

High Tech Tools At Work In Churches With Low Tech Budgets

Making Use Of Open Source Software In The Church

MSRody

As a pastor my role is to train and enable my people to greater worship and ministry in the kingdom of God. Considering this mandate our minds go quickly to teaching and training in evangelism and spiritual growth, even more academic things like hermeneutics and eschatology have there place. What about Computer Science and Information Technology? As administrators we also have to consider what practical tools we put before our people, both professional staff and volunteers. Much of our work passes through a computer the postcards to visitors, the certificates for class completion, the wedding ceremony, the presentation for the annual meeting, a hand out with blanks to be filled in during our sermon, all go through our computer. In fact much of what we would like to do depends on good tools. We use word processors, presentation software, databases, spreadsheets, graphics tools, audio and video editors and a lot more. These have become important for effectiveness in communicating the gospel.

The problem can come when we have to buy the tools. Our churches tend to have low tech budgets with high tech desires. I believe we regularly spend more for our tools (software) than we need to. This limits our access to good tools and makes us less likely to provide good tools for people both paid and volunteer who could use them or learn to make them useful.

When a new staff member joins us they want a computer to work on. The \$300.00 for a cheep desktop is do able for most churches, but then they need software. Microsoft Office will add an additional \$300.00 to the price of that cheep computer. If we want the staff member or volunteer to do more we might have to add graphics software or presentation software. What about the Sound system volunteers that want to use a computer to record the messages? How much will that cost? Most of us can't put Microsoft Office through its paces and would find a product that costs between \$300.00 and \$500.00 less just as useful. Did I mention everyone on staff wants the new upgraded version? I believe and hope to show a path churches could and possibly should take to extend their resources and enable more people to get more work done with less cost.

The Cost of Common Office Software

In a church it is common to find the following software (or someone who would really like us to buy it for their computer). These prices are from Amazon.com August of 2006; they are not list price which would be higher I believe.

Office Suite

Microsoft Office Standard Edition - \$329.99

Graphics

Adobe Photoshop - \$589.99

Corel Draw Graphics Suite X3 - \$244.99

Desktop Publishing

Microsoft Publisher 2003 - \$148.99

Adobe Page Maker - \$539.99

Some may be thinking they have found a \$49.99 alternative, and you may have, but what happens when you want to do the thing that your \$49.99 program can't do? Many projects are hours in before the limitations of software are found and the project can't be done properly or has to be started over again with new software. An example of this is printing. If you use Microsoft Publisher you will have a difficult time taking your project to a regular print shop. Some may think, "we'll just do without." and that's fine if indeed it's not useful. What if you had the tool to do the job, not just on one computer but on any computer who's user wanted it? Would someone maybe pick it up and start trying to use it? It might actually be beneficial to them and the church, but at \$300.00 few churches will make the software available for all staff or volunteers who want to give it a try.

There are multiple problems churches will have with mass market software:

1. In a church setting most of those software packages are priced higher than the computer they will run on.
2. One license to one computer means that to legally equip multiple computers the expenses multiply (though many companies do give some discount for multiple licenses).
3. In most cases you will have to buy a different version for the "Mac" person, even if you have multiple site licenses.
4. Staff cannot use the single copy on their own computer and must use a different computer or have another staff member do the job for them.
5. You can't just take it home and install on your other computer to work on there.
6. Temptation is to bring in "Joe's" copy and and just install it for us.
7. Ties us into an upgrade cycle, meaning that we have to buy again go keep up with current capability.

I'm wondering how many of our churches actively look for alternatives to this course. I'm not death on Microsoft. I really love Microsoft Word and many of

the tools in the Microsoft Office Suite. I know it so well my wife and several friends call me regularly to get “tech support”. I can usually walk them through the steps and the various menus even while I'm driving and have no computer in front of me. My issue is being a good steward and even more providing, with what meager means I have, the tools to help staff and volunteers do the best possible job.

