



Black Ice Newsletter

Black Ice Software, Inc.



NEW FEATURES IN THE VERSION 9.0 PRINTER DRIVERS

In addition to their increased printing speeds, Version 9.0 of the Black Ice printer drivers contain several additional enhancements which can greatly assist developers.

from the BLICECTR.DLL using C++.

Print Progress reported in Group File

Starting with Version 9.0 of the Black Ice printer drivers, the status of the print job is updated within the group file. When printing is started, the Black Ice printer driver will write the message "Printing started" in the Group File header. Once

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Updated Messaging Interface

The Messaging Interface for all of the Black Ice printer drivers have been updated to create a unified messaging interface between the XP/2000/NT, Terminal Servers, and Window 9X printer drivers by using the newly added StartCapture method.

Additionally, developers can now access the Real Time Printer Hook functionality using the Message Capture OCX. Previously, the Real Time Printer Hook could only be accessed directly

StartCapture Method

StartCapture (PrinterName as String, MessagingInterfaceMethod a Long) as Integer

The StartCapture() method is used to initialize the message capturing process. PrinterName represents the name of the printer which is monitored, such as "Black Ice Color". The MessagingInterfaceMethod selects the desired message capture method to be used.

Possible values are:

- 1 - CopyData method
- 2 - Broadcast messages to all applications
- 3 - Pipe interface is used. To use the real Time Printer Hook, use this option.

StartCapture returns 0 on success and nonzero if an error occurs.

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ENHANCED INTERNET IMAGING - HTML PRINT AND SCAN

Version 10.27 of the Black Ice Imaging Toolkits (TIFF, Image and Document Imaging SDK/ActiveX) include the addition of the PrintDIBPageEx method. The PrintDIBPageEx method allows developers to print images directly from an HTML page using programming lan-

guages such as Java and VBScript.

Additionally, the latest release of the Black Ice Imaging Toolkits include a new sample application which demonstrates how to acquire images from TWAIN compatible devices from an

HTML page. The new HTML scanning sample code has been added to the toolkits and can also be accessed directly from the Black Ice website at the following address:

<http://www.blackice.com/ImageInternet.htm>

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printing has finished successfully, the printer driver will update this message to read "Printing finished successfully". If an error occurred during the printing process, the printer driver will write an error message in place of the "Printing Finished successfully" message.

The Black Ice recommended application notification method is using the messaging interface. However, this new addition to the Black Ice printer driver allows developers to write applications which monitor the group file to determine when printing is finished and may be useful in specific situations.

Modify Start Application Before Printing Timing

By adding an entry to the INI file, developers can specify the amount of time that the Black Ice printer drivers will wait for an application which is launched before printing to initialize. This way developers can force the printer driver to wait for their application's messaging interface to fully start, ensuring that no printer driver messages are missed due to slow starting applications.

Developers can specify a delay time by entering the following line into the printer driver INI file

[Default Settings]

Start Application Timeout=5000

The value is specified in milliseconds.
5000 = 5 seconds.

HOW TO DECODE A SCANNED, FAXED OR PRINTED BARCODE SYMBOL

Faxing Barcode Symbols

There are many cases where a developer will want to decode a barcode symbol which was faxed using either the Fax C++/ActiveX or some other means. Fax transmissions are highly susceptible to acquiring "noise" during the transmission which may block or break parts of the transmitted barcode. When faxing barcode symbols using the Fax C++/ActiveX, make sure that ECM (Error Correction Mode) is enabled, and try to send the faxes in Fine Fax resolution (204 x 196).

When faxing from a fax machine, often times this will result in white lines from the top of the image all the way to the bottom. If one of these white lines happens to split a single black bar from top to bottom, then that barcode symbol may no longer be recognized/decoded. In order to avoid this type of problem, the barcode symbol should be printed vertically onto the page.

Printing Barcode Symbols

Printing an image which contains a barcode and maintaining a high symbol recognition rate can be difficult, especially if the image must be scaled before printing. Scaling an image can

produce distortion in the printed image and can result in low recognition rates.

For best results, the image that the Barcode symbol is created on should have settings which are as close as possible to the printer settings. For example, if printing to a printer which uses a resolution of 600 DPI, the initial image should be created with 600 DPI. Using the same DPI in your image and printer will allow the image containing the barcode symbol to be printed without having to perform any scaling to the image.

When printing from an application which will scale images to fit the printed page, if the image DPI and printer DPI cannot be matched for some reason, try to set the printer and Image DPI to fall within an integer ratio, such as 2:1. For example, with a 200 DPI image file, print to a printer using 600 DPI. This way, every pixel in the original image will be doubled, resulting in no additional distortion. Printing a 200 DPI image to a 300 DPI printer will result in every other pixel being doubled, which can add severe distortion to the barcode symbol, even though the barcode may appear correct to the human eye.

