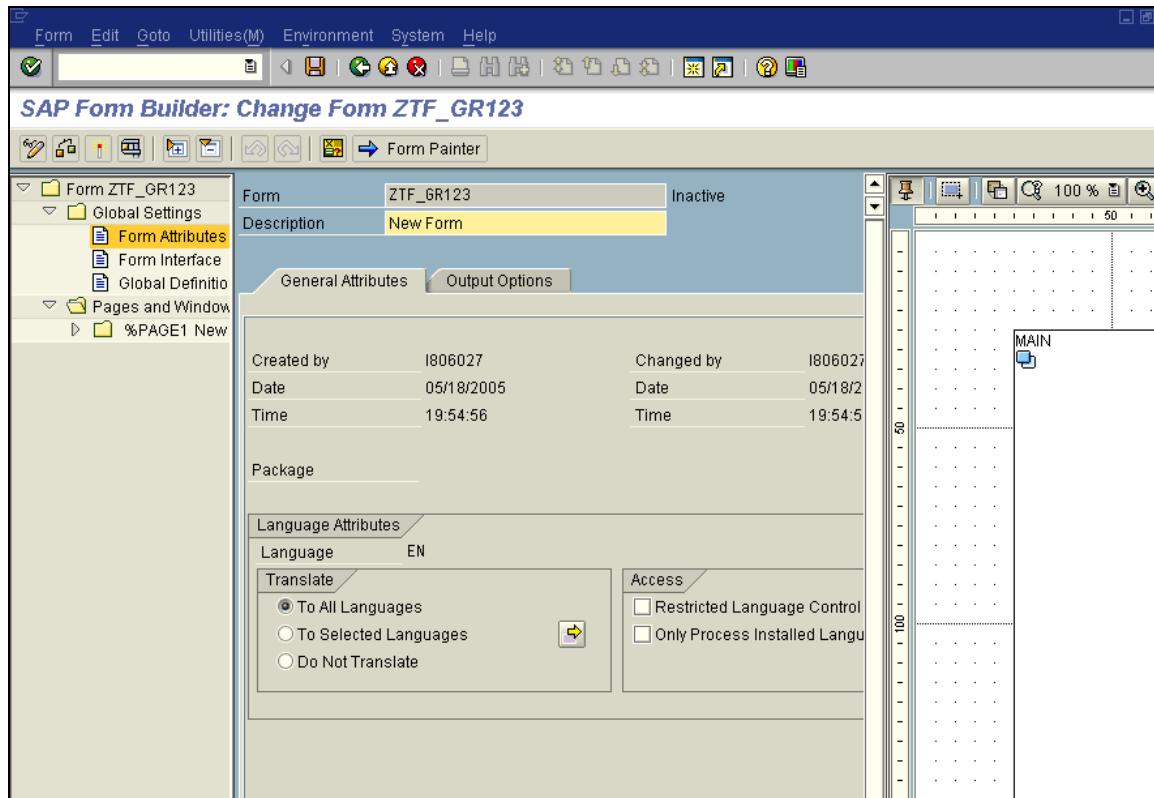
Figure 2: SMARTFORMS transaction for form development or conversion from SAPscript

Use the following steps for mass migration or simultaneous migration of multiple SAPscript forms:

