

OPEN SOURCE VIDEO MANAGEMENT SYSTEM (VMS) FOR OPEN EDUCATION: A Comparison Study

Ahmad Zamzuri MOHAMAD ALI
Faculty of Art, Computing and Creative Industry
Universiti Pendidikan Sultan Idris
35900, Tanjong Malim, Perak, MALAYSIA

ABSTRACT

The emergence of video sharing technology and high-speed broadband connectivity initiative offers a great choice for users throughout the world to share videos online. However, most of the video sharing sites are not primarily educational. Therefore, this study intends to introduce a framework in choosing and installing open source products for teachers and students in developing specialized online video sharing platform for open education. The paper also reports a comparison study on four most credible open source video management systems (VMS).

Keywords: Open source, online video, video management system, video sharing

INTRODUCTION

With today's online video sharing technology, users have tremendous opportunity to study virtually anything, anywhere. Users can now find an online video on any topic, and learners are beginning to utilize it as a reference tool too (Helft, 2009; Iskold, 2008). However, most of the video sharing sites are not primarily educational (Snelson, 2008). Undeniably, there are millions of short video segments available online applicable for education, but challenges do arise in allocating and identifying them from these sites.

Therefore, the development of specialized video sharing sites with educational values is important. Specialized video sharing sites can improve learning by eliminating any distractions from irrelevant contents. Developing an online video sharing site from scratch is complex; meanwhile, outsourcing the development is also costly.

Therefore, open source products can be the potential substitutes for organizations lacking adequate funding.

There are dozens of open source video sharing application that can be downloaded for free from the Internet, for instance, phpMotion, ClipBucket, VidiScript and more. Furthermore, there are even free hosted ready choices such as BoostCast.

DEVELOPMENT STEPS

As a guide line, consider the following five steps suggested by Ahmad Zamzuri (2009) in deciding and installing a suitable open source video sharing site:

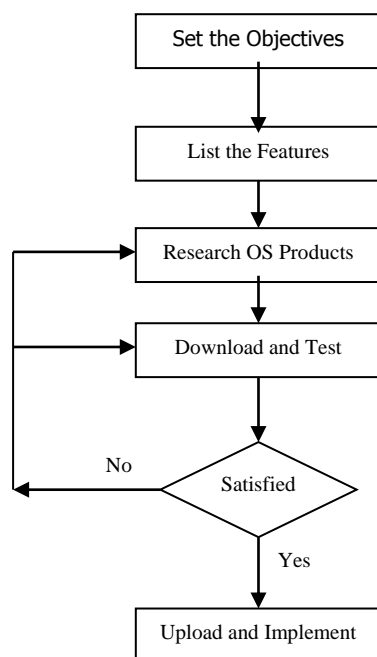


Figure: 1
Process Flow of Choosing Open Source Product
 Source: Ahmad Zamzuri (2009)

Set the Objectives

Selecting the appropriate open source product starts with identifying and developing the learning objectives. Identifying the learning objectives is important in order to find the right open source product that will suit the initial and subsequent requirements. In deciding the objectives, consider the size of the institution, the target learners, their learning preference, their location, the resources available, assessment method and so on ("How to", n.d.).

List the Applications

Once the objectives have been formulated, decide the applications or modules needed in order to fulfill these objectives. Among common applications or modules which are generally referred are such as Users Enrolment, Privilege Settings such as Admin, Moderator and User, Communication, Announcements, Upload, Download, e-Mail and so on. It is also important to prioritize the modules' requirements in a range from high to low.

High-priority requirements are absolutely necessary for the open source product to function effectively in the initial implementation. Low-priority requirements are 'nice to have' and can be delayed indefinitely ("How to", n.d.).

Research Open Source Products

Based on the modules listed, do research on profiles of each potential open source products. Information can be gained from their official or support web sites. Additional information can also be gained from research and comparison reports. Along the process, any open source product that does not fulfill the high-priority requirement should be dismissed from consideration.

Hardware and additional Software requirement, Operating System platform, Storage capacity, Programming language and Database supported also need to be considered throughout the process. From the research done, short-list the entire potential open source product for the following testing process.

Download and Test

It is important to thoroughly examine and test multiple open source products before making the final decision. Among the important aspects that need to be tested are simplicity, stability and processing speed of the open source product.

