Understanding EDM

Electronic Document Management is a relatively new use for corporate networks, allowing filing cabinets and boxes to be replaced by ordered filing of documents electronically on hard disk, either on PCs or dedicated document management hardware.

By Wendy Grossman

Every branch of computing started with expensive, proprietary systems that could be used only by specialists. In turn, each branch has become democratized. PCs brought computing power to the desktop, spreadsheets spread number crunching across whole organisations, and Internet access is giving quick access to many sources of information to everyone, not just librarians and researchers. Electronic document management (EDM) looks set to be the next specialised application (or set of applications) to follow this pattern and become mainstream.

Until recently, it was primarily a few categories of businesses that saw EDM as a way to cut costs, increase efficiency, improve customer service and, in some cases, increase revenue. An example of the latter is the pharmaceutical industry, where time-limited patents are filed before the regulatory process of obtaining drug approvals begins. Using EDM to streamline and speed the approvals process can mean increased profits from a new drug. In the financial industry, too, the number of loan applications and the length of time they and their resulting contracts must be kept on file make systems to reduce the amount of paper and streamline processes especially valuable.

What’s changing now is that businesses outside these categories are beginning to see EDM as a core technology, even if their perception is that it’s currently too expensive.

A June 1998 report from the analyst group Ovum says that “at least a tenth of an organisation’s revenue - maybe much more - is spent on creating, managing, and distributing documents.”

Ovum goes on to say that the EDM market is changing dramatically because of the arrival of a new group of vendors who aim to sell generic solutions across a wide variety of enterprises.

Until recently, by contrast, the EDM market was dominated by a small group of vendors who concentrated primarily on niche markets - Documentum, for example, specialised in the pharmaceutical industry, PC DOCS in the legal profession, and FileNet for the financial sector.

The newer group of suppliers like Siemens, IBM (whose Lotus subsidiary’s Domino product adds document management facilities such as secure access and version control to Notes documents) and Eastman Software, which is integrating the same sort of features to Microsoft’s Outlook and Exchange systems.

Also joining the market are Internet-related suppliers such as OpenText and IntraNet Solutions. One consequence of the arrival of these generic solutions has been to push the established players into lowering prices, adding Internet support and deploying standards-based technology. Documentum, for example, has a strategic alliance with Microsoft to develop enterprise-wide systems based on BackOffice.

Driving Factors

One of the big drivers behind the adoption of electronic document management systems is the desire to provide better customer service. The point isn’t necessarily to create the paperless office - although most businesses would like to cut down on the 1.5 trillion pages of paper that the Gartner Group estimated in 1996 were added each year by US businesses to the existing mountain of dead trees - but to make all of a company’s documents available throughout the company to anyone who needs them. According to Gartner in 1996, paper-based documentation is unavailable 25 to 30% of the time, and as much as 5% is lost or misfiled each year.

EDM is supposed to change all that. If, for example, a customer sends in a faxed complaint, scanning and storing that fax ought to mean that if the customer follows up with a phone call the customer service representative who handles the call can access the fax quickly and see what the company’s response was. You might be able to manage this with a filing cabinet and a score of roller-skating gofers, but the chances are good that the only realistic way is to have a company-wide system that manages those documents effectively and makes them available to anyone who needs them. This is especially true because of the explosion in the number of documents - faxes, email messages, invoices, reports, letters, contracts - most companies have to handle. Ovum estimates that organisations are doubling the number of documents generated every two years.

The volume is only part of the difficulty of managing the mass - diversity is an equally big problem. Unlike the consistently structured data that can be stored in an ordinary database system document shapes, sizes, quality, readability, and formats all vary, as do the work processes and tracking associated with the documents. A completed loan application, for example, typically will have additional documenta-
tion attached to it and has to meet regulatory requirements about the term of its storage and ensuring its authenticity and integrity, while an internally generated monthly sales report may have to go through many verifiable layers of approvals before being adopted and later merged into an annual report.

Similarly, requirements for managing these documents change over the lifecycle of the document (which itself may vary, anything from a few days to 100 years). The instant retrieval and editing that are needed when the document is being actively worked on give way to storage for reference purposes and finally archiving or disposal.

