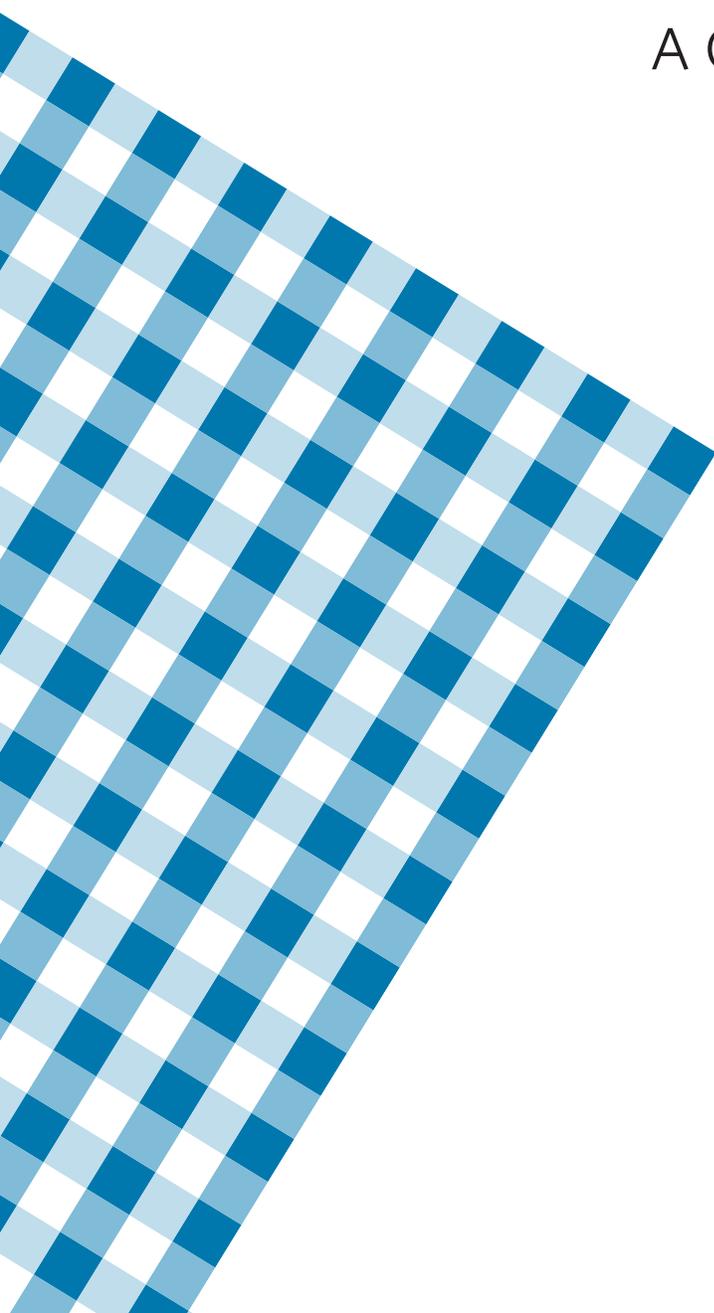


The Joy of Computing

A Cookbook for Small and
Rural Libraries



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Getting Started



What can we do to maintain public computer security? Where can we go to get technical support for our public computers? How can we help users with limited computer skills? What can we do to ensure a healthy, functioning public computer? How do I get more computer funding?

These are just a few of the public computing questions being asked by administrators in small, rural libraries across the United States. They are also the questions . . . along with many others . . . that are answered in *The Joy of Computing*. Comprehensive in scope, this Cookbook brings together current best practices, important insights, and useful tools from the community for building and supporting a successful public computing environment. This first section of the Cookbook highlights the MaintainIT Project and its efforts to promote sustainable models of technical support for public computers in libraries throughout the U.S. It also provides a high level overview of the Cookbook and discusses the ways in which to use it to ensure that your public computing environment operates with technical efficiency and is managed at its potential.

TOPICS COVERED:

- About This Cookbook
- How to Use the Cookbook
- An Introduction to the MaintainIT Project



About This Cookbook

COOKBOOK ORGANIZATION – WHAT’S INSIDE?

The Joy of Computing contains “how to” details geared toward the technical concerns most pertinent to today’s small, rural library. This Cookbook is a collection of recipes based on the ideas and feedback from librarian “Chef’s” throughout the country. Our Chefs in residence are promoting their favorite meal plan and recipes for cooking up a well running computer and happy patrons! For that reason, we’ve compiled a selection of recipes that complement each other — just like a certain appetizer and dessert will make a main dish even better.

The Cookbook is divided into the following core sections:

- **Getting Started** introduces the Bill & Melinda Gates Foundation US Libraries Initiative and MaintainIT initiatives. It also discusses the ways this Cookbook can assist you in proactively and creatively supporting public computing and Internet usage in your library.
- **Meal Plan 1: Focusing on Your Ingredients for Success** digs into the steps that rural libraries should take to assess their public computing needs. It also covers the many key factors to consider in building and maintaining a more robust public computing environment, securing appropriate funding, budgeting for technology, and ensuring program sustainability.
- **Meal Plan 2: Meat and Potato Public Computers** contains guidelines for properly configuring the public computing environment, as well as the tools necessary for specific public computing security issues and network maintenance.
- **Meal Plan 3: Volunteers for the Kitchen** offers a concrete set of “how to’s” for recruiting and using public computer support volunteers such as students, accidental techies, retirees, neighbors, etc. It also discusses staff training opportunities and provides a list of useful resources.
- **Meal Plan 4: Computer Culinary Academy—Getting the Technology Training You Need** includes coverage of the training and support resources needed to build your skills and help with further developing your libraries resources
- **Meal Plan 5: Future Menus for Library Technology Service** looks at the strategic thinking needed to effectively plan for and appropriately address downstream public computing needs, resources, and required support.
- **Appendix** includes helpful tools, resources, and guidelines for managing and maintaining your public computers.



WHO IS THE COOKBOOK FOR?

The Rural Sustainability Project, another effort funded by the Bill & Melinda Gates Foundation, focuses on issues and challenges that rural library staffs typically identify as obstacles in sustaining public access computing. They have created a continuum to help libraries assess progress towards sustainability.

You can use the Rural Sustainability Continuum to determine where your library is right now, and adapt the Cookbook content to your needs. The Cookbook will be particularly useful for libraries currently in Stages 1-3 of Tech Connections, Upgrade & Maintenance, and Staff Training.

<http://www.webjunction.org/do/DisplayContent?id=11778>

WHY THIS COOKBOOK WAS CREATED

Rural library staff have a challenging job when it comes to keeping computer systems up and running. Typical issues include:

- Not enough time
- Not enough money
- Limited resources to help with public computers

In response, CompuMentor, and the library community have developed this “how to” Cookbook, which contains a complete set of recipes for efficiently managing your systems.

WHAT YOU WILL BE ABLE TO DO WITH THE COOKBOOK

- Assess system lock-down and disk-protection software.
- Perform routine maintenance—such as installing software updates and patches—to help sustain public computers.
- Direct patrons to instructional resources for those with limited computer literacy skills.
- Find and utilize resources that can assist with your public computers.
- Identify methods for getting appropriate technical support.



How to Use the Cookbook

You can use this Cookbook in a number of different ways. If you are new to overseeing a public computing environment, you should begin here and work your way through each section in turn. If you are more experienced, but want certain information on a particular topic, you can go directly to the relevant section and review that material.

COOKBOOK CONVENTIONS

This Cookbook includes two sidebars that contain extra information and useful references.

	Notes from a Chef provides real life examples and supporting quotes from library staff involved in sustaining public computing services across the country.
	Other Tasty Recipes points you to related subject matter covered in this Cookbook or in other resources.

BEFORE YOU BEGIN...A NOTE ABOUT WINDOWS

As you will notice, many of the recommendations in this Cookbook are for Windows-based computers. While we don't endorse Windows as the platform of choice, the overwhelming majority of rural libraries with whom we spoke have Windows-based public computers. Thus, it seems to be the most useful platform for the widest audience. In this Cookbook, we discuss some innovative methods of building public computers using other operating systems, such as Linux.

We are also focusing our recommendations on Windows 2000 and XP. While there are libraries that still use Windows 98 and NT computers, you will get better support and security if you upgrade to at least Windows 2000, or Windows XP.

By using these operating systems, you will find you have better security features including firewall and automated security updates. If you upgrade to Windows XP, you will also have the ability to use the free "Windows SteadyState" for disk-protection and workstation lockdown.

Microsoft has also distributed a new operating system called "Windows Vista". You can keep updated on the strengths and challenges of this system by reviewing **Rodney Greensage's blog at :**

http://aals-techie-blog.blogspot.com/2007_03_01_archive.html



An Introduction to the MaintainIT Project

BACKGROUND

The MaintainIT Project is an effort of CompuMentor, home to TechSoup, a non-profit serving fellow nonprofits and public libraries with technology information, resources, and project donations. Funded by a three-year grant from the Bill & Melinda Gates Foundation US Libraries Initiative, the MaintainIT Project (www.maintainitproject.org) focuses on proliferation and adoption of best practices for maintaining public computers at libraries in 18 states that receive hardware upgrade grants from the foundation. The ultimate goals of the MaintainIT Project are to increase the number of libraries with functioning, regularly maintained public computing services and to strengthen their capacity for ongoing self-support of public computing, at both the individual library and regional library system levels.

The MaintainIT Project goals are rooted in the belief that public libraries can build on tremendous existing resources to create a rich body of technical knowledge. It involves getting the right people together, giving them the opportunity to share their learnings, and communicating the results in the most relevant and usable format.

THE BILL & MELINDA GATES FOUNDATION US LIBRARIES INITIATIVE

Since the late 1990's, the Bill & Melinda Gates Foundation US Libraries Initiative has partnered with U.S. public libraries in their efforts to make public computing available to all library users. To this end, the foundation's U.S. Libraries Initiative has given grants to over 11,000 libraries resulting in installation of over 47,000 computer "packages" including suites of software (e.g., Internet, productivity, children's and educational material), training for librarians, and long-term technical assistance. Today, the Bill & Melinda Gates Foundation US Libraries Initiative continues to support public libraries and provide access to information technology that can improve health, educational, and economic opportunities. The foundation also helps public libraries access the necessary tools to regularly upgrade their computers and receive the training and technical assistance they need.

<http://www.gatesfoundation.org/UnitedStates/USLibraryProgram/default.htm>

COMPUMENTOR PROGRAMS

CompuMentor conducts a range of major programs on the national, international, and the local level. It powers the nonprofit technology web site TechSoup.org (www.techsoup.org) and its distribution service for donated and discounted technology products, TechSoup Stock (www.techsoup.org/stock). It also collaborates with local and regional partners to bring technology implementation and support to nonprofit organization through the Healthy & Secure Computing program (<http://www.techsoup.org/toolkits/hsc/>).



Meal Plan 1

Focusing on Your Ingredients for Success



If you're like most people working in a rural library, you understand your community and work to create services and provide resources that will meet community members' needs. You probably know most of your patrons by name. If asked, however, to describe your library's technology resources, can you easily describe what you have?

This section digs deeper into the steps that rural libraries should take to assess current public computing status and needs. It also discusses key factors to consider in creating a more efficient and effective public computing environment. In addition, this meal plan provides you with some examples of tools and techniques that can help you move from feeling uncertain about where you are right now, to feeling confident about the direction in which you are going.

TOPICS COVERED:

- What's On Your Library Resource Plate?
- TechAtlas: Technology Planning Options for Libraries
- Space Requirement Guidelines
- What to Do with Leftovers—Upgrade and Computer Replacement
- Fast Food—Meal Plan 1 Summary



What's On Your Library Resource Plate?

In many libraries, the technology feels like an amorphous and slightly out-of-control thing. In order to create a successful public computer environment, it is absolutely essential that you get a handle on your existing technology needs. To do this, you need to:

- Know your current situation,
- Figure out where you want to be, **and**
- Develop an action plan.

KNOW YOUR CURRENT SITUATION

Successful public computing starts with a clear assessment of your current status. This includes conducting an inventory of the library's hardware and software, and assessing the skill levels of your staff members. It is also important to be aware of your user needs and whether or not they are being properly met.

- How are people using the library's public computers?
- How many people use the computers each day?
- Are some of these users visitors to the community?
- How long does the average user stay on a computer?
- Which software programs are most frequently used?
- How many pages does the average user print?

Gathering this sort of data over time can provide meaningful insights into public computing in the library.

As you carry out your assessment, try to flesh out the statistical information with stories and examples.

- Consider conducting interviews with users of the library's public computers.
- Encourage people to talk about the ways in which they use the computers.
- Ask questions to help determine the needs that are being met.

This kind of qualitative information gathering helps reveal the real heart of computers in libraries. Ask permission to use the stories in marketing and promotional materials. While numbers are always impressive to people, stories can be an inspiration.

If while assessing the current status of your library's public computer environment, you discover areas in which you are doing really well, or there are groups that are particularly well-served by your library's technology, be sure to celebrate those successes!