Open Source Alternatives for Common Office Software

Do you use open source software? Do you know what it is? Basically open source software is developed by a “community” of volunteers, with possibly a few paid by grants, and is free to acquire, use, and modify if you like. There are various licenses falling into this category. For us the important understanding is *it's free*. Free is not always good and that's true in software like cars. However, because these “communities” are so large and diverse their development is often very good and very fast even bugs are often found and repaired quicker than corporate software. Many of these projects were started as corporate projects or are sponsored by corporations who use the software. Some open source applications are beginning to gain broad corporate and government usage. The following are open source software that you can put on any Windows computer (at least a current one) for free. In fact most of these can also be installed on Apple OSX, FreeBSD, Linux or any number of other operating systems, but I'll talk about this as we go along.

Office Suite Alternative

OpenOffice.org - alternative to Microsoft Office Suite. OpenOffice.org (OOo) includes: word processor, spreadsheet, database, drawing and presentation programs. OOo doesn't do everything MS Office does (yet), but it probably does everything you need and works well with MS Office documents¹. The word processor is highly capable, the spreadsheet works well, the database is no Access killer², but most churches do little with Access that OpenOffice couldn't do. It has a graphics program that can do complex diagrams and art as well as desktop publishing. The greatest weakness at this time is it's “presentation” software though I don't use presentation software much and can't speak for myself on this. If you were to put OpenOffice.org on all your computers it would cost you only the time of the installation. You might still need to buy Microsoft PowerPoint, but all the OpenOffice.org computers can play well with PowerPoint. It can edit basic PowerPoint documents and save in formats PowerPoint can import.

If you install OOo you would have to deal with the change process we all have to experience when using a new tool. It's not a difficult change. You won't get

1 The one exception is MS Publisher documents (.pub) which only Publisher can open. Publisher is a simple and useful program, but has some very significant limitations that should not be overlooked by churches.

2 In other words Access is more powerful and easier to use in powerful ways.

blisters or anything like that. If you already use Word, you could start using OOo right away and feel very comfortable with it very quickly. The great thing is when you buy your next computer you won't have to buy Microsoft Office for \$329.99 so you can support a missionary for one more year, or buy the computer sooner. At our church we will no longer purchase Microsoft Office when we buy new computers. We will however install OpenOffice.org. I also offer to do this for anyone in our church, because I can be generous with *Free Open Source Software* and I believe it's great software.

In case you wanted to know the text of this document was written in OOo 2.0. When I'm done I'll probably hit the PDF icon in the toolbar above to save it as a PDF document that you will read using Adobe Acrobat Reader. That's a very nice touch I can't do as easily in MS Word.

Photo Manipulation Alternative

The Gimp - Sounds lame, but it's one of the best graphic manipulation software titles out there. It can't do everything that the Adobe Photoshop can do (I'm told) but I've never done everything Adobe Photoshop can do, nor will I likely need too. The Gimp handles photo manipulation very well. Any kind of bitmap graphic (jpg, gif, png, bmp, tiff, etc³) can be handled by the Gimp. This is great for photographic production work like your brochures and marketing material, resizing the pictures from camp before putting them on your website, touching up the snapshots from the the Senior's Luncheon before you have them printed, or customizing your own photographic background for a PowerPoint presentation.

Though Adobephiles will tell you different there are quite a few companies using The Gimp for production work. It is more than powerful enough for most church use. If you have someone who has photoshop let them use it. If you have to buy it, get The Gimp instead. It is heavy duty graphics software and more powerful than most of us will actually need. Because The Gimp is very capable, the learning curve is long and a bit steep like photoshop. There are tutorials and forums on the web and if one is willing to learn and go through some trial and error a lot can be learned and applied to subsequent projects.