Step 1. Run the mass migration program. In Reporting (transaction **SE38**), select the program **SF_MIGRATE** and execute it (**Figure 3**). Select the names and the language of the SAPscript forms and click the execute icon. The system creates the Smart Forms named for the SAPscript forms plus the extension **SF**. It displays a list of the migrated forms.
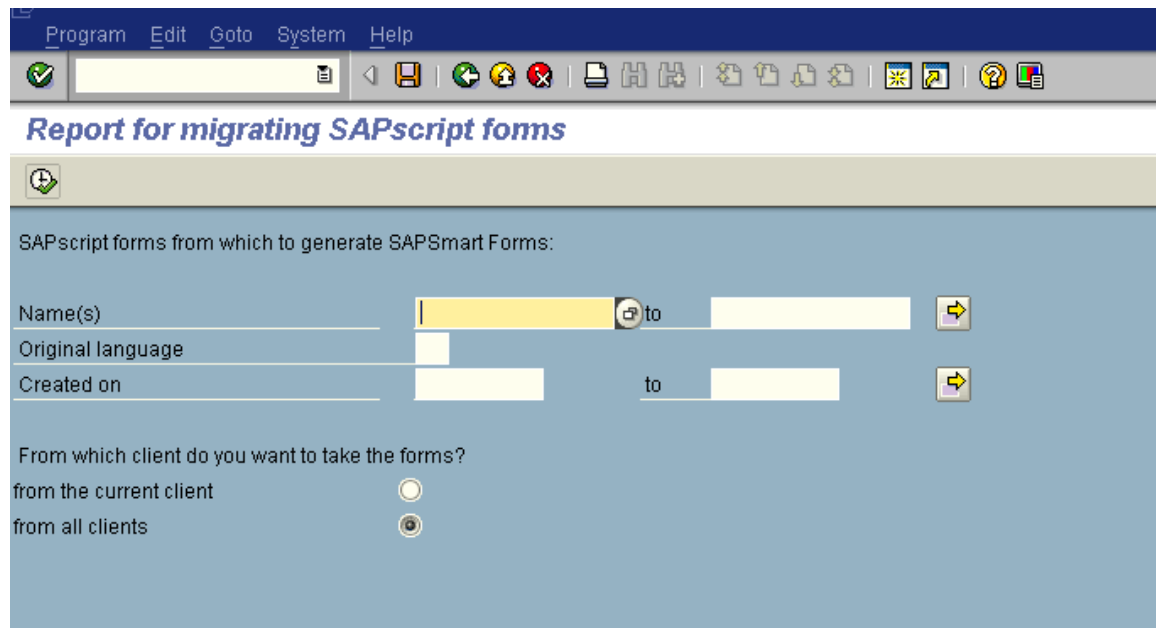
Figure 3: Mass-migrating Smart Forms from a range selection

Step 2. Make changes (if necessary). To change and adapt a form, go to transaction **SMARTFORMS**. Then activate the changed Smart Form.

Smart Style Conversion

The following are the unique conversion steps for Smart Styles. Note that mass migration is not possible, as each Smart Style is attached to a specific Smart Form and conversion must be done individually. For migrating a SAPscript style into Smart Styles, the steps are:

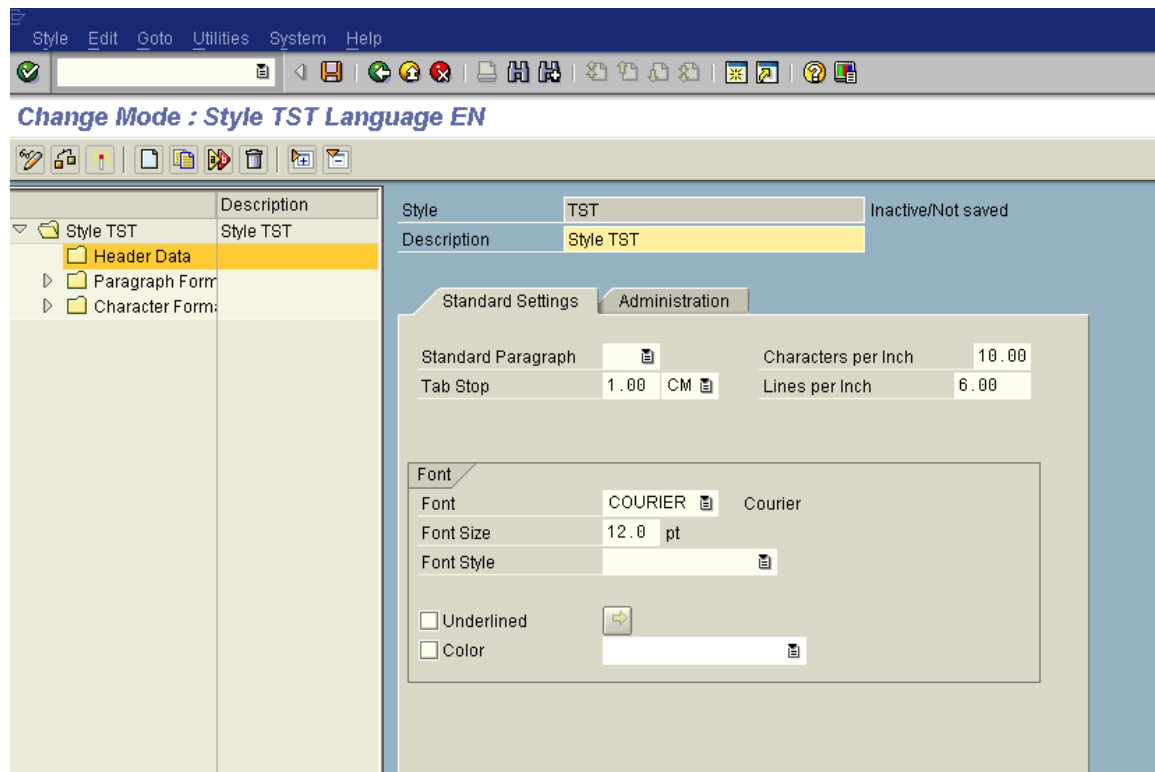**Step 1. Open Smart Styles**. Go to the Smart Styles initial screen (transaction **SMARTSTYLES**; see **Figure 4**).

