

## EFS Enablement (Part 4) - Scanner Tips and Recommendations

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If you are implementing EFS FE-Web in your office for the first time, the largest investment you will probably need to make is the Scanner. In Part 4 of our EFS Enablement Series, we give you advice on what you should be looking out for when buying a Scanner and our recommendation on software applications that will help you optimise the performance of your scanner.

When choosing a scanner, (leaving the aesthetics of case design and whether it fits into available desk space aside), what really counts in measuring performance is - Resolution, Bit-depth & Dynamic Range and Speed.

### RESOLUTION

To put it simply, resolution is a measurement of how many pixels (or "dots") a scanner can process in a given image. Resolution is measured in a grid (think of a chess board) as the number of dots per inch ("dpi"); and is determined by how many pixels it can actually "see". An entry-level flatbed scanner will use a scanning head with 300 sensors per inch so that it can "see" 300 dpi in one direction, and usually, 300 dpi in the other direction (remember the grid). This means that the scanner will send back a total of 90,000 readings per sq inch to your PC. On the manufacturer's flyer, this is expressed as 300dpi. The higher the resolution, the more readings it would sample and accordingly produce a better result.

Easy enough, but how much resolution do you really need? Keeping in mind that scanning at high resolution slows down its processing time and wastes disk space. The rule of thumb is that you should always scan at the lowest resolution that will provide the quality you want. There is a vast difference between scanning photographs and line illustrations for traditional printing press (books and magazines) that requires a minimum resolution of 600dpi and scanning text-based documents for storage in your PC folder or for printing on a desktop printer. For the latter, (which will comprise the bulk of a law firm's scanning needs), a 300dpi scanner will do very well without breaking the bank.

#### Useful Tip:

1. Use more resolution if you are enlarging an image and less if you are reducing it.
2. When images are converted into text using an "optical character recognition" (OCR) software; note that while most OCR software will accept images scanned at 300dpi, scanning at 400dpi will give you better results if the font or typeface is small.)

### BIT-DEPTH/DYNAMIC RANGE

This refers to the amount of information that the scanner is able to record in each pixel. Scanners that have greater bit-depth and dynamic range produce better colour images. The simplest scanners that record only black and white have a bit-depth of 1. To record shades of grey between the two extremes of black and white, most scanners are 4-bit (for 16

tones); and colour scanners are at least 24-bit (8-bits for each primary colour). Again, if you are only scanning text documents, bit-depth and dynamic range is less important.

**Useful Tip:**

Many older monitors are capable of displaying 8-bit images (256 colours) only so if your scanned image looks patchy on the screen, it could be the fault of the monitor and not the scanner.)

## SPEED

Unfortunately, while there is no single standard for evaluating the time it takes to complete a scanning operation, this does not deter manufacturers from specifying the speed of their scanner motors (usually expressed in the number of pages per minute - "ppm"); which rarely correlates with real-time performance. The factors that have the greatest bearing on the speed of your scanner are (1) the driver software that sends instructions from your PC to the scanner; and (2) the type of connection between the scanner and your PC.

## DRIVERS & CONNECTIONS

Although it sounds mundane, every scanner (no matter how fast) relies on the computer to which it is connected for its instructions and to send its results. Most scanner drivers today rely on a common standard called TWAIN to receive instructions from the software programs. For connections, high performance scanners today invariably use a special type of connection device called SCSI. While all Macintosh systems come with built-in SCSI support, please note that most Windows PCs comes with a SCSI port (meaning an expansion slot to accommodate a SCSI device) but not the SCSI card itself. In order to use the SCSI connection, you will need to purchase an "add-on" SCSI card from Adaptec or other manufacturers.

**Useful Tip:** The distance between the scanner and your PC (ie, length of your cable connection) imposes a physical limitation that has an impact on the scanner's performance. In fact, scanners that rely on SCSI connections must be positioned no more than 12 feet away from the PC)

Many older monitors are capable of displaying 8-bit images (256 colours) only so if your scanned image looks patchy on the screen, it could be the fault of the monitor and not the scanner.

Finally, our recommendation on Software Applications that will give your scanner with additional functionality and help you get the most out of your scanner.

## OCR

Optical Character Recognition software is required if you are likely to edit the text in a scanned image. Many mid to high-end scanners come bundled with simple OCR software. While an entry-level OCR software (Scansoft's OmniPage is one such programme) may be all that you need; advanced OCR (such as TextBridge Pro) will give you greater accuracy, better integration with leading word processing applications, and the ability to recognise non-standard typefaces.

## DOCUMENT MANAGEMENT

Today a wide range of document management software is available to help you achieve your goal of a paperless office. Ideally, the application should automate the process of organizing, archiving, search and retrieve documents from every possible source. While you may not find everything you need in a single application, a good document management system can vastly improve office efficiency.

**Useful Tip:** To choose and implement the right document management software for your office requires a clear understanding of what you want to achieve and the capabilities of available applications. As part of our IT Consultancy services, we will undertake a needs analysis before we make a recommendation. For a fuller understanding of what document management applications are capable of, read our article on "Document Management for Law Firms".

## FORMS CONVERSION

Forms Conversion software (such as ScanSoft's Omniform) allows you to convert scanned forms into digitalized version of the same form with all its attendant benefits - you can complete the forms online and send them out via email.

## FAX/COPIER UTILITIES

A useful add-on utility are those that convert a scanner to a copier or fax machine by simply redirecting the data from the scanner directly to the printer or fax modem for output. "Equipment multi-tasking" through the use of simple utilities and software is not only cost efficient, it is also likely to help you save time and resources.

We hope that this article will help you choose the right scanner for your needs. While we try not to endorse any specific product, you can find out what market-leading scanner manufacturers are offering by clicking on the websites I have listed below. You are also very welcome to call us at 325 2704 for free advice.

### USEFUL LINKS FOR DOCUMENT MANAGEMENT:

<http://www.scansoft.com>; <http://www.imanage.com>;  
<http://www.docuworks.com>

### USEFUL LINKS FOR LEADING SCANNER MANUFACTURERS:

<http://www.xerox.com>; <http://www.kodak.com>; <http://www.fujitsu.com>;  
<http://www.canon.com>

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As official Trainers and IT Vendors for the EFS FE-Web, Bizibody has helped more than 160 law firms implement EFS in their office. We provide FREE preliminary consultation on the different aspects of EFS implementation, including - integration with your existing IT setup, upgrades and maintenance, your options for broadband internet access, software & licensing requirements and budget allocation. If you have any questions regarding EFS, send them to - Serena Lim or Sylvia Low at 325 2704 or email to [efs@bizibody.biz](mailto:efs@bizibody.biz)

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