

Kodak's Perfect Page technology
optimizes scanning.

Accelerate your pursuit
of perfection.

George A. Hadgis, Director of Advanced Development,
Document Imaging Products and Services, Graphic Communications Group, Eastman Kodak Company

Introducing the latest ways to maximize



With Perfect Page, scanning is faster and easier than ever.

Scanning is all about capturing documents and converting them into images and information.

You'd like to push a button and get perfect images. That's what has driven Perfect Page innovation for two decades. Every **Kodak** Scanner represents decades of experience designing, developing and producing high-speed document transport, optics, illumination and image processing. It all adds up to document capture that's easy, fast, and reliable.

With Perfect Page, less document preparation is required before scanning. Rescans and operator interventions are virtually eliminated. After scanning, forms processing and data entry can proceed at maximum speed. This results in labor savings and optimum productivity.

The Perfect Page legacy: awesome processing power.

Here's a quick look at our current image processing capabilities, which vary by scanner model,* followed by an overview of emerging Perfect Page technology that optimizes scanning even more.

White level tracking—automatically adjusts white balance according to what the scanner “sees,” and delivers more consistent image rendering—page to page, batch to batch and scanner to scanner.

Deskew, fixed rotation, automatic cropping, border correction—these capabilities combine to deliver right-reading documents with smooth edges without operator intervention. White background deskew capabilities further improve image appearance by eliminating black borders. Fixed rotation allows landscape feeding for throughput improvements of up to 20 percent for letter-sized documents while delivering portrait-format document images that are right-reading.

Automatic color detection—the scanner can automatically switch between color and black-and-white output according to what appears on each page. This enables more efficient image transmission and storage because you only capture what you require, color or black-and-white, within the same batch.

iThresholding and Adaptive Threshold Processing (ATP)—analyzes the foreground and background of document images, assessing brightness and contrast, then automatically sets optimal threshold values. This optimizes image quality, making content such as light pencil marks more readable.

Blank image detection/removal—recognizes blank images and automatically deletes them. By eliminating images that contain no data, this capability reduces demands on network bandwidth and storage capacity.

Our imaging legacy— your scanning advantage.

For almost 80 years, Kodak has been helping banks, insurance companies, healthcare providers, government agencies and other businesses produce billions of document images. So Kodak is uniquely positioned to know—and deliver—what customers want: easy-to-use scanners that output the best possible image quality.

We make it our business to continually improve our scanners for customers like you.

image quality right at the scanner.

New Perfect Page innovations: taking scanning beyond page capture.

Our emerging Perfect Page developments continue to add intelligence to the scanning process, by being smarter about document content for more accurate rendering and automatic processing. This can mean fewer processing steps and hand-offs after a document's point of entry, to shorten time to availability.

Color output adjustment—allows users to adjust color balance to their personal preference, thus compensating for variations in printers, displays, and lighting conditions. Adjusted settings can then be used as defaults.

Color management—significantly improved color accuracy delivers more consistent and standardized color rendering across multiple **Kodak** Scanners. This also enables image processing features, such as electronic color dropout, to perform more consistently.

Segmentation technology—enables selected **Kodak** Scanners* to identify pictures on compound documents such as passport applications or insurance claims. By distinguishing photos from text areas, Perfect Page can apply different processing technologies to each area. Text is optimized while photos are rendered with more detail and clarity.

Photo extraction—allows selected **Kodak** Scanners* to automatically locate, extract and output a photo as a separate black and white, grayscale, or color file. Using one scanner to capture text and photos in a single scan can improve overall workflow efficiency.

Trainable electronic color dropout—advanced capabilities allow selected **Kodak** Scanners* to “learn” a wide range of custom colors. This means that dropout colors are no longer limited to red, green, and blue or a single color per page. The scanner can tolerate wider printing variations in documents and better discriminate between colors. This feature reduces presorting and delivers sharper text for improved OCR performance.

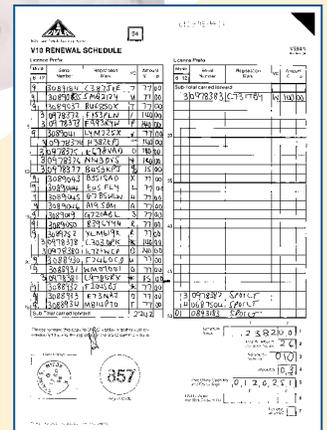
Background color smoothing—removes inconsistencies and variations in paper and form background colors for cleaner looking, sharper images. This can make information easier for people to read, and also reduce color output file sizes by up to 15 percent.