Reliably Decoding Barcode Symbols

In order to reliably read and decode barcode, the portion of the image containing the bar-

code symbol must contain a sufficient number of pixels. Barcode decoding rates are tied to the number of pixel contained in the horizontal direction for each element in the barcode. Barcode elements that are at least two pixels wide produce reliable decoding rates, as long as the angle of skew is kept relatively low. Elements with a pixel width of four or more produce can reliably be decoded no matter the skew angle. Images which do not meet these base requirements (containing single pixel wide elements or high levels of skew and low pixel widths) may be impossible to decode. Printer, scanner, and camera resolution also play a part in a barcode symbols decoding rate.

For best results when decoding barcode symbols, try to enlarge the printed symbol, increase the scanner, camera or printer DPI, or move the camera closer to the object. Performing as many of these steps as possible will increase the number of pixels in each barcode element. The more pixels per element, the higher the overall decoding success rate.

TEXT EXTRACTION WITH THE BLACK ICE PRINTER DRIVERS

The Black Ice printer driver, besides generating an image from the printed document, is also capable of extracting the text information from the printed document.

The text extracted from the document is saved as a standard text file which can then be processed as necessary. The text file will have the same name as the image, but using .txt extension. To enable text extraction, check the **Write text file** option from the **File Formats** tab.

If the **Generate Multipage Image** option is checked, in the case that the printed document contains more than one page, all of the extracted text will be saved into a single text file. The text file will contain delimiters for each new page in the "Page 1:", "Page 2:" format. If the **Generate Multipage Image** option is not checked, a separate text file will be generated for each page generated by the driver. The text file will contain the lines below:

By default the text file is generated as ANSI text, however UNICODE text is also supported. In order to turn on the UNICODE text support use the **Eastern character support** option from the **File Formats** tab.

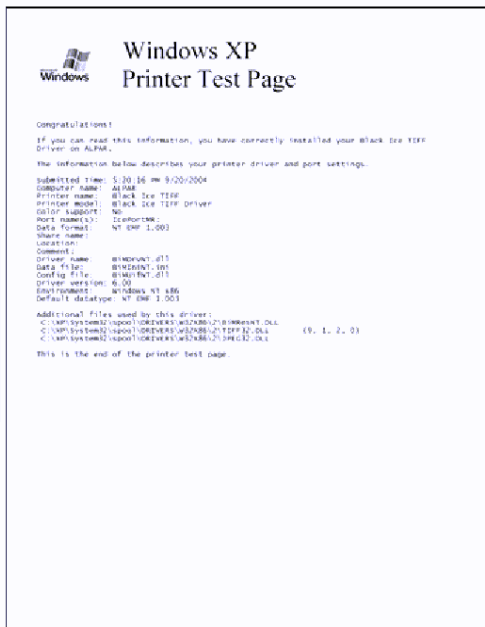


Figure 1. The image generated by printing a test page

Advanced text out

In order to retrieve the exact coordinates of the text from the printed document, use the advanced text out feature by checking the **Save position and style** option from the **File Formats** tab.

When using the **Save position and style** option, next to every line of text the printer driver saves to the text file will be the name of the font, the font size, the font style (Bold, Italic, Underline) and also the coordinates of the text in pixels.

The coordinates are relative to the upper left hand corner of the image. The first two numbers are the X and Y coordinates of the beginning of the text (top left corner of the text). The third and fourth values are the coordinates of the end of the text (lower right corner).

If the text has a style, the style is saved as I, B, U in the [,] signs, like this: [B,I] for Bold and Italic.

Standard Text Extraction

Page 1:
 Windows XP
 Printer Test Page
 Congratulations!
 If you can read this information, you have correctly installed your Black Ice TIFF Driver on ALPAR.
 The information below describes your printer driver and port settings.
 Submitted Time: 5:17:00 PM 9/20/2004
 Computer name: ALPAR
 Printer name: Black Ice TIFF
 Printer model: Black Ice TIFF Driver
 Color support: No
 Port name(s): IcePortMR:
 Data format: NT EMF 1.003
 Share name:
 Location:
 Comment:
 Driver name: BiMdrvNT.dll
 Data file: BiMIniNT.ini
 Config file: BiMUifNT.dll
 Driver version: 6.00
 Environment: Windows NT x86
 Default datatype: NT EMF 1.003
 Additional files used by this driver:
 C:\XP\System32\spool\DRIVERS\W32X86\2\BIMResNT.DLL
 C:\XP\System32\spool\DRIVERS\W32X86\2\TIFF32.DLL (9, 1, 2, 0)
 C:\XP\System32\spool\DRIVERS\W32X86\2\JPEG32.DLL
 This is the end of the printer test page.

