

Friday, February 29, 2008

Open Source for Education

Pachyderm: Open Source Multimedia Authoring

Teachers need a true "Open Source" multimedia authoring program. And, Pachyderm might fill that need. Of course, Open Source zealots might not like the fact that Pachyderm is operating source independent and really is "Open Source" in the original sense of the term.

Many of the Open Source zealots seem motivated by a hatred and aversion to the success of Microsoft. Of course hatred and prejudice are just as inappropriate in the corporate or software worlds as they are in the personal or professional worlds of teaching and living.

No lasting good comes from hatred, bigotry or animosity, and the negative attitude (that is contrary to the laws of success) that motivates some of these zealots is a limiting factor in the success of Open Source Movement. Real "Open Source" How So? Pachyderm is real Open Source because...

It is usable from any Web browser

It is freely available (at zero cost)

It is licensed under the Apache-Open-Source License

Development was funded by grant money

You can obtain a copy of the software for yourself, today

Pachyderm differs from some "Open Source" projects in that... It was developed by an organization to solve a specific need

The developing organization controls development, i.e., development is not left to a loose confederation of volunteers who do their own thing

The features of the product are specific and focused upon specific needs

Setting needs and building a project with a unified focus is atypical of the "Open Source Movement."

Open Source projects are most often group-developed "knock offs" of effective commercial software.

Open Source project developers allow the commercial developers to spend the Research and Development (R&D) funds to develop a product. Then, the Open Source folks step in and copy (or imitate) the commercial product.

Of course, imitation products often fall short of the capacities and features of original, commercial products. The excuse provided for delivering a less-than-stellar product is that "the Open Source product is free."

People that pay nothing have little to complain about, and people that pay nothing lack leverage (except for their ability to employ the delete key in dealing with products that fail to meet their needs). What teachers and students need are high-quality programs that interface with every other program. These high-quality programs should interchange data with (and interoperate with) every other program. Teachers and students need programs that allow the file formats of every other program to be used. Of course, commercial programs have not risen to this level of compatibility, yet, either.

But this interoperability is partially responsible for the mass appeal of Microsoft Windows and Apple Macintosh computers. High-end commercial programs interface with and interoperate with other high-end programs.

Commercial programs enjoy this advantage, most Open Source programs don't. Pachyderm is Free, So, What's the Catch?

Pachyderm is a server-based software application.

This means that you need a server to be able to use this software, so you can't easily install the program to your desktop computer.

So, even though the software is available at zero cost, knowledge of server and database administration is required if you want to use the program. What if you Can't Configure a Server? Unfortunately, Classroom Toolkit was not able to test

Pachyderm because the server requirements were too time consuming to implement on our server

(Microsoft Server 2003), and the amount of work required to test the software would exceed the time available to research this article. Sidebar Here is a sample of the instructions for installing Pachyderm. (Note: If you feel that these instructions are unintelligible, just refer them to your school district's IT Server Operators or Network Administrators.)

Installation. General

Before setting up Pachyderm 2.0.x on any machine, you have to make sure you have several things installed first: Java Runtime Environment 1.5. Sun's JRE is recommended. Available from: <http://java.sun.com/j2se/downloads/>

Web Server with proxy support. Apache is recommended. Available from: <http://httpd.apache.org/>

Relational Database Management Server. MySql is suggested. Available at: <http://dev.mysql.com/downloads/>

ImageMagick. Available from:

<http://www.imagemagick.org/script/download.php> Note: The Mac OS X Server is by far the easiest install for

Pachyderm, because there's no need to install WebObjects or worry about the WebObjects frameworks. First thing you need to do is copy the appropriate directories to the appropriate location on the server: Copy Pachyderm2.woa into

/Library/WebObjects/Applications

Copy the contents of Frameworks/Pachyderm into /Library/Frameworks

Copy the contents of XML into /Library/Application Support/Pachyderm

Copy the contents of wwwroot into /Library/WebServer/Documents/pachydermOnce you've done this, create a database 'pachyderm', and create a user (default is username:'pachyderm', password:'pach=derm') and give that user full privileges on the pachyderm database. Run the following scripts against the database:pachyderm_create_tables.sql load_data_admin_user.sql

load_data_compdescription.sql"Source:Pachyderm™ Installation InstructionsIf this set of installation instructions is incomprehensible to you, you are experiencing firsthand the reason that Open Source software has not made noticeable inroads in its use in our school districts.