*For more specific details on the different steps you can take to assess your current situation, see *First Course: Determine Your Library and Patrons' Needs and Plan Accordingly*, on page 27 of this Cookbook.*



FIGURE OUT WHERE YOU WANT TO BE

Once you have a clear picture of your current situation, you can begin to think about any areas of improvement and/or specific needs that are not being met. How can you create a technology environment that is even more effective and valuable to your community? Technology decisions should never be made for technology's sake.

A thoughtful approach to technology involves looking at people's needs and then using technology to meet those needs as appropriate. The possibilities are endless. Deciding where to focus attention, however, can be a challenge. To help narrow your focus, look to your overall vision, mission, and goals for the library. In what areas is technology a key component?

As a next step, evaluate the groups not being properly served by your library's public computing. Consider targeting specific groups and developing services and resources to meet their needs. These groups might include:

- Teens
- Parents of young children
- Homeschoolers
- Retired individuals
- Persons with disabilities
- New Americans
- Job seekers
- Genealogists
- Small business owners

For example, if one of your library's goals for the current year is to reach out to people who are retired, how might technology help in the attainment of that goal? Is there equipment currently available that might help? What about software or hardware? Classes or training? Are there organizations in the community with whom the library could partner to help reach that group? A certain amount of planning must always focus on the needs of the general population. Devoting time and resources to targeted needs, however, can take the library's services to a higher level.



DEVELOP AN ACTION PLAN

How do you move from where you are at right now to where you want to be? Setting realistic goals is important. What can be reasonably accomplished in the next year? In the next two years? Technology changes quickly, and while it may be impossible to determine specifics for the years ahead, overall technology goals and ambitions can be established and pursued.

In goal-setting and action-planning, it's important to share responsibility with others. Even in the smallest libraries (including those with only one staff person), it's necessary to develop a team approach to technology planning and implementation. Board members, community members, and other libraries are all places where you can look for possible assistance.



TechAtlas: Technology Planning Options for Libraries

It's impossible to predict the future, especially when dealing with technology. Having a good technology plan, however, will serve as a map for your journey. TechAtlas (<http://webjunction.techatlas.org>) is a free online tool for library technology assessment and planning. It includes many features from which a library can pick and choose. Potential uses include the following:

- **Track hardware and software with the automated inventory.** If you use TechAtlas for only one thing, or if you are looking for a first step in using this powerful resource, then consider running the inventory tool. An automated script will run and gather detailed information about each computer, compiling that information in a web-based inventory that you can access from any computer. **This means the information can be shared with anyone who helps you with your computer.** It is a simple and fast process that provides you with an up-to-date inventory of the hardware and software in your library, allowing you to feel much more on top of the technology in the building. Knowing what you have now will help you feel prepared for planning and budgeting for tomorrow.
- **Survey your staff's technology skills.** How do you know if there are technology skills you should have or may benefit from having? The number of skills you can learn is large, so how do you pick and choose where to focus your energy and brainpower? The tools in TechAtlas can help you track staff skills and can also compare your library to other libraries. The staff skill section of TechAtlas is customizable, so you can add skills that are specific to your library.
- **Create a technology plan.** Does your library have a technology plan? If so, is it a meaningful document, or was it simply created to fulfill a requirement for a grant application? A well-done technology plan requires time and energy, but the end result is well worth it. Setting your goals and priorities and then reviewing them on an ongoing basis will mean the difference between feeling overwhelmed by technology and feeling like your community needs are being well-served. TechAtlas can help in this area. After answering questions and inputting the necessary data, you are able to print out a technology plan.
- **Track computer problems and issues.** Event Tracker is a component of TechAtlas that can be used to log problems and other information about your library technology. In a library where multiple people are responsible for technology troubleshooting, Event Tracker can be a way to share information with one another about the computers in the library. It can also be useful in smaller libraries, where there is only one person responsible for fixing computers and solving technology problems. Looking back at logs over time can help you pinpoint problems. It can also serve as a reminder of previous fixes that worked. In addition, if there is staff turnover at the library, Event Tracker can help new staff people quickly review past technology problems and solutions.

If your library receives e-rate funds, then you know that it's necessary to have a current technology plan for your library. The plan you create in TechAtlas can be used to fulfill that requirement.



Space Requirement Guidelines

People begin library careers for many reasons. They love books. They enjoy working with people. They want to make a difference in their community. Some of the tasks and projects that arise in the course of working at the library, however, require skills and knowledge that you might not have expected. Being involved in the design of a new library building, for example, will require a librarian to learn about facility planning. Even if you are not designing a new building, but are simply working with an existing space, technology planning requires space planning.

TECHNOLOGY AND SPACE PLANNING

There are several things to consider when thinking about the placement of the public computers in the library:

- **Traffic flow:** Can people easily access each of the library's public computers? Where is the printer? Is it within "earshot" so people know they have started to print after they have clicked on the print button? Is there a sign-in sheet and a policy that needs to be read? If so, is it clear to a new visitor how the process flows?
- **Adequate space:** Is there room for each person to work comfortably on a computer, and if needed, have a bit of workspace? For example, if the computer user needs to write on a piece of paper while working on the computer, is there enough desk space for that?
- **Privacy:** People use a library's public computers for many important tasks. Imagine you were using one of the public computers to write a personal e-mail or to take a test for an online course. Are the computers positioned in a way that is conducive to both concentration and privacy?
- **Fixing what can be fixed:** If you have been providing public computers for some time now, you may be aware of problems with the current computer placement. Is the current setup too crowded? Are there recurrent frustrating and challenging situations? Talk to the people who frequently use the computers, as well as to the staff members who regularly monitor or assist people with the computers. Sometimes there are small, simple fixes that can make a big difference.

NEW LIBRARY BUILDINGS AND PLANNING FOR PUBLIC COMPUTING

Being involved in the building of a new library is one of the most exciting and most exhausting projects to be encountered while working in a library. It's necessary to not only think about the library you want now, but to also try to anticipate the needs in years to come. Technology needs are especially difficult to anticipate. Wiring, workspaces, and printers are only a few of the many details that need to be considered.



What to Do with Leftovers— Upgrade Schedules and Computer Replacement

COMPUTER PURCHASES

Here are some tips and general guidelines that can help you make informed computer purchase decisions:

- **Do some research.** Before you buy a new computer, be sure to read the consumer reviews and look at price comparisons. CNET <http://www.cnet.com/> is one place to find reviews. Consumer Reports magazine is another place to look. MySimon <http://www.mysimon.com> is a great place to do price comparisons.
- **Know the basics.** A grasp of computer hardware and software fundamentals can help you make informed decisions. If thinking about hardware specifications is new to you, then you might begin by focusing on three essential things:
 - **Processor speed.** The faster the processor, the more quickly it can process computations.
 - **RAM (Random Access Memory).** More memory lets you run more applications at the same time without slowing down your computer.
 - **Size of hard drive.** The larger the hard disk, the more data you can store.

The *How Stuff Works* web site has easy-to-understand explanations <http://computer.howstuffworks.com/>.

- **Make your computer purchase decisions make sense for your public computing environment.** You should ask yourself: How will the library's computer be used? How much software will be loaded on it? What sorts of applications will run on it?
- **Be sure to get any possible discounts.** You may be able to get a lower price by purchasing your computers as part of a group or through an existing county or statewide contract. For software purchases, be sure to take advantage of donated and discounted software available to public libraries through TechSoup Stock (www.techsoup.org/stock/libraries)

COMPUTER REPLACEMENT

How long will a computer last until it needs to be replaced? Many schools and businesses operate on a four-year computer hardware replacement cycle. They use a rotation system so that they will not be replacing all computers within the same year, but will instead be staggering purchases, as some computers hit their four-year lifespan.

The Gates Foundation recommends that you replace public computers (as well as other computers) every four years.

In the past, many libraries did not have a replacement plan, but just tried to use computers until they would no longer work. Recently, however, more and more of these libraries have tried to establish a four year replacement cycle, too. They've found that computers that are kept too long can result in more headaches than it is worth.



Here are three signs that it's probably time to replace a computer:

- **A computer has turned into one that patrons avoid.** If the computer is sick, then fix it. If, however, it is simply slower and less robust than the other computers because it is older, then be kind and retire it.
- **The computer operating systems is outdated/no longer supported.** If your computer runs a Windows operating system that is no longer supported by Microsoft, it may be time to change how that computer gets used in the library. If you are running Windows computers, you should be doing regular Windows updates for security purposes (as discussed in the next section). Windows only creates updates for the more current operating systems. For example, if a computer is running the Windows 98 operating system, that system is no longer being supported by Microsoft. No Windows updates are available. Either upgrade the computer to a newer operating system or use the computer in a different capacity (e.g., use it to run computer games for children or for word processing purposes).
- **Your computer is more like a “headache” machine.** All computers will freeze up or have other minor problems now and then. If an older computer is regularly having problems and in need of finessing, then it may be a sign that it is time to retire that machine.

Computer replacement will be an ongoing cost in libraries. If you realize that a computer's lifespan is approximately four years, you will be able to plan ahead and budget accordingly.

REFURBISHED COMPUTERS

Warrantied refurbished computers are a reasonable low-cost alternative to buying new ones. For libraries that use public computers primarily for web access and occasional word processing, a refurbished computer with a newly installed operating system may be worth considering. Warrantied refurbished PCs have a “fail and repair” rate equivalent to that of new computers, and they can cost half as much.

GETTING RID OF LIBRARY COMPUTERS

The disposing of a computer is not quite as simple as you think. You can't just take it out to the trash for the garbage collector to pick up. Some states have established regulations about the disposal of computer equipment. Monitors, in particular, can be an environmental hazard and need to be disposed of properly. In some places, you may need to pay a recycling fee. If the area in which you live does not have a recycling facility, there are national facilities to which you can send a computer for recycling. In addition to paying the recycling fee, you will also need to pay to ship the computer to the facility location. Some computer stores and manufacturers offer trade-in programs, where they will dispose of an old machine for you when you buy a new one from them. Here are some other things to consider when retiring a computer:

- **Be sure to clear all information off the hard drive.** Files and software programs should be removed. To find out how to do this, go to the "How to Clear Your Hard Drive" link in the "Other Tasty Recipes" section of this Meal Plan.



- **If you decide to give the computer to an individual or organization, consider asking them to sign some sort of waiver of responsibility.** This will ensure that you have made it clear that you are no longer responsible for the maintenance of the machine.
- **Don't be tempted to keep old computers around for spare parts or to use as a back-up.** While this seems logical, most organizations find that these computers never really get used. They instead, simply take up space.

USING OLDER COMPUTERS

If your library needs to keep these older computers and use them as long as possible, here are few points to keep in mind:

- **Computer upgrading:** Ideally, all your computers will be able to run the same version of a currently supported operating system. This makes it easier to maintain the computers and use the latest features. To do this, you'll need to upgrade your computer operating system and software. However, very old computers may not be upgradeable to the current version of Windows.
- **Compatibility issues:** Moreover, after you upgrade, you may find that the other software applications and utilities that you installed previously may not be so completely compatible with the new version of Windows. To avoid this unfortunate outcome, you may want to consider leaving these computers as they are, and limiting their purpose to specific tasks. For example, one library we spoke to designated their older computers – Gates-granted computers which ran Windows NT – for use by children to play educational games. These computers were taken offline so that the children were not able to access the Internet.
- **Computer donations:** Donated computers should be evaluated for their potential usefulness before accepting them; some older computers may be more trouble than they're worth. It's a good idea to have a policy in place that states that you will only accept computers capable of running the same software as the other computers in the library (e.g., Pentium IV processor, 512 GB RAM, 20 GB hard drive). That way, you can gracefully decline donations that won't be useful.
- **Linux Considerations** – A few rural libraries have also made the foray into Linux, a free, open source operating system. Some flavors of the Linux-based operating system are "lighter" and geared to run on fewer computing resources than Windows. This reduces the costs of buying operating system upgrades. So, this might be another way to extend the life of your computers.



The Linux Advantage

"When Microsoft abandoned support of Windows 98, we faced a major challenge! All of our staff and public computers are running on Windows 98. Most of our machines are Pentium II or less. These machines are not really compatible with Windows XP and certainly not compatible with Windows Vista.

We are changing our operating system to Linux. It is open source and comes in many flavors. The one I chose is Ubuntu. It is free. I can have one installation CD and install it on as many machines as I want. I have chosen Red Hat Linux Enterprise Edition Basic to run my server and will pay an annual fee for professional support and upgrades. This is very affordable at \$349 per year".

