BarTender

Exporting Printer Code Templates

Exporting Printer Code Templates for
Use in Other Applications or Devices

SEAGULL
SCIENTIFIC

Contents

Note: The exporting of Printer Code Templates requires use of an Enterprise edition of BarTender.

Print Systems

In some manufacturing situations, portable devices, such as a Pocket PC, or terminals, such as a Data Terminal, are used to print labels. These portable devices and/or terminals typically take printer code created by a label program and merge user input information, like lot number and expiration date, into it and send the completed printer code directly to the printer. For example, the Datamax Passport is a hand-held device that can easily connect to a label printer for printing pre-defined labels. The Passport takes uploaded Datamax printer code, inserts user input information, and then prints the label.
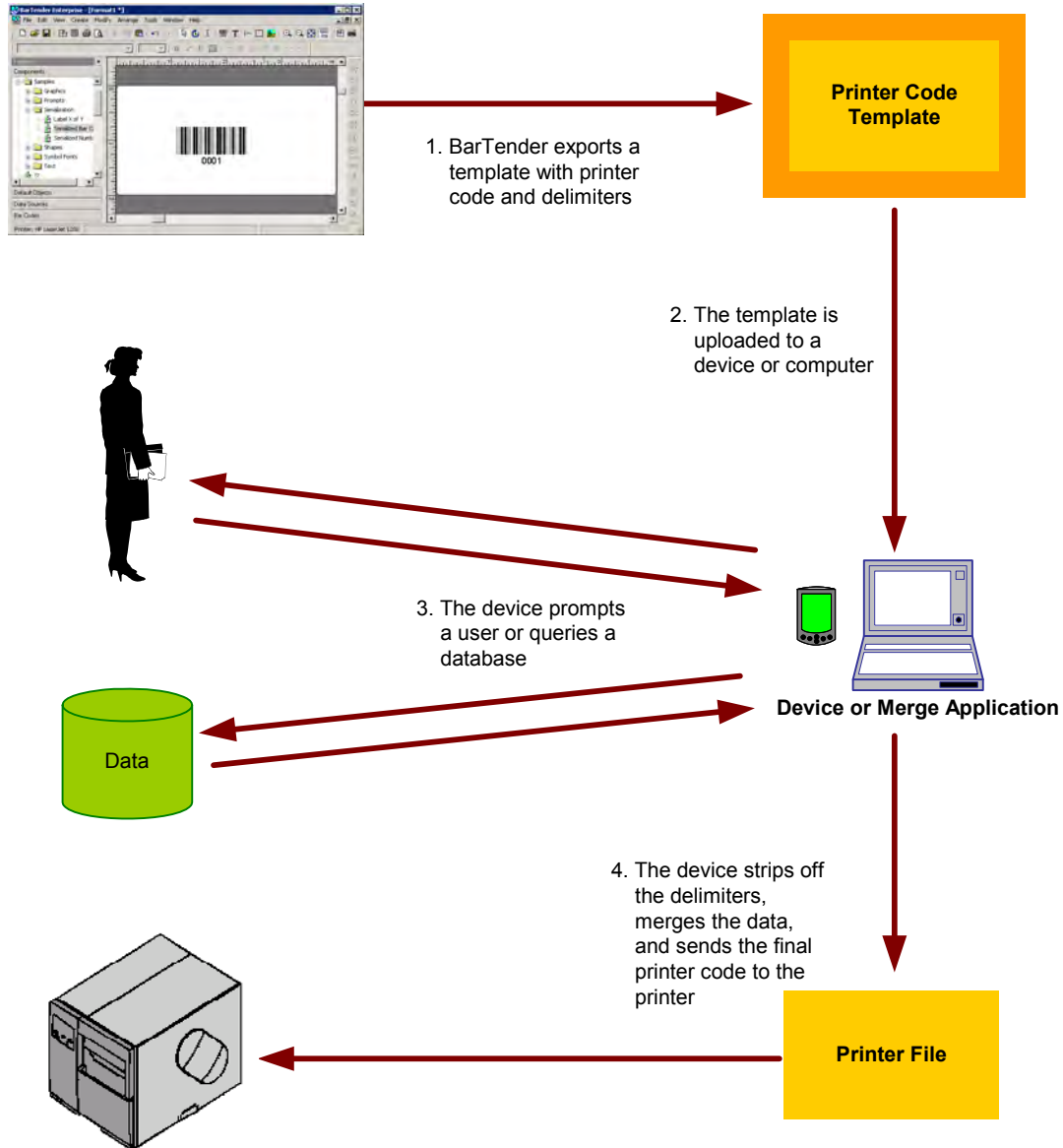
There are also situations in which label printing is performed by a merge application, possibly running on a non-Windows computer. For example, SAP/R3 systems use SAPscript-ITF files as part of a process that prompts users for input information and then prints labels. A SAPscript-ITF file is composed mostly of printer code, but has extra field information for data substitution. The SAP/R3 system software merges user data in place of the field information in the SAPscript-ITF file and sends the resulting file to the printer.