Advanced Text Extraction

```
[[600,150,1306,300][32][,][,][Times New Roman]]Windows XP
[[600,300,1511,450][32][,][,][Times New Roman]]Printer Test Page
[[150,600,550,642][10][,][,][Lucida Console]]Congratulations!
[[150,684,2225,726][10][,][,][Lucida Console]]If you can read this information,
you have correctly installed your Black Ice TIFF
[[150,726,550,768][10][,][,][Lucida Console]]Driver on ALPAR.
[[150,810,1900,852][10][,][,][Lucida Console]]The information below describes
your printer driver and port settings.
[[150,894,1050,936][10][,][,][Lucida Console]]Submitted Time: 5:43:22 PM
9/20/2004
[[150,936,675,978][10][,][,][Lucida Console]]Computer name: ALPAR
[[150,978,900,1020][10][,][,][Lucida Console]]Printer name: Black Ice TIFF
[[150,1020,1075,1062][10][,][,][Lucida Console]]Printer model: Black Ice TIFF
Driver
[[150,1062,600,1104][10][,][,][Lucida Console]]Color support: No
[[150,1104,800,1146][10][,][,][Lucida Console]]Port name(s): IcePortMR:
[[150,1146,850,1188][10][,][,][Lucida Console]]Data format: NT EMF 1.003
[[150,1188,550,1230][10][,][,][Lucida Console]]Share name:
[[150,1230,550,1272][10][,][,][Lucida Console]]Location:
[[150,1272,550,1314][10][,][,][Lucida Console]]Comment:
[[150,1314,850,1356][10][,][,][Lucida Console]]Driver name: BiMdrvNT.dll
[[150,1356,850,1398][10][,][,][Lucida Console]]Data file: BiMIniNT.ini
[[150,1398,850,1440][10][,][,][Lucida Console]]Config file: BiMUifNT.dll
[[150,1440,650,1482][10][,][,][Lucida Console]]Driver version: 6.00
[[150,1482,900,1524][10][,][,][Lucida Console]]Environment: Windows NT x86
[[150,1524,900,1566][10][,][,][Lucida Console]]Default datatype: NT EMF 1.003
[[150,1608,1075,1650][10][,][,][Lucida Console]]Additional files used by this
driver:
[[150,1650,1425,1692][10][,][,][Lucida Console]] C:\XP\System32
\spool\DRIVERS\W32X86\2\BIMResNT.DLL
[[150,1692,1375,1734][10][,][,][Lucida Console]] C:\XP\System32
\spool\DRIVERS\W32X86\2\TIFF32.DLL [[1550,1692,1850,1734][10][,][,][Lucida Con-
sole]](9, 1, 2, 0)
[[150,1734,1375,1776][10][,][,][Lucida Console]] C:\XP\System32
\spool\DRIVERS\W32X86\2\JPEG32.DLL
[[150,1818,1175,1860][10][,][,][Lucida Console]]This is the end of the printer
```

BLACK ICE

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Inside

**New V 9.0 Printer Driver Features,
 Scan and Print from HTML and more**



Time to upgrade?



Latest Version Numbers

Printer Drivers

Product	Version	Date
Color Printer Driver for Win95/98/ME	5.65	10/28/04
Metafile Printer Driver for Win95/98/ME	5.65	10/28/04
Mono Printer Driver for Win95/98/ME	5.65	10/28/04
PDF Printer Driver for Win95/98/ME	5.65	10/28/04
Mono Printer Driver for NT/Win2000/XP	9.00	10/28/04
Color Printer Driver for NT/Win2000/XP	9.00	10/28/04
Mono Printer Driver for NT/W2K/XP	9.00	10/28/04
Metafile Printer Driver for NT/W2K/XP	9.00	10/28/04
PDF Printer Driver for NT/W2K/XP	9.00	10/28/04
Terminal Server Printer Drivers/2003	9.00	10/28/04

Impact Products

Product	Version	Date
Impact Fax Server	4.36	02/18/04
Impact Fax on Demand	4.06	12/01/00
Impact Fax Broadcast	4.00	09/13/04
Impact ColorFax	6.00	07/22/04
Drag and Drop Printing	2.00	12/24/02

Fax, Voice and Image Toolkits

Product	Version	Date
Fax C++/ActiveX/COM	11.0	11/01/04
Voice C++/ActiveX/COM	11.0	11/01/04
Tiff SDK/ActiveX/COM	10.28	11/15/04
Annotation SDK/ActiveX/COM	10.28	11/15/04
Cover Page Generator SDK/ActiveX	10.28	11/15/04
Image SDK/ActiveX	10.28	11/15/04
Document Imaging SDK/ActiveX	10.28	11/15/04
Barcode SDK/ActiveX	4.10	10/04/04

Free Software

Product	Version	Date
Impact ColorFax Lite	6.00	07/22/04
Tiff Viewer Plug-in - Free Version	6.00	07/22/04
ModemWeasel	2.00	08/01/02

Internet Tools

Product	Version	Date
Print2Email	3.01	01/20/03
Tiff Viewer Plug-in - Complete	6.00	07/22/04
Print Monitoring Server	2.40	04/02/04