Black Ice Software

April Developer Newsletter

Tax Time

Median Filter Now in Barcode SDK!

There are new functions in the PDF-417 barcode dynamic link library and ActiveX control for searching barcodes on the image using a median filter. If the image is noisy: for example scanned or faxed, the barcode algorithms may not find the barcode on the picture. In this case you should use the new barcode functions, which using nonlinear median filter before detecting barcodes improves the ability to read.

A median filter operation on an image removes long tailed noise such as negative exponential and salt and pepper type noise from the image with a minimum blurring of the image. Median filter is defined as :

$$Median(A) = median[A(x + i, y + j)]$$

where the coordinate (x+i, y+j) is defined over the image A and the coordinate (i, j) is defined over the N x N size square mask.

Black Ice Software Announces Print2FTP for the Printer Drivers!

Print2FTP transfers printed images to a specified FTP server. The application starts after the printing is finished, and will then copy all printed images to the FTP server. Print2FTP has C++, Visual Basic, C#, and J# versions in Visual Studio 2005, and Delphi in Borland Delphi 5.

The C++ program uses the **BiPrint2FTP.dll** dynamic link library for transferring files to the FTP server, while the Visual Basic, Delphi, C# and J# programs use the **BiPrint2FTP.ocx** ActiveX control. The dll and ocx were also written in Visual Studio 2005, and the dll uses the *CInternetSession* and *CFtpConnection* classes.

The entire source of the sample programs, BiPrintToFTP.dll and ocx is provided in the Printer Driver Resource Tool Kit.

If you want to configure the program, start the executable without parameters, you will get a box similar to **Figure 1**.

Save some extra money this Tax Season...

15% off all DEVELOPMENT TOOLS!

(Median Filter Continued from page 1)

You can specify the value of the N as a parameter in the new barcode functions. You can also display a progress bar during filtering the image for the user.

About new BiBrP417.dll barcode functions.

The new barcode functions work for only monochrome (black and white), 8 bit per pixel and 24 bit per pixel images. The names of the new functions in BiBrP417.dll are: ReadPDF417BarcodeRemoveNoise, ReadAllPDF417Barcodes-RemoveNoise and PDF417RemoveNoise.

ReadPDF417BarcodeRemoveNoise

This function uses the median filter on the image and then reads and decodes a PDF-417 Barcode with any orientation in the given range of the input image and returns the decoded string.

ReadAllPDF417BarcodesRemoveNoise

This function uses the median filter on the image and then reads and decodes any of the barcodes on the image.

PDF417RemoveNoise

This function uses the median filter on the image and returns the newly created DIB.

Example of using new functions in C++

int ErrCode, FilterSize, QuietZoneSize, N, BarCodeNum = 0;

// The function displays progress bar during filtering
HANDLE hRet = ReadAllPDF417BarcodesRemoveNoise (pDoc->hDib, N, DISPLAY_PROGRESS, AfxGetMainWnd()->m_hWnd, NULL, FilterSize, QuietZoneSize, &BarCodeNum, &ErrCode);

About new BiBrP417.ocx barcode methods.

The names of the new barcode methods are ReadPDF417Bar-codeRemoveNoise and ReadAllPDF417BarRemoveNoise.

ReadPDF417BarcodeRemoveNoise

This method uses the median filter on the image and then reads and decodes a PDF-417 Barcode with any orientation in the given range of the input image and returns the decoded string.

ReadAllPDF417BarRemoveNoise

This method uses the median filter on the image and then reads and decodes all the barcodes on the image.

Example of using new methods in VB.NET

Dim hDib As Long
Dim ret As Long
Dim BarcodeNum As Integer
Dim N As Short

` 1: show progress bar during filtering
ret = view.BiBrP417.ReadAllPDF417BarRemoveNoise(hDib, N, 1, Handle.ToInt32())
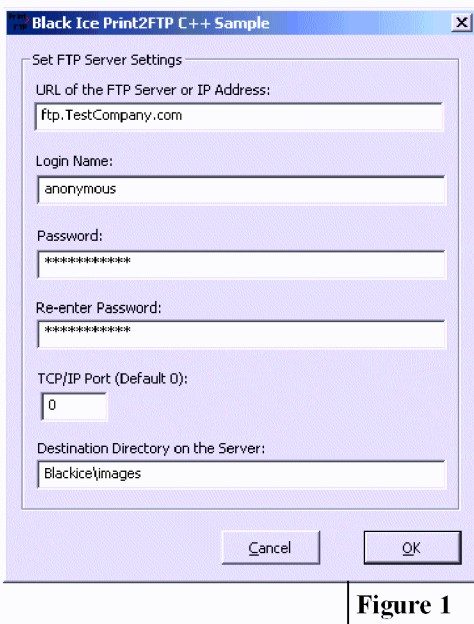
BarcodeNum = view.BiBrP417.GetBarcodeNum()

Black Ice Print2FTP C++ Sample

Set FTP Server Settings

URL of the FTP Server or IP Address:
ftp.TestCompany.com

Login Name:
anonymous

Password:
****

Re-enter Password:
****

TCP/IP Port (Default 0):
0

Destination Directory on the Server:
Blackice\images

Cancel   OK

Figure 1

(Print2FTP Continued from page 1)
You can specify the name of the server, the login name, the password, the TCP/IP port and the destination directory. If you specify only the server and the destination directory, the application uses anonymous login with no password, and the default TCP/IP port. The server name and the destination directory are required fields.

If the printer driver starts Print2FTP, a pop-up window is displayed. This window shows the state of the transfer. If the transfer fails because of incorrect FTP server information, you can modify the login settings and resend the images.

