



Module Barcode

User's Guide

Version: 1
Update: November, 2004

Contents

Introduction to Papyrus	3
Barcode Module	4
Chapter 1 – Rulers based design.....	5
Barcode fonts	5
Barcode rulers	7
The Edit ruler.....	7
The Substitute ruler.....	8
Chapter 2 – Template based design.....	9
Barcode fonts	9
Barcode ruler.....	11

© Copyright 2001 by Sanskrit Software Systems Ltd., Moria Street, Haifa 34401, Israel. All Rights Reserved.

Information in this manual is subject to change without notice. No part of this publication may be reproduced or distributed in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Sanskrit Software Systems Ltd.

Papyrus is a registered trademark of Sanskrit Software Systems Ltd.

AS/400 is a registered trademark of IBM Corporation.

Microsoft Word is a registered trademark of Microsoft Corporation.

All other products or services referred to in this manual are the trademarks, service marks, or product names of their respective holders.

Introducion to Papyrus

Papyrus is a unique off-the-shelf software package providing total output management for AS/400. Papyrus offers on-line connectivity between AS/400 applications and MS-Office applications running under the Windows operating system on a personal computer. By integrating the organizational management and data processing capabilities of the AS/400 with the advanced graphic capabilities of the popular Microsoft word processor, Papyrus enables the organization to achieve a new level in document quality.



Figure 1. Papyrus output management

attaches pre-defined formatting parameters (fonts, colors, tables, etc.) to create the final output documents. It then sends the spools with their formatting parameters from the AS/400 to the Papyrus PC component. The PC component reformats the spool using MS-Word and sends the outcome document with its full graphic content to the desired output device.

Papyrus can also convert spools into Excel spreadsheets. The Papyrus Excel module is described in a separate user's manual.

In addition to the improvements in printing capabilities, Papyrus enables the routing of the reshaped documents to any of the PC network printers, sends them out as a fax or e-mail, and enables connectivity to other PC applications such as a computerized archive or the Internet.

A single Papyrus server provides print management and formatting services for the entire organization. Alternatively, several Papyrus servers can be used in parallel to increase the print throughput.

After definition of the formatting parameters for company documents, Papyrus works behind the scenes and is transparent to the user. The only variable elements are the company documents themselves, which are produced in a professional and attractive manner. This is done in the following way: an AS/400 application creates spool files, which are placed on the AS/400 output (print) queue. The regular Papyrus AS/400 component (non API) captures these spools and

Barcode Module

A barcode is made up of a series of parallel vertical bars and spaces. Barcodes are designed to convey information in a machine-readable format. In addition, some barcodes include a human readable portion so that human eyes can easily read the barcode. Barcodes always start with a special character, or symbol, that tells the machine scanning the barcode to start the reading process. (This start character will also tell the reader what bar code symbolism is being used.) A barcode always ends with a special character, or symbol, that tells the reader that this is the end of the barcode. (The stop character.)

Barcodes allow fast, easy and error-free input of data, and this is easy to implement with Papyrus.

Papyrus enables easy integration of barcodes into AS/400 printouts.

Papyrus is designed to capture spool files created on the AS400 output queues and automatically process them. The automatic process may include the encoding of strings to create barcodes.

Papyrus' Barcode solution is composed of a barcode font which graphically displays the data as barcode, and barcode rulers which automatically encode strings from spools.

The barcode fonts in this package are TrueType fonts. Each character in the font corresponds to its matching barcode pattern. To use a barcode font, you switch to the barcode font and enter the data that you want to encode. Windows will display this data as a barcode on screen and will print a barcode on virtually any printer connected to Windows.

The barcode rulers are built on formatting strings. The formatting string is a string that filters the source text from the spool. The barcode formatting strings activate a function which encodes the digits of the spool. So the barcode rulers automatically add the required control characters to the spool text, corresponding to the desired barcode type.

Once you apply the barcode solution on your spool files, Papyrus will print the data you specified, in the barcode font you specified, on any printer in the PC network and on most AS/400 network printers as well.

Chapter 1 - Rulers Based design

Barcode Fonts (on the PC)

Papirus supports barcode fonts that are supplied by Sanskrit Software Systems.

The barcodes fonts in this package are TrueType fonts. Each character in the font corresponds to its matching barcode pattern. TrueType fonts are scaled by changing their height. The character's width is altered proportionate to the change in height. When printing a barcodes you frequently want to control both its height and its width independent of each other, but unfortunately, printers and scanners can only handle a fixed range of print densities.