*Marian Wynn
Geneva Public Library, AL*



OTHER TASTY RECIPES

Technology Planning

- TechAtlas for Libraries
Technology planning tool
<http://webjunction.techatlas.org>
- Library Technology Planning (from the Wisconsin Department of Public Instruction)
<http://dpi.wi.gov/pld/planout.html>
- TechSoup
Technology planning tools and resources
<http://www.techsoup.org/learningcenter/techplan/index.cfm>
- WebJunction
Technology planning tools and resources
<http://www.webjunction.org>
- New Pathways to Planning
An online guide to all aspects of planning for small libraries
<http://skyways.lib.ks.us/pathway/#overview>



Purchasing, Reviews, and Donations

- TechSoup Stock
Discount and donated software available to libraries from Microsoft and other companies
www.techsoup.org/stock/libraries
- CNET
Hardware and software reviews and purchasing information
<http://www.cnet.com>
- MySimon
Hardware and software reviews and purchasing information
<http://www.mysimon.com>

Hardware and Software General Information

- HowStuffWorks
Easy-to-understand explanations of how computers work
<http://computer.howstuffworks.com>
- Planning for Replacement and Upgrades
http://infopeople.org/training/past/2006/managing/ex4_planning_for_replacements_upgrades.doc
- Upgrading and Maintaining Computers
<http://webjunction.org/do/DisplayContent?id=13463>
- How to Clear Your Hard Drive
A techsoup "how to" article with links to free software
<http://www.techsoup.org/learningcenter/software/page5726.cfm>
- US EPA's EPEAT program to help purchasers in the public and private sectors evaluate, compare, and select desktop computers, notebooks and monitors based on their environmental attributes.
<http://www.epeat.net/>
- TechSoup.org on extending the usable life of a computer
<http://www.techsoup.org/learningcenter/hardware/page4790.cfm>
- Electronics Environmental Benefits Calculator shows environmental savings for extending the life of computers
<http://www.federalelectronicchallenge.net/resources/bencalc.htm>

Computer Recyclers

- Zip code searchable directory of places to donate hardware
<http://www.techsoup.org/recycle/donate>
- Computer Takeback Campaign's list of responsible recyclers.
http://www.computertakeback.com/the_solutions/recyclers_map.cfm

Where to Find Refurbished Computers

- Zip code searchable listing of Microsoft Authorized Refurbishers
<http://www.techsoup.org/mar/marList.aspx>



- Dell refurbished: www.dell.com/outlet/ **or**
<http://www.dell.com/content/segmenter.aspx?s=dfo>



Fast Food—Meal Plan 1 Summary

- To create a successful public computer environment, you need to
 - Know your current situation,
 - Figure out where you want to be, **and**
 - Develop an action plan
- To better understand your current status, conduct an inventory of your library's hardware and software, assess your staff skill level, and find out if your user needs are being properly met.
- To figure out where you want to be, evaluate the groups or user needs not being properly served by your library's public computing. Consider targeting specific groups (e.g., teens, parents of young children, retirees, etc.) and developing services and resources to meet their needs.
- In goal-setting and action-planning, share responsibility with others. Develop a team approach to technology planning and implementation. Board members, community members, and other libraries are all places where you can look for possible assistance.



MENU 1 CHECKLIST

- Use TechAtlas (<http://webjunction.techatlas.org>) to:
 - Track hardware and software.
 - Survey your staff's technology skills.
 - Create a technology plan.
 - Track computer problems and issues.
 - Compare your library's technology to technology in other libraries.
- Consider the following when placing public computers in your library:
 - Traffic flow
 - Adequate space
 - Privacy
 - Fixing what can be fixed
- To make informed computer purchase decisions:
 - Do some research.
 - Know the basics.
 - Make your computer purchase decisions based on the expected uses of the computer.
 - Be sure to get any possible discounts.
- Try to establish a four-year computer hardware replacement cycle.
- When retiring a computer:
 - Be sure to clear all information off the hard drive.
 - If you decide to give the computer to an individual or organization, consider asking them to sign a waiver of responsibility.
 - Don't be tempted to keep old computers around for spare parts or to use as a back-up.



Meal Plan 2

Meat and Potato Public Computers



Taking the time to complete this meal plan will save you both time and maintenance costs in the long run. We hope this ultimately translates into better service for your patrons and fewer headaches for you.

This section details the elements you need to help you get through the process of managing and configuring your public computers.

TOPICS COVERED:

- A Well-Rounded and Balanced Computer Maintenance Diet
- Checking Your Chops—Are You Ready for Meal Plan 2?
- Two Square Meals You Shouldn't Go Without: Computer Lock-Down and Disk-Protection
- First Course: Determine Your Library and Patrons' Needs and Plan Accordingly
- Second Course: Install Antivirus and Anti-spyware Software
- Third Course: Lock-Down Your Computers
- Fourth Course: Install Disk-Protection Software
- Fifth Course: Image Your Computer's Hard Drive
- Food for Thought—Public Computer Software Comparisons
- Fast Food—Meal Plan 2 Summary



Getting Your Computers to Act Like an Appliance

“Having your computers act like an appliance, where you turn them on and they just work is the main thing. Getting things stable, that’s where Deep Freeze or that multi-user toolkit come in. These can make your computer become more like an appliance, and minimize change. Because once you get your computers to that point . . . other than hardware failure . . . you can just walk away and let them do their thing.”

Anton Pintar
Calumet Public School Library, Calumet, MI



A Well-Rounded and Balanced Computer Maintenance Diet

Meal Plan 2 includes five courses that make up a well-rounded and balanced computer maintenance diet. One could pick and choose from this list, but we have found from other Chefs in a variety of rural libraries that things work best, if you follow all of these steps.

Here are the five key courses:

- 1. Determine your library and patrons' needs and plan accordingly** so you can identify the software and resources you would like to offer. Once you do that, you will be able to set up the security systems needed to plan for the public computer components that you would ideally like to provide, as well as the protections you need to keep computer maintenance manageable for you and your staff.
- 2. Install antivirus and anti-spyware software** to help keep those downright nasty intruders out of your public computers and the rest of the computers on your network too.
- 3. Lock-down your computers** to prevent patrons from doing damage to your hardware and/or software components...accidentally or intentionally. The thing to keep in mind is that you don't want to lock your computers down so tightly that they become less useful for you patrons. We reference a couple of articles in the "Other Tasty Recipes" section that discuss the issues around this. It is a balancing act between how much latitude to offer your patrons and how much you want to manage their access in order to make maintenance easier for you.
- 4. Install disk-protection (reboot and restore) software** that allows you to capture the pristine "baseline" computer setup that you have when everything is working properly. If a patron opens an e-mail and a new virus hits one of your computers, not to worry. Restart the computer to make it disappear. The disk-protection automatically restores the computer system to the "baseline" setup. These tools are effective in cleaning patrons' "tracks" on a computer, which in turn, helps you protect their privacy. You do not have to worry about "scrubbing" data—such as their web browsing history or saved passwords.
- 5. Image your computer's hard drive** to capture a "model" computer configuration and "clone" the rest of the computers. This saves you the time of configuring each computer individually. Images also act as a backup and recovery tool. If something really catastrophic happens—like hard drive failure — clone the computer to get a running start on getting the computer back online.



Checking Your Chops—Are You Ready for Meal Plan 2?

In order to do some of the courses in this meal plan, you should have some requisite "chops" or technical/computer knowledge. Here are a few guidelines for setting expectations around the competencies that can help you succeed.

In general, across all courses in Meal Plan 2, you should:

- Have a general comfort with computers and have previously installed software on a computer.
- Be able to get around the Windows operating system (e.g., you are familiar with tools such as My Computer and the Control Panel).
- Have administrator-level access to public computers for full control over system settings.

Before taking on the individual Meal Plan 2 courses, we suggest that you review the suggested prerequisite competencies list below. If, after reading this list, you are still not sure if you have the skills to complete the courses, go to a web site that offers the software you are interested in and review the product demos and user guides provided. These resources should give you a more detailed explanation of what it takes to install and configure these tools.

Ultimately, the best way to test and hone your computer chops is to get your hands dirty. If possible, set aside one or two older computers or assign a "learning" computer for you and your staff. A designated computer will allow you to try out the actions suggested in this Cookbook without the potential repercussions of downtime. Many vendors offer free, downloadable trial editions of their software that you can install and use on a limited basis. There is no better substitute for hands-on skill building when it comes to computers.

Here are some suggested competencies to successfully complete the Meal Plan 2 courses.

MAINTENANCE AREA/TOOL:	COMPETENCIES:
Disk-Protection	<ul style="list-style-type: none">■ Familiarity with the software components that require regular updating so that you can configure disk-protection to keep those changes (e.g., Windows updates, anti-virus definitions, MS Office updates).■ An understanding that disk-protection greatly affects how the computer handles changes you make to a computer (e.g., patrons cannot save work to the protected system drive, you have to turn off disk-protection to install software).■ Familiarity of hard drive partitioning so that you know which sections of a hard drive are protected and understand how to create parts that are unprotected to save work, if desired. For an overview of hard drive partitioning, see http://en.wikipedia.org/wiki/Partition_(computing)



MAINTENANCE AREA/TOOL:	COMPETENCIES:
Lock-down computers	<ul style="list-style-type: none"> ▪ An understanding of computer user accounts and how they limit or grant access to various pieces of the computer's operation (e.g., an administrator should have the ability to change other users' passwords, but regular users should not be able to do this). ▪ Familiarity with Microsoft Policies (or Group Policies) to modify user permissions and access is helpful. For an overview of Microsoft Policies, take a look at http://www.infopeople.org/resources/security/workstation/policies.html
Imaging and cloning	<ul style="list-style-type: none"> ▪ The capacity and the ability to manage large files (2 GB and greater) on various media (e.g., recordable DVDs, portable hard drives, servers). Imaging copies the contents of the whole hard drive to one file. This creates "big" files (anywhere from 2 GB on up, depending on what software you have installed on your computer). ▪ Familiarity with hard drive partitioning to understand the sections of a hard drive being imaged. Some people will store a copy of an image on the hard drive of the computer, making it much easier to clone the computer if the need arises. It is important to maintain a copy of these images elsewhere as a backup. For an overview of hard drive partitioning, see http://en.wikipedia.org/wiki/Partition_(computing) ▪ An understanding of available imaging and cloning tools. Some tools, especially older versions, may require the creation of bootable CDs, floppy disks, or flash drives. Newer versions of cloning software are more flexible and offer ways of imaging/cloning that don't require boot disks. Most imaging software includes tools to create boot CDs. ▪ An understanding of third-party imaging and cloning tools. For example, BartPE (http://www.nu2.nu/pebuilder/) is an outstanding and free boot CD creation tool, but requires advanced knowledge of Windows operating system and hardware device drivers. There are other options at http://bootdisk.com.



Two Square Meals You Shouldn't Go Without: Computer Lock-Down and Disk-Protection

Two of the most valuable tools to help libraries maintain their public computers are computer lock-down and disk-protection software.

SAVING TIME AND MONEY ON ROUTINE MAINTENANCE

Lockdown and disk-protection tools can dramatically reduce the amount of time your staff will spend troubleshooting computer problems, not to mention the money you can save on aspirin for all the headaches that come with fixing those problems! Most importantly, these tools can also help reduce a number of regular, costly maintenance activities you need to perform for the health of your system. However, this does come with some up-front work and costs.

MAINTENANCE COMPARISON CHARTS

The charts on the following pages provide a breakdown of the regular computer maintenance tasks and costs required on a computer system. The first chart itemizes the maintenance plan for computers without lock-down and disk-protection software, while the second shows the appropriate tasks and cost after installing the software.

As demonstrated here, the benefits of using lock-down and disk-protection software are:

- Total monthly time savings per workstation, per month (not including time for installing and configuring lock-down and disk-protection software): **12 hrs.**
- Total monthly cost savings per workstation, per month (not including time for installing and configuring lock-down and disk-protection software): **\$800 per workstation! (if you are using a technology contractor)**

Bottom Line. . . One month's time/cost savings will more than pay for the initial costs of purchasing, installing, and configuring lock-down and disk-protection software on each computer.



OTHER TASTY RECIPES

- Managing Public Access Computers - Best Practices
<http://pacomputing.webjunction.org/do/home>
- Library Computer and Network Security: Library Security Principles
<http://www.infopeople.org/resources/security/basics/index.html>

Maintenance Tasks/Costs: Computers WITHOUT Lock-Down and Disk-Protection Software

Items that must be completed on a regular basis to maintain computers that are NOT locked down and do NOT have disk-protection.

* Monthly time does not include hours required on a quarterly and annual basis.

AREA	TASK SCHEDULE				MONTHLY TIME REQUIRED (PER COMPUTER)	OUTSIDE CONSULTANT @ \$50 PER HR.
	WEEKLY	MONTHLY	QUARTERLY	ANNUALLY		
Security	<ul style="list-style-type: none"> ▪ Update virus definitions, and run a full antivirus system scan. ▪ Update spyware definitions, and run a full anti-spyware system scan ▪ 1 hr. 	<ul style="list-style-type: none"> ▪ Change system passwords. ▪ Visually inspect computers for signs of tampering. ▪ 30 min. 	<ul style="list-style-type: none"> ▪ Check for unneeded or unused applications and consider uninstalling them. ▪ 15 min. 	<ul style="list-style-type: none"> ▪ Renew antivirus software subscription. ▪ 1 hr. 	4.5 hrs.	\$225.00
Computer	<ul style="list-style-type: none"> ▪ Run "ScanDisk" to check hard drive for errors. ▪ Run "Defrag" to defragment files. ▪ Run "Disk Cleanup" to delete Temporary Internet files, Temporary Files, and Recycle Bin. ▪ Troubleshooting and fixing problems on computers ▪ 2 hrs. 	<ul style="list-style-type: none"> ▪ Check for the latest Service Packs/Updates for Windows, Office, and Internet Explorer. ▪ Clean the mouse so it is free of dust and grime. ▪ Make sure all the plugs are properly connected. ▪ 1 hr. 	<ul style="list-style-type: none"> ▪ Clean the screens with appropriate screen-cleaning cloth/solution. ▪ Check printers. Print a test page to ensure printers are producing clean copies, and toner cartridges are full. ▪ Clean the CD-ROM drive. ▪ Check supplies (e.g., paper, cartridges, disks, etc.) and order as needed. ▪ 30 min. 	<ul style="list-style-type: none"> ▪ Check cables for crimps, breaks, wear and tear. ▪ Clean inside PC. ▪ Update drivers as needed for printers, modems, sound cards, video cards, and other devices. ▪ 1 hr. 	9 hrs.	\$450.00
Internet	<ul style="list-style-type: none"> ▪ Clear browser history ▪ Delete cookies ▪ 15 min. 	<ul style="list-style-type: none"> ▪ Identify policy and procedure issues ▪ 1 hr. 			2 hrs.	\$100.00
Patrons		<ul style="list-style-type: none"> ▪ Restock: ▪ Computer use policies and procedures ▪ Instructional handouts for computer and Internet use ▪ 30 min. 	<ul style="list-style-type: none"> ▪ Review and update as needed: ▪ Computer use policies and procedures ▪ Patron instructional materials ▪ 8 hrs. 	<ul style="list-style-type: none"> ▪ Review and update as needed: – Library policies – Patron instructional materials ▪ 32 hrs. 	30 min.	\$25.00
TOTAL MONTHLY PER COMPUTER					16 hrs.	\$800.00

Maintenance Tasks/Costs: Computers WITH Lock-Down and Disk-Protection Software

Items that must be completed on a regular basis to maintain computers that ARE locked down and disk-protected.

