

# **Koha The ILS that keeps on giving**

By John Brice  
Executive Director Meadville Public Library  
System Administrator, Cochran Area Public Library

My talk today is about the open source Koha Integrated Library System. How it came into being, what in the heck does Koha mean, how it works and of course how it works in the Crawford County Federated Library System.

Before I go into my prepared notes on Koha I would just like to share with you my thoughts and philosophies concerning open source software.

I wish to begin by quoting one of the hosts from the tv show Myth Busters, Jamie Hyneman:

*...high tech companies-stop messing with us on your treadmill of upgrades while making the old stuff obsolete. It may be that any software company that didn't routinely upgrade its product would go out of business. But what if the rest of the world worked this way? Oh, I lost a sock. I need to get a whole new wardrobe because the replacement sock is version 2.0.1, and the stores now only sell version 2.0.3*

Or we could analyze what the founder of Linux operating system Linus Torvalds has said:

*Talk is cheap show me the code.*

These two quotes basically follow my thinking on why the Crawford County Federated Library System decided to use and invest our funds into the Koha ILS project. In short I was tired as an administrator of throwing away good serviceable hardware because some new piece of software needed a faster cpu or more RAM. Secondly I was sick and tired of having to work around software. Current closed ILS's make you alter your policies to fit the program. I want to be able to change the ILS program to fit our policies.

The Crawford County Federated Library System has a long history of using open source software in our operations. So it did not scare us when we were investigating purchasing a new ILS to seriously consider an open source ILS. I know using open source in libraries is considered risky however, we have found that it works, is reliable, and is in the long run a very low cost solution.

Actually everyone in this room has experience using open source software. How many people here use Google? How about Amazon.com? Both of these corporations use open source software to run their primary business units. When you are on their web pages those pages are being served up by open source operating systems running commodity computer servers. If extremely successful commercial companies can benefit from open source why not libraries?

CCFLS is very comfortable in implementing Open Source solutions in our nine member libraries. We have learned to build upon success. We view open source projects as building infrastructure.

Getting Koha installed in Crawford County took over four years and cost over \$50,000. So much for the idea of open source software being free. When we first began to investigate replacing our old DOS based circ system, we actually preferred another proposed open source ILS called OpenBook.

Unfortunately OpenBook never released its code. We originally did not consider Koha a viable option because it lacked critical features such as MARC support.

In order to understand our apprehension in the beginning, I need to take a moment and describe how Koha came into being.

.....Once upon a time in country where there are 40 sheep for every human there was a little library system that had a really big y2k problem..

Can you tell that I once did story times?

OK, back to the narrative the Horowhenua Library Trust in New Zealand found out in 1999 that its old circulation program would not run in the new millennium and that commercial software was way too expensive for its budget. So Rosalie Blake, Head of Libraries approached a local firm called Katipo and they proposed to create a new open source system. After a lot of discussion and some trepidation, HLT agreed to commit to the project.

The original requirements for Koha were rather basic, that it run at a reasonable speed, be easy for staff and patrons to use, have a graphic interface, be used through a web browser, require little upgrading of hardware, and provide decent financial reporting. Sticking to the idea of open source Koha was written using Linux, MySQL database, and PERL programming.

When we first downloaded and installed Koha in 2001 this is the version we first saw. As mentioned above the major problem in running it in a US library was the lack of MARC support. In 2002 Nelsonville Public Library solved that problem by funding a project that added MARC to Koha. Shortly after Nelsonville got Koha up and running CCFLS visited them to see how it worked. The trip brought up one big issue with Koha, speed. Nelsonville was about 80% of our size and we noticed that the response time on the servers was just barely acceptable. Koha, at that time had what is commonly referred to as a scalability problem. What worked fine for a library with less than 50,000 items would not work well for a library system with 480,000 items.

So, CCFLS hired a third party company, Liblime to create a new version of Koha that used the Zebra Index engine. This modification significantly increased the speed of the program for large libraries and library systems and allowed libraries with collections of up to 4 million plus items to use Koha. This new version called Koha Zoom became operational in early 2007 when it was implemented in a public library in Western Provenance, France in January of 2007.

While Koha's index engine was being rewritten CCFLS designed a new user interface for the program. After a series of meetings with system librarians we rewrote the Nelsonville templates to create our own look and feel to the program.

We began using Koha at Meadville Public Library in May of 2007. We shut the old circulation system down at closing on a Saturday and had Koha up and running, with all of the bibliographic, patron and transaction data reinstalled on Monday morning. Not only did we change the software but we also reconfigured the computers from running Windows to a thin client architecture using Ubuntu as the operating system.