Taken collectively, the devices and merge applications are called "print systems."
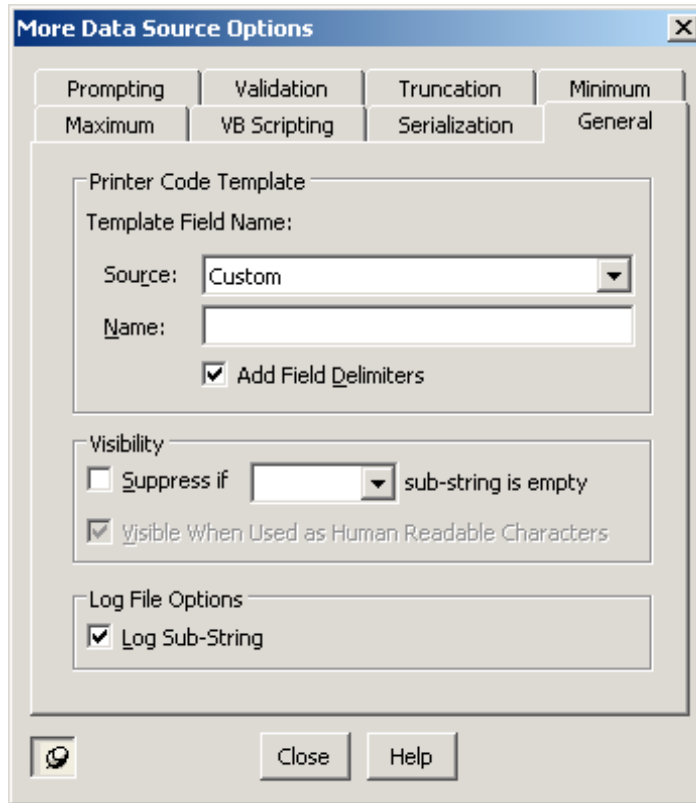
Printer Code Template

You can use BarTender (Enterprise editions) to design and configure your labels and then export a printer code template that can be merged and printed by one of these print systems. A *printer code template* is a file written mainly in the language of a printer, but it is not a pure printer language file because certain delimited fields have been added. Some of these are delimiters inserted in significant places in the file, such as the start and end of each line. Others are data field names, which are used as placeholders that will be replaced at print-time by actual data. Although not every print system uses every possible delimiter, the template may include a header, footer, start and end line delimiters, start and end print code delimiters, and delimiters at the start and end of data fields.

Once a printer code template has been created with BarTender from a label format, the template can be uploaded to a portable device which can then be used to (1) insert the needed data or prompt the user for it, and (2) send the merged file to the printer. Alternatively, a merge application running on a computer can insert the data and print the label. BarTender need not be running at print-time or even be installed on the computer or device that processes the template. (Optionally, you can have the merge application treat certain field names as literal data that will print unchanged.)

