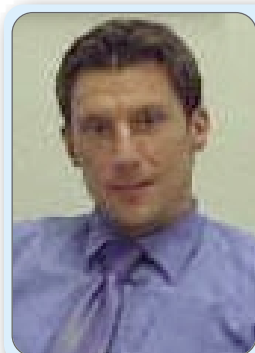


Document management using DocMan Enterprise



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Studies show that 95% of business data is held on paper; typically 15% of such documents are lost by staff who spend 30% of their time searching for them.

In many ways, a general practice is like any other business. It has premises, it has staff and it has paperwork. Many of the problems of excessive paperwork apply to general practice in the same way as they do to 'ordinary' businesses, because a massive number of documents are required to run a busy doctor's surgery successfully. Whilst there have been significant strides towards paperlessness in recent years—through registration links, path lab links, computerised appointments systems etc—the plethora of forms, letters, claims, faxes, e-mails and sundry other documents still exists.

Increasingly, computer-aided document management is seen as a way of organising these large numbers of disparate documents.

What is document management?

Document management is the management on computer of unstructured items of information, typically found as letters, invoices, faxes, orders and computer printouts. (In this context, the word 'document' is shorthand for 'any individual source of information'.)

The purpose of document management is to make relevant information available to the right people at the right time. Although such information is critical to the success of any business, it is often stored in a disorganised, insecure and inaccessible manner—particularly information that doesn't relate to specific patients.

There are four main stages in computer-based document management.

1. **Capturing the information**, usually (though not necessarily) by a scanning device
2. **Storing** this on the computer as either a digital image or its text equivalent
3. **Labelling** the documents with **basic identifying details** to make later retrieval an easy process
4. **Retrieving documents** when they are needed, using a variety of criteria to 'home in' on the information required.

Why use document management?

Document management:

- Reduces costs and increases productivity.
- Dramatically reduces repetitive, time-consuming data entry
- Minimises storage and staffing costs.
- Reduces the physical space required to store records
- Locates information with improved speed.
- Minimises the risk of losing vital information.
- Increases the quality of service offered to patients
- Increases the workload capacity of each member of staff
- Makes the flow of key documents efficient and secure
- Minimises mis-filing.

Key system components of document management.

- **Data capture**—includes information derived from scanners, data entry, fax, disk, Internet, e-mail.
- **Optical character recognition (OCR)**—converts the document to text, if this is wanted (or if it is necessary, in order to reduce file sizes for storage purposes)
- **Data correction**—which enhances, corrects or updates information prior to storage
- **Document indexing**—records and stores key criteria along with the document
- **Topic-based database management**—retrieves document information based on topics and key criteria
- **Storage, archive and output**—stores documents in a structured and manageable format with the ability to print and archive material.

Some current uses of document management in general practice.

Don't forget that practice documents don't always relate to patients: many are concerned with medicine generally, or with the running of the practice itself. Sources of non-patient information include general medical information from journals, e-mails and lecture notes; missives from the Department of Health; information from the Health Authority or PCG/PCT; local hospital information; financial details; project and planning documents; and practice-specific, patient-orientated information to be given out to patients.

There are many different ways of utilising document management in general practice. Here are a few specific ideas:

Patient data:

- **Incoming and outgoing letters** can quickly be scanned and stored against the patient medical record. These can be viewed on-screen during the consultation.
- **Pictures from digital cameras**, for

example, of skin lesions, can be stored against the patient medical record¹.

Non-patient data:

- **Educational information, HA and PCG documentation** can be scanned and stored, to be quickly available on screen. The originals can be thrown away, if desired, both reducing storage space and ensuring that no-one refers to an outdated version by mistake.
- **Interesting or relevant articles** from the bewildering array of medical journals can be scanned, digitally stored and are immediately accessible on the doctor's screen rather than in a pile on the common room floor!
- **Documents relating to a major practice project**—for example a practice move, or extensive premises work—can be organised so that the information is readily available, in its latest form, without the problems incurred by a senior member of staff being on her day off, taking the key to her filing cabinet with her!
- **Web addresses along with information from the World Wide Web or e-mails** can be downloaded and then filed away for future reference / retrieval.

