

USE OF OPEN SOURCE CONTENT MANAGEMENT SOFTWARE

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1. INTRODUCTION

The past decade has seen a rigorous change in the way we understand and use information technology within a business context advancements in the field of research and development has led to technologies such as; distributed computing, content management, data mining and processing, all of which fulfil a range of business needs. The move from localized computing platforms to the take-up of commodity computer and network components based on faster hardware and sophisticated software.

Although the term “ Content Management” is relatively new, content management practices have been around since the late 1980’s and is derived from existing techniques. Even though the term itself wasn’t established until the corporate business sector started using it, the field of content management was already being practiced through other fields of management within the business. The timeframe between late 1995 and 1996 was the one of the most aggressive periods of growth in the internet. The enormous market potential was evident to everyone in the information Technology sector.

2. OPEN SOURCE SOFTWARE

Open source doesn’t just mean access to the source code. The distribution terms of open source software must comply with the following criteria:

2.1 Free Redistribution

The license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The license shall not require a royalty or other fee such sale²

2.2 Source code: Program must include source code, and must allow distribution in source code as well as compiled from.²

2.3 Derived Works: The license must allow modification and derived works, and must allow them to be distributed under the same terms as the license of the original software²

2.4 Integrity of the Author's Source Code: The license may restrict source- code from being distributed in modified form only if the license allows the distribution of “ patch files” with the source code for the purpose of modifying the program at build time. The license must explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software.²

2.5 No Discrimination Against person or groups: The license must not discriminate against any person or group of persons.

2.6 No Discrimination Against Fields of Endeavor: The License must not restrict anyone from making use of the program in a specific field of endeavor.

2.7 Distribution of License: The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.

2.8 The license must not be Specific to a Product: The rights attached to the program must not depend on the program's being part of a particular software distribution.

2.9 The license must not Restrict other Software: The license must not place restrictions on other software that is distributed along with the licensed software.

2.10 A license must be Technology- Neutral.

3. CONTENT MANAGEMENT SOFTWARE'S

In the marketplace at present, there are literally hundreds of content management systems, all having different capabilities and strengths. Every Organization has a unique set of requirements for a content management systems, and there is no ‘ one- size-fits-all’. According to the need of the library, one can choose the best possible CMS which can fully automates the publishing of library web page. There are three main following CMS software.

- Joomla
- Wordpress

- Drupal

All three are open- source software, widely used, each development and maintained by a community of thousands. Not only are all three free to download and use, but the open-source format means that the platform is continuously being improved to support new internet technologies.

3.1 Features of Joomla

- **Multilingual:** Joomla! Is the most popular and widely supported open source multilingual CMS platform in the world, offering more than 64 languages. Webmasters and content creators can create websites to be presented in available in the joomla! Core software.¹¹
- **Well Supported:** Our worldwide, enthusiastic community is filled with individuals, and teams of world class developers and business consultants who actively help at no cost in the forums.
- **Easy Upgrades:** One of the big challenges with any software is keeping it up to date. Fortunately, joomla! Has a “one Click Version Update” feature to make this process super easy for users of any skill level.
- **Integrated Help Systems:**Joomla! Has an in-app contextual help system to help every level of user to operate their joomla.
- **Media Manager:** The Media Manager is the tool for easily uploading, organizing and managing your media files and folders.
- **Banner Manager:**With the banner manager, you have the possibility to easily add advertising and monetize your website.¹¹
- **Contact Management:** The Contacts component allows you to add several contacts, departments and categories, and extend the basic contact information with miscellaneous information and an image. Easily set up a contact form for each contact you create and allow access to the public or just to some registered users, or create a listing of these contacts.¹¹
- Search better, search smarter: with the built in search and smart search, your website visitors will be able to quickly and find the appropriate information on your site.¹¹

- **Content Management:** Joomla! is a content management system at heart and has some seriously great features that make organizing and managing your content a breeze. Content creation is made very easy by the inbuilt WYSIWYG editors and allows and allows you to edit content without any knowledge of code.¹¹
- **Nested Categorization:** When you are managing content, organisation is a key requirement. Being able create categories with nesting and no limits in depth is a great plus in helping manage large websites.¹¹
- **Tagging:** When categorisation is not enough to structure your content, it's time to look at a flat organisation structure which is best served by tagging.¹¹
- **Fronted Editing:** Editing content should be easy and fast. You are reading through your site's content and see a change you need to make.
- **Content versioning:** You will never again lose a previous important version of your article and other changes on your site.
- **Syndication and Newsfeed Management:** Make sure your visitors stay updated on the new content you're adding, even when they come only once in a while. With syndication, you create a feed that users subscribe to in their favorite RSS reader so they receive the updates.¹¹
- **Menu Manger:** The Menu Manger allows you to create as many menus and menu items as you need.
- **Powerful Extensibility:** The Joomla core is just the beginning, the real power is an in the way you can customize joomla.¹¹

Extensive ACL for all your access control needs: it allows you to manage the users of your site, different groups.¹¹

3.2 Features of Drupal

- **Multilingual Capabilities: With You Can:**
 - Translate anything in the system with built-in user interfaces.
 - Build pages with views language filtering and block visibility.
 - Get software translation updates automatically from the drupal community.