Figure 4: Transaction **SMARTSTYLES** for creating styles or converting from SAPscript

Step 2. Name the style. In the **Style** field, enter the name of the Smart Style you want to create.

Step 3. Run the program. Choose **Smart Styles Convert SAPscript style**. Enter the name of the SAPscript style you want to convert. Press Enter. A list of the converted styles appears.

Step 4. Make adjustments to the style (if necessary). Choose **Back**. You can now change the Smart Style (using **Change**). To activate the Smart Style, choose **Activate**.

Other Processes

Once the SAPscripts are converted, whether in Smart Forms or Smart Styles, you should clean up any errors made during the conversion process, in terms of attributes, window alignment, or syntax errors. Cleaning up errors during conversion is often standard procedure, as SAPscript might have used local logic. Errors may occur when a field displayed is extracted or manipulated to display and doesn't exist, or fields exist but appear with no values. Errors may also arise in ABAP syntax.

Step 1. Define the Import Parameter. Double-click on the **Global Settings> Form Interface** from the navigation menu (**Figure 5**).
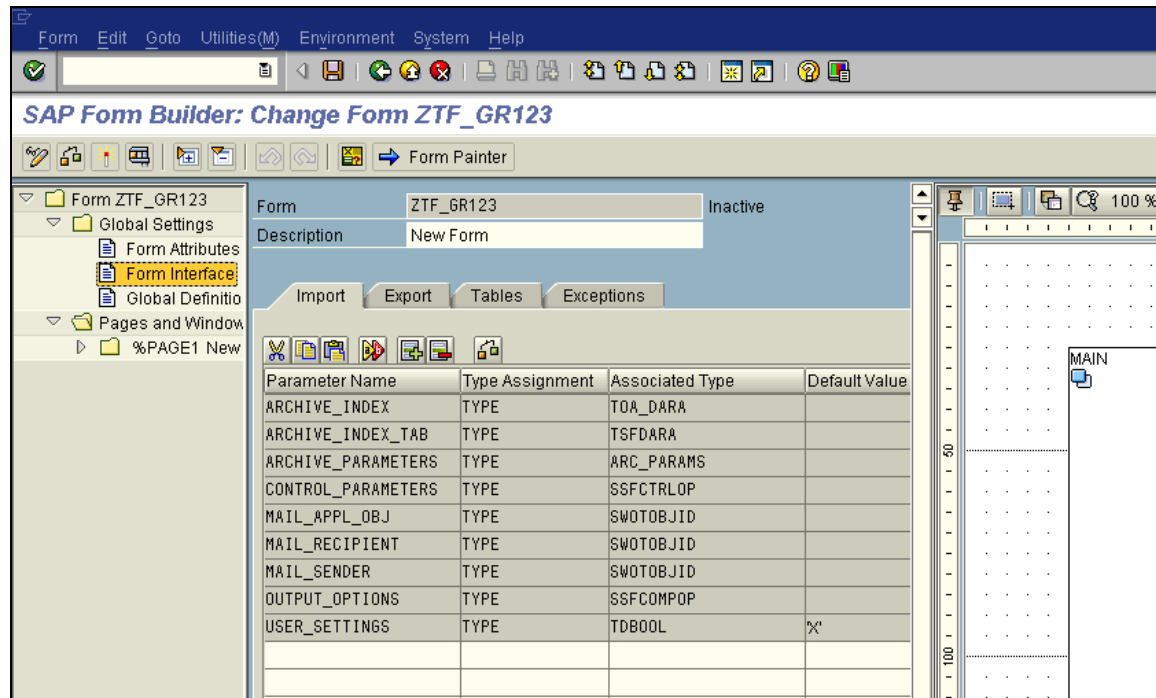