Automatic orientation—this technology examines the content of an image to determine the correct orientation, and rotates images accordingly. Documents can be fed mixed portrait and landscape within a batch for right-reading output without time-consuming post-processing. There's less need to be concerned about the occasional sideways document that might slip through document preparation.

*Visit www.kodak.com/go/perfectpage for a listing of Perfect Page features by scanner model.



Perfect Page



Up to the challenge.

The latest Perfect Page technology can deliver great images from documents that are far less than perfect. The results: fewer exception documents and a more streamlined capture process. Which means greater overall productivity.

Take a closer look at how Perfect Page capabilities.

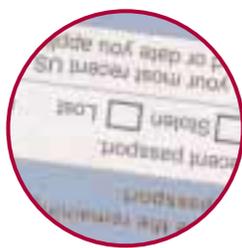
The key benefit of Perfect Page Scanning is improved image quality, which leads to improvements in productivity and overall capture time, and a reduction in labor costs.

With Perfect Page, an operator can feed an "imperfect" batch of mixed documents (color, black and white, multiple sizes and orientations). The scanner can automatically apply the correct image processing and deliver optimized, right-reading images. "Imperfect" documents can be transformed into near-perfect images. The need for operators to rescan or rework images is virtually eliminated, resulting in a more efficient workflow.

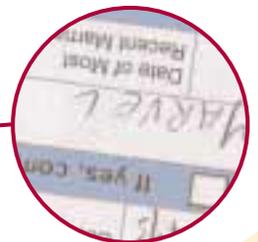
As you'll see in the examples presented on the following pages, Perfect Page image processing delivers multiple benefits to your scanning operation.

Output without Perfect Page

This is an example of "problem" output that requires additional work to produce an image of good quality.



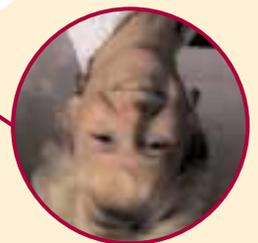
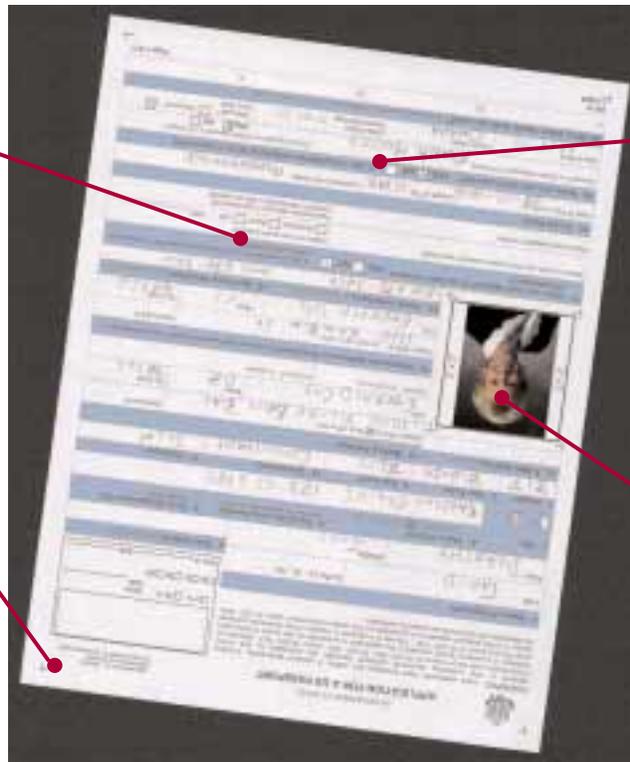
Dark, uneven background



Characters too light



Image is upside down and skewed with a black border



Poor photo reproduction with inaccurate color

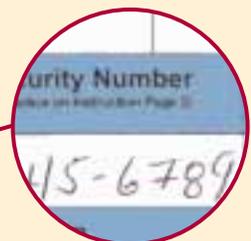
easy and accurate image capture can be with

Color output with Perfect Page

The same document, scanned in color with Perfect Page image processing. The result is a much better image, without the need for additional work to optimize image quality.



