Web Content Management System: A Review

Annie Ahuja
Dept of Computer Science, S.R. Govt. College for Women,
Amritsar, Punjab, India

Abstract: Content Management Systems have played a pivotal role in today's era of ever growing emerging IT needs. It is designed to facilitate flexible content management and its blending with on-site instruction. It effectively cope up with the ever changing requirements of business environment. Web Content Management can easily manage the today's scenario of handling large contents and database. This paper deals with the difference of technical management of data with the non-technical management of data.

Keywords: Web Content Management System, Key Elements, Extensibility in Capabilities, Architecture, Work Review, Evaluation Criteria

I. INTRODUCTION

Content Management System is a web application that permits even non-technical users to manage their websites with ease. Management of websites involves creating, storing, editing of large amount of data. It enables you to edit the contents by simply having an internet connection on any system. You need not to rely anymore on third party developers to manage your website. You can be the sole owner of your website. It is an easy to use application with little knowledge of the technical skills. A web content management system requires a System Administrator who manages the website so that it is always in upgraded form by adding more and more features as per the changing needs of the business environment. Here the Content Management System deals with the e-education that comprises teachers, tutorials, students who are having keen interest in getting knowledge but not having favorable circumstances for getting education.

II. KEY ELEMENTS OF WEB CONTENT MANAGEMENT SYSTEMS

2.1 Automated Templates:
Templates are one of the key elements of web based content management systems. Templates are also called boilerplate text i.e. you can use them as they are with the additions of your own. Templates can be applied to the existing and new data which is being added to the website, which enables the change in the content from a central space rather than moving to each and every webpage in order to change the appearance of a webpage.

2.2 Content:
Website is all about content so it is an integral element in web based content management systems. Content can be created and managed independently with the support of an editor tool known as WYSIWYG (What You See Is What You Get).

2.3 Metadata:
The data that provides additional information about other data. It is having vital role in managing Search Engine Optimization like it is helpful in search ranking on the popular search engines.

III. EXTENSIBILITY IN CAPABILITIES OF WEB CONTENT MANAGEMENT SYSTEMS

3.1 Addressing of Challenges: It addresses all the major challenges of content delivery and learning activities.
3.2 Ease of use: Basic content management systems are easy to use even by the non-technical users.
3.3 Complete Platform: The Web Content Management is a complete platform which can be used by everyone who wishes to manage the business in an effective manner like Schools, Colleges, Universities and other Institutions / Organizations.
3.4 Administration: System Administrator manages the website solely. No more dependence on web developers to manage your website. You are the sole owner of your website.
3.5 Money Saving: Usage of Content Management Systems reduces the cost of maintaining your website to a greater extent. You can yourself update the website when and where required.
3.6 Proper Controlling Channel: Being a system administrator you are having a full control of delegating the responsibilities to other members.
3.7 Accessing of data from anywhere: Any type of data stored can be accessed with ease from almost any device that constitutes mobile devices such as phones or tablets.
3.8 Access Control: Anonymous users who are not logged on will not be having access rights for a webpage that the user is looking for.

3.9Instant Publishing of Content: Scheduling of the content which is to be published after reviewing can be done. If you have done with the scheduling part, then you need not to worry, content will be published automatically.

IV. ARCHITECTURE OF WEB CONTENT MANAGEMENT SYSTEMS

Architecture is the actual outcome of thinking out and specifying the overall structure, logical components and the interrelationship among these components. Basically, it can act as a reference model for you with the help of which you can have an overall idea about the whole scenario.
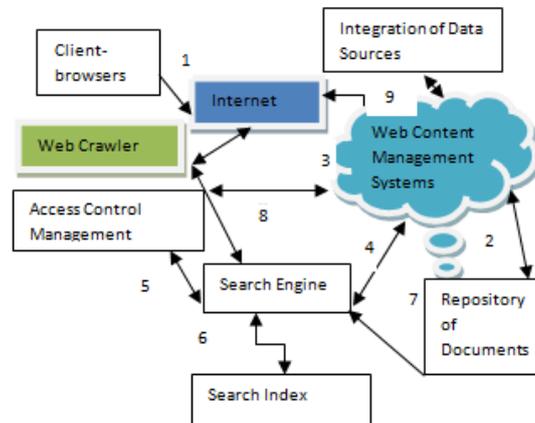

Fig. 1 Showing Architecture of Web Based Content Management Systems

- Any user can connect to the web based content management systems with the help of standard browsers as clients.
- It fetches and puts all the contents and the corresponding metadata into the repository of documents base.
- Access Control Management is accomplished with the login facility. Users have to login in order to access the contents.
- Searching by the user containing certain keywords is done form repository of documents. It can search any type of files like .doc.
- The responsibility of search engine is to provide only those results a user is allowed to see. So, it always keep an eye over the access control rights of the particular user.
- The search index is kept by the search engine and very useful if the content management system make instant updates whenever a new document is checked in the repository of documents.
- The search engine firstly scans the repository of documents before generating search-index.

- Web crawler is a program that has the top search results from search engines
- Integration of other data sources like SQL-database can be done with standard like JDBC, etc

V. WORK REVIEW

The Existing System scenario prevailing is that the without using content management systems the integrity of data is like next to impossible to be maintained in the large organizations where you cannot have even an estimate of handling an immense amount of data.

5.1 Drawbacks of Existing Scenario
The existing system i.e. the system in which the concept of virtuality was not used was totally manual and it has following disadvantages: -
- Non-Safety of contents.
- Contents cannot be easily accessed from anywhere.
- Multiple access to the same contents not possible
- Time consuming as lot of time get consumed in searching process.
- Infrastructure is required.

5.2 Advantages of Prevailing Scenario:
It has the following advantages over the existing scenario: -
- Security of the contents
- Contents can be easily accessed from anywhere
- Infrastructure is not required.
- Multiple accesses to same contents is possible
- It helps in formulating a version of your website which is optimized with mobile web also.
- Storing of archived content helps in gaining the processing speed.
- Customization of website so as to meet the changing daily business needs.

- Reduces the expenses to a greater extent, being the sole owner to maintain your website.
- No dependence on third party web designers/developers.
- Searching is optimized with the search indexing.
- Easy maintenance of the site as CMS software can be updated easily without even interrupting the site.
- Your website will always be in updated state gives you feeling of being active.
- Most of the web based content management systems store your information in the database thereby protecting your content from other web site attacks.
- Better customer relationship management as your customer can make a direct contact with you through the given email or contact number as per the requirement.
- It is very easy to access even for non-technical minded persons.

VI. EVALUATION CRITERIA OF WEB CONTENT   MANAGEMENT SYSTEMS

There is not only a single point of concern in web based content management systems. Few key points are given as follows:

- Simultaneous multiple user involvement.
- Re-use of content in different contexts.
- Multi-lingual support.
- Ease of use for non-technically minded persons.
- Proper security enforcement mechanisms should be there in order to maintain integrity and validity of contents.
- Integration with external systems must be accomplished smoothly.
- Effective navigation can only be there if powerful links have been made between the pages.
- Separation between the graphical objects with their contents.
- User Access Management with the help of standard directory services like X500.

VII. CONCLUSION

It helps in gaining the security of the contents. Contents can easily be accessed from anywhere. Multiple accesses to same contents are possible. The major benefit is infrastructure is not required. The major disadvantage is that internet speed is very essential and vital factor. On the one side, you have everything if internet is available and on the other side nothing if it is not.

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