Figure 5: Use **Form Interface** within **Global Settings** for clean-up

Step 2. On the Import Tab, enter the import structure information. For example, enter **Parameter Name** (table name, such as **LIKP**), **Type Assignment: Type, Reference Type** (table name), **Optional** (or **Mandatory**); **Pass Val**: (Passing value indicator). This must be done for all the data retrieved from the SAP tables.

Step 3. Remove irrelevant or unnecessary windows. To delete a navigational menu node, right-click on the node, and select **Delete**. Since you start with windows in SAPscript, there might be redundant windows created for text.

Step 4. Set the first page. Delete the **NEXT** page node on the menu tree. Double-click on the first page node. In the **General Attributes** tab, change the **Next Page** value to **FIRST**.

Step 5. Delete the DETAIL frame window. Expand the **MAIN** window and delete all its text nodes.

Step 6. Adjust the text nodes. Click on the text nodes and let the system fit the text.

Step 7. Save and check the syntax.

Modification

Smart Forms allows you to customize the newly migrated forms and styles, adding images, headers, templates, and standard text.

To insert the company logo (or any image):

Step 1. Open the Form Painter for graphics (Figure 6). Select the **Form Painter** button. Click the **LOGO** window in Form Painter. Right-click and choose **Create>Graphics**.
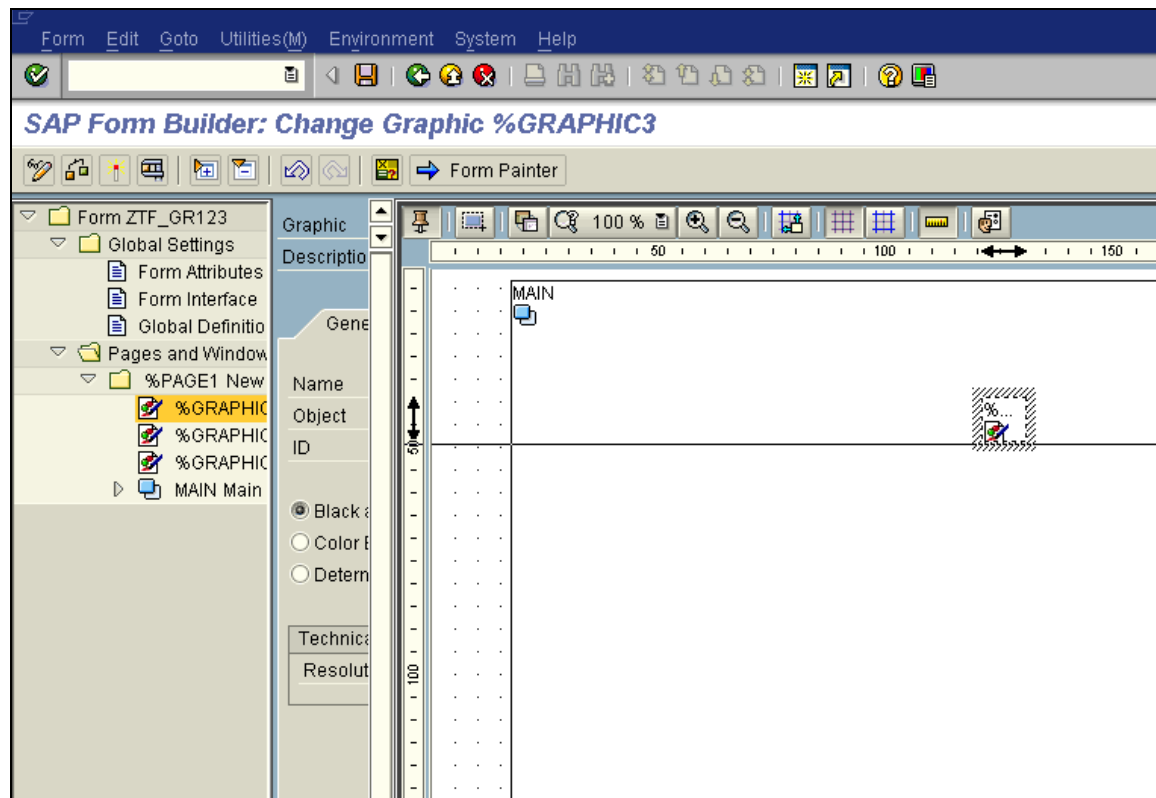

