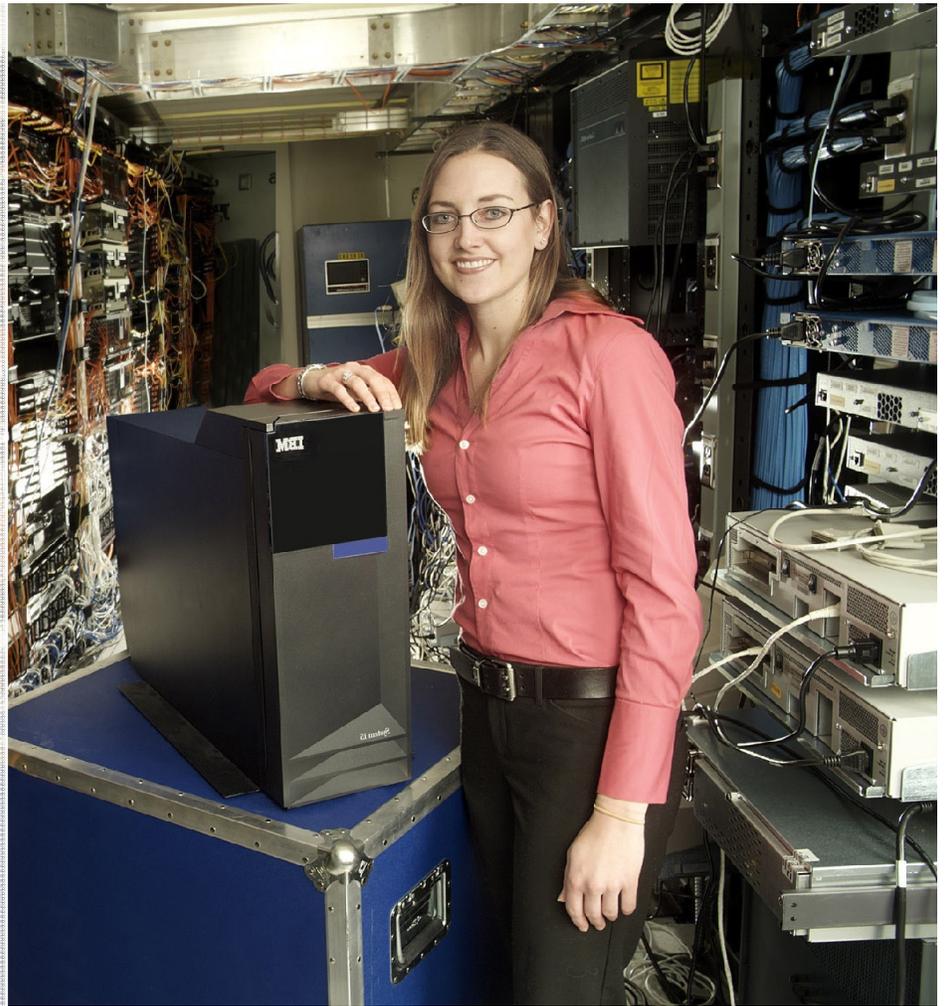# Smart CMS White Paper

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While System i shops both large and small can benefit from the use of advanced content management systems, many worry about security-related challenges. Key industry analysts say centralized document storage and maintenance are critical tenets to better customer service, but how do you implement multiple levels of security to make self-service over intranets and public networks a safe reality?

Areas of Concern

1. Content Management Systems: What are they?

2. Growth areas for CMS technology

3. The forces driving acceptance

4. Do CMS systems represent additional overhead?

5. Issues relating to System i and CMS system security

Improving accessibility to digital assets is a straightforward way to advance productivity. Single-click document access can improve workflow and make the workplace more efficient. In case you've been busy and haven't heard much about content management systems, here's a primer.

The central objective of a content management system (CMS) is to make computer files, images, electronic documents, and Web content files more available. Essentially, CMS consists of a framework for permanent record storage, collaboration, version control, retrieval, and publishing. Most actions taken with documents throughout their life cycle can be served by CMS technology.