1. BarTender exports a template with printer code and delimiters

Printer Code Template

2. The template is uploaded to a device or computer

3. The device prompts a user or queries a database

Device or Merge Application

Data

4. The device strips off the delimiters, merges the data, and sends the final printer code to the printer
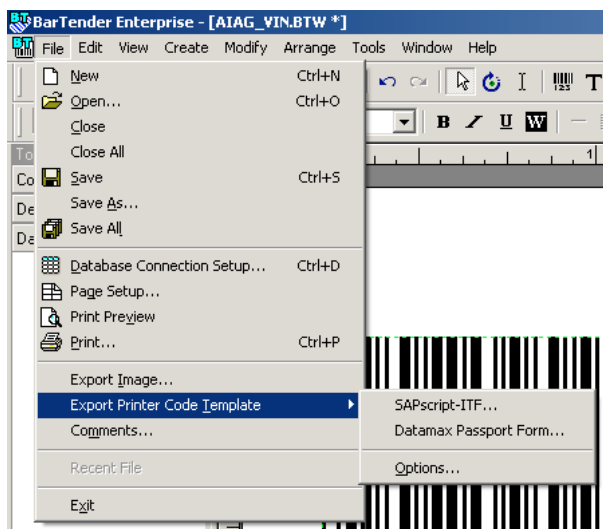
Printer File

Adding Template Field Names

Any bar code or text object for which the print system is going to insert data must have a template field name so that the print system can find it in the template file. Objects linked to BarTender prompts or database fields are automatically given template field names when a label is exported to a template. For example, turning on prompting for an object will automatically generate a template field name when the label format is exported to a template. You can also specify a custom name for a template field from the **General** tab in the **More Data Source Options** dialog.
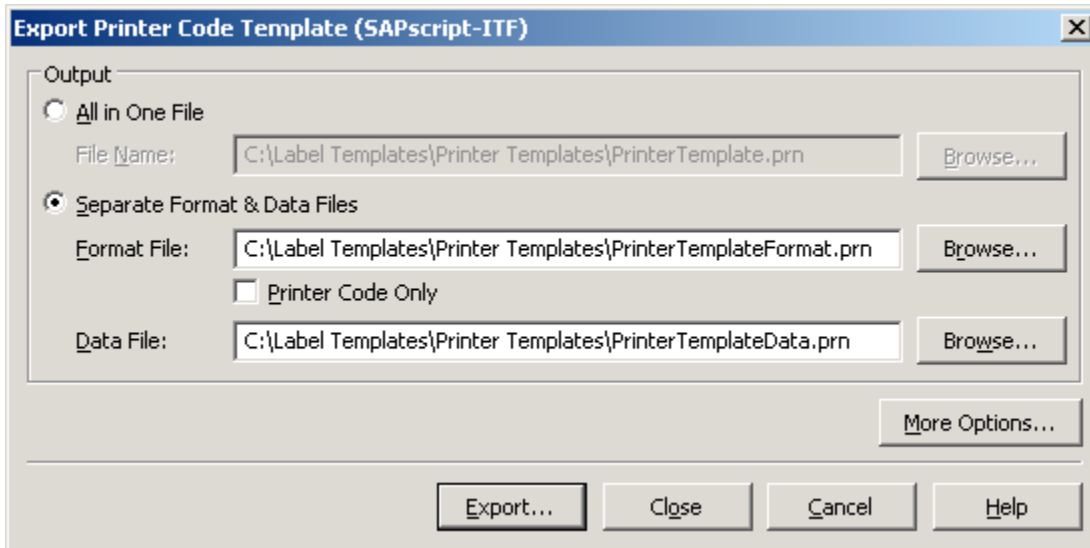
Exporting a Printer Code Template

BarTender Enterprise editions come with some predefined print systems (such as Datamax Passport and SAPscript-ITF). To export a printer code template using your label, select **Export Printer Code Template** from the **File** menu. Then select a print system from the sub-menu that opens. Custom print systems can also be listed on this sub-menu.