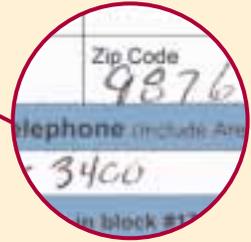
Increased brightness



Smoothed blue and white background colors; can reduce file size up to 15 percent



Accurate color reproduction



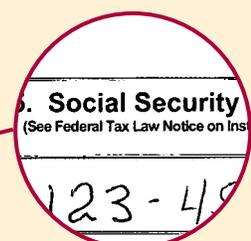
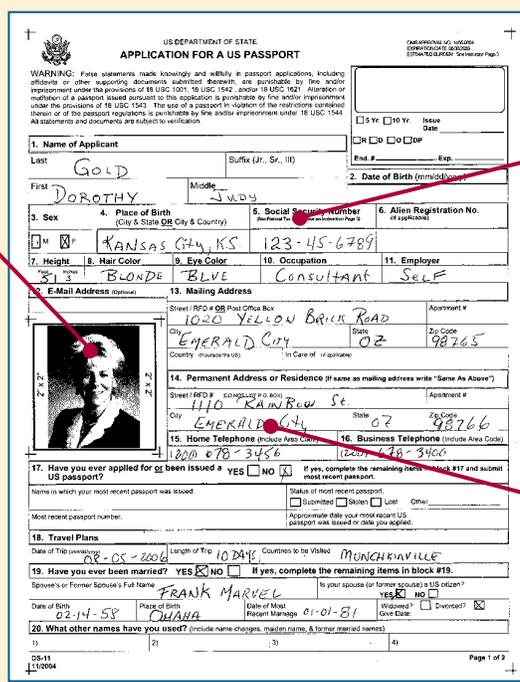
Improved contrast

Black-and-white output with Perfect Page

The same document, scanned in black and white with Perfect Page image processing. Again, the result is a much better image, right from the scan.



New generation Perfect Page processing optimizes quality of photograph with better rendering of detail



Background removed for increased legibility



Competitive image processing



Increased text legibility

Perfect Page turns even "imperfect" documents into

Multiple colors and annotations are no problem.

This shipping ticket presents multiple colors, machine printing, and handwriting in colored ink. Perfect Page automatically converts the document to a black-and-white image without losing any detail.

Shipping Ticket

NO. 0372-316
DATE Feb. 15, 2003
RECEIVED 2853

SHIP TO: SAC EQUIPMENT CO
500 UNIVERSITY AVENUE
CHESTER, PA 19380

ORDER NO. A1526-3
OUR INVOICE NO. 52197
SHIPMENT NO. 2JM

QUANTITY	DESCRIPTION	PRICE	AMOUNT
1	WLT-41800-Printer Ribbons	63.00	63.00
2	LED-LS20-MB-Clip-on desk lamps	18.90	37.80
1	BRT-PT-580C-Labels	499.15	499.15
SPECIAL INSTRUCTIONS: Ship to customer at no charge			TOTAL 600.95
AUTHORIZED BY: Frank Smith			DATE: Jan. 15, 2003

6. / 10 / 2003 RECEIVED 2853

SAC EQUIPMENT CO
500 UNIVERSITY AVENUE
CHESTER, PA 19380

CTIONS Ship
Frank

Stamped content pulled out from background

Faint text rendered with full contrast

Gradiated background color converted to white

Clean conversion from color to black-and-white output.

Note how Perfect Page image processing overcomes a colored background, multiple ink colors, highlighting, and even correction fluid to deliver a clear legible scan that preserves all of the information in the original document.

EXPENSE REPORT
ATTACH RECEIPTS IF PRESENT

TO: Finance FROM: Mike Howard

FOR PERIOD: 3/19/99

	MON	TUE	WED	THUR	FRI	SAT	SUN	TOTALS
MEALS	189.00	189.00	---	---	210.00	---	---	590.00
BREAKFAST	4.00	---	---	6.00	9.00	---	---	19.00
TRAVEL	---	12.00	24.00	10.00	23.00	---	---	79.00
ENTERTAINMENT	34.00	60.00	57.00	---	112.00	---	---	363.00
OTHER	210.00	---	---	370.00	---	---	---	1333.00
TOTALS	18.00	21.00	---	---	17.00	---	---	68.00
TOTALS	597.00	291.00	416.00	12.00	377.00	62.00	211.00	2386.00

STATE BUSINESS PURPOSE: PEOPLE ENTERTAINED PLACE OF ENTERTAINMENT AND TRAVEL CALLS MADE
New Jersey - Albany Trade show with clients - (A. Roberts, J. Swartz)
Rochester - Client meetings at their site both days
Eagan MN - Presented new material to Stewart Enterprises - took them to dinner and lunch
Client dinner

APPROVED: Mike Howard 3/22/99

3/19/99

2 23 80
112 62
484 00

PROVED

Blue ink lifted from blue background

Text is clearly readable in highlighted areas

Stamped content remains readable

images that are practically perfect.

