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Contemporary Content

Content management software powers e-business through enterprise data integration

By Katherine C. Adams

Content management software has been a hot topic in knowledge management (KM) circles since the late 1990s. Content management (CM) is often defined as software that helps companies build and manage their Web sites. For example, WhatIs.com, a popular online IT encyclopedia, defines content management as "... a system used to manage the content of a Web site."

Beyond Web Basics

One way to act as a knowledge manager within an organization is to launch a high profile, Web-based project. Leveraging digital tools allows you to twin technical know-how with the unique demands of your business. Many analysts argue that the primary focus of KM is finding ways to connect groups of people. Information technology offers effective ways to create and support communities of practice, and in fact, most KM programs take the form of portal construction projects.

However, Web site management is no longer CM's entire raison d'etre, because business Web sites have evolved from "brochureware" to platforms for e-business. The complexity of Web data means that work groups and functional teams who collectively build multifaceted corporate sites are replacing webmasters.

In the current e-business context -- geographically scattered teams who collaborate to produce enterprise content -- CM technology ensures that workflow procedures and security precautions are maintained. CM products offer the necessary groundwork for moving business processes onto the Web.

The Web is moving toward a software application model of development, and CM software is a key part of this transition. This article takes a quick look at how CM and KM software and practices are evolving in conjunction with the Web and enterprise e-business applications.

Content Creation and Retrieval

Contemporary businesses depend on CM software to streamline information retrieval and content creation across the enterprise. CM software is more than just a way to organize Web sites. It functions as an underpinning for business data and facilitates e-commerce. CM vendors claim to offer enterprisewide data management. To take three examples from a crowded field of vendors; Documentum Inc., FileNet Corp., and Eprise Corp. (recently acquired by Divine Inc.) focus on the entire lifecycle of content, from creation to delivery. In addition to ordering and organizing Web site data, software from this category of vendors assists in the creation, use, and retrieval of corporate knowledge.

CM products manage workflow and organize content so that it can be easily updated, reused, and repurposed. These products act as a link between those who create content and those who deliver it. CM products are valuable because they offer the groundwork for data integration and aggregation. They result in online information that is consistent, accurate, and easily updated.

Moving Data Through an Enterprise

Data moves through an organization in three distinct stages: authoring, managing, and delivering content, as explained in the following sections.

Authoring content. Business content is extremely varied but it can be divided into two types: structured and unstructured content. Structured content can be ordered into columns and rows and is stored in relational databases. This type of data is usually the product of ERP, CRM, or supply chain management (SCM) enterprise applications. Unstructured content, produced by Microsoft Office or Adobe PhotoShop software for example, consist of "natural language" text or image files, such as e-mail, reports, or photos.

CM is an exciting category of software because it wrestles the enduring problem of automatically managing unstructured information. For example, Interwoven Inc. focuses specifically on content aggregation in managing structured and unstructured data (for instance, HTML, graphics, computer source code, transactional data from CRM applications, and the like).

Managing content. The second step in the CM dataflow model is about automating workflow within an organization. Templates are important components in most CM product suites. Because content posted to a corporate Web site comes from a range of sources, data is created in a variety of applications and formats. CM software moves this heterogeneous data into a central repository where it can be managed through two basic tools: workflow systems and templates.

Workflow systems automatically route data from creation through editing to approval. The systems provide security through various user access permission levels. The software also keeps track of versions and tracing errors through audit trails.

Templates separate content from other Web site elements and aid in presentation. CM software provides a common look and feel to corporate Web sites while ordering data for complex transactions. Templates are useful for Web page production and guarantee a uniform appearance throughout large, heterogeneous Web sites. In addition, templates encourage the efficient use of time because multiple pages can reuse shared text, images, and layout elements.

Delivering content. The delivery stage makes enterprise information available to internal groups, partners, and customers. Increasingly, this phase entails software applications that permit Web-based business transactions. Such applications can offer sales support and customer service. This stage of the data delivery cycle often includes CRM products, personalization tools, and enterprise portals.

Retrieval Tools and Metadata

The sheer volume of data managed by companies is too large for any individual or team to maintain and organize. Computer-based information retrieval and automatic classification tools are the only viable alternatives. These digital tools are complementary technologies that help workers fully utilize all the information within an enterprise. Categorization software funnels documents into appropriate subject

categories. This helps workers locate and retrieve relevant information.

Computer-based classification software automatically generates metadata in the process of cataloging texts. This type of metadata is created either as a product of the workflow system outlined in the preceding section or through labels produced by humans. Metadata terms can be created automatically from text or specified by workers. Classification technology is especially useful because it can order information lying fallow in legacy databases. Information retrieval software acts as an ultraefficient corporate librarian who identifies and delivers vital corporate knowledge.

Eprise's Content Server (also known as Divine Content Server) and Eprise Participant Server software, for example, produce metadata in a variety of ways: metadata tags may be user-defined, they can come from a standard taxonomy, or be assigned as defaults in the Web page template. An index (sometimes called a taxonomy or directory) can be automatically generated from these metadata tags.

Linking CM and KM

CM software solutions work in accord with KM principals. KM products automate the process of capturing and reusing tacit knowledge. This goal is typically achieved with tools similar to those in CM product suites. CM software organizes knowledge into a structured database to ease information retrieval and access.

Workflow tools, for example, capture business procedures and workflow processes within an organization. Both KM and CM software are concerned with structured processes that capture intellectual assets in support of business goals.

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RESOURCES

Documentum: www.documentum.com

Eprise/Divine: www.eprise.com
www.divine.com

FileNet: www.filenet.com

Interwoven: www.interwoven.com

WhatIs: whatis.techtarget.com