* Monthly time does not include hours required on a quarterly and annual basis.

AREA	TASK SCHEDULE				MONTHLY TIME REQUIRED (PER COMPUTER)	OUTSIDE CONSULTANT @ \$50 PER HR.
	WEEKLY	MONTHLY	QUARTERLY	ANNUALLY		
Security	<ul style="list-style-type: none"> ▪ Update virus definitions ▪ Update spyware definitions ▪ 15 min. 	<ul style="list-style-type: none"> ▪ Change system passwords. ▪ Visually inspect computers for signs of tampering. ▪ 30 min. 	<ul style="list-style-type: none"> ▪ Check for unneeded or unused programs and consider uninstalling them. ▪ 15 min. 	<ul style="list-style-type: none"> ▪ Renew antivirus software subscription. ▪ 1 hr. 	1 hr. 30 min.	\$75.00
Computer		<ul style="list-style-type: none"> ▪ Check for the latest Service Packs/ Updates for Windows, Office, Internet Explorer. ▪ Clean the mouse so it is free of dust and grime. ▪ Make sure all the plugs are properly connected. ▪ 1 hr. 	<ul style="list-style-type: none"> ▪ Clean the screens with appropriate screen-cleaning cloth/solution. ▪ Check printers. Print a test page to ensure printers are producing clean copies, and toner cartridges are full. ▪ Clean the CD-ROM drive. ▪ Check supplies (e.g., paper, cartridges, disks, etc.) and order as needed. ▪ 30 min. 	<ul style="list-style-type: none"> ▪ Check cables for crimps, breaks, wear and tear. ▪ Clean inside PC. ▪ Update drivers as needed for printers, modems, sound cards, video cards, and other devices. ▪ 1 hr. 	1 hr.	\$50.00
Internet		<ul style="list-style-type: none"> ▪ Identify policy and procedure issues ▪ 15 min. 			15 min.	\$12.50
Patrons		Restock: <ul style="list-style-type: none"> ▪ Computer use policies and procedures ▪ Instructional handouts for computer and Internet use ▪ 15 min. 	<ul style="list-style-type: none"> ▪ Review and update as needed: ▪ Computer use policies and procedures ▪ Patron instructional materials ▪ 30 min. 	<ul style="list-style-type: none"> ▪ Review and update as needed: <ul style="list-style-type: none"> – Library policies – Patron instructional materials ▪ 8 hrs. 	15 min.	\$12.50
TOTAL MONTHLY PER COMPUTER (after installation)					3 hours	\$150.00
Lock-down and disk-protection software install	One time installation: 6 hours for first computer, 2 hours for each add'l computer (not counted in total above)	Approx. \$45 - \$90 for first computer, \$30 for each add'l computer Note: if you have Windows XP, you can use the free Windows SteadyState for locking down and disk-protection.	Lock-down and disk-protection software install	One time installation: 6 hours for first computer, 2 hours for each add'l computer (not counted in total above)	Approx. \$45 - \$90 for first computer, \$30 for each add'l computer. Note: If you have Windows XP, you can use the free Windows SteadyState for locking down and disk protection.	Lock-down and disk-protection software install



First Course: Determine Your Library and Patrons' Needs and Plan Accordingly

Before you set up and configure your computer for usability and security, you must first determine how much public computer access to offer. This may include such issues as which applications you offer, the kinds of content that patrons may download from the Internet (e.g., documents, music, videos, software applications), where they can save their work, etc. There are many choices to make. You should also assess your own needs, as well; particularly when it comes to managing and protecting your computers to keep them up and running at reasonable cost in terms of both time and money. This begins by making some decisions about what you will install on your computers, how to configure them, and how to manage patron use of computers.



FIRST COURSE: Determine Your Library and Patrons' Needs and Plan Accordingly

EQUIPMENT AND INGREDIENTS:

- A dash of diagnostic ability
- A pinch of policy-making

TIME TO IMPLEMENT:

2 to 8 hrs, depending on the number of patrons you are serving

PREPARATION

Computer use: Carefully consider the ways in which your patrons use the computers in your library. Think through the actions you must take to ensure usability and proper security. Ask yourself the following questions:

- What software applications do you want installed on your public computers? Some examples are:
 - Office productivity software (e.g., Microsoft Office, OpenOffice, etc)
 - Games
 - What web browsers (e.g., Internet Explorer, Mozilla, Safari, etc)
 - Antivirus or anti-spyware
- Should user access be the same for everyone?
User accounts should be segmented by different patron groups, (e.g., you may want several different patron accounts—one for children, one for young adults, one for adults, etc.)
- Where do patrons save their work, such as resumes or school reports?
Our world class Chefs recommend that you have patrons save work on their own media, such as a flash drive, or even online (in a pinch, a patron can send an e-mail to him or herself with the file attached). This way, the responsibility of saving data and keeping it safe resides with the patron, not with the library. It should be made clear to users that they cannot save work on the public computers. Libraries might want to keep a stash of flash drives or recordable CDs on hand which patrons can purchase and use to save their work. There are also web-based services available that allow patrons to store limited amounts of information for free. As an example, Box.net (<http://www.box.net/info/pricing-plans>) allows up to 1GB and XDrive (<http://www.xdrive.com/>) offers 5 GB free.

Computer policies: Once you have determined your patron and library needs and have assessed how you want to configure your computers, your next task is to create guidelines and policies to document and communicate an agreement between you and your patrons about computer usage. Take the time to sit down together with your library staff and create an acceptable-use policy. By documenting the expectations and rules around your computers for patrons and staff, you will be ahead of the game when it comes time to making decisions around some of the next steps, such as locking down and disk-protecting your computers. Remember, your policy should grow out of your library's particular needs to maintain your computers and serve your patrons' needs.



OTHER TASTY RECIPES

Here are some resources and actual policies viewable on the Internet. Use these to get an idea of what a policy looks like and what issues you might cover.

- Milwaukee Public Library
A more complete policy from a multi-branch city system
http://www.mpl.org/FILE/computer_policy.htm
- West Lafayette Public Library Computer Use Policy
A simpler, but still comprehensive policy
<http://www.wlaf.lib.in.us/computerusepolicy.html>



Notes from a Chef

A Patron Needs Balancing Act

"I am trying to learn how to allow patrons to download to their iPods, flash drives, and all that kind of good stuff, without jeopardizing the safety of my systems — the worms or spyware... you know, viruses and that type of thing. I'm nervous about letting somebody walk in off the street with a drive full of information and just attach it to my computer. And yet, that's what the public is demanding."

*Susan Ryals
Vinita Public Library, Vinita, OK*



Second Course: Install Antivirus and Anti-spyware Software

The first two components that you install on your computer should be antivirus and anti-spyware software.

Disk-Protection is designed to make it easy to revert back to a healthy, baseline computer configuration. So, if you encounter problems with your computer — like a virus — a restart of the computer should allow you to make a full recovery of your system and rid your computer of the virus. **If you have disk-protection installed, do you really need to install antivirus software?**

The answer is “yes.” Many viruses — and their counterparts, worms and spyware — are designed to spread over computer networks. So, if one of your computers gets infected, it puts the other computers on your network at risk. Every library computer connected to the Internet should have antivirus and anti-spyware software installed. You are protecting patrons and other users on the Internet from harmful viruses and spyware, which are designed to propagate to other computers, steal passwords, track web surfing activity, send spam, etc. Antivirus and anti-spyware protects computer users, as well as the computers themselves.

Also, if the public computers in your library do not have antivirus or anti-spyware installed and they share the same network with staff computers that don't have disk-protection, it leaves the public computers in a more vulnerable position.



Virus Protection and Ongoing Vigilance

“The only time we’ve ever had a virus is when I didn’t put antivirus software on a public computer that we had moved. The computer was donated to us, and when we put it into service, we waited a week before I got that antivirus on there, but it was already full of viruses. That’s the only time we’ve ever had any trouble like that.”

*Mary Alice McLeod
Cherokee City Library, Cherokee, OK*

SECOND COURSE: Install Antivirus and Anti-spyware Software

EQUIPMENT AND INGREDIENTS:

- Antivirus software
- Optional: Anti-spyware software

TIME TO IMPLEMENT:

30 minutes to 1 hour

PREPARATION

- **Virus protection:** It is advised by Chefs "in the know" that you install antivirus software on all your library's computers. Many new computers come with antivirus software packages. In fact, it has become standard equipment on Windows computers.
- **Spyware protection:** Even though antivirus software has improved when it comes to picking up and squashing spyware (nasty software that monitors user behavior), it's not a bad idea to also install some spyware protection on your computers. There are several free spyware protection offerings, such as Spybot Search & Destroy and Microsoft Windows Defender. As with every type of software, the best anti-spyware solution changes frequently, and you often receive better protection when you pay some money. So if you want the latest information about anti-spyware utilities, or if you want to know more about fee-based software, check out the reviews at PC Magazine.



OTHER TASTY RECIPES

- PC Magazine Spyware Reviews
<http://tinyurl.com/24zj8x>
- Infopeople's Antivirus Software Overview
http://www.infopeople.org/resources/security/general_security/desktop_antivirus.html
- Symantec Antivirus
http://www.symantec.com/smb/products/overview.jsp?pcid=vir_prot&pvid=av_corp
- Spybot Search & Destroy
<http://www.safer-networking.org/en/download/index.html>
- Microsoft Windows Defender
<http://www.microsoft.com/athome/security/spyware/software/default.mspx>
- Symantec's Overview of Common Security Threats
http://www.symantec.com/home_homeoffice/security_response/index.jsp



Third Course: Lock-Down Your Computers

Lockdown (access control) software allows libraries to more easily manage the level of access a user has on a public computer. In short, it keeps patrons from making harmful changes (accidentally or intentionally) to your computers. For example, patrons might delete key operating system files, change passwords, or run unauthorized programs. In addition, some lockdown software tools also include features that help you manage patron usage (e.g., features such as session timers and library card authentication).



Notes from
a Chef

Locking Down as an Ounce of Protection

“Early on, the White Plains Public Library identified several major challenges to maintaining computer availability. We needed to make sure that we lock-down our computers so that patrons can only access Library-approved web sites, and not access software or applications on the PC or network, and/or make changes to configurations or settings. We also recognized the importance of automatically starting and logging into our computers in the morning, and shutting them down in the evenings.”

*Kurt Haderler
White Plains Public Library, White Plains, NY*



THIRD COURSE: Lock-Down Your Computers

EQUIPMENT AND INGREDIENTS:

- A plan and policies to guide your computer lock-down configuration
- Lockdown software

TIME TO IMPLEMENT:

2 to 3 hours for the first computer; 2 hours on additional computers if you take advantage of replication methods such as copying settings files or cloning (See Fifth Course: Image Your Computer's Hard Drive on page 40 of this Cookbook.)

PREPARATION

Listed below are some actions you can take to lock-down you public computers and make them more foolproof. Although some of the tools discussed here include “templates” or recommended configurations, they also present a number of options when it comes to locking down specific parts of the computer. So, clear policies and a plan of how much you want to permit and/or restrict will help to better utilize these applications.

- **Workstation lockdown applications:** There are a number of tools now available to help manage public computer use. Among other features, these applications help “cage in” patrons to a limited number of available functions. For example, these tools will allow a patron to launch Internet Explorer for access to the Internet and to a word processor, but not anything else. This is especially true for administrative tools such as system files and the Control Panel. These applications may also include other patron management features such as session timers and printing management.
- **Prohibiting application launch:** An interesting application that several library staff members have recommended is the free, downloadable Trust-no-exe. An “exe” is “tech speak” for a file that launches an application. This utility allows you to predetermine the type of application that can be launched on a computer, allowing you to prevent patrons from executing downloaded software or bringing in unauthorized software on removable media such as flash drives or CDs. This type of feature is also included in some of the other lockdown software mentioned above. For some small libraries with tight budgets, however, and/or those who may not need all the other features included in the other more “comprehensive” software packages, this little application might serve you well.
- **The public web browser:** This tool cracks open the hood of Internet Explorer. It provides very granular control of many pieces of the web browser, including menu items and tool bar buttons, and hundreds of other options. By editing a single text file, you have access to literally hundreds of options, a list which may be a little intimidating at first.



