 Imaged Documents

Imaging is a technology that stores documents as electronic photographs in a computer system. These digitized computer files of documents are known as images. An imaging system consists of a computer, scanner, document management software, storage device, workstations, and printers. A page is sent through a scanner and "scanned". When scanned, the document is converted into a "bitmap" image. The bitmap is composed of tiny dots represented by dpi (dots per inch). It is then stored on a computer disk. After checking for quality, the image is indexed for later retrieval (since the image itself cannot be searched). However, if the image is scanned using OCR software, the words on a document are converted to ASCII machine-readable text that can be subsequently edited or searched like a word processing file.
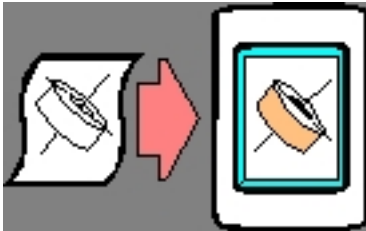

This image can be displayed on workstations, eliminating the need to retrieve the paper document. The documents can be retrieved in seconds and several people can use the image simultaneously at different locations or the image can be routed to different members of the law office. Space for paper storage is reduced, security is increased, and original documents are never lost or damaged. Images can also be instantly printed.

Document imaging systems enable a law firm to manage and control the documents in a case by maintaining images of the documents in the computer. Key information of the document is indexed to identify the document for later retrieval. For cases, witness can view the images chronologically, or by legal issue ? it depends on how you indexed the document.

There are three primary uses of imaging:

-       Litigation support; (see further discussion in Section 7)
-       Archiving old files;
-       General filing system.

Imaging Process
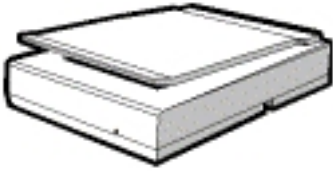
Scanners are used to capture the image of a document or graphic into a computer. Also, with a scanner you can scan a piece of paper and later use OCR software to convert the words on the paper to ASCII readable text. This text can be imported into your word processing for changes such as a brief or interrogatories. Scanners have been significantly reduced in price. A high quality scanner can be purchased for $100 - $300. Scanners can either be small wand like tools that can scan a few lines at a time or a 90 page per minute high-end machine. One of the primary differences in scanners is the resolution scanning capability and whether it is in color or black and white.

Format. The de facto standard for a document image is TIFF (Tagged Image File Format), which is also the standard for fax machines. A TIFF image can be altered and changed by simple computer graphics programs.
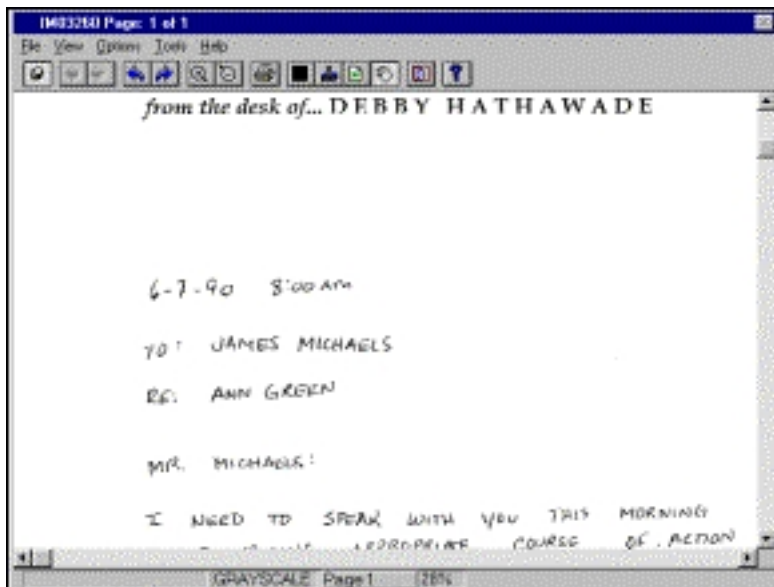
Scanning or Input. Imaging begins with scanning and converting documents into bit mapped images consisting of millions of light and dark pixels or dots. Most scanning software enables you to choose the resolution at which you want to scan the document. Resolution of a document is measured in dpi or dots per inch. The resolution you select depends on how sharp you want the image to be. The higher the dpi, the sharper the image and the more storage it takes. For

this reason, most documents are scanned at 200 dpi. If they are needed for presentation purposes, such as in court, then they are scanned at least 300 dpi.

Storage and Retrieval. Images can be stored on floppies, hard drives, and optical disks, or on CD-ROM. The primary storage device is CD-ROM. The major reason that imaging was not popular prior to the CD-ROM revolution is that there was not a low cost storage media available to handle the large amounts of storage required for images. Approximately 20,000 - 50,000 bytes of space are needed per image. Thus, 50 - 100 images will require approximately 1 to 5 megabytes of storage. A CD-ROM can hold up to 15,000 document pages, depending on the density of the document and the dpi at which the document is scanned.

Images are generally retrieved using a CD-ROM player. CD-ROM players are built to hold one, 4, 6, or hundreds of CD-ROM disks. The larger players are referred to as jukeboxes, since they resemble the old jukeboxes that played records.

Output. Images can either be viewed on your monitor or printed out. Generally, after searching a database, the multiple records and images linked to the records are printed for trial books or witness kits, etc.

Integration and linking to full text or databases. An image is a piece of electronic paper. Like actual paper, it cannot be searched for specific words like full text documents. For this reason, your imaged document must be LINKED to an index, database, or full text document. Then, when you want to retrieve the document, locate the abstract of the record in your database. The image will be linked to that record. It can then be retrieved for viewing.