You can export a printer code template as one file or you can break it up into format and data printer code. Typically printers can accept printer code of two different types:

Format Code: Format printer code typically defines initialization commands, the fonts, the positions of the label's objects, and the data that does not change from label-to-label.

Data Code: Data printer code typically changes from label-to-label and uses the Format Printer Code commands as a format template for printing labels using the changing data.


Validation of Printer Code Templates

BarTender can very easily perform advanced label printing and do things such as control the centering of text, set the bar code density, add human readable text, and add check digits where needed, because BarTender controls the entire print job. A print system typically does not have this level of control, however. The print system uses raw printer code and can only merge user input data into it. Centering of text, for example, cannot be adjusted because the print system does not change the printer code. Thus, the design of the label becomes very important.

When a printer code template is exported BarTender opens a dialog such as the one shown below to report on numerous label design issues to help improve printing success using the selected print system. This process is called validation. Each problem reported can be manually corrected or automatically fixed.
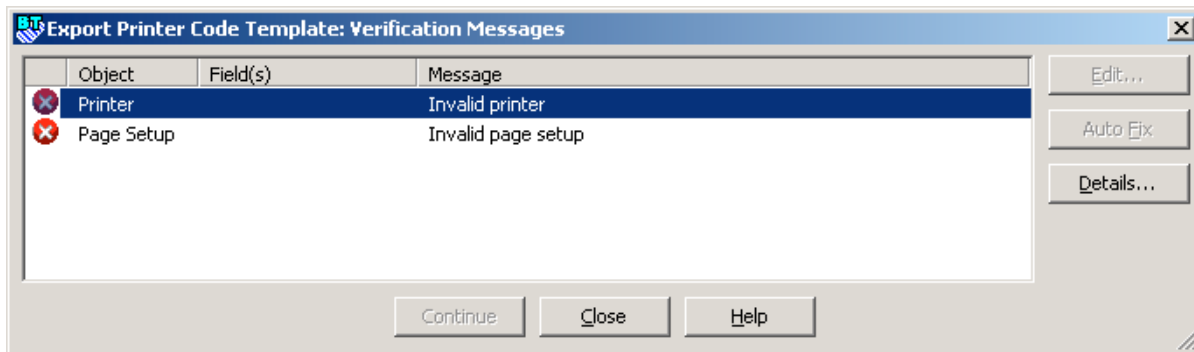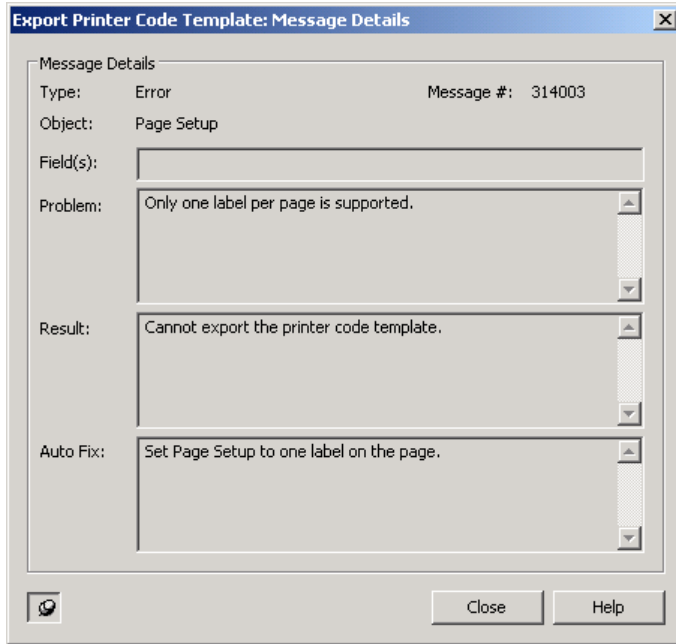
Pressing the **Details** button on this dialog will open a window, such as the one shown below, giving more information about the issue to help you decide how to deal with it.