- **Basic Input Output System (BIOS) Lockdown:** The BIOS hosts the most fundamental information your computer needs to get itself up and running. It contains a number of configurable options that change how a computer behaves, which could lead to trouble. For example, there is a setting to require a password when the computer powers on. This can be very dangerous if it's set without your knowledge. It could render your computer unusable. See InfoPeople's Overview of the BIOS link below for more information.

In order to make any changes to the BIOS, you should set a password. This can help prevent unauthorized access to the BIOS. Some of the workstation lockdown software tools mentioned here provide BIOS lockdown features. A very powerful feature is the keyboard shortcuts, which give you access to administrative functions such as logging off the current user or restarting the computer. This way, you can use lock-down tools to limit functionality (e.g., remove "log off" and "shutdown" options from Start Menu to prevent patrons from accidentally turning off the computer), but ensure that you and your staff still have easy access to these functions, provided you know the shortcut and the password.



The Right Tools—The Right Access

We want to give them access to what patrons need, not necessarily what they want. There is a difference. What they need is what you want to give them, but you don't want them exploring around your computer network or messing with files in My Computer. All those things can be locked down; you give them access to the things that they need."

*Rodney Greensage
Alamo Regional Library System, TX.*



OTHER TASTY RECIPES

Here are some links to the lockdown software just discussed. Please take a look for further reading.

TechSoup and WebJunction also offer an article that discusses issues around public access security at

<http://www.techsoup.org/learningcenter/techplan/page4892.cfm?cg=searchterms&sg=lock%20down>

- Fortres Grand 101
<http://www.fortresgrand.com/products/f101/f101.htm>
- CybraryN
<http://www.cybraryn.com/>
- Microsoft Windows SteadyState for Windows XP
<http://www.microsoft.com/windowsxp/sharedaccess/default.msp>
- CASSIE
<http://www.librarica.com/>
- Library Metricks
<http://www.librarymetricks.com/>



- Trust-no-exe
<http://www.beyondlogic.org/solutions/trust-no-exe/trust-no-exe.htm>
- Public Web Browser
<http://www.teamsoftwaresolutions.com/>
- Infopeople's Overview of the BIOS
<http://infopeople.org/resources/security/workstation/bios.html>



Fourth Course: Install Disk-Protection Software

So you forgot to cover the soufflé and it collapsed right before your big dinner party. Now what can you do? Not much...the damage is pretty much done.

But, disk-protection can do for your computer what you can't for that soufflé. It's a powerful tool that helps you quickly recover from computer mishaps and melt-downs. When you restart the computer, it returns to the point where disk-protection was turned on. This is sometimes referred to as "reboot-to-restore" software or rollback software. We cannot stress enough how valuable this tool is for libraries in terms of reducing their maintenance costs. This is especially true for the small rural library that often doesn't have the resources nor time to perform maintenance. It helps minimize the troubleshooting and repairs you have to perform on computers. For some libraries, the simple act of restarting the computers may be the most effective maintenance and troubleshooting technique...thanks to disk-protection software.



FOURTH COURSE: Install Disk-Protection Software

EQUIPMENT AND INGREDIENTS:

- Disk-protection software
- Computers with a “baseline” configuration

TIME TO IMPLEMENT:

2 to 3 hours (after you've configured computer to baseline)

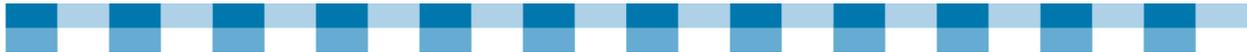
PREPARATION

Disk-protection is a way to revert back to the way a computer was configured at a particular point in time. Ideally, you want to start off with a solid configuration that has all the elements to serve your patrons well. This is the configuration that disk-protection will revert back to when you restart your computer.

- **Take some time to plan and think about all the elements you want to have on these computers before installing disk-protection.** These include:
 - Patron-use software such as office productivity software, games, or alternative browsers such as the Public Web Browser
 - Antivirus or anti-spyware software policies that you use to customize the look-and-feel of the computers
 - Accounts for patron use (e.g., you may want several different patron accounts—one for children, one for teens, one for adults, etc.)
 - Patron management and lock-down software such as the Fortres 101, CybraryN, or CASSIE
- **Set up your public computer accordingly, so that changes to the computer will not stick.** This brings up some issues that do not apply to a “normal” computer setup. For one thing, as mentioned previously in this section, patrons wishing to save work or downloads from the Internet should use their own media or online. If they save on a disk-protected computer, it will get wiped away when the computer restarts.

Also, by nature, disk-protection makes it harder for you to change your public computer's configuration. You must turn disk-protection off before you install new software or upgrade software. For example, if you want to upgrade Microsoft Office to the new version, you will have to turn disk-protection off before you can install it, then turn it back on once its installed.

- **If your patrons use a certain kind of software that needs to update configuration information as it is used, configure your setup to accommodate that.** For example, a typing tutor program might include a feature that saves the progress of its students so when they return at a later date to do more exercises, the program will know where the student left off. If you don't configure the typing tutor software to save this progress data to an unprotected area, disk-protection will wipe out this information when you restart the computer. How disappointed your hard working typing students would be!



- **Along with planning, test the disk-protected setups to make sure things are working as intended, especially after you restart your computer.** First, test the computers yourself. Once this is done, ask one or more of your patrons to sample the computer with the new features and setup. If the patrons identify problems, you can address them before installing and setting up the other public computers.



Rebooting Saves Us!

"We've never had any real issues with our computers because we can wipe and reboot. All of our public machines are secluded from our staff network so if we end up with someone downloading a virus of some sort, we reboot and they're fine."

*Josh LeBlanc
Jackson Parrish Library, Jonesboro, LA*



Putting It in the Deep Freeze

"I personally consider Deep Freeze to be a big contributing factor in the way that our Internet usage has skyrocketed in the past year - from around 13000 in 2004-05, to over 18000 in 2005-06 and... those figures just keep getting better. This is because the computers are working all the time and not sitting on my desk being worked on!"

*Terry Caudle – Hopkins County
Madisonville Public Library (KY) (courtesy of WebJunction:
<http://webjunction.org/do/DisplayContent?id=14253>)*

"We use Deep Freeze, which is a program that freezes our system so that changes cannot be made by anyone other than the IT person. A password is entered and the computer stays placed in a thawed state. Then I make any needed changes, put the computers back into the frozen state and reboot. So far this has worked very well in maintaining the security on our system."

*Mindy Farley
Barton Library, El Dorado, Arizona*



OTHER TASTY RECIPES

Here are links to some of the disk-protection software just mentioned.

- Faronics Deep Freeze
<http://www.faronics.com/html/deepfreeze.asp>
- Centurion Technologies CenturionGuard
<http://www.centuriontech.com/products/centurionguard>
- Centurion Technologies CompuGuard Cornerstone
<http://www.centuriontech.com/products/compuguardcornerstone/>
- Fortes Grand Clean Slate
<http://www.fortresgrand.com/products/cls/cls.htm>
- Microsoft Windows SteadyState
<http://www.microsoft.com/windowsxp/sharedaccess/default.aspx>



Fifth Course: Image Your Computer's Hard Drive

Hard drive failure is one situation in particular where disk-protection cannot save you, but cloning can. If the hard drive on your computer dies, you can replace it and clone it to get it back up and running.

Cloning:

- Offers a way to take a “snapshot” of a computer's configuration. With this snapshot you can easily re-install the computer configuration if something really goes wrong.
- Should be used to complement disk-protection, not replace it.
- Allows you to “clone” one computer's setup to another similar computer disk-protection, workstation lockdown — all of this takes time to configure correctly.
- Provides a way of replicating those difficult setups to your other computers, and as a result, saving you valuable time.



Computer Cloning is Worth Paying For

“When we did the last server upgrade, we needed to Ghost all of our computers. I brought someone in to help with that, because it was just too large of a project. I’m a believer in looking at cost-benefit ratios, and that sometimes it just makes more sense to pay someone to set things up properly.”

*Lesley Kimball
Wiggin Memorial Library, Stratham, NH*

FIFTH COURSE: Image Your Computer's Hard Drive

EQUIPMENT AND INGREDIENTS:

- Imaging software
- Large amount of disk space to store public computer disk images (5-10 GB per image)

TIME TO IMPLEMENT:

2 to 3 hours

PREPARATION

Use imaging software such as Symantec Ghost and Acronis True Image. This allows you to take an exact image of a hard drive and copy it on the other computer (the clone). It's designed to help you install software on one computer and configure it just the way you want it, make an image of it, and clone the rest of the computers. In short, the idea is to build one computer, and clone many of the same. (See the TechSoup article links below for more detail on cloning.)

Remember... Cloning works best when you have identical computers (same make, model, and configuration). The more diverse your public computers are, (e.g., many models of computers, different sets of software installed on each computer, etc.), the less effective cloning becomes. The more images you need to make to reflect the array of computers you have also increases the space requirements to store the large files, such as on recordable DVDs, an external hard drive, or a server.



OTHER TASTY RECIPES

- Description of Cloning
http://en.wikipedia.org/wiki/Disk_cloning
<http://www.techsoup.org/learningcenter/software/page6684.cfm?cg=searchterms&sg=cloning>
- WebJunction Overview of Cloning and Issues to Consider:
<http://www.techsoup.org/learningcenter/software/page6684.cfm>
- Symantec Ghost
http://www.symantec.com/enterprise/products/overview.jsp?pcid=1025&pvid=865_1
- Acronis True Image
<http://www.acronis.com/enterprise/products/ATICW/>
- DriveImage XML
<http://www.runtime.org/dixml.htm>
- Storage Device Example
<http://www.techsoup.org/stock/product.asp?catalog%5Fname=TechSoupMain&keyword=network%20storage&product%5Fid=G40279&cg=searchterms&sg=network%20storage>



Public Computer Software Comparison Chart

Library public computers aren't like most "normal" computers. You depend on them to be extra resilient and also very rigid at the same time. Fortunately, there are many great software tools to help you maintain these computers.

The chart on the following pages compares some of the better-known titles that are currently in use in small libraries. We've grouped them by family, based on the most prominent public computers' management features. The pricing and support terms reflect discounts for public library licensing and 15 workstations (where applicable).

Software families and common features:

- **Time management software** offers session time and print management, workstation reservations, public computer usage reporting.
- **Disk-protection** preserves a computer's baseline configuration and restores it upon restarting or logoff.
- **Workstation lock-down** restricts patron access to a limited number of functions (e.g., web browsing, word processing), tailors the look and feel of desktop and menus, and prevents access to files and folders.
- **Application launch restriction** prevents patrons from launching unapproved applications (e.g., downloaded or brought in on removable media).
- **Web browser customization** modifies the way Internet Explorer looks and locks down its functionality.
- **Workstation remote control and administration** allows library staff to see and interact with the workstation desktop to make changes, troubleshoot, or assist a patron.
- **Patron privacy and data cleanup** can clean patron tracks (e.g., web browsing history, web site usernames/passwords, cookies).

We've placed each software program in the family where we believe it has the strongest features; however, please note that some of the features overlap into other categories. We've identified these with footnotes, as appropriate.

For filtering software, take a look at this chart: <http://libraryfiltering.org/>.