Figure 6: Form Painter with graphics insertion

Step 2. Insert the logo or image. In the maintenance screen of the node (the center of the frame) under the **General attributes** tab, enter the company logo or other image as **Graphic Image**, **Graphics** as **Object type**, and **bmap** as **ID**. Choose the grid screen color and press Enter. You can position the logo as you wish.

To import standard text for addresses and other purposes:

Step 1. Access the text creation tool (**Figure 7**). In the navigation menu tree, click on the **INFO1 window** node. Right-click and select **Create>Text**.
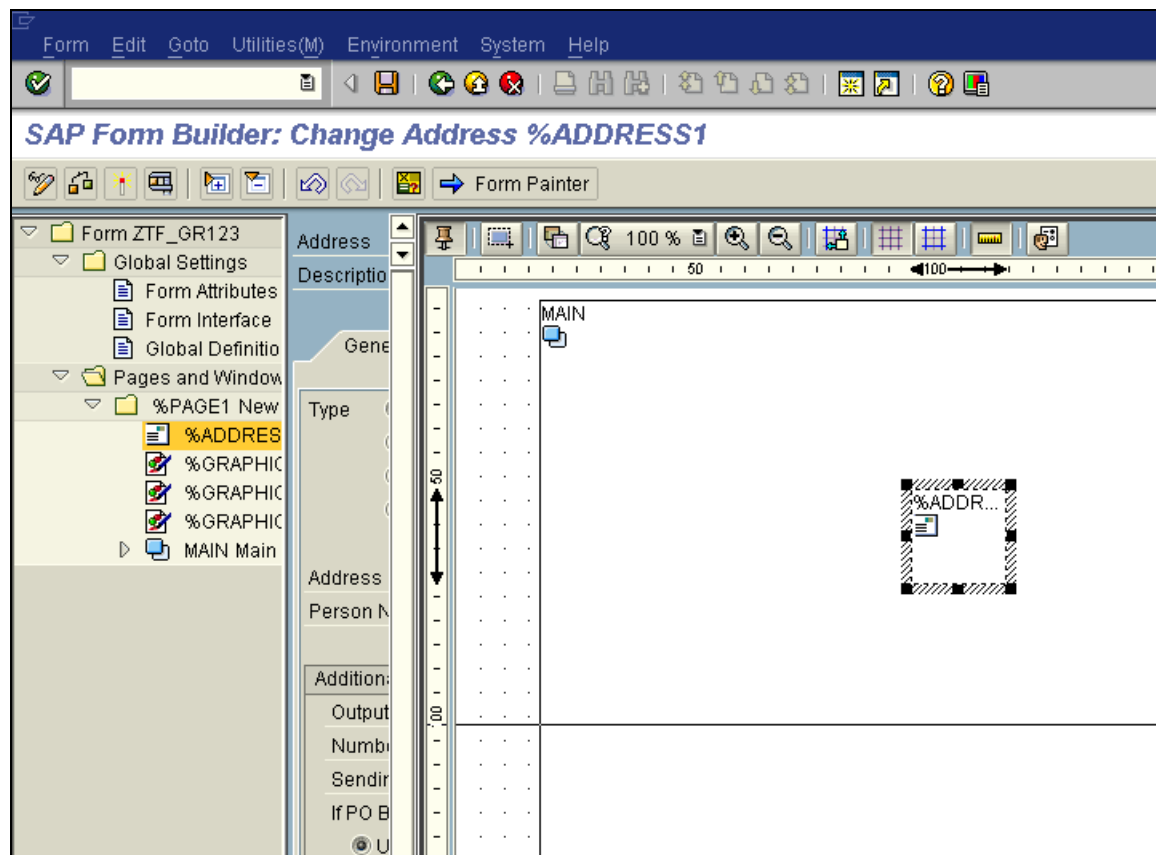
Figure 7: Insert standard text in the form painter