The first stage is to install the supplied barcode fonts in your Windows.

To add a new font to your computer:

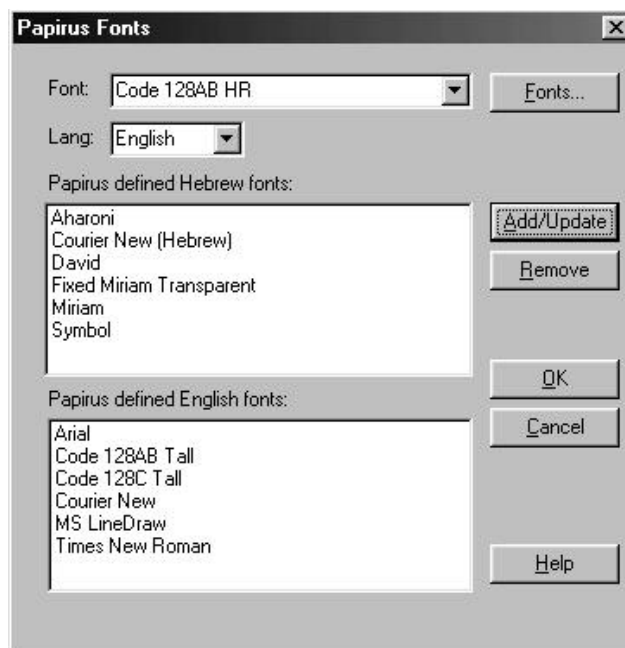
1. Click Start → Settings → Control Panel → double-click Fonts.
2. On the File menu, click Install New Font.
3. Click the drive, and then click the folder that contains the fonts you want to add.
4. Click the font you want to add.

Make sure the font is available to MSWord by opening a new Word document and writing a number in the new barcode font. The font should appear in the regular fonts list in MSWord.

The second stage is to add the supplied barcode font to Papirus' fonts list.

To add the font to Papirus' fonts list:

1. Click Start → Programs → Papirus → Papirus Setup.
2. On the Setup menu, click Papirus Fonts. The Papirus Fonts window will open:



The following table describes the available fields in this window:

<i>Field</i>	<i>Explanation</i>
Font	The font selected for printing.
Lang.	Font language (Hebrew/English).
Papyrus defined Hebrew fonts	The list of Hebrew fonts that were defined for use by Papyrus.
Papyrus defined English fonts	The list of English fonts that were defined for use by Papyrus.

The following table describes the available buttons in this window:

<i>Button</i>	<i>Explanation</i>
Add/Update	Add font displayed in the Font field.
Remove	Remove the highlighted font in one of the two Defined Fonts lists.
OK	Confirm changes and Exit.
Cancel	Cancel changes and Exit.

3. Select the desired font in the English language and press [Add/ Update].
4. Press [OK] to confirm the changes and exit.

The defined fonts will later become available on the AS/400 side of Papyrus and will appear on the list of fonts in the different formatting rulers.

Barcode Rulers (on the AS400)

In order to include the creation of barcode in a spool design two new rulers must be added for each barcode string. The two rulers are an Edit ruler and a Substitute ruler and they should be applied on the desired barcode string (for detailed information about defining areas and rulers please refer to the Papirus Word Module User's Guide p. 63).

The Edit Ruler

Define the area from the spool in which the desired string appears.

This string is about to be encoded and control characters will be added to it.

The area you define must be wide enough to contain the text from the spool and the control characters.

The number of the control characters is determined by the barcode technology. Every barcode technology uses a different number of control characters.

Apply an Edit ruler on that area.

In the Edit ruler Window press [F4] near the field English Font.

The Font table window will open:

Font table			13:33:05 10/04/01
Sanskrit			Sanskrit Systems
1-Select			
<u>Dpt No.</u>	<u>Description</u>		<u>Lang.</u>
- 05	Arial		Eng.
- 06	Courier New		Eng.
- 07	MS LineDraw		Eng.
- 08	Times New Roman		Eng.
- 09	Barcode		Eng.
- 11	iQs Code 128		Eng.
- 12	iQs Code 128		Eng.
- 13	Code 128C		Eng.
- 14	Code 128AB		Eng.
- 16	Bar Sample 128AB		Eng.
- 17	Code39 Barcode		Eng.
<u>1</u> 19	Code 128AB Tall		Eng.
			More...
F3=Exit F5=Refresh F8=Retreive fonts			

Press [F8] in order to retrieve new fonts from the PC.

