

Research Paper on Content Management System

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Abstract - This is a research paper on Content Management Systems. Content Management Systems are getting used in building number of websites now a day. This document discusses the difference between building a website using a CMS than to building a web application using the existing web technologies like J2ee, dot net, php etc. It also discusses the advantageous as well as disadvantageous of Content Management System.

Keywords - CMS – Content Management Systems

I. INTRODUCTION

A **Content Management System (CMS)** is a computer program that allows publishing, editing and modifying content as well as maintenance from a central interface. Such systems of content management provide procedures to manage workflow in a collaborative environment. These procedures can be manual steps or an automated cascade.

The first content management system (CMS) was announced at the end of the 1990s. This CMS was designed to simplify the complex task of writing numerous versions of code and to make the website development process more flexible. CMS platforms allow users to centralize data editing, publishing and modification on a single back-end interface. CMS platforms are often used as BLOG Soft wares.

II. WHAT IS CONTENT MANAGEMENT SYSTEM

A content management application will allow content manager and author to manage the creation, modification and removal of content from activity operator's website. This means one can easily add content to web site without having to be a developer. A CMS may also provide tools for one-to-one marketing. This is the ability of the website to tailor its content and advertise to a visitor's specific characteristics. It does this by using information that is either provided the visitor themselves, or gathered by the website.

III. MAIN FEATURES

The core function of content management systems is to present information on web sites. CMS features vary widely from system to system. Simple systems showcase a handful of features, while other releases, notably enterprise systems, offer more complex and powerful functions. Most CMS include Web-based publishing, format management, revision control (version control), indexing, search, and retrieval. The CMS increments the version number when new updates are added to an already-existing file. A CMS may serve as a central repository containing documents, movies, pictures, phone

numbers, and scientific data. CMSs can be used for storing, controlling, revising, semantically enriching and publishing documentation

IV. NEED OF CONTENT MANAGEMENT SYSTEM

What is the actual need of CMS over the web technologies? Consider an example in which your site complexity has exploded. Dynamic content of all kinds is assembled on the fly from back-end databases and middle-tier application servers, coded in multiple scripts and languages, and served via Web server farms distributed across the country and around the world. The number of hits has increased exponentially, and the content has changed too. Now, your humble Web site is a portal and a place of business--not just a showcase or information repository. A broken link or bad code isn't just embarrassing; it has an impact on the bottom line. Your site content must be updated instantly and constantly, and the site must be up all the time--with zero tolerance for errors and bad information, from any source. Perhaps a product manager, someone in corporate communications or both must approve changes before they're posted to the site. It's likely that you're handling purchases and other transactional content online. As your sites become more critical and complex, you need tools to automate management. CMS is the option for you.

In short we can summarize the need of CMS as follows.

- To save money rather than keep paying web designers for every update.
- To help you show up on the first page of Google
- CMS's have become commonplace and easy to use
- You can do update your site quickly and easily yourself.
- it is easier and easier to put up Web pages with no knowledge of HTML.

V. PROBLEMS WITH TRADITIONAL WEB TECHNOLOGIES

- Lots of time and money are spent managing static content: especially with sites that have hundreds or thousands of pages Sites are growing and increasingly have lots of content. Successful sites rapidly accumulate large amounts of content.

Managing the Content: There is no easy way to manage it and secure it.

Keeping the Content Consistent: The design of pages and the 'style' of the site are inextricably linked with the content itself - to updating content you must use people with HTML experience or risk errors and style problems

Maintaining the Content: Significant IT time and financial resources are being used on managing content. Separating the originators of the content from the authors: this costs time and money, and accuracy and currency

A site needs a CMS if it requires/needs any of the following:

Database orientation

Particularly if High volume

High number of hits

High peaks

Multiple sites

Changing content

Varying content sources

Brand identity

Multiple authors, contributors, and editors

Personalization

Differential display

Integration of related functions

Openness

Division of labor

Need for flexibility

VI. IDEAL CONTENT MANAGEMENT SYSTEM

In their most basic form, Web content management systems should allow each content producer to create pages and feed them to the publishing system. The system must have customized and automated checks and balances to ensure that pages get placed correctly, that navigation trees are created and maintained, and that the appropriate people control the process along the way. To make this happen, good Web content management packages separate content (written material, images, streaming audio, video and anything else that makes up Web pages) from presentation of content (templates), and they include strong workflow capabilities.

When more than one person is responsible for generating new content the issues get more involved, particularly when the authors are not in the same location. Typically at this point of complexity web sites have turned to some form of dynamic content, where the web page is built by an application, which gathers the different components into some organized structure either dynamically (e.g. for each user request) or statically (e.g. writing out the generated web page periodically - perhaps whenever new content arrives).

Adding a few additional capabilities to this dynamic content, such as security, auditability, and search and concurrency control brings us into the realm of content management. Content Management provides tools for administering web sites with extensive or complex content, or web sites where access to the content must be controlled.

A good content manager makes it easy for the authors of content to publish their material onto the web site, without conflicting with other authors, and should at the same time make it easy for the user of the web site to find and access to the content they require and are allowed access to. Content Management can handle the complex issues of online catalogs and their related e-commerce functionality, tying dynamic content seamlessly with web applications.

VII. TYPES OF CMS

Depending upon the scenario & the need different types of CMS are available. The core function of content management systems is to present information on web sites. CMS features vary widely from system to system. Simple systems showcase a handful of features, while other releases, notably enterprise systems, offer more complex and powerful functions. Most CMS include Web-based publishing, format management, revision control (version control), indexing, search, and retrieval. The CMS increments the version number when new updates are added to an already-existing file. A CMS may serve as a central repository containing documents, movies, pictures, phone numbers, and scientific data. CMSs can be used for storing, controlling, revising, semantically enriching and publishing documentation.

Broadly the different CMS can be classified as under.

1. Web content management system
2. Component content management system
3. Enterprise content management systems

VIII. CONCLUSIONS

CMS can be used when the web application is especially going to be used for management of contents instead of any complex business logic.

Maintenance of a web application dealing with vast amount of data is somewhat critical and also not economical. CMS suits in such cases which are concentrating on just maintenance of data. Still CMS is not ideal solution for a complex web application.

IX. REFERENCES

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