

Softwords

A&L Computer Software Limited

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◆ The Future Is Now...

Electronic Photography

Photography? In the examination room?

Now that we've got your attention, please read on. You will discover the details of a new technology which is rapidly finding new applications every day. 'Digital photography', 'digital cameras', 'electronic pictures' are terms you will continue to hear as this technology becomes more and more a part of everyday life.

How does digital photography work? It's simple. Taking a photograph with a digital camera is the same as taking a photograph with any other type of camera. You point...and shoot. Instead of recording the image onto a roll of film however, it is stored in the camera's memory, in digitized form. Your camera can then be connected to a computer port and, using the software which is provided with the camera, your image is copied to a computer file from where your photograph can be viewed on the monitor.

No more trips to the photo counter to get your film developed. No more lost negatives. No more film to buy.

Who is using this technology? One such application is photojournalism. Journalists can shoot what is required for a feature article, hook up to a computer, and instantly the images become a part of the story copy, ready to go to print. The darkroom stage is eliminated.

Insurance adjusters can likewise accomplish their task with ease and promptly document fender benders, house fires and other such calamities.

The real estate industry is also using this new technology to enable speedy transfer of a new property up for sale to their publication or to their web page on the Internet.

Motorvehicle departments have also jumped onto the bandwagon. Several are now using digital cameras for their driver's license renewal programs and registering the image on their database.

Home use of digital cameras is also on the increase. With the proliferation of personal computers, many are now using them as a way to store family albums. The affordability of colour inkjet printers makes the reproduction of hardcopy prints a much less expensive operation than it used to be.

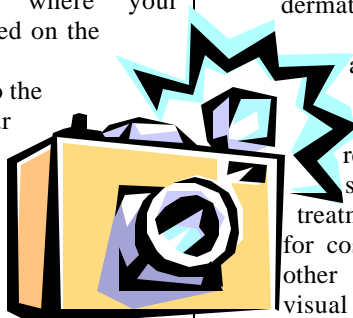
Who makes digital cameras? You will recognize the names: Kodak, Canon, Fuji, Nikon, Polaroid, Ricoh, Olympus, Hitachi, Panasonic, Sony and Toshiba are some of the major manufacturers. Prices range from a few hundred to several thousands of dollars depending on the camera's features and image quality.

So what does all this mean to the medical professional? Well, uses in dermatology immediately come to mind. Digital photographs of a skin lesion, when attached to a patient's chart, supplement the written report, and over time would serve as a visual record of the treatment process. The same is true for cosmetic surgery, and for any other area of medicine where a visual record is necessary.

If the physician has a fully functional document imaging software system, digital photographs can easily be attached to a patient's file, and be referenced and/or transmitted anywhere simply at the click of a mouse.

As with the other professional applications we have identified, a digital camera can certainly be an asset to a medical practice, and is just another example of how technology is changing the way we all do business today. Christmas present anyone?

Coming Next Issue: Digital X-Rays !



Document Imaging - Frequently Asked Questions

The recent interest in the use of document imaging has raised several questions concerning its application in a medical office environment. Many of these questions relate to the quality of the image which is produced once a document is scanned into a computer. Another area of concern is the security of the information, since the confidentiality of patient records is a high priority.

As with any computer application the answers to these types of questions depend a great deal on the software being used, and on the procedures put in place for its use.

In this article we shall address some of these issues so that our readers will be in a better position to judge for themselves the applicability of document imaging to their particular circumstances.

What type of scanner will I need to buy?

There are many types of scanners available on the market and you will need to shop carefully to determine which is best suited to your needs. First you need to ensure that it is TWAIN compatible. What does this mean?

Specifically, TWAIN refers to "a standard software protocol and application programming interface (API) for communication between software applications and image acquisition devices." Sorry you asked? Well, don't worry about it since most scanners on the market today are TWAIN compatible - but you should ensure that this is the case for the one you buy.

You will also be smart to buy a scanner with an automatic document feeder (ADF) so you don't have to waste time scanning documents manually, one by one, since it takes several seconds for each document to be read into your computer database.

Other factors to consider when selecting a scanner include whether you want black & white or colour capabilities, the scan speed and the density of the image produced.

What quality can you expect in the scanned image? Again, depending on the quality of your scanner your digitized image can be identical to the original, and in most cases you will not be able to determine the difference.