Select the desired barcode font by pressing 1 next to it and [Enter].

Press [F2] for update.

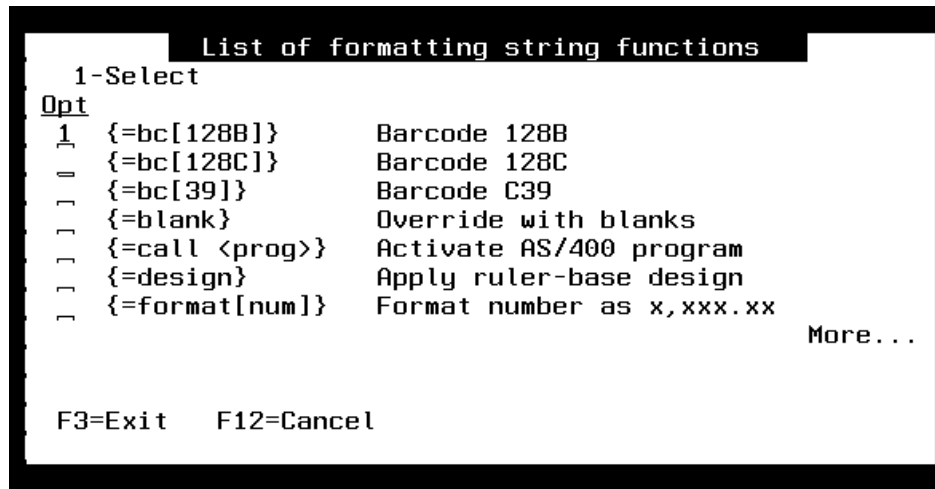
The Substitute Ruler

The Substitute ruler should be applied on the same area you defined for the Edit ruler.

You can copy that area by locating it in the Area Table and pressing 3 next to it and [Enter].

In the substitute ruler window press [F4] on the lines of the text.

The list of formatting string functions will appear:

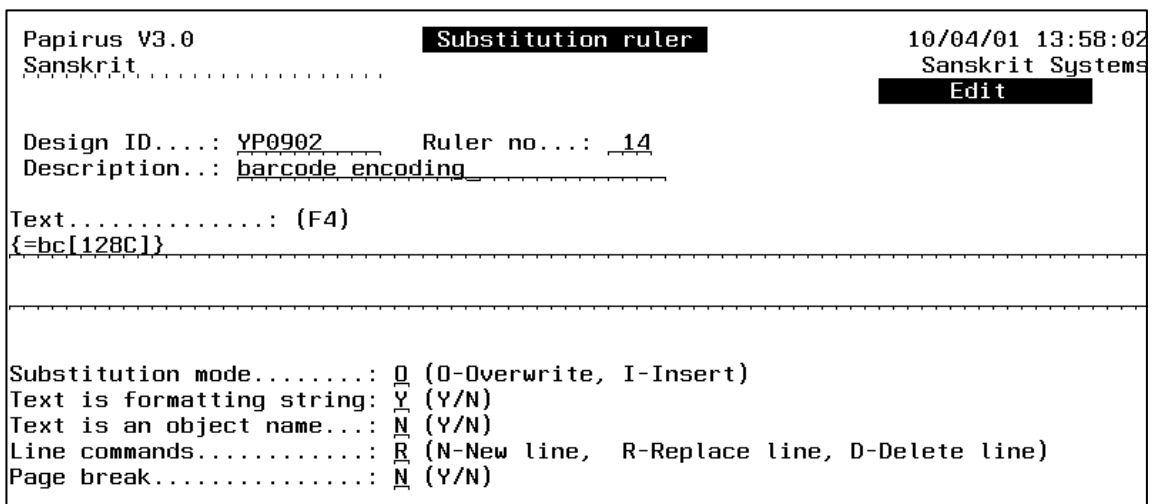


Formatting strings filter the source text from the spool. The barcode formatting strings encode the digits of the spool. The barcode formatting strings are written in this format: `{=bc[xxxx]}`.

Select the formatting string suitable for your desired barcode by pressing 1 next to it and [Enter].

You determine which formatting string to use according to the desired barcode technology.

For example, if you use barcode 128C, the suitable barcode formatting string is `{=bc[128c]}`.



In the options below the lines mark Y for the option: Text is a formatting string.

Press [F2] for update.

Add these two rulers for each desired barcode string. You may apply a different encoding and write each string in a different barcode font.