DocMan Enterprise 2000

DocMan Enterprise 2000 is a complete electronic document management system designed specifically for use within general practice. Compatible with the majority of clinical systems, including System 5, System 6000 and Premiere, it is scaleable from a standalone PC to Local or Wide Area Networks.

It was developed in close consultation with a number of general practices with the aim of designing a system to minimise the overheads caused through processing paper-based correspondence.

The application structure is centred on a 'cabinets, drawers and folders' principle, allowing a practice to custom-define the elements of a 'cabinet' and within these, store data in amounts limited only by hardware storage capacity.

There are a number of modules from which different tasks are performed.

Key Modules

Maintenance

The maintenance module allows a practice to control the whole system.

Each user added to the system is 'profiled'—graded according to his or her level of responsibility and assigned an access level. This relates directly to the access level assigned to every doc-

¹ though this function is already available to System 6000 and Premiere, both of which can store photographs within the clinical record.

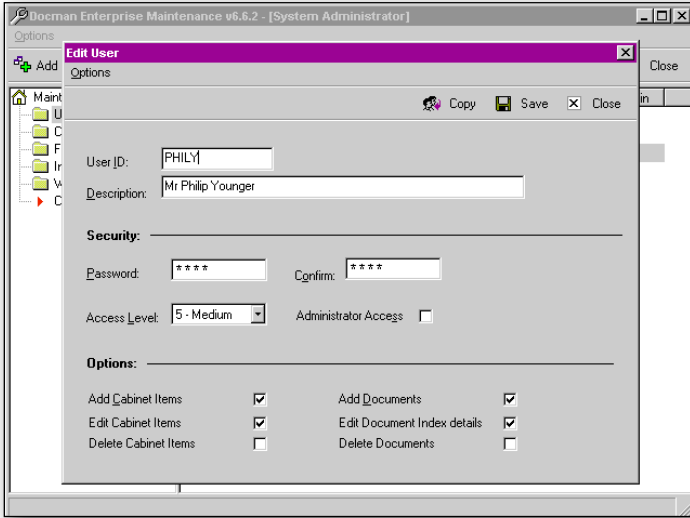


Fig.1 User profile

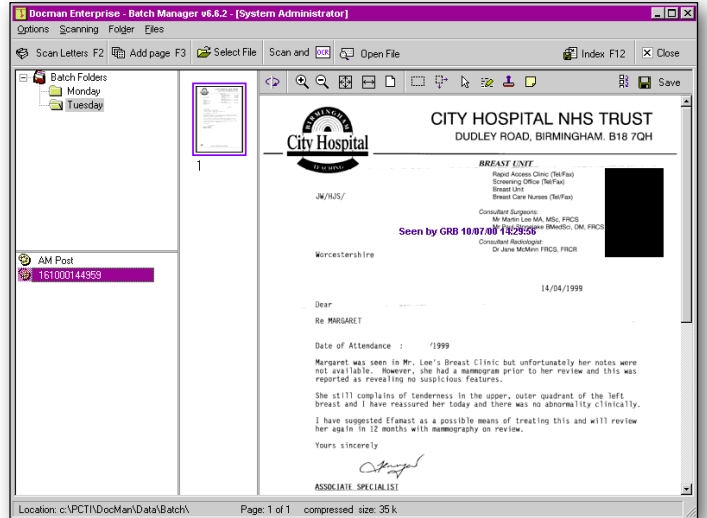


Fig.2 Batch manager

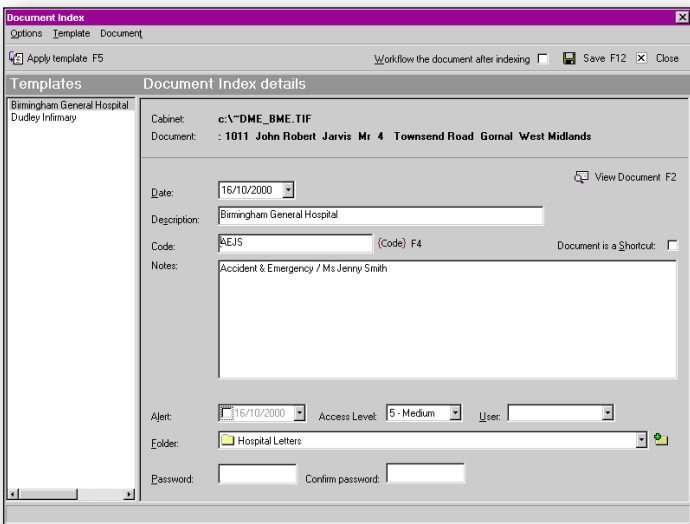


Fig.3 Indexing screen

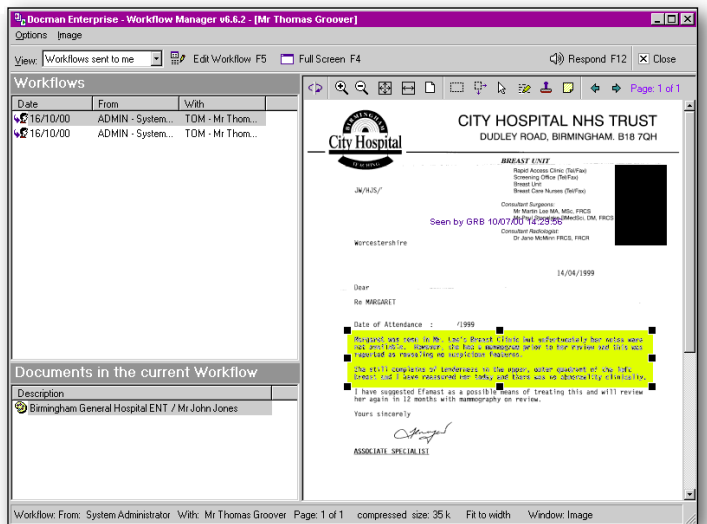


Fig.4 Workflow manager

ument within the system so the practice can control the types of documents each user is allowed to view (Fig.1).

Another aspect of profiling is to prevent a user from deleting documents; or alternatively to permit a user to add documents to the system.

From the maintenance module the administrator can control the structure under which documents are filed.

The system already has a Patient cabinet in which to store all patient-related correspondence. Additional cabinets can be created—such as Practice Education, PCG/PCT, Practice Building Project, and even personal cabinets so each member of staff can file away information they may specifically wish to keep for themselves.

