

Content Management

WEB CONTENT MANAGEMENT

A Web content management system (WCMS or Web CMS) is content management system (CMS) software, usually implemented as a Web application, for creating and managing HTML content. It is used to manage and control a large, dynamic collection of Web material (HTML documents and their associated images). A WCMS facilitates content creation, content control, editing, and many essential Web maintenance functions.

Usually the software provides authoring (and other) tools designed to allow users with little or no knowledge of programming languages or markup languages to create and manage content with relative ease of use.

Most systems use a database to store content, metadata, and/or artifacts that might be needed by the system. Content is frequently, but not universally, stored as XML, to facilitate reuse and enable flexible presentation options.

A presentation layer displays the content to regular Web-site visitors based on a set of templates. The templates are often XSLT files.

Administration is typically done through browser-based interfaces, but some systems require the use of a fat client.

Unlike Web-site builders like Microsoft FrontPage or Adobe Dreamweaver, a WCMS allows non-technical users to make changes to an existing website with little or no training. A WCMS typically requires an experienced coder to set up and add features, but is primarily a Web-site maintenance tool for non-technical administrators.

Capabilities

A WCMS is a software system used to manage and control a large, dynamic collection of Web material (HTML documents and their associated images). A CMS facilitates document control, auditing, editing, and timeline management. A WCMS provides the following key features:

Automated templates

Create standard output templates (usually HTML and XML) that can be automatically applied to new and existing content, allowing the appearance of all of that content to be changed from one central place.

Easily editable content

Once content is separated from the visual presentation of a site, it usually becomes much easier and quicker to edit and manipulate. Most WCMS software includes WYSIWYG editing tools allowing non-technical individuals to create and edit content.

Scalable feature sets

Most WCMS software includes plug-ins or modules that can be easily installed to extend an existing site's functionality. Web standards upgrades

Active WCMS software usually receives regular updates that include new feature sets and keep the system up to current web standards.

Workflow management

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Workflow is the process of creating cycles of sequential and parallel tasks that must be accomplished in the CMS. For example, a content creator can submit a story, but it is not published until the copy editor cleans it up and the editor-in-chief approves it.

Document management

CMS software may provide a means of managing the life cycle of a document from initial creation time, through revisions, publication, archive, and document destruction.

Content virtualization

CMS software may provide a means of allowing each user to work within a virtual copy of the entire Web site, document set, and/or code base. This enables changes to multiple interdependent resources to be viewed and/or executed in-context prior to submission.

Types

There are three major types of WCMS: offline processing, online processing, and hybrid systems. These terms describe the deployment pattern for the WCMS in terms of when presentation templates are applied to render Web pages from structured content. Seth Gottlieb has used the terms 'baking', 'frying', and 'parbaking' to describe the three alternatives.

Offline processing

These systems pre-process all content, applying templates before publication to generate Web pages. Vignette CMS and Bricolage are examples of this type of system. Since pre-processing systems do not require a server to apply the templates at request time, they may also exist purely as design-time tools; Adobe Contribute is an example of this approach.

Online processing

These systems apply templates on-demand. HTML may be generated when a user visits the page, or pulled from a cache. Some of the better known open source systems that produce pages on demand are Joomla! Drupal, WordPress and Plone. Most Web application frameworks perform template processing in this way, but they do not necessarily incorporate content management features.

Hybrid Systems

Some systems combine the offline and online approaches. Some systems write out executable code (e.g. JSP, PHP, Perl pages) rather than just static HTML [citation needed], so that the CMS itself does not need to be deployed on every Web server. Other hybrids, such as Bloxom, are capable of operating in either an online or offline mode.