Black Ice Newsletter

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Document Imaging SDK/ActiveX is here!

Black Ice Software is proud to announce the availability of its highly anticipated Document Imaging SDK/ActiveX product.

The new Document Imaging SDK/ActiveX is built upon Black Ice technology that was available and used by customers for many years in products like TIFF SDK/ActiveX, Annotation SDK/ActiveX and Image SDK/ActiveX, but also includes many new features that have been developed exclusively for the Document Imaging SDK/ActiveX product.

Document Imaging SDK/ActiveX is a software development tool that helps application developers and programmers to create applications with sophisticated image processing capabilities. The SDK works on every Windows operating system from Windows Server 2003 to Windows 95 and because it includes both C/C++ libraries and ActiveX controls, the functionality of the product can be accessed from most programming languages like C, C++, Visual Basic, Delphi, MS FoxPro, MS Access. Document Imaging SDK/ActiveX is also .NET compatible meaning that VB.NET, C# and J# programmers can also take full advantage of the product.

Structurally, Document Imaging SDK/ActiveX

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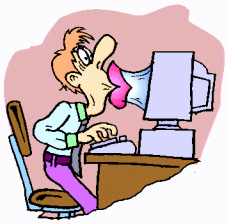

BLACK ICE PRINTER DRIVERS - New exciting additions!

Printer driver profiles introduced.

Black Ice printer drivers can be used to generate image files for different types of applications. All these applications require a different set of printer settings like file format, resolution, paper size, etc. For example to generate images for a fax server, the printer driver has to be set to generate monochrome TIFF images. However to generate images for a document archiving application the printer needs to be set to generate full color, high resolution JPEG files.

When a user wants to switch the printer from one application to another and the application does not provide an automatic way for changing printer settings, the user not only has to know which settings must be changed to fulfill the requirements of the other application, but also has to change all the settings manually. This is a time consuming task and it could cause problems if the user makes a mistake by settings printer driver parameters to incorrect values.

To provide a solution to this problem, printer driver profiles have been introduced. A printer driver profile stores every printer setting at a given moment. This means that one can have separate profiles for different applications and

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consists of a set of DLLs and ActiveX controls. Each DLL and ActiveX control implements a specific, well-defined feature set which is designed to help developers to pinpoint specific functionality.
Based on the above structure, Document Imaging SDK/ActiveX can be divided into the following main components:

File formats (loading, saving and converting images from one format to another):

Document Imaging SDK/ActiveX supports several file formats. From simple BMP files to more complex TIFF and JPEG files, everything is included. The Document Imaging SDK can help create standard Group 3 1D, Group 3 2D or Group 4 faxable TIFF files, create JPEG files for web sites, color faxing or photo albums, or use other formats like PCX, DCX, PNG. And that's not all! The TIFF and JPEG libraries developed by Black Ice Software are one of the first, most used TIFF and JPEG encoding/decoding libraries available on the market.

Display:

Document Imaging SDK/ActiveX includes a very powerful feature that makes displaying images to any display device easy.
When displaying images on display devices, there are several issues that have to be addressed. The color depth of the displayed image can be different from the color depth of the display device. The size of the image could be much bigger or much smaller than the size of the window that displays the image. In this case either the image has to be stretched/compressed to the right size or scroll bars must be used. Also, users may want to select an area of the image that is displayed or they may want to zoom in to view the details of an image area.
The display feature included in Document Imaging SDK/ActiveX provides an easy to use solution for all the above problems. Application developers now do not have to spend expensive engineering time implementing complicated display routines. Just a few function calls and the Black Ice display routine will do the rest.

TWAIN scanner support:

Scanning support is based on the latest TWAIN 1.9 drivers. With the latest TWAIN drivers, application developers have total control over almost every aspect of the scanning process. Parameters that affect the way that documents are being scanned can be retrieved and changed. Applications can set the brightness and contrast of the scanned documents, can specify the area of the document that should be scanned and they even have control over the resolution and the color depth of the scanned image. Applications can even turn on and off the use of the document feeder that some newer scanners have to do batch scanning or automated scanning.

Image Processing:

Document Imaging SDK/ActiveX includes a huge number of image processing functions, some of which are typically found only in high performance end-user programs such as Adobe PhotoShop®. The image processing functions are separated into three categories: Filters and Effects, Color conversion functions and Image processing functions.

Filters and effects are designed to change the appearance of an image by applying sophisticated mathematical algorithms to the image. The Document Imaging SDK includes almost 50 different filters and effects that provide developers access to image processing tools that could take years to develop.
The below sample illustrates the result of a Laplacian edge detector applied to an image. the resulted image was also inverted to better present the result of the Laplacian filter.

Picture 1: Original Image

Picture 2: After processing

All the filters come with an optional preview dialog that allows users to change parameters of the filter and preview the result. The following screen capture (next page) shows the preview dialog box of the Hue/Saturation modifying function:

Color conversion functions implement features that change the way how colors are represented in images. Today's devices represent colors in many different ways. Some devices like printers accept 1 bit monochrome images, others accept

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(New exciting additions - Continued from page 1)

switching from one application to another means that another printer driver profile should be loaded. Users do not have to know what settings the application requires and they do not have to make printer settings changes manually. They simply select another profile from the profile list and the printer driver will make all the necessary changes automatically.

Custom command line parameters.

Black Ice printer drivers are capable of launching an application and passing command line parameters to the launched application. Command line parameters contain print job related information like document name, printer name, generated image and group file names, etc, however the number, the order and the content of the command line parameters passed to the application is hard coded and cannot be changed.