Customize Your Own Print Systems

In addition to BarTender's predefined print systems, you can create your own custom print system using the **Printer Code Template Setup** dialog. Any number of print systems can be defined and configured to support virtually any print system. Optionally, you can have any print system you define added to the **File | Export Printer Code Template** menu for selection.
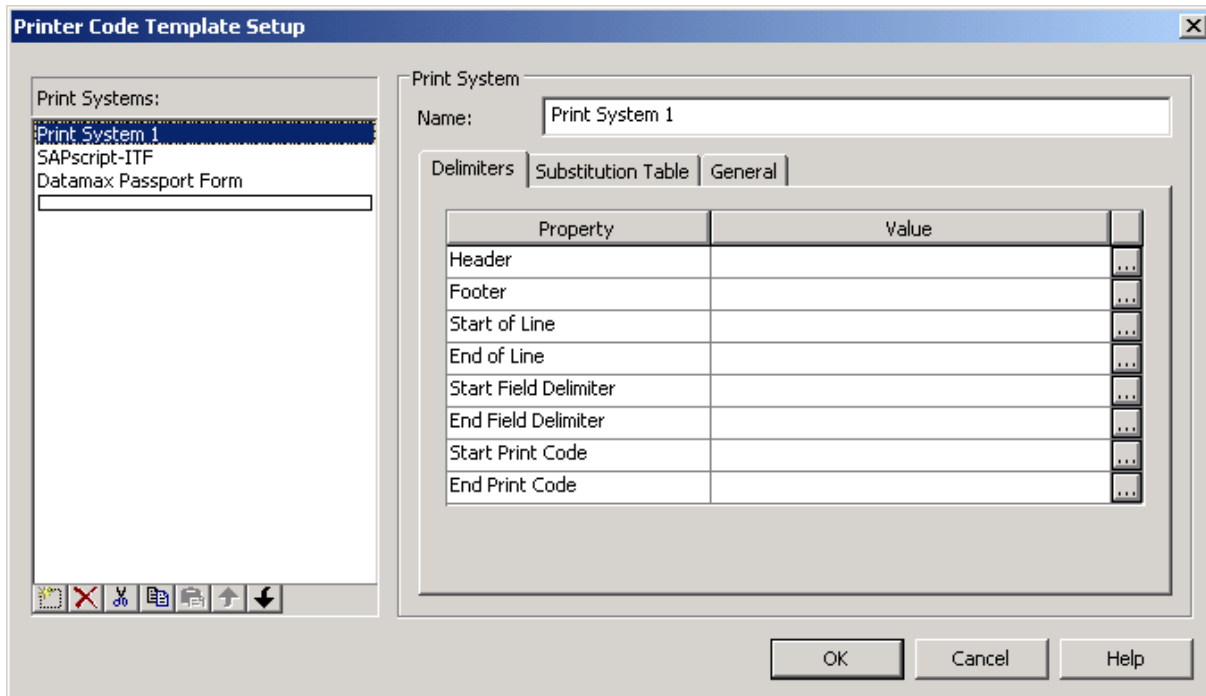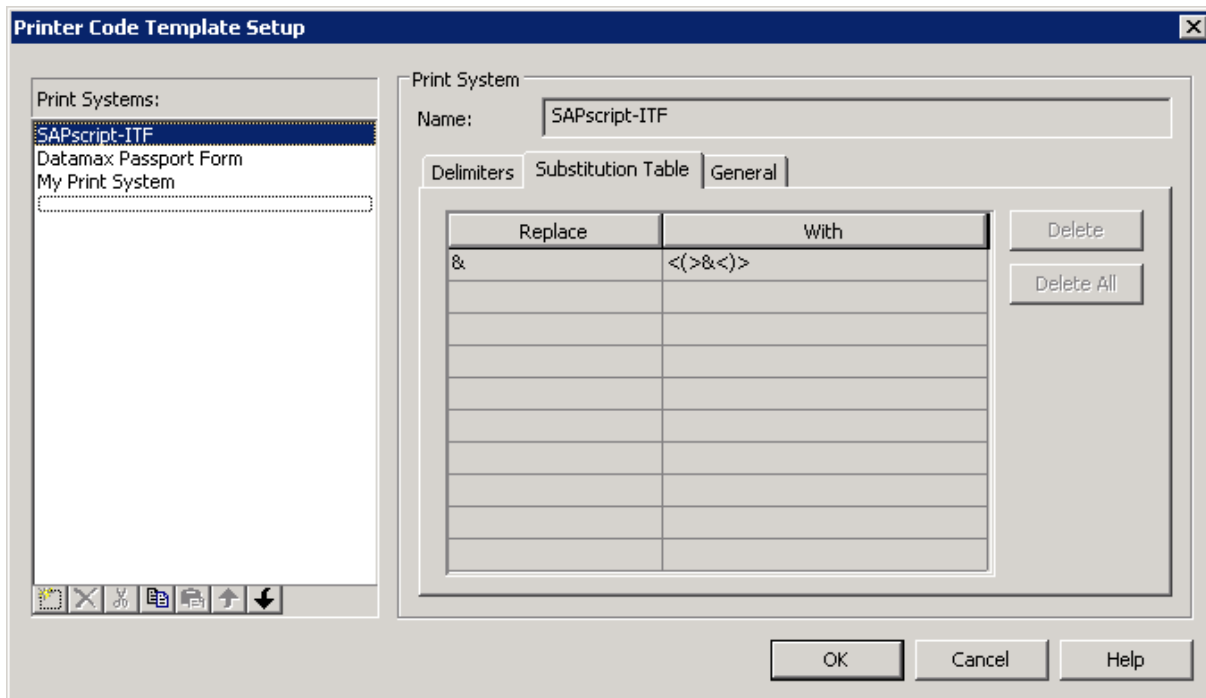
The following delimiters are available. Many print systems do not use them all.