The lion's share of companies that have adopted CMS are enterprise-level organizations, says a recent study from Forrester Research. This study forecasts the market for CMS products to push past $3.9 billion in 2008, up from $1.6 billion in 2003. Much of this growth is expected to come from SMBs.

While Gartner—another market research giant—agrees, its growth forecast is more optimistic. Gartner says the explosive growth in the CMS space is driven by the present state of content management, which is perhaps more accurately described as content mismanagement. It says word processing documents, spreadsheets, presentations, and rich-media files now reside on scores of disk drives that are scattered throughout organizations. For the most part, these drives are not accessible from a network, and the data that resides on them is not centrally indexed. For companies to grow more efficient and profitable, according to Gartner, data must be maintained centrally.

Beyond the jumble of drives that Gartner references, people also like to print invoices, purchase orders (POs), and other documents and then store them in file cabinets (come on, you know you print them). Does a piece of paper really offer peace of mind? It's all very strange if you consider the fact that virtually every document is created electronically in the first place.

Much of the benefit derived from the use of CMS technology, say its users, seems to be gleaned from the area of operations (less work because all business documents are readily available with a click of a mouse) and improved customer service (selfservice access to all documents that are stored digitally).

Less Work, More Satisfaction

Since its emergence more than 10 years ago, CM systems have been well received by users working for companies that have committed to them and also by members of their supply chain. Broader Internet accessibility to these information repositories has found favor to a lesser extent. This is due in large part to fear. Despite the growing interest in SOA and SaaS, the Internet is still perceived by many IT professionals as an unsafe frontier, with only limited usefulness in a narrow definition of e-commerce.

Security

Billions of dollars in business is transacted on System i computers on a daily basis, and that fact causes a big concern generally relating to the kind of openness that a Web-accessible knowledge base represents: How can such an environment be established in a secure way and not open any doors that compromise security?

System i computers are not popular targets for people with nefarious intent because they offer multiple layers of security that, if configured properly, cannot be circumvented. These security constructs can be used in Web-based CMS systems for authentication and verification. These methods secure underlying document, database, and index data.

At the highest level, security can be configured so authority is required even at the document level, so specific access privileges can be assigned only to people who have a need to know. CMS systems have their own security constructs that can be layered on top of System i security. For instance, CMS systems should be transaction-based so users never gain direct access to the System i. For System i shops, requests for documents should be submitted in the form of a message. A copy of the requested document is then returned to the user. A basic CMS security layer can be configured to determine whether documents are available for viewing, printing, emailing, etc. and which users can access which documents.

Advanced configuration options allow encryption, password protection, and compression of the data stream. Individual pages can be secured according to user privileges. A customer accessing documents through a Web-based interface, who can only see the pages in a document that are indexed with his customer number, is one example of how advanced CMS system security works. Masking allows some information on a page to be obscured if security is required down to specific items on a page.