To make the process of launching applications more flexible, the newest version of the Black Ice printer drivers allow users to specify which command line parameters they want to pass to the application and in what order. With this addition, Black Ice printer drivers can easily integrate with existing applications like image viewers, editors etc. by passing only the parameters that the given application expects.

Easily restore printer defaults.

In some cases, printer driver users may want to reset printer settings to the original values that were set when the printer driver was installed. By doing this, users can easily fix problems that are caused by some incorrect printer setting modifications.

To address this issue, the latest version of the Black Ice printer drivers have a "Restore defaults" button available on the printer driver user interface. By pressing this button the printer driver will reset all its settings to the original values that were set at installation time.

Restrict available file formats from the printer driver's INI file

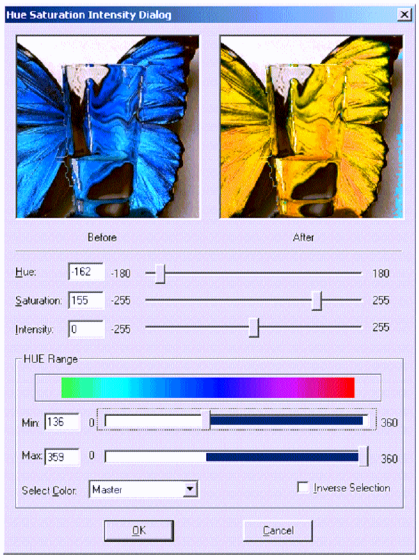
The latest version of the Black Ice printer drivers allow developers and printer driver users to control the list of file formats that are displayed in the printer driver user interface by modifying the printer driver's INI file. By limiting the number of available formats, the user will be limited to select from a limited number of file formats that are compatible with the developer's application and this way limiting possible file incompatibilities.

Pass TIFF DIB in memory

In response to customer requests, Black Ice printer drivers are now capable of generating TIFF images and DIBs (Device Independent Bitmaps) in memory and pass image data to an application that integrates with the printer driver.

Some applications do not want to save the generated images to a file and in these cases this new feature provides an easy to implement solution. The application does not have to retrieve the image file name through the printer driver's messaging interface or from the group file, it will simply capture the image data from the printer driver and the image is ready to be processed.

(Document Imaging - Continued from page 2)



Picture 3: Preview Window

24 bit full color images. But there is a difference also in the method how colors are encoded. Some devices, like display devices work with RGB colors. Others use CMYK colors.

The Document Imaging SDK/ ActiveX makes it easy to convert between different color depths and color spaces. There are nine dithering methods available and the SDK can convert between nine color spaces easily.

Image processing functions are used to make images look better or correct and remove visual artifacts from images. These image processing feature are sometimes use together with filters and effects to produce better results. The Document Imaging SDK implement several image processing methods that can provide solutions to problems that happen mostly during faxing or scanning. Just to enumerate a few of the algorithms, there are skew, de-skew algorithms available, there is an automatic black border remover, punch hole remover and clean image algorithm available.

In the following issues of the Black Ice Newsletter we will present several Document Imaging SDK/ ActiveX features in more detail. We will also illustrate different areas of application for these features.

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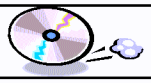
Inside

Document Imaging SDK/ActiveX is here!

Time to upgrade?



Latest Version Numbers

Programming Tools

Product	Version	Date
Fax C++/ActiveX/COM	9.17	08/06/03
Voice C++/ActiveX/COM	9.17	08/06/03
ColorPrinter Driver for Win95/98/ME	5.57	07/28/03
Metafile Printer Driver for Win95/98/ME	5.57	07/28/03
Mono Printer Driver for Win95/98/ME	5.57	07/28/03
PDF Printer Driver for Win95/98/ME	5.57	07/28/03
Mono Printer Driver for NT/Win2000/XP	8.11	07/30/03
Color Printer Driver for NT/Win2000/XP	8.11	07/30/03
Mono Printer Driver for NT/W2K/XP	8.11	07/30/03
Metafile Printer Driver for NT/W2K/XP	8.11	07/30/03
PDF Printer Driver for NT/W2K/XP	8.11	07/30/03
Terminal Server Printer Driver for NT4.0/ Win2000	8.11	07/30/03
Tiff SDK/ActiveX/COM	9.12	07/30/03
Annotation SDK/ActiveX/COM	3.12	07/30/03
TIFF SDK w/ Cover Page Generator	9.12	07/30/03
PDF Plug-in for TIFF SDK	2.11	05/02/03
Image SDK/OCX	5.58	05/04/01

Impact Products

Product	Version	Date
Impact Fax Server	4.36	12/18/02
Impact Voice Mail Server (Standard)	3.14	04/11/01
Impact Voice Mail Server (Deluxe)	3.79	04/11/01
Impact Terminal Fax Server	4.34	05/03/02
Impact Fax on Demand	4.06	12/01/00
Impact Fax Broadcast	3.04	08/01/03
Impact ColorFax	5.01	02/21/03
Drag and Drop Printing	2.00	12/24/02

Internet Tools

Print2Email	3.01	01/20/03
Tiff Viewer Plug-in - Complete	5.01	06/26/03
Print Monitoring Server	2.1	08/01/03

Free Software

ColorFax LITE	5.01	02/21/03
Tiff Viewer Plug-in - Free Version	5.00	03/26/03
ModemWeasel	2.00	08/01/02