The open source product can be downloaded from their official or any other download websites. It is recommended to do the testing on a personal computer configured to work as a web server.

It is also necessary to test them in a local network. From the testing processes, users can also explore and familiarize the features of the open source product that surely will be helpful in the implementation phase.

Upload and Implement

Once the decision has been made from the testing process done, the final implementation is often easier.

The first requirement is to have a hosting space available either on a web server available in the institution or on an outsourced web server hosted by any Internet Service Providers (ISPs). Ensure that the hosting service come with FFMPEG module, which contains application such as MEncoder, MPlayer, FFMPEG, FFMPEG-PHP, PHP4 & PHP5, LAME MP3 Encoder, libOGG, libVorbis, MySQL 5 and CGI-BIN support.

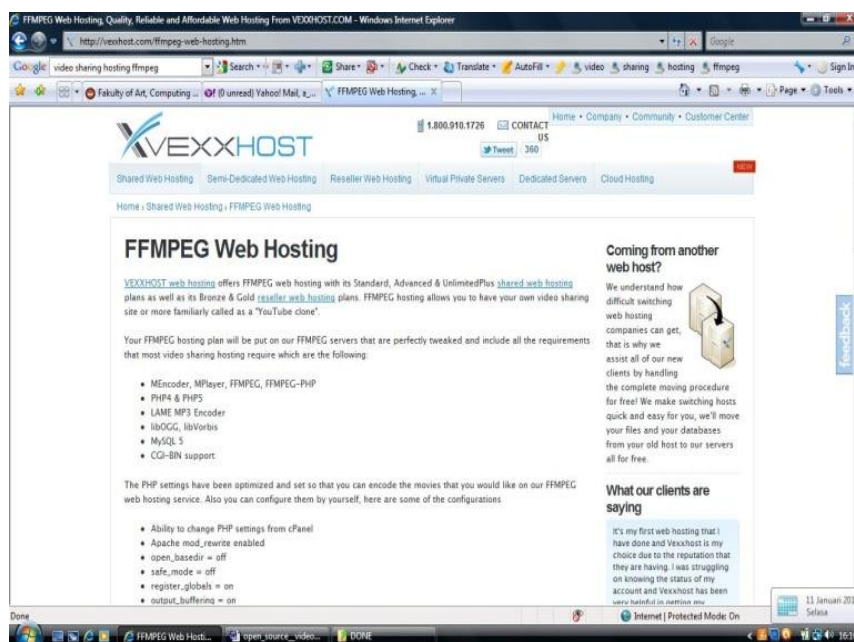


Figure: 2
Hosting service with FFMPEG module

The second step is uploading the open source product to the server, and the final step is setting up and fine-tuning the application accordingly based on the knowledge gained from the testing process carried out.

POTENTIAL OPEN SOURCE VIDEO MANAGEMENT SYSTEM

Five potential open source video sharing platform will be introduced in this section namely PHPmotion, ViDiScript, ClipBucket, MediaCore and PLUMI. The screenshot and some important features documented in the official script providers' site are as follows:

PHPmotion (<http://phpmotion.com>)

Initially free to download and use, cost is incurred when the user wishes to remove certain branding units displayed. A growing user base of over 100,000 webmasters had already downloaded this application. Templates based on nature allow a user to change the look and feel of the digital environment. PHPmotion has a full-featured admin area to manage the site such as viewing, deleting and approving videos. Among the features available are easy uploading, support for many video formats, edit or delete video at anytime, making video public or private, annotating video comments and creating group.