**Processes**

There are four major areas relevant to EDM. Imaging automates the capture, indexing, management, storage, and retrieval of digital images, usually pictures of paper documents (the most familiar such image is probably the PC-based fax). These images may be displayed, annotated and distributed throughout an organisation and stored so that anyone may retrieve them. COLD (computer output to laser disc) is generally used to capture formatted computer output - customer bills, transaction registers, and other reports and data streams that previously would have been printed or stored on microfiche. Workflow allows organisations to define work processes, so that tasks can be routed correctly and automatically around the organisation, tracking workers’ involvement, inputs, and outputs. Other workflow features are familiar from the groupware market, such as the ability to set rules and policies, allocate resources, and route around bottlenecks. Finally, document management provides for the management of many types of documents, from images to spreadsheets and word-processed files, providing control and tracking the location and usage of these documents as well as their revision history.

Organisations that have implemented EDM up until now, have typically done so on a departmental basis, and are likely to have several different products in any or all of these areas from multiple vendors, and the products may or may not be compatible.

The traditional systems in this market tended to handle single business processes and rather formally structured and predictable documents.

In today’s networked, distributed world, these systems are limited: they tend not to scale well; they were not designed to be integrated with today’s networked infrastructure; they typically handle only the narrow set of document types they were designed for; and often they are expensive and difficult to administer. Today’s EDM systems aim to change all that, and they need to: analysts estimate that more than 80% of corporate knowledge exists as unstructured information.

A big driver behind the push to broaden EDM’s capabilities is coming from the development of the Web, which gives a unified, low-cost, simple-to-manage interface to many types of data (the development of XML is expected to drive this even further). But the Web, because of those same characteristics, means that many organisations have an alternative to EDM systems if their need to make information widely available across the organisation is relatively simple - they can simply put everything on an intranet.

In choosing which route to go, it’s important to consider three things: the profile of the typical user, security, and file management. EDM systems typically have all these things built in, while the same functions may be cumbersome to implement on a Web server, especially if the documents will be actively worked on by a team; in addition, some types of EDM systems may be able to help manage company Web sites that make available an extensive amount of content.

There are several levels of Web integration. Web access is primarily good for situations where management is highly centralised and widespread read-only access is adequate - even though the Web’s inventor, Tim Berners-Lee, designed the original browser so that editing and viewing took place in the same screen, today’s browsers do not support such interactivity. In a Web-enabled EDM system, the Web provides access to a proper repository, allowing documents to be tied more tightly to business processes. In a system that really exploits the Web and its programming capabilities, Web pages may be constructed on the fly to actively manage the site’s content: customers may get personalised messages, formatting, and pages.

The problem now for many organisations is finding products and suppliers that are able to integrate everything - EDM and office management products at the front end, and EDM and relational database systems at the back end. It’s not a simple matter, partly because the deployment of EDM has been fractured, and partly because we are in a transition period from paper-based records to electronic ones. Over time, as electronic communications become more accepted - many companies currently report that their customers are a strong influence keeping them in the print era - and strong encryption is deployed so that data confidentiality and authenticity can be assured and digital signatures become legally binding, EDM is expected to become an essential technology.

---

**The Author**

Wendy Grossman is a freelance IT writer with a special interest in all things Internet and can be contacted as wendy.grossman@itpjournals.com.
New Reviews from Tech Support Alert

**Anti-Trojan Software Reviews**
A detailed review of six of the best anti trojan software programs. Two products were impressive with a clear gap between these and other contenders in their ability to detect and remove dangerous modern trojans.

**Inkjet Printer Cartridge Suppliers**
Everyone gets inundated by hundreds of ads for inkjet printer cartridges, all claiming to be the cheapest or best. But which vendor do you believe? Our editors decided to put them to the test by anonymously buying printer cartridges and testing them in our office inkjet printers. Many suppliers disappointed but we came up with several web sites that offer good quality cheap inkjet cartridges with impressive customer service.

**Windows Backup Software**
In this review we looked at 18 different backup software products for home or SOHO use. In the end we could only recommend six though only two were good enough to get our “Editor's Choice” award.

**The 46 Best Freeware Programs**
There are many free utilities that perform as well or better than expensive commercial products. Our Editor Ian Richards picks out his selection of the very best freeware programs and he comes up with some real gems.

Tech Support Alert
http://www.techsupportalert.com