- The **Header** and **Footer** delimiters mark the very beginning and end, respectively, of the template.

- The **Start Print Code** and **End Print Code** delimiters mark the points at which the printer code begins and ends.

- The **Start of Line** and **End of Line** delimiters mark the beginning and end, respectively, of each line of printer code.

- The **Start Field Delimiter** and **End Field Delimiter** mark the beginning and end, respectively, of each data field; that is, each template field name. See *Adding Template Field Names* on page 4.

The Substitution Table

The Substitution Table of the **Printer Code Template Setup** dialog is used to resolve potential conflicts between your printer's language and the template field syntax you are using. For example, if the character you need to use as the Start Field Delimiter, such as "&", is used in your printer's language, then you will need to temporarily replace the character where it appears in the printer's language code. Otherwise, the print system would interpret every instance of this character as the start of a template field. The temporary substitution is reversed by the print system as the last step before it produces a printer file that is entirely written in the printer's language

Printer Code Template Setup

Print Systems:
SAPscript-ITF
Datamax Passport Form
My Print System

Print System
Name: SAPscript-ITF

Delimiters | Substitution Table | General

Replace	With
&	<(>&<)>

Delete

Delete All

OK | Cancel | Help

Suppose Ajax Swizzle Sticks, Inc., wants its SAP/R3 system to print simple address labels such as the one shown here:


```
Ajax Swizzle Sticks, Inc.
888 157th Ave NE
Bellevue, WA   98989


              Recipient's Name
              Street Address
              City
              State          Zip
```

The return address stays the same on all labels, but each line of the recipient's address is variable. On the warehouse floor is a non-Windows computer running a SAP/R3 print system that will prompt the user for the recipient's name and address. This information will be inserted by the SAP/R3 print system into a BarTender-created printer code template and the resulting printer file will then be sent to a printer.

These are the steps to creating such a system.