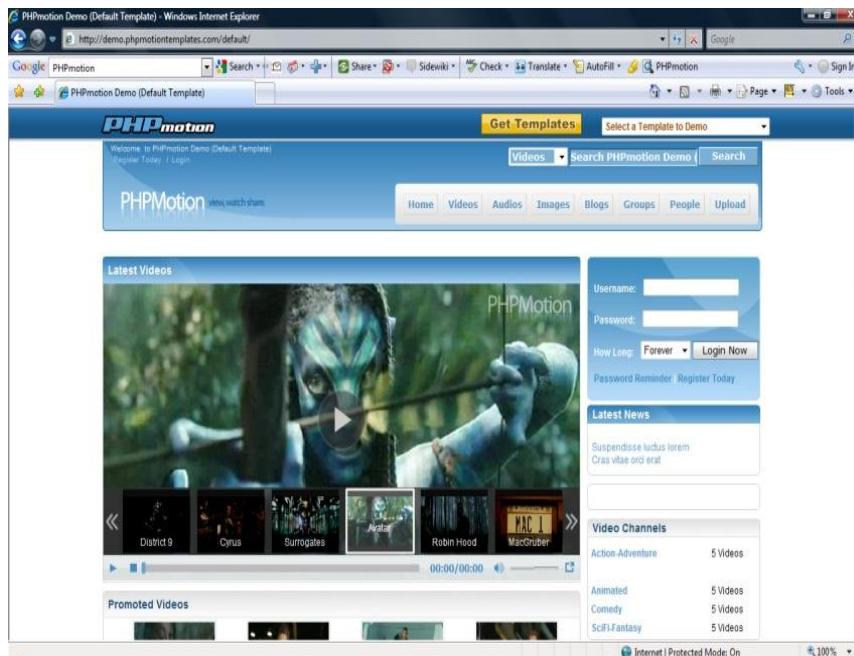


Figure: 3
PHPmotion demo site

ViDiScript (<http://www.vidiscript.com>)

A 100 % free open source application, *ViDiScript* is packed with features that can only be found in major sharing communities such as YouTube, Meta Café and Break. Some of the features available are members can upload, manage and share their own video files, bundled with the most powerful open source video player, members can create group, video commenting system, add categories and sub-categories, converts video to flv, thumbnail creation and admin are able to approve, modify and delete video.

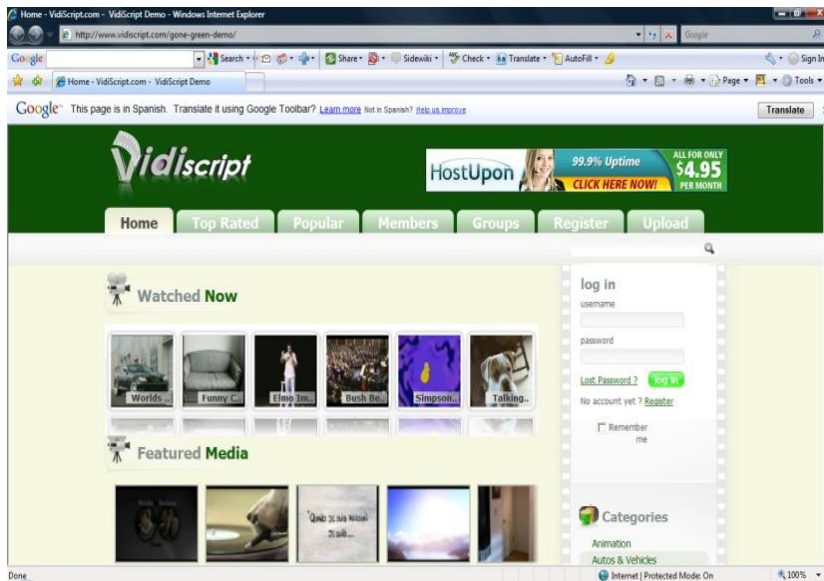


Figure: 4
VidiScript demo site

ClipBucket (<http://clip-bucket.com>)

ClipBucket is the fastest growing script with many interesting video sharing and social networking features.

The video script uses the latest in web 2.0, Ajax and JavaScript libraries that bring the user to experience the features found on most of the high end commercial video sharing scripts.