There are other more basic photo-manipulation software out there, both



The picture above is my son waving hello to his grandpa while standing in Grandpa's driveway overlooking a junk pile, a shed and a garden. It was taken with a Treo 650 (sub-megapixel phone camera). With The Gimp, I took out the background, redid the coloring in the picture to make his cheeks more rosy and everything else more yellow and warm. I blurred the image a bit to make it just a cute kid, not necessarily any particular kid. I took that picture and put it on a layer over the rockery background. In between those layers I put some shading to make the top left corner fade to black and on top I put the letters in a color I picked off my son's shirt. I'm no graphics wiz' but I couldn't have done that with any of the basic programs our church could afford.

3 In case you were wondering there is not etc format, I just meant etcetera.

open source or freeware. They may be more to your basic needs, but having your publications people learn to use The Gimp will give them a lot of tools to grow with. If you install The Gimp it only costs the time of download and install. If you get a cheap alternative it costs \$50-\$140 and you have to upgrade at some point or get better software if your graphics skills or requirements increase.

Vector Graphics Alternatives

Inkscape is a great alternative for doing vector graphics. Again it is not at the top of the heap but moving in that direction. The great thing is its price because it is free to install and it's also easy to learn and work with. It is capable of doing most of what you'd need to accomplish.



In the Windows world, Corel Draw was king of this type of production graphics. Vector graphics use lines and shapes to develop an image. These images are infinitely re-sizable without degradation of the image. This is the kind of software you'd use to make a logo or a non-photographic graphic. If your church logo is made as a vector graphic the same file can be used to produce both your letterhead or a massive billboard with equal quality. As noted above the Corel Graphics Suite runs \$244.99. What's not noted? That's the upgrade price. If you don't already have it or you're installing from scratch on a new computer you're looking at a price twice or three times that. Even simple graphics for your website will require some pretty expensive software if you buy it and we know you'd never pirate it. I think Inkscape is looking pretty good now.

This Girls Night out banner runs on our youth website. The original graphic was produced in Inkscape. It is an svg file which stands for Scaleable Vector Graphic; it can be scaled to any size we want without losing the clarity of the colors or the definition of the lines. Each little element of the picture can be moved individually or as a group. In the background of this graphic are around 300 little swirls that can be individually manipulated. Or they can be reused in another graphic by cutting and pasting. It is also a multi layer document so when a girls night event is actually planned we can easily hide the coming soon layer and put the event title or promo slogan on the stars appearing underneath. All of this without ruining the image.

Desktop Publishing

Scribus is a free open source software for desktop publishing that is beginning to usurp the big boys. Okay it has a ways to go, but many independent publishers and a significant number of self publishing companies are using Scribus and other open source software to do the work. "Real" desktop publishing is done with programs you may or may not have heard of: Quark Express (\$799.00), Adobe PageMaker (\$539.99) or Corel Ventura (\$219.99). These are the big professional quality desktop publishing software names. Many of us use cheaper titles like Microsoft Publisher(\$148.99) for our bulletins

and brochures. Problem is most print shops don't take Publisher documents. Given that Scribus' is free open source software that is more powerful and easier for a beginner to understand, even Publisher starts looking awful expensive.

In a church who really needs desktop publishing software? When you only use your laser or ink jet printer or copier to put out our posters, flyer's and promo material why buy extra software? Most of us do "desktop publishing" with our word processing software, me included.⁴ OpenOffice does a great job of this basic desktop publishing. Both the word processor and the draw program handle this task well.⁵ OpenOffice.org will also produce a file you can easily take to your printer if needed. We currently do our bulletins in OOo, though we're changing over to Scribus soon if not this week. To answer the questions above we'll ask another, when it's free why quibble? Just get the right tools to start with and you won't need to change mid project.

Other Open Source Software We Use in Church

My venture into open source software was the product of need, lacking funds and a little time to research. The whole story is not worth telling, but we use open source to record our services, edit those audio files and convert them into three different formats for web publishing. We use open source web software to produce a nice blog style page for our audio archive and to produce the rss files necessary to enable distribution of our podcasts.