Step 2. Prepare the new text node. On your new text node under **INFO1**, in the **Maintenance** frame, on the **General Attributes** node, change the **Text Type** to **Include text**. Select **OK** on the popup menu.

Step 3. Set the text attributes. Under **Text Name**, enter the name of the form. For **Text Object**, enter `text`. For **Text ID**, enter `ST`. For Language, enter `WN`. Check the checkbox for **No error when no text exists**.

To create a template for your header and line items:

Step 1. Insert the company logo (or any image). Right-click on the **MAIN** window node and select **Template** (**Figure 8**).
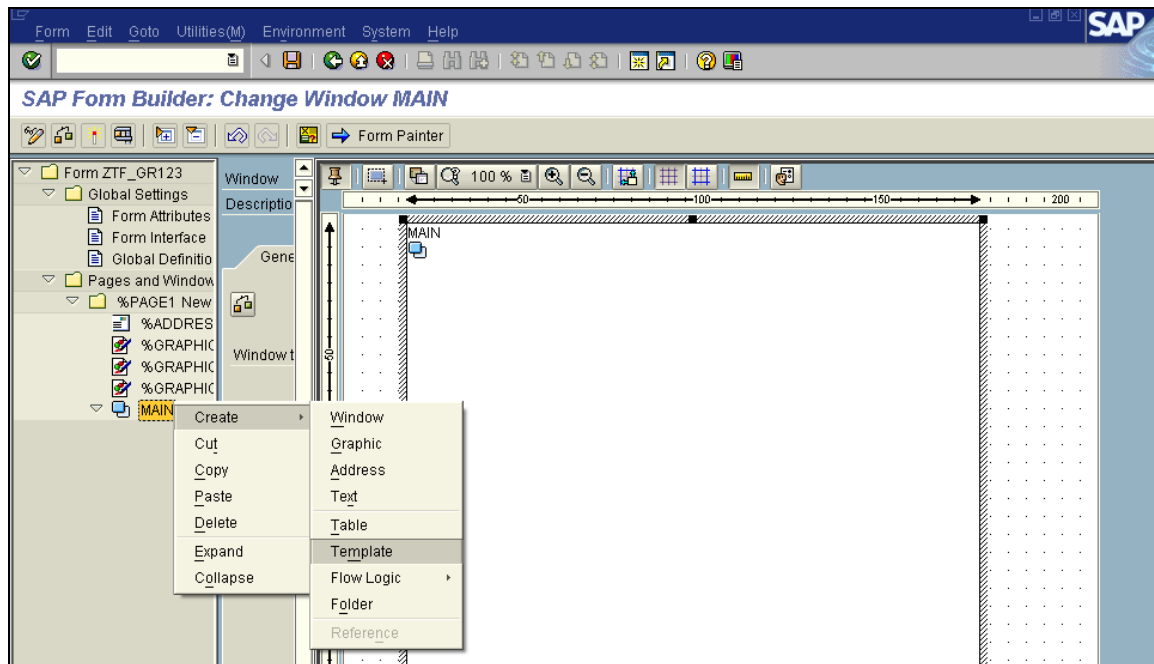
Figure 8: Use menu path **Form Painter>Create>Template.**