Public Computer Software Comparison Chart

TYPE OF SOFTWARE	SOFTWARE PUBLISHER AND TITLE	APPROXIMATE COST	INCLUDED SUPPORT, MAINTENANCE, AND SOFTWARE UPGRADE TERMS
Patron Management	Librarica CASSIE Supports: Windows 95, 98, NT, 2000, XP, 2003, Vista Feature list: http://www.librarica.com/features.html	\$995 for 5 workstations \$1,990 for 10 workstations \$2,485 for 15 workstations	One year phone, e-mail, online help documentation support (add additional years for 15% of licensing cost per year)
	CybraryN Library Solutions ¹ Supports: Windows 98, ME, NT, 2000, XP Feature list: http://www.cybraryn.com/Solutions/	\$774.95 for 5 workstations \$1074.95 for 10 workstations \$2,519 for 15 workstations	One year phone, e-mail, online help, documentation and remote assistance support (add additional years for \$375, according to number of workstations)
	Useful DiscoverStation ^{1,2,4} Supports: Linux-based thin-client w/ included hardware Feature list: http://userful.com/products/library-ds	\$1,740 / year for 5 workstations \$3,480 / year for 10 workstations \$5,220 / year for 15 workstations (all rates based on 3-year term agreement)	Phone, e-mail, online help, documentation, and remote assistance support
	Fortres Grand Time Limit Manager Supports: Windows 2000, XP, 2003 Feature list: http://www.fortresgrand.com/products/tlm/tlm.htm	\$125 for 5 workstations \$250 for 10 workstations \$195 for 25 workstations	Lifetime phone, e-mail, online help, and documentation support
Disk-Protection	Faronics Deep Freeze STD Supports: Windows 95, 98, ME, 2000, XP, Vista Feature list: http://www.faronics.com/html/deepfreeze.asp	\$219 for 5 workstations \$236 for 10 workstations \$334.90 for 15 workstations	One year phone, e-mail, online help, and documentation support (add additional years for \$44, up to three years)
	Fortres Grand Clean Slate Supports: Windows 2000, XP http://www.fortresgrand.com/products/cls/cls.htm	\$295 for 5 workstations \$590 for 10 workstations \$335 for 15 workstations	Lifetime phone, e-mail, online help, and documentation support
	Faronics Deep Freeze Mac Supports: Mac OS 10.3 and 10.4 Feature list: http://www.faronics.com/html/DFMac.asp	\$330 for 5 workstation \$364 for 10 workstations \$516 for 15 workstations	One year phone, e-mail, online help, and documentation support (add additional years for \$68, up to three years)
	Centurion Technologies CompuGuard CornerStone Supports: Windows 2000, XP Feature list: http://www.centuriontech.com/products/compuguardcornerstone	\$462 for 15 workstations	One year phone, e-mail, online help, and documentation support (additional years at 10% of license cost per year)

Public Computer Software Comparison Chart (continued)

TYPE OF SOFTWARE	SOFTWARE PUBLISHER AND TITLE	APPROXIMATE COST	INCLUDED SUPPORT, MAINTENANCE, AND SOFTWARE UPGRADE TERMS
Disk-Protection (continued)	Centurion Technologies MacShield Universal Supports: Mac OS 10.3 and 10.4 Feature list: http://www.centuriontech.com/products/macshielduniversal/	\$453.75 for 15 workstations	One year phone, e-mail, online help, and documentation support (additional years at 10% of license cost per year)
	Faronics Deep Freeze STD Supports: Windows 95, 98, ME, 2000, XP, Vista Feature list: http://www.faronics.com/html/deepfreeze.asp	\$219 for 5 workstations \$236 for 10 workstations \$334.90 for 15 workstations	One year phone, e-mail, online help, and documentation support (add additional years for \$44, up to three years)
Workstation Lock-Down	Microsoft Windows SteadyState ^{2,5} Supports: Windows XP Feature list: http://www.microsoft.com/windowsxp/sharedaccess/default.aspx	Downloadable for free	Online help, documentation, and discussion forum support.
	Fortres Grand Fortres 101 Supports: Windows 2000, XP Feature list: http://www.fortresgrand.com/products/f101/f101.htm	\$295 for 5 workstations \$590 for 10 workstations \$335 for 15 workstations	Lifetime phone, e-mail, online help, and documentation support
	Faronics WINSelect ³ Feature list: http://www.faronics.com/html/Winselect.asp	\$245 for 5 workstations \$490 for 10 workstations \$755 for 15 workstations	Through next version (typically two year lifecycle per version) phone, e-mail, online help, and documentation support
Application Launch Restriction	Faronics Anti-executable standard Supports: Windows 95,98,ME, 2000, XP Feature list: http://www.faronics.com/html/AntiExec.asp	\$179 for 5 workstations \$236 for 10 workstations \$398 for 15 workstations	One year phone, e-mail, online help, and documentation support (add on up to three years for additional fees, according to number of workstations)
	Beyond Logic Trust-No-Exe Supports: Windows NT, 2000, XP Feature list: http://www.beyondlogic.org/consulting/trust-no-exe/trust-no-exe.htm	Free downloadable	Online help, and documentation support
Web Browser Customization	TeamSoftware Solutions Public Web Browser Supports: Windows 95, 98, ME, NT, 2000, XP, 2003, Vista Feature list: http://www.teamsoftwaresolutions.com/	\$125 for one year, renewable site license	E-mail, pager, online help, and documentation and discussion forum support

Public Computer Software Comparison Chart (continued)

TYPE OF SOFTWARE	SOFTWARE PUBLISHER AND TITLE	APPROXIMATE COST	INCLUDED SUPPORT, MAINTENANCE, AND SOFTWARE UPGRADE TERMS
Workstation Remote Control and Administration	GoToMyPC Supports: Windows 2000, XP, Vista Feature list: https://www.gotomypc.com/en_US/personalFAB.tpl?_sid=209346628%3AFE2219DAD0D8CF8	\$777/year for 5 workstations \$1554/year for 10 workstations \$2,025/year for 15 workstations	One year phone, e-mail, online help, and documentation support
	VNC Supports: Windows 98, ME, 2000, XP, Mac OS 9 and 10.x, Unix, Linux (various sites, e.g., http://www.realvnc.com/)	Free download	Online help, and documentation support
	LogMeIn Supports: Windows 98, 2000, XP, 2003 Feature list: https://secure.logmein.com/go.asp?page=products_free	Free for LogMeIn Free version	Phone (leave message for call back), e-mail, online help, and documentation support
Patron Privacy Data Cleanup	CCleaner Supports: Windows 95, 98, ME, NT, 2000, XP, 2003, Vista Feature list: http://ccleaner.com/features.aspx	Free download	Online help documentation and discussion forum support

NOTES

¹Includes some workstation lockdown features

²Includes disk-protection functionality

³Includes some patron management features

⁴Requires Linux/Unix

⁵Requires Windows XP Service Pack 2

A note about the listed costs: These are prices as reported by the respective vendors in April, 2007. Prices are subject to change, please contact vendor for current rates. In addition, you should always discuss your specific situation with the vendor to get the most appropriate package and pricing for your library.



Fast Food—Meal Plan 2 Summary

- Before taking on the individual Meal Plan 2 courses, make sure you have the right skills, or get someone with the appropriate skills to help you. (See Competency Charts on pages 22 through 23). In general, across all courses in Meal Plan 2, you should:
 - Have a general comfort with computers and have previously installed software on a computer.
 - Be able to get around the Windows operating system (e.g., you are familiar with tools such as My Computer and the Control Panel).
 - Have administrator-level access to public computers for full control over system settings.
- Lockdown and disk-protection tools can dramatically reduce the amount of time your staff will spend troubleshooting computer problems, not to mention the money you can save on aspirin for all the headaches that come with fixing those problems.
- Know the time and cost savings benefit, of using lock-down and disk-protection software. One month's time/cost savings will more than pay for the initial costs of purchasing, installing, and configuring lock-down and disk-protection software on each computer.

MENU 2 CHECKLIST
<input type="checkbox"/> Determine your library and patrons' needs and plan accordingly so you can identify the software and resources you would like to offer your patrons.
<input type="checkbox"/> Consider the ways in which your patrons use your computers in your library.
<input type="checkbox"/> Think through the actions you must take to ensure usability and proper security.
<input type="checkbox"/> Create guidelines and policies to document and communicate an agreement between you and your patrons about computers usage.
<input type="checkbox"/> Install antivirus and anti-spyware software to help keep intruders out of your computers.
<input type="checkbox"/> Lock-down your computers to prevent patrons from doing damage to your hardware and/or software components...accidentally or intentionally.
<input type="checkbox"/> Establish clear policies and a plan of how much you want to permit and/or restrict patron access.
<input type="checkbox"/> Select and use appropriate lock-down software tools to manage patron usage.
<input type="checkbox"/> Install disk-protection (reboot and restore) software that allows you to capture the pristine "baseline" computer setup that you have when everything is working properly.
<input type="checkbox"/> Take some time to plan and think about all the elements you want to have on these computers before installing disk-protection.
<input type="checkbox"/> Set up your public computer accordingly, so that patron changes to the computer will not stick.



MENU 2 CHECKLIST (continued)

- If your patrons use a certain kind of software that needs to update configuration information as it is used, configure your setup to accommodate that.
- Along with planning, test the disk-protected setups to make sure things are working as intended, especially after you restart your computer.
- Image your computer's hard drive to capture a "model" computer's configuration and "clone" the rest of the computers.
- Use imaging software such as Symantec Ghost and Acronis True Image.



Meal Plan 3

Volunteers for the Kitchen



In the rural library “kitchen” one person often does the work of the Executive Chef, Sous Chef, Broiler cook, Fry cook, Pastry Chef, Bottle Washer, and Caterer. Getting some help in the kitchen is a good way to avoid being overwhelmed.

Technical volunteers can be most effective if they are assigned work that is clearly defined, short-term, and non-urgent. It’s up to you to make the most of your volunteers’ free time and efforts. That is what this section is all about!

TOPICS COVERED:

- Appetizer: Volunteer Planning
- Side Dish #1: Recruitment
- Side Dish #2: Volunteer Selection
- Main Course: Getting Started
- Dessert: Supervision
- After Dinner Beverage: Project Closing
- Fast Food—Meal Plan 3 Summary



Volunteers are Invaluable

“The computer committee is a group of volunteer patrons and several staff members. There’s about five core folks who have computer experience. The committee offers me and other staff members an opportunity to raise issues that have come up on a daily basis. They also assist with the planning. It’s been really great to have outside information and ideas. It’s like a think tank and when I get very frustrated, I can say ‘Hey, I really don’t know what’s going on. Does anyone? Have you heard of this?’ These are folks that I can e-mail or call. They’ve just been really quite invaluable.”

*Kate McMullin
Southwest Harbor Public Library, Mt Desert Island, ME*



APPETIZER: Volunteer Planning

EQUIPMENT AND INGREDIENTS:

- A phone and/or computer so you can communicate with your volunteer
- A clear understanding of who you want to help you and when
- A quart of support
- A dash of patience

TIME TO IMPLEMENT:

4 to 8 hours to define who you need and what they will do.

PREPARATION

To bring the right staff into your kitchen, you need to first:

- **Define and prioritize needs for your library.** What tasks need to be done and what support do you need for your library? How often does this work need to be done?
- **Decide who can best accomplish each task.** Do you need a volunteer to do one task, or a person to do routine tasks on a regular basis? What skills must they have to do the work you need done?
- **Create a volunteer job description.** The volunteer needs to know what they are being asked to do. A clear job description (for staff or volunteers) is essential for success. Include in the job description:
 - What the volunteer will do
 - When will the volunteer do it
 - How many hours will the volunteer need to work
 - Who is the volunteer liaison on your staff and what is the best way for a potential volunteer to get in touch with that person
 - Any deadlines that need to be met
- **Decide on a process for the volunteers to be screened, oriented, managed and supported.** Who will support and supervise the volunteers' work?
- **Decide on a budget.** Does the project have costs associated with it? If yes, do you have money available now to purchase the necessary ingredients **before** the volunteer arrives?

SIDE DISH #1: Recruitment

EQUIPMENT AND INGREDIENTS:

- A computer, printer, and/or phone to spread the word
- A volunteer job description
- An understanding of who you want and what you want them to do
- A person to coach and support the volunteer
- Staying away from nuts and fruitcakes

TIME TO IMPLEMENT:

8 to 10 hours to recruit (more if you can).

PREPARATION

Unless you are calling in Uncle Bob or another relative to help you in your library, you need to spread the word about your volunteer position throughout your entire community. Here are some actions you can take:

- **Ask your colleagues.** Where do other libraries in your state and region go for technical volunteers?
- **Ask other volunteers.** Many times, current volunteers will be the best source for new volunteers. They may know of someone, or they can tell you where to post a job description.
- **Look through newspapers and newsletters.** You can list your volunteer job description free of charge in many local newspapers, P.T.A newsletters, or other community publications.
- **Check schools and community college postings.** Many vocational schools and community colleges will post your volunteer job description in a career center or a departmental bulletin board. Some professors may announce the opportunity in their classes. Try contacting departments related to technology, such as engineering and computer science.



Notes from
a Chef

The Right Mix

"I put Adam and Dr. White together and both of them came to the program right after we got the Gates grant with all of the manuals telling you how to do things. Dr. White was in his late 60's so he couldn't get down on the floor. Adam was 14 so he could get down on the floor. So Dr. White told Adam how to do the wiring, and we did the entire building with CAT5, successfully networking the computers. Then Dr. White developed courses on teaching basic computing to the public using a lot of the Gates-supplied manuals. Adam then took the training and adapted it for use for teenagers. Out of these efforts we have really created—for a county our size—a very unique program."

*Rita Maupin
Calhoun County Public Library, Blountstown, FL*



- **Get the word out to virtual communities:** These communities (e.g. Yahoo Groups, MySpace, Facebook) provide a network of people who are interested in connecting and sharing information with other like-minded people via the Internet. It's often possible to locate tech-savvy people in a particular location or with particular expertise. Using a library-oriented community such as WebJunction (www.webjunction.org), you may even be able to get help from "virtual" volunteers who can provide answers to particular questions.
- **Consult user groups:** These are groups that meet either in person or online to discuss different technical topics. People who participate in these groups may be good volunteers.



Knowledgeable Volunteers Can Help Your Library Save Money

Your library is likely too short on funds to hire a technology manager or consultant, but that doesn't mean you can't get the help you need. The Yale Public Library in Yale, OK discovered, that tapping into the community to find volunteers with technology expertise was a great way to accomplish projects without spending big bucks.

When the library wanted to wire its building for Internet access in 1999, it turned to a former board member who had experience setting up computer labs.

"He did all the wiring and put in the jacks," said staff member Janice Clark. The Yale Public Library has also been able to retain the services of this volunteer for assistance with its other technology needs. "He volunteers and donates his time to do any of our computer projects," Clark said. "He has saved us so much money."