Audio Software

Audacity is great for recording and editing music. It will do single track recording and multi track editing. It does a great job for the basics of recording a service and works with Windows and other operating systems. I use it with Windows and FreeBSD (at home).

Sox is a command line (like the old day under DOS when we used text for everything) program that works great. If your able to write a simple script or batch file you can do even more like convert all the .wav files in a certain directory in to .mp3 files and put them in their own directory for archiving or web publishing. Part of sox is rec which we uses to automate the recording of our service audio via a very simple script.

Web Server

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- 4 I really became a power user of Microsoft Word from doing publications and academic papers. My skill increased as I figured out how to make it do what I wanted not what it wants to do and to do it in an efficient, repeatable manner.
 - 5 I find the OOo word processor functions very similar to Word in these types of tasks. OOo's draw is more like Publisher. There are irritating quirkiness to both the OOo programs, but no greater than the quirkiness of the Microsoft products, just different.

Apache – The Apache web server was at one point almost the default web server. There are still more Apache web servers on the Internet than any other. It is open source. It runs off of Windows, the BSDs, Linux and other operating systems.

Blog Software

WordPress – We use wordpress to handle our blog front page and our podcasts and other rss feeds from our archive site. It's very easy for us as we just write a blurb regarding a new audio file, put it in the editor, type in the details about our audio file and WordPress (and it's podcasting plugin) take care of making it all look nice and come out right.

Open Source Software We'd Like To Use in Church

I always have projects in mind that are beyond our current situation, but when these projects start germinating I start looking for the tools that will enable the people to accomplish the task. To such tools for these down the road tasks are Jahshaka and Asterisk. Both are in totally different fields, but I'm doing the research so when the right situations and people come together we can jump and do the project.

Jahshaka – Video editing and effects program. The software is said to be quite good and in rapid development. As with any video application it requires some horsepower and some time to learn. We don't do very little video so I have not used it enough to say I use it. It's a complex and capable video editing tool but it doesn't appear to be all that hard to figure out. Being free open source software it's way cheaper than the Adobe products.

Asterisk - In the future we might install an open source PBX, called Asterisk, that is full featured and will cost us about \$250.00. We have major problems with phones because of an AM radio station in our neighborhood. The Asterisk system will give us Voice Over IP (VOIP) capability in the facility as well as out of the facility. This means a digital phone system that could be used anywhere our network reaches or anywhere the Internet reaches. It is a smart enough system (if properly programed) that it can track you down or take a message and e-mail it to you. It's capabilities are significant and beyond the scope of this discussion, but it's important to see , there are things we may not have thought of yet that other's are already preparing for us to use, for free.

Open Source Operating Systems

The use of Open Source operating systems in a church is not really a necessary issue in a general sense because new computers typically come with the OS pre-installed. Using open source OS on old computers in a church can be useful. There are many open source operating systems (OS) to choose from. They can be very complex or not. Some are even easy to set up. Each open source OS seems to have it's own specialty. Before you jump into a new OS do your research or find an expert or both. However in this day and age you may end up with a staff member or volunteer that doesn't use Windows. They may use an Apple Macintosh with OSX or they may use some version of Linux or BSD. Wal Mart even sells inexpensive computers with a Linux based operating system. If it happens in your church you'll have some software issues with your major brand software. That's not a problem with these open source titles because any of the above mentioned applications should be fully functional in Windows, OSX, 'BSD or Linux and more.

We use FreeBSD and open source OS to run a computer (PIII 350Mhz with no monitor) that records our service audio automatically, stores our archives of audio and documents, serves up our [archive website](#), serves our [youth website](#) all with open source software. FreeBSD is the operating system and the other software we use is easily accessible to FreeBSD users. FreeBSD is an open source operating system that keeps on working. It tends to be more stable and secure than Linux. I have left in on without need of rebooting for over 6 months at a time with no problem. There are FreeBSD mail servers that have run for over a decade without need of rebooting, even with high volume work load. That can't be done with Windows in my experience even when it's not doing anything.