Sub-folders can be added to any cabinet, for example a sub-folder 'Hospital Letters' might be linked to the 'Patient' cabinet.

Once Cabinets and sub-folders have been created from within the Maintenance module, Workflow Templates (see below), Index Templates and Chapters/Codes can be created.

Through the use of Index Templates, Chapters and Codes the user is given the facility to design predefined document-indexing templates that can be selected with a single mouse-click to make indexing and filing a document a

one step process. For example, when filing a letter from the XYZ hospital's ENT department, the user might choose to utilise the XYZ ENT template that automatically completes the associated entries for Date, Description, Notes, User, Access Level and Alert.

Batch Manager

DocMan's batch scanning module is designed for quick and effective scanning of large numbers of documents (Fig.2). These are then stored temporarily in batches until ready to be filed away against the appropriate record. Once a batch has been scanned into a temporary holding folder (such as 'Incoming Post') any user with access rights to this module can file selected documents, thus allowing the practice to spread the filing workload.

To file a document, the user selects the temporary folder (e.g. 'Incoming Post') and is presented with a list of document batches available. Highlighting the selected batch displays each document as a 'thumb-nail' which when selected expands to show the document in full. A user can select one document, if it is a single page; or multiple documents via the use of the 'Shift' key.

After document selection the user is taken to an indexing screen (Fig.3) in which he or she fills in the details about that document i.e. Description,

Notes, Access level and so on. This part of the procedure can be semi-automatic, through using a template / code previously created via the 'Maintenance Module'; or if desired the user can insert the index details freehand.