Clark explained that another board member, the computer teacher at Yale's high school, has helped train the library's staff to use Microsoft Word and other basic pieces of software. Clark also occasionally seeks advice from the city's schoolchildren, whom she says are quite knowledgeable about technology.

Even though its budget is small, the Yale Public Library is staying up-to-date in terms of technology with the help of its volunteers. "We're excited that as a little town of 14,000, we are really moving on," Clark said.

*Janice Clark
Yale Public Library, Yale, OK*



SIDE DISH #2: Volunteer Selection

EQUIPMENT AND INGREDIENTS:

- A volunteer job description
- An understanding of who you want and what you want them to do
- The Chef who will supervise the volunteer
- A kitchen full of eager **volunteers**

TIME TO IMPLEMENT:

4 to 6 hours to interview (more if you can).

PREPARATION

You may be tempted to welcome with open arms the first volunteer who shows up. Remember that you are going to invest time and energy supporting them, and you are going to entrust them with care of your computer systems. It's crucial to screen potential volunteers by interviewing them first to find out whether or not they are a good match for your library's needs. You should also check their references in the same way you would for a staff person.

Consider these guidelines when interviewing volunteers:

- **What skills will the volunteer need to accomplish the task?**
Ask about the volunteer's previous experience with the technology you want them to work on. Bear in mind that some volunteers can learn skills as they go, especially if they have other technical expertise, or they are taking a class. It may be worth risking if the volunteer is serious about learning.
- **Is the volunteer willing to work in at a library with limited resources?**
A volunteer might be coming from an environment that had the latest and most expensive system. Ask if the volunteer has any experience working in a library setting which may be "lean and mean". If he or she has not worked in a library setting, explain some of your ways of working, including your budget, staff skill level, and atmosphere. Ask if the volunteer would be comfortable working in an environment with fewer resources.
- **Can the volunteer communicate clearly about the work they do?**
Can the volunteer explain technical issues in a way that you understand? If the volunteer uses a word you don't know, will he or she define it clearly? Is the volunteer willing to report back regularly on the progress made and document his or her work?
- **Is the volunteer reliable?**
Make sure the volunteer is willing to make a specific time commitment and finish the project before the deadline you give. Checking a volunteer's references is the best way to see if he or she is likely to follow through.



High-School Students Can Help Keep Library Computers Up and Running

In Pryor, OK, high-school students can take classes that will help prepare them for careers in technology — at the same time, they also get real-world experience by helping to maintain their local library's 12 public-access computers. David Shreffler, who teaches the high-school computer classes and acts as Pryor Public Library's technology consultant, explained that when the current librarian wanted to spend money to hire a full-time IT staff member, he stepped in and offered his students' services instead.

"I have students that are available about every hour, and we train them to help," Shreffler said. "And it's a good thing for us and it's not a lot of trouble."

Shreffler and his students visit the library several times a week to perform a variety of maintenance chores on the computers, including replacing malfunctioning computer components, installing software, and troubleshooting occasional connectivity problems. Because most of the computers are more than four years old, having a regular maintenance team has been especially useful in keeping Pryor Public Library's machines functional.

*David Shreffler Consultant
Pryor Public Library, Pryor, OK*



MAIN COURSE: Getting Started

EQUIPMENT AND INGREDIENTS:

- The Chef who will supervise the volunteer
- An excited and charming guest Chef (i.e. volunteer)

TIME TO IMPLEMENT:

3 hours

PREPARATION

- **Be clear on what you're cooking up.** A good rule of thumb is to keep all volunteer projects under 20 to 30 hours over a three month period. Why? Because most volunteers will not sign up for anything longer, since it would be too time consuming.
- **Whip up a work plan.** Once you have determined the scope of work, you should document it in a work plan. It is similar to the contract you would sign with a staff person, just shorter and more informal. Even if you are one of the lucky libraries with an ongoing relationship with a volunteer, you will still find it useful to create work plans for specific projects. The essential elements of a work plan are:
 - A list of specific tasks to be accomplished.
 - A plan for training and sustainability of the project
 - A timeline. Include the weekly schedule for work on the project.
- A work plan will help you reach a shared understanding of the volunteer's work, and assist you in making sure you aren't placing too many demands or requesting conflicting timelines.
- **Schedule an initial “get to know you” meeting with your volunteer.** This not only gives a volunteer a chance to get a better idea of the resources and equipment he or she might need, but gives you an opportunity to teach the volunteer a little bit about how the library functions. Here are some good points to cover:
 - Who you serve
 - The main contacts for the volunteer staff (including on-site computer literate people)
 - The project budget
 - Where everything is located, including the phone, tools, sign-in/sign-out sheet, rest room, coffee, and so forth
 - Your work plan to make sure you and the volunteer understand the work to be done, the timeline, and when you will be checking in about progress
- **Review your library security and confidentiality guidelines.** If you keep confidential information about your staff or patrons, make sure you communicate this to all volunteers. Clearly describe what they can and cannot access.



**Notes from
a Chef**

Good Volunteers May Be Closer Than You Think

"I have one volunteer who I call my technology guru. Whenever I have a technology question I'm not sure on, I give him a call. Just between you and me, it's my husband! I'll call him up and say that "I need to talk to my technology volunteer. He'll say, 'I think he's out' I'll say, 'Oh, OK. When can I call back?' He'll then say, 'Oh here he is, he just came in!'"

Bonnie Tollefson

Levy County Public Library System, Bronson, FL

DESSERT: Supervision

EQUIPMENT AND INGREDIENTS:

- The Chef who will supervise the volunteer
- An excited and charming guest Chef (i.e. volunteer)
- A ¼ lb of direction

TIME TO IMPLEMENT:

2 hours on a monthly basis

PREPARATION

- **Check in regularly.** The staff liaison should communicate with volunteers on a regular basis to talk about their progress and find out if there are any problems or changes to the work plan. Technical volunteers may be used to working at a very rapid pace. However, if your library needs to take things more slowly, you can communicate this while keeping the project moving toward completion with regular meetings, e-mails, or phone calls. This is also a great way to let volunteers know that you value their time and energy.
- **Establish accountability.** Volunteers should understand that even though they are giving their time away, it doesn't mean they can blow things off or not show up, etc. Some libraries have their volunteers sign letters of commitment, while others rely on volunteers' devotion to the cause to keep them interested and coming back.
- **Set limits.** With accountability comes a lot of responsibility, and although volunteers should feel like they can “own” their work, they shouldn't feel burdened. Volunteers should know they are allowed to say “no”, or “That's all I can do.” Sometimes, volunteers will burn out after one or two projects because they put in tons of hours, when this could have been avoided had they only known that it was okay for them to set limits. After your first meeting, volunteers should re-evaluate the work and see if it looks realistic.
- **Document work done.** Make sure your volunteers keep records of the work that they did. You might want to set up a system for this, such as a log book or spreadsheet.



Notes from a Chef

Retirees Bring a Lifetime of Experience to Volunteering

“We are fortunate to have two retired men, who worked in the computer industry, to help us with our computer upgrades and maintenance. They come once a week to download any updates to Windows, antivirus, and/or our spyware programs. They also run antivirus and spyware scans. This two or three hours per week frees me to do my other jobs. They are very knowledgeable and work independently. In addition, they volunteer for other projects as we need them. It is a huge time and stress saver for the library!”

*Kristi Bryant
Wells Public Library, Wells, ME*

AFTER DINNER BEVERAGE: Project Closing

EQUIPMENT AND INGREDIENTS:

- A case of gratitude
- A kitchen full of thankfulness

TIME TO IMPLEMENT:

2 hours monthly.

PREPARATION

A well-managed volunteer program can offer a great experience for both the person who is volunteering and the library. Sometimes lasting relationships develop between volunteers and their local library.

Remember what your mother taught you! **Always say Thank You!** Here are some ways to say it:

- **Be sure to thank the volunteer at the end of a project.** Do this even if your volunteer has decided that he or she loves your organization and will continue working.
- **Do something personal.** This can include things like buying a volunteer a gift certificate at his or her favorite store, or giving that volunteer something that's related to your library.
- **Think about what is most meaningful to your volunteer.** He or she might prefer to hear about the impact of their work, receive your newsletter, or be invited to a staff party, rather than receive a t-shirt or plaque.
- **Keep communications clear.** This is the key to successful technical volunteer projects.
- **Establish future volunteer communications and make sure that you have accurate contact details.**



OTHER TASTY RECIPES

- Why Have Volunteers?
http://www.helpnow.org/npos_tips.php
- Recruit a Volunteer
<http://webjunction.org/do/DisplayContent;jsessionid=039CEDCF1A38A29846E7A48725CEB813?id=1158>
- Sample Technology Volunteer Job Description
<http://webjunction.org/do/DisplayContent;jsessionid=039CEDCF1A38A29846E7A48725CEB813?id=1312>
- Volunteer Job Description
<http://www.ewbportland.org/node/29>



- Your Circle of Resources – Volunteer Recruitment
<http://www.energizeinc.com/art/avolrb.html>
- Shared Wisdom: Recruiting and Managing Volunteers
<http://www.techsoup.org/learningcenter/volunteers/page6010.cfm>
- Where Should We Place Our Volunteer Ads?
<http://www.nonprofits.org/npofaq/04/17.html>
- Essential Volunteer Management
<http://www.casenet.org/program-management/volunteer-manage/essenvol.htm>



Fast Food—Meal Plan 3 Summary

Technical volunteers can be most effective if they are assigned work that is clearly defined, short-term and non-urgent—it's up to you to make the most of your volunteers donated time and efforts.

MENU 3 CHECKLIST
<ul style="list-style-type: none"><input type="checkbox"/> Bring the right staff into your kitchen:<ul style="list-style-type: none">– Define and prioritize needs for your library.– Decide who can best accomplish each task.– Create a volunteer project description.– Decide on a process for the volunteers to be screened, oriented, managed and supported.– Decide on a budget.<input type="checkbox"/> To find and recruit volunteers:<ul style="list-style-type: none">– Ask your colleagues and other volunteers.– Look through newspapers and newsletters.– Check schools and community college postings.<input type="checkbox"/> When selecting volunteers:<ul style="list-style-type: none">– Screen potential volunteers by interviewing them first.– Check their references in the same way you would a staff person.– Think seriously about whether they will be a good match for your library's needs.<input type="checkbox"/> As you start up your volunteer project:<ul style="list-style-type: none">– Try to keep all volunteer projects under 20 to 30 hours over a three month period.– Create a work plan.– Schedule an initial “get to know you” meeting.– Review your library security and confidentiality guidelines.<input type="checkbox"/> Ensure proper volunteer supervision:<ul style="list-style-type: none">– Have a staff liaison communicate with volunteers on a regular basis to talk about their progress and any problems or changes to the work plan.– Establish accountability.– Set limits.– Document work done.



MENU 3 CHECKLIST (continued)

- Close the volunteer project on a positive note:
 - Be sure to thank the volunteer once they've finished a project.
 - Do something personal.
 - Think about what is most meaningful to your volunteer.
 - Keep communications clear.
 - Establish future volunteer communications and make sure that you have accurate contact details.



Meal Plan 4

Computer Culinary Academy— Getting the Technology Training You Need



Given the demands of the library kitchen, it can be hard to find time to learn new skills and expand your repertoire. However, there is training assistance that you can access locally, regionally, and nationally, whether it be in a workshop format, print, or online.

This section discusses the various ways to keep your library operating like a well-run kitchen and keep your library soufflé from falling.

TOPICS COVERED:

- Appetizer #1: Assessment
- Appetizer #2: Training Budget
- Main Course: Training Resources
- Dessert: Evaluation
- Fast Food—Meal Plan 4 Summary



Staff Training Builds Confidence

“I try to encourage other folks on the staff to take trainings. While I do a lot of the technology maintenance, it’s important that everyone here be able to do some simple troubleshooting. I think people don’t feel very confident about technology, which is why we concentrate on getting people to workshops and training.”

*Lesley Kimball
Wiggin Memorial Library, Stratham, NH*



Learning The Language of Technology

“I went to a conference on technology and one of the things that I got out of it, that I have not forgotten, was that they likened technology to learning to speak English. For those of us that did not grow up with technology it is like English as a second language. When we hire someone new, we send them to a Florida Electronic Library training, so they can better serve the patrons.”

*Bonnie Tollefson, FL
Levy County Public Library System, Bronson FL*



Appetizer #1: Assessment

You wouldn't start baking before you know you have the right ingredients in place...would you? Well, you'd be creating a similar disaster by signing up or sending your staff members to training before you know what their training needs are (something like baking a cake without sugar). We suggest that you collect your ingredients (i.e. your staff's training needs) **before** you start looking at training catalogs and online resources. As always, start with your appetizer.