Configuring the Printer Driver for using Print2FTP Program

Open "Printing Preferences…" and select the "Start Application" tab. Check the "Enable Start Application" checkbox, and enter the path to the Print2FTP executable. The application uses 6 parameters: Document Name, Group File Name, Printer Name, Number of Pages, Multipage and Orientation.

Select the "Start After Printing" option and Print2FTP will start after printing, and transfer the generated files to your FTP.

Printer Driver Tips and Tricks – Maintaining the Same Input and Output Filename

Often times it is desirable to create an application using the Black Ice printer drivers which generates output files with the same name as the input files. For example, printing "Test.doc" to the Black Ice Printer Driver and getting an output file called "Test.pdf".

The Black Ice printer driver supports seven filename generation methods:

- Use the prefix and extension
- Prefix and extension from the registry
- Prefix and extension from the INI file
- Exact filename
- Exact filename from the registry
- Exact filename from the INI file
- Use the document name

In the past, the "Use the document name" has created some confusion among our customers. Many developers, when printing programmatically to the Black Ice printer, would like to use the file name of the original printed document as the file name of the generated image file. This is not directly possible since printer drivers are not aware of the name of the file printed by the printing application. When a printer driver prepares the print job, the printing application can pass a string to the printer driver specifying the document name, but in most cases that is not the same as the actual file name. For ex-

ample if Word prints a file called test.doc, the document name passed by Word to the printer driver will be "Microsoft Word – test.doc".

There are two basic types of printing involving the Black Ice printer drivers: Program driven and User driven. Depending on how the Black Ice printer driver is receiving print jobs, you will want to proceed differently to maintain the same filenames

Program Driven:

1. When printing is done programmatically, the printing application knows the name of the file which is going to be printed. Before printing, the application must read the name of the source file.

2. Once you have the name of the source file, use the BlackIceDEVMODE.dll or BlackIceDEVMODE.ocx controls to change the filename generation method to "Use exact filename" and set the output file name using the SetImageFile-Name() function to the desired file name. Cutting the extension of the original file, and replacing it with the file extension for the current file type can create the desired file name. Use the GetFileExtension() function to get the file extension for the currently used file format.

Using these simple steps it is possible to

create images having the source document's name. The Black Ice Printer Driver RTKs include simple sample applications which demonstrate the above steps and can be used as a starting point for implementing this functionality in your own application.

User Driven:

Using the custom plug-in functionality of the Black Ice Printer Drivers, developers can perform custom actions at various stages in the printing process. To maintain the same file names, developers can do the following:

1. Use the custom plug-in at the StartDoc phase of printing and call the GetDocumentNameFromJobInfo function/method of the BlackIceDevmodeControls to retrieve the name of the document passed to the printer by the printing application.

2. Parse the text string for known strings added to the file name by the printing application. Some examples of how printing applications pass the document name are available in **Figure 2** below.

3. Use the DocumentName function/method of the Black Ice printer drivers to set the output filename to the modified string.

4. Resume printing

Figure 2			
Application	**Prefix**	**Suffix**	**Other**
MS Word	"Microsoft Word – "	N/A	N/A
Notepad	N/A	" – Notepad"	Words in filename connected with underscores
Adobe Acrobat	N/A	N/A	N/A
MS Excel	N/A	N/A	N/A
MS Publisher	N/A	N/A	N/A

BLACK ICE
SOFTWARE, LLC

292 Route 101
Amherst, NH, 03031

Phone: 603-673-1019
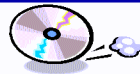Fax: 603-672-4112
E-mail: sales@blackice.com

Inside

Median Filter Now in Barcode SDK!, Black Ice
Software Announces Print2FTP for the Printer
Drivers!, Printer Driver Tips and Tricks— Maintain-
ing the same Input and Output Filename.

Time to upgrade? Latest Version Numbers

Printer Drivers

Printer Drivers for ME/98/95 Monochrome, Color, ColorPlus, EMF, PDF	5.80	8/01/05
Printer Drivers for XP/2000/NT Color, ColorPlus, EMF, Monochrome, PDF	9.81	2/28/06
Printer Drivers for 2003, Citrix and Terminal Servers Color, ColorPlus, EMF, Monochrome, PDF	9.81	2/28/06

Free Software

Impact ColorFax Lite	7.01	02/28/06
Tiff Viewer Plug-in - Free Version	6.40	3/15/06
ModemWeasel	2.00	8/01/02

Internet Tools

Print2Email	5.10	3/16/06
Tiff Viewer Plug-in - Complete	6.40	3/15/06
Print Monitoring Server	3.00	9/16/04
ePrintAnywhere	2.41	2/28/06
Voice2Email	2.00	10/01/05

Fax, Voice and Image Toolkits

Fax C++/ActiveX	12.14	4/1/06
Voice C++/ActiveX	12.14	4/1/06
Document Imaging SDK/ActiveX	10.54	03/03/06
PDF Plug-in	10.54	03/03/06
Annotation SDK/ActiveX	10.54	03/03/06
Image SDK/ActiveX	10.54	03/03/06
Tiff SDK/ActiveX	10.54	03/03/06
Cover Page Generator SDK/ActiveX	10.54	03/03/06
Barcode SDK/ActiveX	4.40	2/16/06

Impact Products

Impact Fax Server	7.00	04/01/06
Impact Fax Broadcast	5.00	9/01/05
Impact Fax on Demand	4.06	12/01/00
Impact ColorFax	7.01	2/28/06
Drag and Drop Printing	2.00	12/24/02