Can the scanned image be changed?

The actual image cannot be significantly changed but, depending on your imaging software, the document file created can usually be electronically manipulated and annotated with text, bookmarks and thumbnails. Also, pages can be added or deleted without affecting the actual image.

What is the life span of a scanned image?

Your image life span depends upon the storage medium you choose. If stored on

a CD-ROM it will last as long as the disc itself. If stored on your hard drive it will last as long as your drive does (provided you don't accidentally delete the image, of course). You should always make back-ups of your files on a daily basis to ensure against accidental hardware or software failure.

Can I print the image once it is scanned into my computer?

Yes. The image can be printed, faxed and e-mailed in the same way as any other document, provided your computer system has these features.

What about file confidentiality?

The confidentiality of your scanned patient documents and records is determined by your office procedures and by the imaging software you use. Security is especially important if your computer is part of a network. You need to decide who is to have access, update capability, fax and/or e-mail capability and who will be limited simply to document reference.

Your choice of document imaging software will be influenced greatly by its security features. Make sure it allows you to specify several levels of password control to enable you to restrict who has what types of access capabilities to your database. Also, a data encryption feature is a definite asset.

Do I have to buy another computer system?

The answer to this depends upon what you have now and what software you are currently running. In order to receive quick response you need a fast computer. If you don't yet have a Pentium you will need one - with lots of RAM (32meg is recommended).

You will also need a hard drive with plenty of storage space for your text and image files. Adding a writeable CD ROM drive is even better. Another important feature your imaging software should have is the ability to highly compress your images as they are entered into your database. This will help you save as many documents as possible on one disc.

If you don't have back-up capability (and you should have!) you will need to ensure your files can be backed up. A tape back-up system is recommended.

You should also have a laser printer with at least 4meg of RAM to ensure your images can be quickly printed whenever necessary, although you will probably wish to minimize the need for printing since you are trying to achieve a paperless office environment.

If we haven't answered your questions here please let us know and we will do our best to respond in a future article. Document imaging is a useful tool, one that



The User's Corner

Indexing

What Does It Do For You?

Two of several definitions for *index* in Webster's dictionary are as follows: (1) a list of books disapproved of by Roman Catholic authorities, and (2) the figure denoting to what power any mathematical quantity is involved.

In A&L's Windows based program indexing has nothing to do with the above. In the complex world of computer terminology the definitions are not even close. Here, indexing allows all fields in a program continual access to all related fields and ensures the program is in tiptop shape.

For example, the top three lines of *add patient*, *add claim* and *add an appointment* are identical. Other fields can also be found in multiple screens and must be viewable in multiple files in order to be cross referenced with each other.

The health card number is an example. Found in six different files (although you may see it in only two or three, depending upon your use) it has a validation (or Mod 10) check run against it to ensure no keying errors have been made. The program also checks for duplicate entries of a card number, retrieving the original file if the same number is entered for different patients. Finally, patient files without a card number will not be sent to the MOH.

Such incidents as not being

Don't Be Alarmed!



Just Index!

avoid to retrieve a

patient's file or to search across other files may be remedied by what is termed *indexing the program*. The program has been designed to reduce complications caused by improper indexing. Upon exiting the program you may see a reminder **INDEXING EVERY WEEK IS GOOD. PROCEED WITH INDEXING NOW?** Replying **YES** will automatically index for you and keep your program running efficiently.

You may also index at any time if you wish. Click on the **Setup Utilities** icon to open a screen showing *Setup: Data Version #.##*. You will see a column entitled *Indexing*, below which are lists of files beginning with *patients*, *claims/services*, and so on. Click on each file, until each is checkmarked.

At the very bottom you will see *Start Indexing At...* Click on this to start the indexing process. You will be informed that this is a lengthy process but it really depends upon your database size and computer speed. For a single physician office running a Pentium it should take a couple of minutes. A networked multiphysician office could take up to twenty minutes.

Practices with high patient volume or those using the scheduler every day should index daily. In short, *indexing* in computer terminology can be defined as 'a good thing!'

Smart System

In Development For Ontario

Here's The Latest

Progress continues to be made in the development of a *smart system* for health care in Ontario. The purpose of a *smart system* is to provide the right information to the right person at the right time in order to meet the care delivery, deployment, management and social objectives of the health care system.