New trainable color capability enhances forms dropout performance.

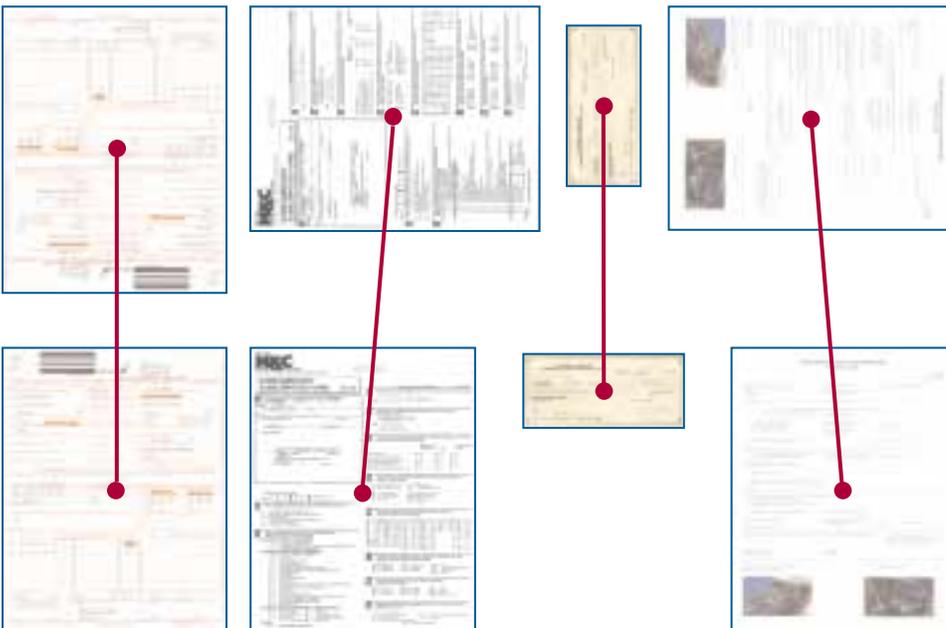
Selected **Kodak** Scanners can now be set to discriminate a wider range of colors, color hues that are closer together, and up to three colors on a single form. A batch can also be comprised of a mix of forms, each printed with up to three different colors. These expanded color dropout capabilities can enhance read rates and forms design flexibility.

Note that the annotation is retained while the form color is dropped out

The form is removed, while the information entered on the form is retained in high fidelity for improved OCR read rates

New automatic orientation feature delivers right-reading output from any input orientation.

Without automatic orientation



With automatic orientation enabled

As shown here, automatic orientation goes beyond fixed rotation to “fix” images within a batch. Perfect Page technology “looks” at printed text and automatically orients the front and back images as needed to make them right-reading. Automatic orientation even works on a duplex document that has portrait content on one side and landscape content or upside-down text on the other side. Because document preparation is less critical with automatic orientation, you save time and labor. Plus uniform output helps OCR engines operate at top speed.

There's a Kodak Scanner that's right for you.

The full series of **Kodak** Scanners offers a wide range of duty cycles and speeds. You can easily match scanners to applications and work environments and quickly scale up operations when necessary. And you'll maintain the benefits of Kodak's Perfect Page technology across your entire scanning platform. Combined with Kodak's SurePath paper handling and **Kodak** Service & Support, **Kodak** Scanners are the perfect way to get consistent image quality, ease of use and a great return on investment.

To learn which Perfect Page image processing features are in specific models of **Kodak** Scanners, visit www.kodak.com/go/perfectpage.



Advanced processing capabilities make scanning easier than ever.

The Perfect Page capabilities designed into **Kodak** Scanners put a virtual scanning expert to work for you. Operators can be more productive because they spend less time on presorting, editing, and rescanning documents.

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Innovation you can count on™

**For more information about Kodak scanners,
visit www.kodak.com/go/docimaging.**

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A-6332 CAT No. 817 0805

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