One key item about Koha is that only the server needs to run on an open source server. Since Koha is completely web based the client computers can be any type, including Windows, Macs, Linux, the only

requirement is that it can open a web page.

The staff as a whole has accepted Koha well. There are a number of things that the staff did not like about the program. In most cases we could fix the problem ourselves, usually within a day or two, or write a new script which added capability to the program. For example, we discovered you could not use the word "not" in the OPAC. That problem took two days to fix. Another example, some staff did not like the search for titles. So we added a new script which gave the added ability to list books in the same manner as our circulation system. In fact the biggest problem now, is that the staff knows we can alter the program so they are regularly proposing new things to add.

As for costs we did spend almost exactly the same amount for Koha as we would have implementing a commercial vendor. The cost of the upgrade to the Koha software was over \$35,000. We also spent slightly over \$15,000 on new computer servers and barcode scanners. We did reuse our old Windows machines by converting them over to thin clients.

The word Koha means the gift that keeps on giving in the New Zealand indigenous language of Maori. But within the meaning of the word koha is also an unspoken understanding of responsibility that this gift is to be savored and enjoyed many times over.

I believe that what CCFLS has enhanced and improved the program Koha so that future libraries can benefit from it. In a way it is a version of paying it forward. Libraries such as Howard County Library System in Maryland are planning to use Koha, that library could not have used Koha without the investment made by the Horowhenua Library Trust, Nelsonville Public Library and the Crawford County Federated Library System.

A major criticism of open source software is that there are no guarantees that a particular program will survive into the future. The key to successfully installing open source software is an active community of users and developers. With an active community of developers and large number of users open source projects become self sustaining. With a large group of users there is an incentive for the developers to improve and support the program. With a large group of programmers the users can expect to receive continual upgrades and can easily find support. Koha has a worldwide base of both users and developers with France, United States, and New Zealand having large numbers of libraries using the software.

Two other common complaints about OSS is that there is no support available and commercial support is much superior. We have found both complaints to be false.

Usually a closed source software company has a department called customer support which answers customer problems. Customer support bases their answers on a database of questions that was developed by the programmers and on previous answered questions. If a customer has a previous unreported problem or bug then that problem will have to go from the customer support department to the programming department. The programming department may not have the time to fix the problem so they will get to it when they can.

With OSS we make sure that the program has an active community with a Frequently Asked Questions (FAQ) list that is updated on a regular basis. Most problems can be answered through the FAQ lists. If you have an uncommon problem or discover a bug, you usually can contact the person who wrote the program or who is currently writing code for the next upgrade. In most cases the problem can be fixed through e-mails. If the program doesn't have time to do it right now you can always ask a local

programmer to help with the problem. We have done this technique using our in staff programmer, Kyle Hall.

In our experiences we have found OS software to be more reliable and we receive faster support than closed source firms. However, you have to realize that you need access to someone, staff member or consultant, who understands Linux and is comfortable using a command line. Fortunately these skills can be learned. Two and half years ago we hired a full time programmer, Kyle Hall to help support and modify our open source software programs. Kyle has a Masters Degree in programming which he earned at a Edinboro University.

Another option is to hire a commercial service to help install, manage, support your OSS ILS. CCFLS has purchased a year of support from a commercial Koha service, Liblime. We hired Liblime because we will be needing help as we migrate. However, once the migration ends we may decide that we have enough in house skill to manage the program without a commercial support contract.

In conclusion, I would like to leave you with this thought. From the perspective of the 1980's using a circulation system from a third party closed source vendor was a smart solution. Programming computers was difficult, computer hardware was very expensive, support for hardware in a third tier city was next to impossible and there really was only one computer to support and manage.

From today's perspective using third party closed source vendors to provide libraries with ILS software is no longer the only solution it once was. Software can be easily written in modern computer scripts, running on hardware that is cheap and easily supported by individuals who can be trained at local community colleges.

Another big difference between the eighties and now is that the ILS is the primary point of entry for the public to access library resources. The Crawford County Federated Libraries System has concluded that it is in our own best interest to have complete and utter control over this vital piece of technology.

Koha may not be the solution for everyone, however, every library should have a viable open source solution ILS option available to them. If, for no other reason, than to help negotiate the best possible price from a vendor.

Now, I will take a few minutes here and show you a few screen shot slides of the Koha program in action.