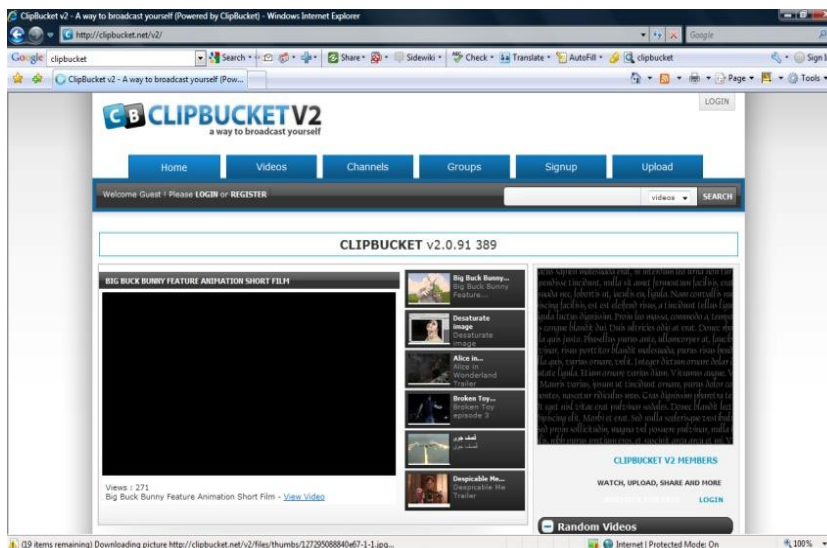


Figure: 5
ClipBucket demo site

MediaCore (<http://getmediacore.com>)

MediaCore is an open source video CMS for centralizing all of users' video and podcasting needs. Users can browse through video added to the CMS from any devices, store the video anywhere: YouTube, GoogleVideo or any server, categorize the video, comment and share videos, admin can manage all video, podcast and comments through a beautiful control panel. Every aspect of MediaCore can be controlled; user can upload video via the upload interface. An admin will be notified and can review and approve new content.

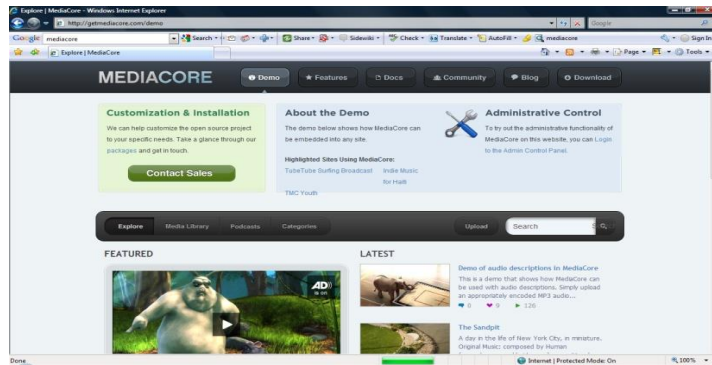


Figure: 6
MediaCore demo site

PLUMI (<http://blog.plumi.org>)

PLUMI is a free software content management system designed for video-sharing, based on PLONE and produced by EngageMedia. By installing PLUMI on web server, user can use a wide array of functionalities to facilitate video distribution and community creation. Capabilities include publishing videos in diverse formats, auto conversion to flv, attaching of open content license - including thumbnails, social networking; embedding a video from PLUMI on another website or blog, uploading video via FTP; managing users and their roles, and moderating contents - featured videos, news and events on the front page and site language using site manager administration tools. Apparently, all the capabilities or features available can be used in proper contexts for learning purposes.

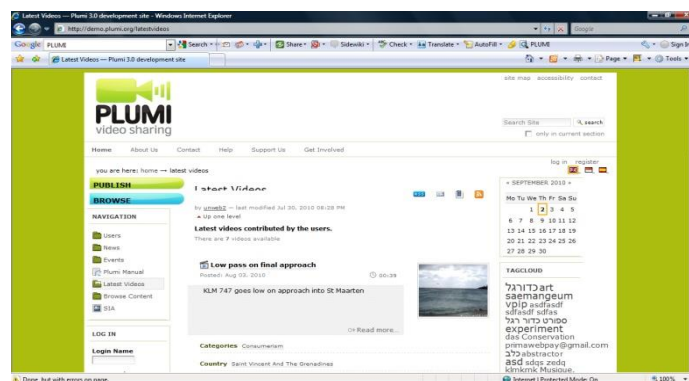


Figure: 7
PLUMI demo site

COMPARASION STUDY

From the five open source video management system introduced in the previous section, a comparison study was conducted on four products that provide demo sites. In summary, the outcome of the study is as in the table below. The conclusion was made based on experience gained from exploring the demo site and information in the official web site.