- **Configuration Management:** Configuration management keeps track of all the important details as content is configured and revised.
- **Accessibility:** Drupal has added extensive support for standard accessibility technologies including WAI-ARIA and have been working to provide more semantic HTML5.¹⁰
- **Built- in Web Services:** Build mobile apps with drupal as the data source, or even post back to drupal from the client. Drupal implements state-of-the-art Hypertext application language (HAL) as well.
- **Efforts Authoring:** With the new editor functionality and bundled CKEditor WYSIWYG editors, it has never been easier to edit content in drupal.
 - In-place editing of content without having to use the full edit form.
 - WYSIWYG configuration made easy with web security in mind.
 - Draft saving made easier.¹⁰
- **Fun and Fast Theming:** Drupal includes the flexible, fast, and secure template engine for PHP called Twig. With Twig, templates are now written an easy-to-learn syntax which brings several simplification and greater security Twig makes designing beautiful and functional Drupal sites easier than ever before.¹⁰
- **Views:** Views has long been a very popular Drupal Add-on Module that allows non developers to create lists, posts, galleries, tables, maps, graphs, menu, items, block, reports, forum posts and more.¹
- **Industry Standard Approach:** The new release features much more modern, objects- oriented code (classes, inheritance, interfaces, etc.) embraced the latest PHP standards (e.g. PSR-4, PSR-3, namespaces, traits). Its also leverages many “best of breed” external libraries.¹⁰
- **More Field Power:** Drupal extends the signature content structuring system by including more field types in core, and lets you attach fields to more types of content. New types include entity reference, link, date, e-mail, telephone, etc. comments are now a field and, for example, you can now take comments on products, You can also attach fields to forms to create custom contact forms.

- **Better Markup with HTML5:**HTML5 plays a key role in making websites fully functional and compatible with mobile screens. This industry standard is now include in drupal and means drupal now has proper native input tools on mobile for fields like date, e-mail, and phone.

3.3 Features of Wordpress

- **Simplicity:** Simplicity makes it possible for you to get online and get publishing, quickly.¹²
- **Flexibility:** With Wordpress, you can create any type of website you want: a personal blog or website, a photoblog, a business website, a professional community,even a network of website. You can make your website beautiful with themes, and extend it with plugins. You can build your very own application.
- **Publish with Ease:**If you've ever created a document, you're already a whizz at creating content with Wordpress. You can create posts and Pages, format them easily, insert media, and with the click of a button your content is live and on the web.¹²
- **Publishing Tools:**Wordpress makes it easy for you to manage your content. Create drafts, schedule publication, and look at your post revisions.
- **User Management:** Not everyone requires the same access to your website. Administrators manage the site, editors work with content, authors and contributors write that content, and subscribers have a profile that they can manage.¹²
- **Media Management:** They say a picture says a thousand words, which is why it's important for you to be able to quickly and easily upload images and media to wordpress.¹²
- **Full Standars Compliance:** Every piece of WordPress generated code is in full compliance with the standards set by the W3C.
- **Easy Theme System:** WordPress comes bundled with two default themes, but if they are'nt for you there's theme directory with thousands of themes for you to create a beautiful website.

- **Extend with Plugins:** WordPress comes packed full of features for every user, for every other feature there's a plugin directory with thousands of plugins.
- **Built-in Comments:** Your blog is your home, and comments provide a space for your friends and followers to engage with your content.
- **Search Engine Optimized:** Word Press is optimized for search engines right out of the box.
- **Multilingual:** Word press is available in more than 70 languages.
- **Easy Installation and Upgrades:** Word Press has always been easy to install and upgrade.
- **Freedom:** Word Press is licensed under the GPL which was created to protect your freedoms.
- **Community:** As the most popular open source CMS on the web, Word Press has a vibrant and supportive community.

3.4 What's Common in Word Press, Joomla and Drupal

All three of the web's most popular CMS have a lot in common terms of Technology, philosophy, and community.

- Word Press, Joomla, and Drupal are all free and open source software licensed under GPL. See our article on why is Word Press free to learn more about free software.¹³
- All three of them are written primarily in PHP.
- They all Support MYSQL as their database management systems. Word Press exclusively supports only MYSQL, while Joomla and Drupal support other database management systems.¹³
- All three of them use themes and templates for visual appearance of sites,
- And plugins module, or extensions for extending features.
- As open source software, they are all community- driven projects.

4. CMS AND ITS IMPLEMENTATION

There is a wide scale implementation of CMS in various field like independent business, higher learning to name just a few. What comes with CMS can be listed as

- Easy to add/edit/update content on your website through a browser when ever you want.
- Tiered access systems so that people at different levels or departments have different permissions for viewing or adding content.
- The design layer can be altered in the future without having to rework your exiting content or functionality.
- You don't have to tackle everything at once. Begin with core functions and expend your features as time goes on. Some forethought to a rollout strategy can provide even more precision.
- No licensing fees.
- It's open source and has a huge user/ developer base..
- There are different ways to grant "member" status to visitors so they can access secured or personalizes areas of your website.
- You can set up Notifications for certain areas / content types of your site and grant members the ability to fine-tune what they want updates for and how often. Set up advanced/ filtered searches to make it easier for audience.

5. CONCLUSION

An Organization can use open source CMS to manage their contents effectively and efficiently with the features like personalization and web administrative functions. While choosing best suitable open source CMS for the organization one has to study it in detail.¹⁴ Analysis of various features of open source CMS can often enhance decision making. A stable, costeffective, flexible CMS which fulfills the organizational needs is an ideal choice. Open source CMS which facilitate user to control overall content management needs. For basic site which contains few pages and less number of users, Wordpress and Joomla are the best options.¹They are useful for blogs and forum sites. Drupal and is suitable for complex site with more number of pages and multi- contributors.

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