The current development process involves collaboration among three parties because of its complexity and because of the inter-connectivity among the various players. (1) The MOH, (2) the health provider community represented by the Ontario Health Providers' Alliance and (3) the Information Technology Association of Canada (Ontario) are coordinating their efforts to arrive at a solution that will satisfy all the objectives on the table.

This project is another example of the continuing evolution of technological applications in our day-to-day lives. The *smart system* promises to have a far reaching impact on health care in that it will apparently provide access to an organized set of patient information and link a variety of stakeholders including consumers, providers, pharmacies, laboratories, hospitals, government and financial concerns.

The enabling technology of the *smart system* will involve the integration of computers and information databases via a telecommunications network.

The functional components of the *smart system* are being designed to include the following features:

- ⇒ unique identification of all individuals receiving care, of all providers across the system, and of all facilities
- ⇒ information management systems to help providers, payers, researchers and patients access and analyze health related information
- ⇒ an electronic health record for each individual
- ⇒ encryption and user authentication technology to ensure that the privacy of patients and care providers is maintained and the confidentiality of health care information assured
- ⇒ common business services such as networks, e-mail, Internet access, and access to health reference information operational support and services to maintain the system once implemented.

A series of integrated projects to achieve these objectives and deliver the various components is well underway and it is expected to yield some outcomes in the first half of 1998. Once again, a learning curve for all users will be necessary, but one thing is certain - dependence on computer systems in hospitals, clinics and physician's offices will increase, as will the nature of electronic communications among all players, including pharmacies and laboratories. Physicians who closely follow these developments will be prepared to effectively utilize the features of the *smart system* as they become available.

A&L HERO*

An Important Clarification For Our Clients

We would like to take this opportunity to clarify an issue that has apparently been causing some confusion among our clients. It concerns our Windows-based medical software package called A&L HERO* and why it differs from our DOS based A&L Medical System.

Two years ago we were faced with the decision of either developing our own Windows based medical system or marketing an existing product. Such factors as research and development time and expense were weighed against trying to find a product which would live up to A&L's high standards and provide to our clients the leading edge medical software they had come to depend upon from A&L.

The simple answer is that we were able to find such a product – the Healthcare Electronic Resources On-line (HERO*) network, developed by HTN Incorporated. It is able to provide electronic OHIP billing, scheduling and e-mail in addition to having the built in capacity to handle laboratory requisitions and prescription transmission when laboratories and pharmacies eventually come on-line.

A&L's focus over the years has been to invest our time and resources to provide the best possible customer service and support. Therefore we elected to continue this policy rather than diverting much time, effort and financial resources to the development of new software.

This led to our decision to launch a joint venture with HTN Incorporated to market the HERO* software to Ontario physicians and also resulted in A&L acquiring a thirty percent ownership of HTN Incorporated. A&L's focus was to be on marketing and support of the new product.

However, due to the reluctance of many physicians and clinics to invest in the hardware upgrades necessary to convert to a Windows operating platform HTN Incorporated elected to add their forces to the marketing process in order to help expand the client base more rapidly. Some confusion has since arisen from the fact that there are now two organizations, A&L Computer Software Limited and HTN Incorporated, from which this product is available. Both are completely distinct companies and operate independently, even though A&L has a thirty percent ownership of HTN Incorporated.

Users who have installed the new software through A&L have continued to enjoy the same kind of dedicated support you have come to expect as clients of A&L over the years, including training of the office staff who will be using the software. Support for clients buying directly from HTN is naturally provided by HTN as a component of their contract with such clients.

As previously mentioned, A&L's policy is to continue to provide leading edge software and support to Ontario's medical community. Through our contacts with clients, the Ontario Medical Association and with the developments currently underway with the PMO, Primary Care and the Smart System, we are in a position to maintain our leadership role. Our new document imaging system, A&L Document Console, is just another example of our efforts to provide the medical office with software designed to increase operational efficiency.

A&L Computer Software Limited is here to help you take advantage of the latest advances in technology. You may continue to rely on us for your support.

(Don't forget to keep up to date with what's happening at A&L by visiting our web site at www.anl.com)

**HERO is a registered trademark of HTN Inc*

In our next issue (Feb '98) **The Internet and You** returns to this page with *"Your On-line Medical Community"*