Table: 1
Comparison Between VMS

Features	PhpMotion	Clipbucket	VidiScript	Mediacore
General				
1 Media Type				
Video	✓	✓	✓	✓
Imej	✓	✓	✓	x
Audio	✓	✓	✓	✓
Flash Game	x	x	✓	x
2 Blog	✓	x	x	x
3 Group	✓	✓	✓	✓
4 Channel	✓	✓	✓	✓
5 Free download	✓	✓	✓	✓
6 Free hosting	x	x	x	✓
Installation				
1 Documentation	✓	✓	✓	✓
2 List of requirements	✓	✓	✓	✓
3 Step by step instruction				
Clear			✓	✓
Unclear	✓	✓		
4 Certified hosting integration	✓	✓	✓	✓
Uploading				
1 Video file format stated	✓	✓	x	x
WMV	✓	✓		
MPG	✓	x		
AVI	✓	✓		
MPEG	✓	✓		
MP4	✓	x		
3GP	x	✓		
FLV	✓	✓		
MOV	✓	✓		
MOOV	✓	x		
DIVX	x	✓		
2 Edit Video	✓	✓	n/f	✓
3 Delete Video	✓	✓	✓	✓
Editing Videos				
1 Description	✓	✓	✓	✓
2 Tagging system	✓	✓	✓	✓
3 Category	✓	✓	✓	✓
4 Media Privacy	✓	✓	n/f	✓
5 Comment	✓	✓	✓	✓
6 Embedding	✓	✓	✓	✓
7 Rating	✓	✓	✓	✓
8 Report	✓	✓	✓	x
9 Search	✓	✓	✓	✓
10 Filter searching	✓	✓	n/f	x
11 History	x	x	✓	x
12 Favorites	✓	✓	✓	x
13 Playlists	✓	✓	x	x
14 Featured	✓	✓	x	✓
15 Most Viewed	✓	✓	✓	✓
16 Most Recent	✓	✓	✓	✓
17 Most Commented	✓	✓	x	x
18 Top Rated	x	✓	✓	x
19 Statistics	✓	x	x	x
20 Social Bookmark	✓	✓	✓	x
21 Sharing				
Through email	✓	✓	✓	✓

	Through social networking	x	✓	x	✓
Users					
1	Register New	✓	✓	✓	✓
2	Register with social networking	✓	x	x	x
3	Profile Customization	✓	✓	✓	✓
4	Avatar	✓	✓	✓	✓
5	Member searching	✓	✓	✓	✓
6	Email systems	✓	✓	✓	x
7	Friend request	✓	✓	✓	x
8	Subscribe	x	✓	✓	x
9	Close account	✓	x	x	✓
Support on website					
1	Live Help	x	✓	x	✓
2	Forum	✓	✓	✓	✓
3	Live Demo Site	✓	✓	✓	✓
4	FAQ	✓	✓	✓	✓
Plugins					
1	Free API	✓	✓	✓	✓
2	Others free plugin	x	✓	x	✓
3	Paid plugins/addons on website	✓	✓	x	✓
Themes					
1	Free Themes	x	✓	x	x
2	Websites example	✓	✓	✓	x

n/f – not functioning

CONCLUSION

Information discussed on the highlighted open source video sharing sites in the preceding section demonstrates that there are a number of low cost, but powerful products available online that can be tapped on for learning purposes. However, installing these products can be technically demanding entailing expert advice or assistance. On a positive note, some product developers do provide installation services but with minimum charges that lends technical support to users lacking the experience and/or skills. Further study on installation and implementation are needed before concluding the first-rate video management system product.

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BIODATA and CONTACT ADDRESSES of the AUTHOR



Ahmad Zamzuri MOHAMAD ALI

Ahmad Zamzuri MOHAMAD ALI Dr. Ahmad Zamzuri Mohamad Ali, born in Malaysia. Currently a Senior Lecturer at Faculty of Art, Computing and Creative Industry, Universiti Pendidikan Sultan Idris, Malaysia. His areas of interest are Instructional Multimedia, Instructional Technology and Open Source in Education.

Ahmad Zamzuri MOHAMAD ALI
 Faculty of Art, Computing and Creative Industry
 Universiti Pendidikan Sultan Idris
 35900, Tanjong Malim, Perak, MALAYSIA
 Email: zamzuri@fskik.upsi.edu.my

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