From the Indexing screen a user can now 'Workflow' the document, a procedure which passes it electronically to another user's in-tray—for review, final filing or action (which can include annotating it, or forwarding to other users for further comments or actions).

Workflow Manager

Workflow Manager (Fig. 4) is best described as a user's electronic in-tray. Each incoming document is dealt with using a selection of tools. The user can highlight it, annotate it, rubber stamp it (user-definable) or even draw freehand on the document. Each user has the ability to forward the document to an individual, or to a group of people by selection of a workflow template, or passing the document back to an appropriate user for 'actioning'.

DocMan Enterprise 2000

Retrieving and viewing documents is the part of the system that every user utilises. Searching is simple yet powerful: in its simplest form it allows users to find a particular patient and review all the attached documents. More complex procedures include searching all

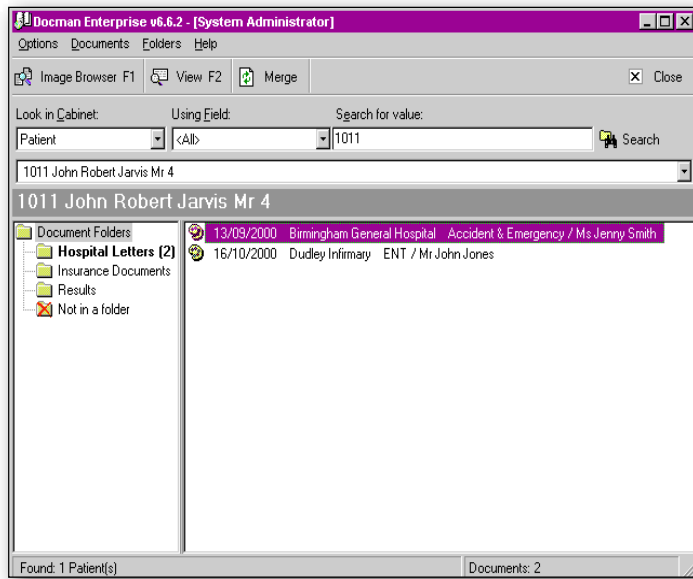


Fig.5 DocMan viewer

patients for documents with 'diabetes' occurring in the index, or where documents have been added within a specific date range, and so on.

The majority of practices simply want to click on a button such as 'View documents' from within their clinical application and are presented with a list of all documents for that patient (broken down by type through folders). Using the DocMan Enterprise Viewer (Fig.5) and toolbar this is a one-click process.

Other Tools

Other items available in DocMan include:-

- **A Microsoft Word template to allow direct indexing of typed documents.** For example, this could be the typing of minutes of a practice meeting, filing them directly into the 'Practice Information' cabinet, in effect publishing them for viewing by any user with appropriate access rights.
- **A drag and drop facility** is provided to file away previously created documents and files. This speeds the process of structuring a practice's existing data in an

ordered manner.

- **An intranet interface, DocMan Web,** by which a practice has the ability to search the document management database through a Web browser such as Internet Explorer. The Web application can form part of an existing Intranet or be used to create a practice Intranet, thus making administrative information available within the practice.

For further information on DocMan Enterprise, contact [Guy Bridgewater on guybridgewater@pcti.co.uk](mailto:guybridgewater@pcti.co.uk)

Premiere—Short codes

Make Short codes for anything you prescribe regularly that needs altering. For example the quantity of Gaviscon can appear as 480ml, and it should be 500ml. Go to Options, Short codes and add the prescription using a short code to identify it. Now, instead of typing the drug name into the browser, type / followed by the short code, and your prescription will be created for you. This technique of using a short code is also useful for anything you prescribe frequently.

System 5—To move an entire problem from Current to Dormant

To move an entire problem from Current to Dormant, don't use F4 MOVE, tempting as it is! Better to choose the line number of the problem heading, bringing it below the line, then **F7 TYPE**, and tap **D** to make Dormant. To reverse the process, choose the problem heading line number, then press **F7 TYPE** and tap **C** to make Current.