Interoperability

When implementing a CMS system, it's also important to address issues relating to interoperability — i.e., how can you make documents in the CMS system instantly accessible to people who are using core business apps without their having to leave those applications or toggle between multiple programs?
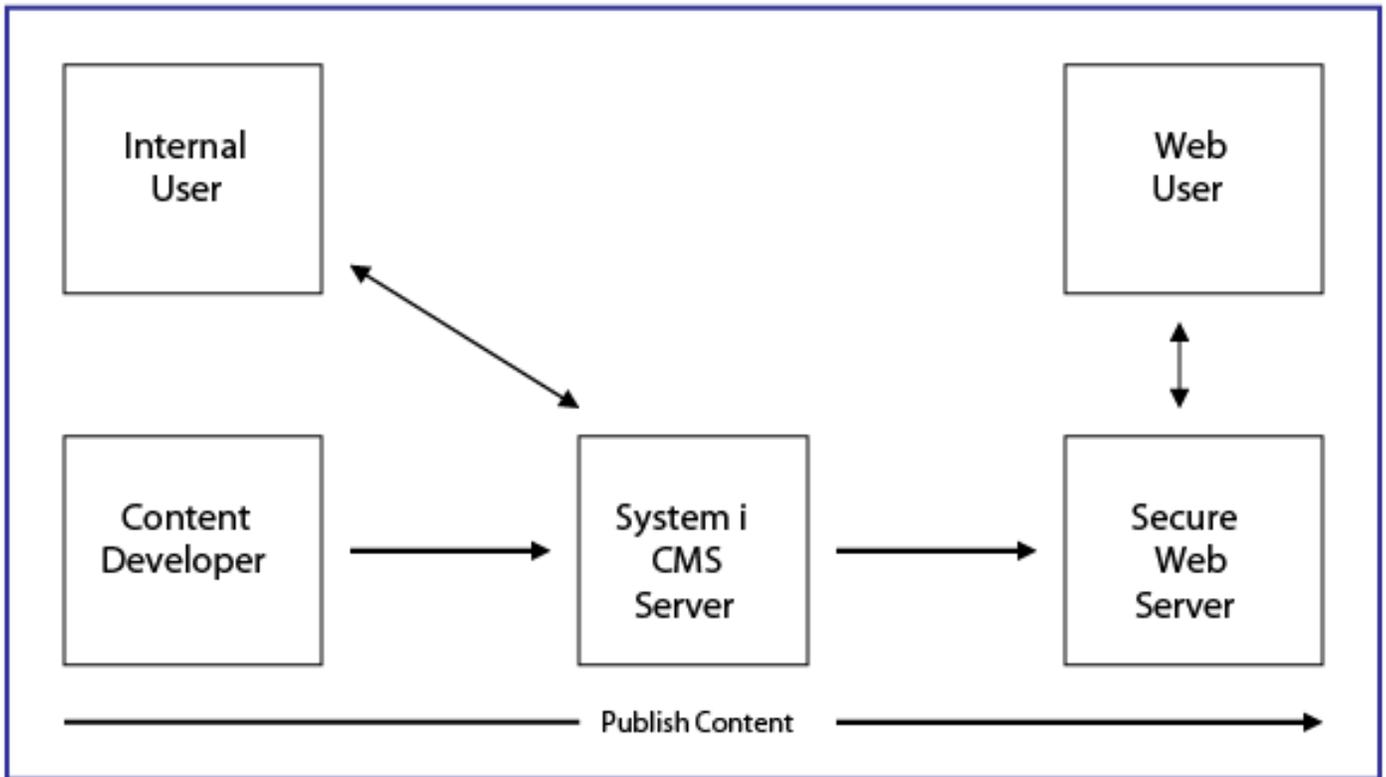
Figure 1: Typical CMS Flow

The answer seems to be in new-generation CMS tools. Many of these products support APIs to legacy applications so users can call documents stored in the central repository from accounts payable, accounts receivable, human resources, inventory, etc. Ultimately, through this convenience, CMS can improve response times. Centralized archiving and access will support better workflow, reduce document duplication, promote consistency, and streamline records administration.

Impact on Operational Overhead

New skills are required with any new system. CMS products have matured since their inception and are much easier to use. Furthermore, solution providers have been around the block a few times by now and are highly skilled at implementing CMS solutions.

Industry analysts have their eye on CMS, at least for now. Whether CMS reaches the pinnacle of must-have technology is still unclear. Something that is clear, though, is that many big companies have already adopted CMS because of the competitive edge it gives them. As CMS product developers shift their focus to SMBs and offer solutions that are less expensive and easier to integrate with existing core business systems, more organizations will be able to enjoy the benefits.

Conclusion

Content management systems consist of programs designed to manage vast amounts of accumulated content. Organizations implement these systems to simplify the process of retrieving, updating, publishing, and archiving documents of all sorts. CM systems allow organizations to enjoy the benefits of greater efficiency while their customers serve themselves on a 24/7 basis. Concerns over security have slowed the proliferation of CMS systems but several measures can be taken at multiple levels to make document access control procedures perfectly sound.

S4i authors S4i Express, an EDM/CMS solution for the System i, capable of managing desktop, System i, mainframe, and documents located throughout the organization. The company also offers S4i Image XP for document imaging and DASD-Plus for disk management. As an IBM Advanced Business Partner, S4i is committed to continually delivering scalable and highly affordable solutions. S4i provides 24x7 customer support and listens to the needs of its customers to help define future capabilities. For more information, contact info@s4isystems.com or call 800.231.5280 or 760.631.5280.