FreeBSD is complex and unless you like doing computer stuff or have your own geek on staff don't plan to switch today. I only use it at church because it was a home project that became useful at church. In fact I use FreeBSD for my main computer at home because I can't afford the newer windows machine I desire. It runs all the above mentioned programs like OOo, Inkscape, Scribus etc. I can do my work at home or at the office. At the church we have two 1Ghz desktop computers one a PIII with Windows 2000 and one a P4 with XP. My home computer is a 500 Mhz PIII with FreeBSD 5.2. When I work at home I don't notice a slow down using any of these programs. All this to say, open source operating systems are a great way to upgrade old windows computers, even making real old ones useful again.

There are much easier ways to set up an Open Source computer than what I've done, but it was more of a fun project from which I've learned a lot.

If you have a coffee shop and want to include Internet capable computers why not get some old ones and load them with a new OS and set them up as Internet browser stations. Need a kiosk? Open Source can turn your old computer into a very functional kiosk. These however are projects not daily use stuff.

Reasons to use open source OS's are many and specific to the individual distribution. They are often used as servers, but many of these make for great desktops as well. When they are your desktop you can choose what desktop environment you want⁶. The primary benefit I see in the church context is that

⁶ A desktop environment is what things look like on your screen and how you go about getting around. In windows XP or 2000 you use the start button to access a lot of things. XP's desktop is on such environment.

they can make old slow Windows computers perky, peppy and useful again. Read the side bar to see what we do with ours. In reality a 300Mhz desktop can have a new life with an updated OS that will easily run any of these applications.

There are Linux distributions designed for easy installation and there is a new OS based on FreeBSD called [FreeSBIE](#) that is for the beginner (OSX is also based on FreeBSD).

What About Open Source Software For???

There is not always an open source solution ready for your needs, but it's good to keep looking or maybe investing. What do we do about tasks like bookkeeping, accounting, assimilation, and other issues of church management? At this point we keep buy from ACS or Intuit or products like Peachtree or Servant Keeper. This will change. There are several groups that are working on very interesting projects for church management; none that I've seen are ready for prime time but when they come to fruition we could all be blessed.

Like many non-church specific projects there are larger entities, churches and denominational offices in this case, funding, promoting and acting as test beds for these projects along with the many volunteers who do every aspect of the development. Some of these were originally custom projects funded by a church. They have turned their code over to a community of developers, sharing with the rest of us what their investment has produced and increasing the effectiveness and reach of their project. The United Methodist Church is making a major effort in this area. Maybe we have people resources that could find ministry fulfillment by joining in on one of these projects. Maybe we can communicate to them the need and suggest they look into it and so validate their skill and tallents.

Conclusion

As I said I don't have a problem with companies like Microsoft and Adobe. As you can tell a lot of the open source is not yet to their standards. Some however are passing them buy. Some will one day. In the mean time we still have to get work done with limited funds. If you have a computer and want the latest software you don't have to pay for it. You can get your work done in style, upgrade any time one is available, give the software away to whomever you like and stay out of jail all without paying for anything more than an

On a Mac, the program you're using determines what menus appear at the top of the screen. That's another environment. Most open source operating systems are totally separate from their desktop environment. This is analogous to the way we used to boot up DOS and could use DOS programs or could start windows from the command prompt. Windows was separate from DOS. The difference is in open source we have a plethora of choices for what desktop environment to use. High on graphics, low on memory consumption, simple, complex all are considerations. Many people actually use different desktop environments for different purposes. Personally I like KDE because it looks cool. I also use Window Maker on less potent computers. Gnome is nice too.

Internet connection. No matter the size of a church's budget you now know there are less expensive real options for software that works well.