1. In BarTender, select **Print** from the **File** menu and select the printer you will be using to print the label. (The printer driver must support exporting of printer code templates and that feature must be enabled in the driver's **Properties** dialog.)

2. For the return address, create a text object and place it in the upper left corner.

3. Double-click the object to open the **Modify Selected Text Object** dialog.

4. Click the **Text** tab and click **Paragraph** as the **Type**, then click **OK** to close the dialog.

5. Click the object to enter edit mode and enter the return address.

6. Create another text object and place it where the recipient's name should appear.

7. Double-click the object to open the **Modify Selected Text Object** dialog.

8. Click the **Font** tab and select a printer-based font.

9. Click the **Data Source** tab and enter "Recipient's Name" in the **Screen Data** box.

10. Click the **More Options** button to open the **More Data Source Options** dialog.

11. Click the **General** tab.

12. Select **Custom** in the **Source** drop down list and enter "Recipient's Name" in the **Name** box.

13. Be sure that **Add Field Delimiters** is checked.

14. Click **Close** and then click **OK**.

15. **Note**: There is no need to turn on prompting for the object because the prompting will be done by the SAPscript, not BarTender.

16. Repeat steps 6 through 14 to create, place, and configure text objects for "Street Address", "City", "State", and "Zip".

17. On the **File** menu, select **Export Printer Code Template**. On the sub-menu, select **SAPscript-ITF**.

18. Click **Export**. This will produce a template file somewhat like the one below. The exact appearance will vary depending on the printer you selected in step 1. (In this example, a Datamax printer was used.) Note the presence of the fields you created with their names encased in the SAPscript-ITF field delimiter, the "&" symbol.

```
/ ¬L
/ D11
/ PE
/ pG
/ SG
/ A2
/ 1Y1100001420008gfx1
/ sCfmt1
/ ¬L
/ D11
/ PE
/ pG
/ SG
/ rfmt1
/ ySW1
/ A2
/ 1911S0101040108P012P012&Recipient's Name&
/ 1911S0100790108P012P012&Street Address&
/ 1911S0100540108P012P012&City&
/ 1911S0100290108P012P012&State&
/ 1911S0100290202P012P012&Zip&
/ Q0001
/ E
/ ¬xCLfmt1
/ ¬zC
/ ¬xCGgfx1
/ ¬zC
/
```

19. Upload a copy of this file to a computer on the warehouse floor.

20. Configure SAP/R3 to open the SAPScript-ITF file and prompt the user for a recipient's name and insert it in place of the "**&Recipient's Name&**" in the template. Similarly, it should prompt for, and insert, the address, city, state, and Zip code. Finally, the SAP/R3 system should send the resulting file to the printer.

Available Seagull White Papers

General White Papers

- The Advantage of Drivers by Seagull
- Choosing the Right BarTender Edition
- Label System Security

Companion Applications

- Printer Maestro, Part 1: Enterprise Print Management
- BarTender Security Center
- BarTender Web Print Server

Recent Upgrades

- What's New in the Latest BarTender

Integration White Papers

- Integration Overview
- Commander
- Commander Examples
- BarTender's .NET SDKs
- BarTender's ActiveX Automation Interface
- Exporting Printer Code Templates
- Using BarTender with Terminal Services and Citrix MetaFrame
- XML Integration with Oracle's WMS and MSCA

Integration With SAP

- SAP Integration Methods
- Reading SAP IDocs
- SAP Auto Infrastructure Integration with BarTender

Miscellaneous White Papers

- BarTender Enterprise Licensing
- Printing International Characters Using BarTender
- BarTender Software Activation
- Using BarTender's Application Identifier Wizard
- Optimizing Label Printing Performance
- Status Monitor Overview
- Silent Install

For downloadable versions, visit:

www.seagullscientific.com/aspx/whitepapers.aspx

SEAGULL
S C I E N T I F I C
w w w . s e a g u l l s c i e n t i f i c . c o m