Chapter 2 - Template based design

Barcode Fonts (on the PC)

Papirus supports barcode fonts that are supplied by Sanskrit Software Systems.





The barcodes fonts in this package are TrueType fonts. Each character in the font corresponds to its matching barcode pattern. TrueType fonts are scaled by changing their height. The character's width is altered proportionate to the change in height. When printing a barcodes you frequently want to control both its height and its width independent of each other, but unfortunately, printers and scanners can only handle a fixed range of print densities.

The first stage is to install the supplied barcode fonts in your Windows.

To add a new font to your computer:

5. Click Start → Settings → Control Panel → double-click Fonts.
6. On the File menu, click Install New Font.
7. Click the drive, and then click the folder that contains the fonts you want to add.
8. Click the font you want to add.

The second stage is to add a new variable to the template that will hold the position for the barcode string. Open your template document in MSWord and add the variable with the sign '~' before and after it. For example: ~barcode~.

	Turtle Furniture Production, Buffalo, NY 14616 Tel: 718-6564444,  Fax: 718-6563333 				
Attn: ~client_addr1~ ~client_addr2~					
PURCHASE ORDER NO: ~ordno~ DATE: ~date~					
~abovetable~					
Catalog No.	Description	Model	Quantity	Unit Price	Total
~catalno~	~desc~	~draw~	~amnt~	~unitprice~	~total~
Total Ex-Works					~totalex~
Shipping					~ship~
Grand Total					~gtotal~
~conditions~					
<u>Please confirm and advise shipping details</u>					
			~signature~		

Place the variable in the desired location for the barcode string that will be created by Papirus.

Change the font in which the variable is written to the desired barcode font.

The barcodes fonts in this package are TrueType fonts, so the result will resemble a barcode string:



However, this is not a valid barcode because the string is not encoded yet.

Decide in which size and color you want to write the barcode string and apply this format on the variable.

Save the changes and close the document.

While processing spools, Papyrus creates temporary files which are based on the template document.

These temporary files are not updated automatically according to the changes in the template document.

In order to create new updated files, delete all the files (not folders) in the temp directory which is located under the Papyrus directory on the Papyrus server.

Once the spool design on the AS400 is complete, Papyrus will merge data from the spool file into the barcode variable creating a barcode string.

Barcode Ruler (on the AS400)

In order to include the creation of barcode in a spool design a new Field ruler must be added. The Field ruler should be applied on the desired barcode string (for detailed information about defining areas and rulers please refer to the Papirus Word Module User's Guide p. 63).

The Field Ruler

Define the area from the spool in which the desired string appears.

This string is about to be encoded and control characters will be added to it. The area you define must be wide enough to contain the text from the spool and the control characters. The number of the control characters is determined by the barcode technology. Every barcode technology uses a different number of control characters.

Apply a Field ruler on that area.

Papirus V3.0	Field ruler
Sanskrit	
Design ID....: <u>YP0902</u>	Ruler no....: <u>30</u>
Description..: <u>barcode</u>	
Field.....: <u>BARCODE</u>	(F4)
Formatting string.....: (F4)	
{=bc[128B]}	

Text is an object name...: <u>N</u>	(Y/N)
Clear spool area.....: <u>N</u>	(Y/N)

In the field name enter the name of the variable you wrote earlier in the template document. The variable name should be written without the '~'.

In our example the name of the variable is "barcode".

Press [F4] on the lines of the formatting string. The list of formatting string functions will appear:

List of formatting string functions		
1-Select		
<u>Opt</u>		
<u>1</u>	{=bc[128B]}	Barcode 128B
=	{=bc[128C]}	Barcode 128C
]	{=bc[39]}	Barcode C39
]	{=blank}	Override with blanks
]	{=call <prog>}	Activate AS/400 program
]	{=design}	Apply ruler-base design
]	{=format[num]}	Format number as x,xxx.xx
		More...
F3=Exit F12=Cancel		

Formatting strings filter the source text from the spool. The barcode formatting strings encode the digits of the spool. The barcode formatting strings are written in this format: {=bc[xxxx]}.

Select the formatting string suitable for your desired barcode by pressing 1 next to it and [Enter].

You determine which formatting string to use according to the desired barcode technology.

For example, if you use barcode 128B, the suitable barcode formatting string is {=bc[128b]}.

In the options below the lines mark N for both options.

Press [F2] for update.

Add this ruler for each desired barcode string. You may apply a different encoding and write each string in a different barcode font.