Commercial software is easier to install, and commercial software developers include all the helping applications in their installation packages.Commercial software developers do this by licensing the software components, and passing on the cost to purchasers.

Of course this suits everyone because the licensing costs are smaller for large developers (they buy in bulk), and because the installation process is automated.

The typical commercial program installation routine (even for servers) consist mostly of clicking on the "next" button. Pachyderm™ is a great Open Source program, but unless teachers work for a school district with an IT Department that is willing to experiment with non-commercial products and trouble shoot how to make these products work, teachers will probably find that paying the \$99 per year for the Pachyderm™ hosted product is the path to success…a path that avoids the high-stress of entering the technology "Twilight Zone" of difficult-to-deploy, free software.

Pachyderm™ allows the use of its software on its servers if you purchase a yearly account license. This way, a teacher (and students) can access their Pachyderm™ presentations online.

The range of access runs from use of the software (basic account \$99 USD per year) to use of the server and software (for 5,000 users at \$7,500 USD per year - members or \$10,000 USD per year - non-members).

Use of the server allows either downloading the multimedia presentations, or allows leaving the creations on the Pachyderm™ server and linking to the Flash-formated files.

Pachyderm™ can also be hosted on a dedicated server for large numbers of users for only \$5 USD per user per year.

This may seem like a subversion of Open Source; i.e., providing free software to teachers, but charging to use the software. But, Pachyderm™ was developed for museums to allow them to provide online presentations related to the museum's collection.

Pachyderm™ also partnered with many big university systems that have no difficulty paying for servers of their own, universities that have no difficulty finding the technical talent to install and manage those servers.How does the Pachyderm™ Program Work?All that is required to create Web-accessible multimedia presentations with Pachyderm™ is a Web browser.

With a Web browser you or your students can…Upload mediaAudio - MP3

Images - JPG and GIF

Movies - MOV and FLV

Link the templates

Publish the presentation

Website

CD or DVDWho uses Pachyderm™?Pachyderm™ is used by schools and museums of all sizes.

This is because the Pachyderm™ software is so easy to use.

The software and hosting is also cost effective.

And, educators know that multimedia presentations increase students' memory and recall…especially when students create the presentations themselves…or, when students collaborate on their presentation projects.Real Educational UseThe members of the Pachyderm™ Project read like a "Who's who" of museums and universities. Here are some helpful links to Pachyderm™ Partners…

Pachyderm™ Partner List

Pachyderm™ Museum MembersSidebarLink to other Pachyderm™ resources…Training Timeline from the Maricopa Community College

Link to a Description of the Pachyderm™ software's design

Link to the Pachyderm™ Developers' Site

What this Open Source Project Means to TeachersTeachers should feel frustrated that this great online multimedia presentation software resource is so close that they can hear it breathing through its long trunk, so close that they can smell peanuts on its breath…yet so out of reach for themselves and their students.

Teachers who don't have access to district servers, and teachers who work for school districts with IT Departments that are selective about what applications they support will remain frustrated.

But, there are no viable alternatives.

Tinkering with servers, and installing programs such as Pachyderm™ is not something that many teachers can try at home unless they invest in server and network resources.

While many teachers could learn the process, few have the spare time to meander through the IT World…the call

of the "wild and wooly" high-stakes test keeps teachers' discretionary activities in check.

One benefit: Since the developer of Pachyderm[®] is a non-profit organization, teachers should have little trouble getting a purchase order for the Pachyderm[®] service processed through their school district's bureaucracy.

Posted by Classroom Toolkit Newsletter in Open Source at 01:00