Step 2. Click on your new Template node. The attributes associated with your new template will appear.

Step 3. In the tab labeled Template, enter the following:

1. In the column **Name**, enter Line1. This will be the first row in your template.

2. Click on the **Table Painter** button. Click on the **Pattern** button and select the pattern on the upper left hand side of the pop-up window.

Activation

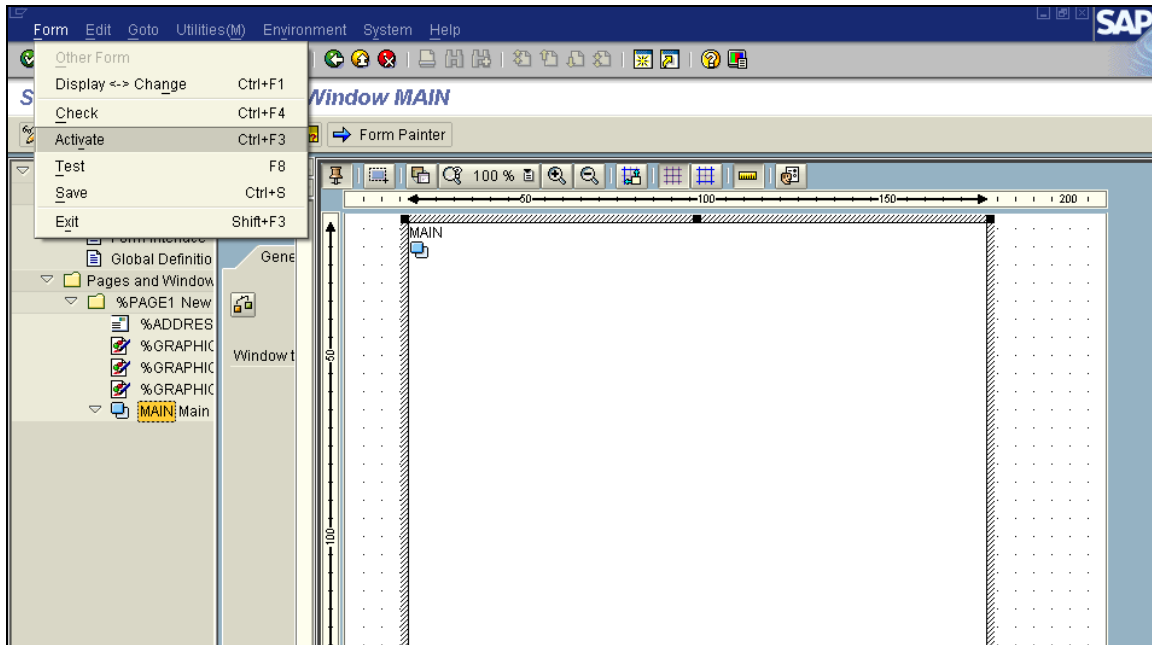**Step 1. Save and activate your form.** Select **Activate** (**Figure 9**).

Figure 9: SMARTFORM transaction with **Activate** option to activate the form

Step 2. Test your form. Click on the **Test** button or press the F8 key.

Step 3. Execute. When the **Function Module** screen comes up, click on the **Execute** button or press the F8 key again.

Step 4. Preview the document. On the **Print** pop-up menu, click on the **Print Preview** button. Your new form will appear.

Step 5. Return to Form Builder. Close the print preview and press the Back key until you return to the Smart Form Builder screen.