Imaging Concepts

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Before you begin to explore document imaging system options, it is helpful to have a basic understanding of some of the imaging industry terms and concepts. This document is meant to provide just that.

Let's start with what *document imaging* actually means. Document imaging is the process of making paper documents available to individuals in an electronic format. A document imaging system provides a secure means to organize documents for easy retrieval and instant viewing.
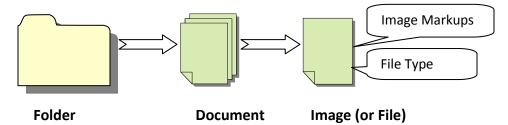
What is a Folder?

In the real world, documents are typically stored inside file cabinets. Each file cabinet contains drawers, and each drawer usually contains multiple file folders. The file folders contain documents, sometimes multi-paged documents. The pages in the documents are often stapled or grouped together with a paper clip.

In an imaging system, the folders and documents often mimic this structure. For example, there may be a file cabinet called Accounting. This file cabinet may have a drawer called Invoices. There may be many folders, each one designated for a client. Each folder may contain one or more multi-page documents.

The name of the *folder* usually has something meaningful to help sort them for easy access. In an imaging system, this is accomplished with *keywords* such as SSN, Last Name, Account Number, etc. In fact, imaging systems allow for much greater search capabilities due to an unlimited number of keywords defined by the administrator.

Just the like real world has a hierarchy inside a cabinet, imaging systems likewise have hierarchies. Before randomly filing documents in the real world, one takes special consideration to analyze the filing process. As an example, the bottom drawer in a cabinet may contain confidential records and need to be locked while the top two drawers can be accessed at any time by anyone in the department. Additionally, thought must be given to determine the most appropriate way to search for documents. Imaging systems provide this functionality plus much more.

| Folder | Document | Image (or File) |

What is a File?

Once again, in the real world, documents often contain multiple pages. Each page is represented as a *file* in an imaging system. For example, if an invoice had 5 pages, front and back, it would actually be represented in an imaging system as 10 images or files.

What is an Image?

An *image* is a visual representation of text, pictures, photographs, etc. Essentially, it simply contains thousands of tiny dots (pixels) that form the picture. Because of this, images containing text cannot be edited or the text manipulated.

An easy way to think of an image is to imagine looking at a paper written in a foreign language. When examining the paper, nothing makes sense. However, to someone who can read the language, it does make sense. In the imaging world, *OCR (Optical Character Recognition)* is the translator of the image text. It can translate the thousands of tiny dots into English or another language people can understand.

Once an image has been processed through OCR software, the text in the image can be searched for specific words.   OCR can be problematic in the fact that it may incorrectly translate some characters.

An image and a file are used synonymously throughout this document.

How to collaborate while processing files?

When dealing with paper documents, people routinely make notes, highlight, protect or attach a paper note to files. In the imaging world this is referred to as a *markup*.

Since electronic images are protected from updates and editing, imaging systems provide for "marking up" files. Hiding confidential information on a file is known as *redaction*. Other markup features are typically, *highlighting* portions of a file, adding a note, and *adding drawing a line or circle around text*. These electronic markup features are helpful to collaborate with others when processing documents.

What is a File Type?

Images are one *file type*. There are other types of files that can only be opened with specific software. For example, Microsoft Word, Adobe PDF, CAD Drawings, Video files, etc. Imaging systems can often import these files so that they can still be accessed by users in an organized manner. However, the specific software to view the files must be installed on the user's computer. When specific software is needed to open a file, this is known as proprietary. One of the big differences between images and non-images is that images can be viewed on virtually any computer system when stored in universal formats. These types of images are known as non-proprietary.

How to get documents into an imaging system?

Documents that are in paper or electronic format need to be imported into the imaging system. This function is commonly known as *capture*. Each page of the document (files or images) is captured as a separate *file* in the imaging system. There are a variety of methods to achieve this function.

In order to place paper documents into an imaging system, scanning hardware is necessary. A *scanner* is similar to a copier machine and is used in conjunction with the corresponding scanning software to route a document to the imaging system.

Electronic documents can be routed to an imaging system via a special *print* function. Instead of routing a document to the selected printer, one simply chooses a preset destination directly into the imaging system.

Some imaging systems may offer an *import* function, so that documents stored on a network can be placed into the imaging system. The import function allows one to designate the specific folder location within the imaging system.

The clipboard is the holding area used to store "cut" or "copied" images (such as screen shots for help functions). Again, some imaging systems may offer a *clipboard monitor* feature to route these images into the imaging system.

How to locate documents?

Documents are retained in file cabinets for later retrieval as needed. Documents can be *browsed* sequentially, as well as going directly to a specific document based on a given need.

An imaging system provides for both of these methods to locate a document. *Browsing* for a document allows navigation by a combination of drilling down (via tree structure or some similar mechanism) and/or scrolling through the pages of the files within the document.

Searching for a document in an imaging system is enabled through known criteria about a document. An advantage that an imaging system provides is the ability to search for an electronic document based on multiple *search criteria*. With a paper filing system, cabinets and folders have limited searching ability.

For instance, documents are typically filed by a client name and/or account number. While this meets the majority of searching needs, it does not provide for searching with additional criteria. For instance, the question "show me all clients that have submitted payments over the last week that are greater than $2,000". While an accounting software system can normally locate this information, the supporting documentation is sometimes needed for additional information. The search functionality is a substantial benefit of an imaging system.

How to enable searching for documents?

To provide for a variety of searching needs, documents that are contained in an imaging system need to be *indexed* with the appropriate *keywords*. This is a key step to enable adequate searching to meet specific business needs. *Folders* within the imaging system need to establish appropriate required keywords, so that all documents placed in the imaging system, can easily be located later. The *administrator* of the document imaging system is responsible for establishing the required *keywords* based on the business needs.

Once a document is placed into an imaging system, keywords that are necessary for search purposes need to be "attached" to the document for later searching needs.

How to manage privacy of documents?

Certain laws, such as HIPPA and Sarbonnes-Oxley, establish privacy criteria within certain industries. Almost every business deals with documents with private information of either individuals or other businesses. Also, certain employees may be allowed more latitude when it comes to viewing documents. For this reason, imaging systems provide various levels of administering *security*.

Security within an imaging system is managed by one's *account*. The individual account has associated rights as to what folders and documents can be viewed. For

instance, if a group of employees deal only with accounting records and another group deal with personnel records, this is easily manage with security associated to each folder. Furthermore, within the personnel folder, one individual may have rights to only view insurance records, while another individual can only view payroll records. To expand even further, an individual may only be able to access payroll records for an organization within the business. The security can be managed at all of these levels.

How to restrict staff from functions?

Imaging systems provide for a variety of *functions*, such as *administering, indexing, capturing* and *viewing* documents. Each of these functions is enabled by the *administrator* of the system. The administrator of the imaging system is established upon installation of the software. The administrator can then protect certain functions from unauthorized usage.

How to get documents out of an imaging system?

Many times it is practical to have a hard copy of a document. Imaging systems allow for *printing* one page or selected pages of a document, just as if a document resided on a typical network location.

Other times a document is needed for an email communication for an external business or individual. This can be achieved by the *export* function, allowing one to extract a page(s) or folder into a network location. Then the file(s) can easily be attached to an email.