APPETIZER #1: Assessment

EQUIPMENT AND INGREDIENTS:

- Library Core Competencies – A list of your state, regional, or county technology competencies for library staff
- TechAtlas Staff Skill Survey
- A dollop of interest in defining the skills you want your staff to have

TIME TO IMPLEMENT:

3 to 6 hours to define staff training needs

PREPARATION

- **Review your state and local core competencies.** Technology competencies help staff members understand the computer-based skills and knowledge they need to effectively serve their patrons. These competencies also help libraries assess staff needs and develop appropriate training plans.
- **Assess your staff skills and training requirements.** To help identify which staff may need training and/or who can act as “tech resource” within your library, use the TechAtlas Staff Skill Survey at <http://webjunction.techatlas.org/tools/start.asp?subtab=1>.
- **Identify your library's staff training priorities.** Ask:
 - What problems/needs should be addressed through training? Is it really a training need?
 - What skills need to be taught? What do you need people to be able to do that they can't do now?
 - Which staff member(s) need the training?
 - What format do you want for the training? How will the information be best delivered (e.g., the training might be group, individual, online, etc)
 - What training resources will you use? (e.g., CDs, online resources, classes, books, etc.)
 - What is your training budget for initial **and** on-going training?
 - What is your schedule for training? How soon do you need staff to be trained?

- What do you want the staff to learn or be able to do after the training?
- How will you know if the training worked? In other words how will you evaluate the success of the training?

Blend your competencies, staff skills, and library training priorities, then cook to perfection.



When It's Something Important—You Need to Go

"I go to as many workshops as my commissioners will allow me to go to. They like for me to be here; we have to keep our hours up. But if it's something that I think is important...something that's going to help me, I just go."

Joan Frazier Haskell
Haskell County Library, Haskell, TX



OTHER TASTY RECIPES

Technology Competencies

- Evaluating Staff Technology Competencies
TechAtlas Staff Skill Survey
<http://webjunction.techatlas.org/tools/start.asp?subtab=1>
- Staff Competencies Resource List
A list of web site resources providing insight into how your colleagues are handling the challenge of assessing library staff competencies.
<http://www.webjunction.org/do/DisplayContent?id=1066>
- Library Technology Reports
Library Technology Reports 43:2 (Mar/Apr 2007) by Sarah Houghton-Jan tackles technology competencies for librarians in the Information Age. It is a thorough discussion of technology competencies, including some concrete examples.
<http://www.techsource.ala.org/ltr/technology-competencies-and-training-for-libraries.html>
- Library Staff Competencies
<http://www.librarysupportstaff.com/4competency.html>
- Assessing & Meeting Technology Training Needs
A description of the process used by the Newport News, VA Public Library.
<http://www.infotoday.com/cilmag/sep05/jennings.shtml>

APPETIZER #2: Training Budget

EQUIPMENT AND INGREDIENTS:

- A clear idea of the skills that you and your staff want to learn (i.e. You've sampled the appetizer)
- An idea for how you would like them to learn them (e.g., online, classroom, conference)
- A bushel full of funders to partner with you and pay for the training
- Funding to support the training, travel, and time off

TIME TO IMPLEMENT:

1 hour

PREPARATION

- **Review your library budget for training, staff development, and materials to help determine the kind of training you can offer your staff.** Be sure to take into consideration:
 - Cost of materials and classes
 - Cost of staff time
 - Travel expenses
 - Miscellaneous training expenses



OTHER TASTY RECIPES

Funding Technology Training

- WebJunction
Purchasing & Funding Learning Find e-learning discounts, grants, scholarships, and more.
<http://www.webjunction.org/do/Navigation?category=13590>

MAIN COURSE: Training Resources

EQUIPMENT AND INGREDIENTS:

- Computer with high speed Internet access (if you're doing an online course that includes more than text)
- A clear idea of the skills that you and your staff want to learn and what means/method you would like to use to learn those skills
- Time to attend the training, the conference, read the materials, or study online
- Funding to support the training, travel, and time off

TIME TO IMPLEMENT:

From 1 hour to 1 week, depending on the training and your location.

PREPARATION

No matter what skill you need to learn, the library culinary academy has a rich assortment of places to look for training. The Chefs are waiting to share, so come on in!

What to do next:

- **Sit down and review our “Other Tasty Recipes” which focuses on technology training.**
- **Using your staff training priorities and budget as a guide, and the list of Other Tasty Recipes, determine the best fit for your staff.**
- **Identify how staff members will use these training resources and how you can measure the value of the training for both your staff and your library.**



Staying on Course with Technology

“Our regional library, the Southern Maine Library District, conduct spring and fall counsel meetings, and a conference every year through the Maine Library Association. They always have conferences that involve technology, workshops, and things like that. We do training in-house as well. I usually have a section of each staff meeting where we might cover an issue such as how to troubleshoot or online research.”

*Kristi Bryant
Wells Public Library, Wells, ME*



OTHER TASTY RECIPES

Online Courses

- WebJunction
Training and resources to help libraries create, implement and use all forms of online learning. A variety of free and fee based online courses and resources
<http://www.webjunction.org/do/Navigation?category=372>
- University of North Texas
Lifelong Education @ Desktop
Online courses help librarians and library staff, volunteer managers, rehabilitation professionals, and business people deal with the challenges that are a part of their daily work lives.
http://web2.unt.edu/cmp_lead/
- LibraryU
Free web-based training for library staff and their patrons, supported cooperatively by the Illinois Library Systems and the Illinois State Library with funding from the Bill and Melinda Gates Foundation.
<http://learning.libraryu.org/home/>
- Education2Go
A series of online courses on computer-related topics offered by University of Wisconsin-Madison School of Library and Information Studies
<http://www.slis.wisc.edu/continueed/ed2go.html>
- Library Support Staff.com
Online Learning Sites
Free Online Learning Sites and Resources
<http://www.librarysupportstaff.com/ed4you.html#Online%20Tutorial>
- SirsiDynix Institute
The *SirsiDynix* Institute is an ongoing forum for professional development in the library community. It provides free access to industry-leading speakers and events.
<http://www.sirsidynixinstitute.com/>

Webcasts

- InfoPeople
A list of archived webcasts from InfoPeople. Topics include: Web 2.0, Leading Edge Technologies, and Practical Strategic Planning. Infopeople also offers training courses for California libraries.
<http://www.infopeople.org/training/webcasts/list/archived>

Webinars

- WebJunction
A wide variety of self-paced and live online courses, as well as the new E-Learning Institute and Live Space
<http://www.webjunction.org/do/Navigation?category=15543>



News and Notes about Technology in Libraries

- WebJunction Forum on Emerging Technologies
Librarians discuss the latest and greatest such as web technologies and social software
<http://www.webjunction.org/forums/category.jspa?categoryID=37>
- Public Library Association TechNotes
Tech Notes are short, Web-based papers introducing specific technologies for public librarians.
<http://www.ala.org/ala/pla/plapubs/technotes/technotes.cfm>
- ALA TechSource
Publishes *Library Technology Reports*, *Smart Libraries Newsletter* (formerly *Library Systems Newsletter*), and the ALA TechSource Blog
<http://www.techsource.ala.org/>
- MaintainIT
A work in progress including stories, blogs and resources from the field
<http://www.maintainitproject.org/about>

General Technology News Sources

- New York Times Technology column
<http://www.nytimes.com/pages/technology/index.html> or
- National Public Radio's Technology programs
<http://www.npr.org/templates/topics/topic.php?topicId=1019>



Link and Learn

"What I've learned I've mostly found through the Internet. It's just a basic willingness to learn, taking your time, and listening to your patrons."

*Karen Bryant
Calhoun County Public Library, Blountstown, FL*

DESSERT: Evaluation

EQUIPMENT AND INGREDIENTS:

- Copy of technology competencies for library staff.
- Copy of staff training priorities
- Learning objectives, workshop topics, and any advertising regarding the training
- A scoop of reflection

TIME TO IMPLEMENT:

From 1 to 2 hours, depending on the training needs.

PREPARATION

- **Ask staff members who attended the training to write up a brief review.** Have them describe what they got from the training, what they thought was most useful, and if they would recommend it to others.
- **Gather and file the staff evaluation.** Keep it for future use.
- **If appropriate, share your training evaluation information with other staff in the library, as well as the trainer of the training program.**
- **If you are a member of a library community site (e.g., listerserv message boards, blogs, etc,) let them know what you thought of the training.**



On-the-Job Learning Leads to Self-Sufficiency

"Everything that I've learned has been on the job experience. Over the course of the 18 years that I've been here, I've picked up more and more and it's gotten to the point where I understand quite a bit of it. I'm able to maintain our systems, add computers, add programs, and do the kinds of things that a technical person does. A lot of people don't have that kind of support in their own library, so it makes it a lot easier when you don't have to call somebody to help."

*Amber Allard
Spies Public Library, Menominee, MI*



Fast Food—Meal Plan 4 Summary

- Collect your ingredients (i.e., your staff's training needs) before you start looking at training catalogs and online resources.
- To create a sound training budget, you must have a clear idea of the skills that you and your staff want to learn (i.e., You've sampled the appetizer) and an idea of how you would like them to learn them (e.g., online, classroom, confidence). You must also determine whether or not you have the funding support necessary to pay for training, travel, and time off.

MENU 4 CHECKLIST
<input type="checkbox"/> Review your state and local core technologies competencies to help assess staff needs and develop appropriate training plans.
<input type="checkbox"/> Assess your staff skills and training requirements. (Use the TechAtlas Staff Skill Survey at http://webjunction.techatlas.org/tools/start.asp?subtab=1)
<input type="checkbox"/> Identify your library's staff training priorities.
<input type="checkbox"/> Review your library budget for training, staff development, and materials so that you can determine the kind of training you can offer your staff. Consider: <ul style="list-style-type: none">– Cost of materials and classes– Cost of staff time– Travel expenses– Miscellaneous training expenses
<input type="checkbox"/> If you don't have enough funding for your training plan, go to http://www.webjunction.org/do/Navigation?category=13590
<input type="checkbox"/> Using your staff training priorities and budget as a guide, review the list of Tasty Recipes on pages 66-67 and determine the best fit for your staff.
<input type="checkbox"/> Identify how staff will use these training resources and how you can measure the value of the training for both staff members and your library.
<input type="checkbox"/> Ask staff members who attended the training to write up a brief review.
<input type="checkbox"/> Gather and file the staff evaluation. Keep it for future use.
<input type="checkbox"/> If appropriate, share your training evaluation information with other staff in the library, as well as the trainer of the training program.
<input type="checkbox"/> If you are a member of a library community (e.g., listserves, message boards, blogs, etc.) let them know what you thought of the training.



Meal Plan 5

Future Menus for Library Technology Services



Close your eyes. Imagine you are in your library ten years from now. What do you see? How are people using technology to meet their needs? Now imagine it is only five years from now. What do you see? Let yourself dream of the possibilities for a few minutes.

When talking about their public computing services, it is not uncommon to hear a rural librarian say, “If I just had a day or two to catch up. But, how is it possible to think about tomorrow when it is impossible to feel caught up with today?”

This section of the Cookbook “serves up” some key tips, resources, and recommendations for planning and preparing your public computer services for tomorrow. The rapid rate of change and the uncertainty of the future make it impossible to anticipate just what tomorrow will look like. However, with a clear picture of where you are right now, some strategic planning, routine scanning of the horizon (trend-watching), and a flexible and innovative mindset, it is possible to feel good about your library’s technology services.

TOPICS COVERED:

- What’s Cooking in Library Technology?
- Keeping Up in the Kitchen—What You Need to Stay Future-Focused
- More Chef Ideas on Technology, Support, and Fundraising
- Baking on a Tight Technology Budget
- Fast Food—Meal Plan 5 Summary



What's Cooking in Library Technology?

Over the last several years, many libraries have been providing computer access to their patrons. This development has changed the nature of library work and operations. Expectations have also changed. The library's very role in the community has been altered. As much as things may change, however, it is likely that this is a role that will remain. These four trends reflect technology changes and developments that will most likely have an impact on your public computer resources.

- Wireless technology
- Social uses of technology
- Assisting users of technology
- Changing demographics

General tips for keeping up with these trends follow.

WIRELESS TECHNOLOGY

Laptop computers are ever-increasingly popular. As this trend is likely to grow, libraries will continue to evolve the ways in which they meet wireless technology needs. If your library currently does not provide wireless access, it might be something you want to consider. Wireless access is a relatively low-cost service to implement and it can expand the library's ability to serve community needs. In urban areas, residents have numerous options for high speed Internet connectivity at home, at cafes, and other businesses. In rural communities, however, the library is often one of the only places where community members can find high speed access. Beyond simply providing wireless access, here are some other things to consider:

- **Space for laptop users.** Are there tables and work areas located near electrical outlets yet away from direct sunlight (which can cause glare)?
- **Printing.** Is there a way to allow laptop users to print?
- **The benefits of laptop purchases (rather than or in addition to the PCs in the library).** The benefits of this would include space flexibility and convenience. Drawbacks or potential challenges include security and durability.
- **Wireless availability promotion.** Promoting wireless access is essential if it is going to have an impact.



Wireless in the Woods

“Not only are we the only people in town with broadband access, we’re wireless as well in our little library. It’s kind of cool. Here we are out in the middle of the woods and you see people sitting around in their hunting clothes with their laptops. We have one student who’s staying in town working on her master’s degree. She comes in and works online, because she has access to the internet. We’ve had young people take their hunter’s safety training online. We have a trucker who will sit out in the parking lot with his laptop if we’re not open and look for jobs online. We have another telecommuter in town who comes in with a laptop and sits here and works.”

*Margaret Patterson
Elk River District Library, Elk River, ID*

SOCIAL USES OF TECHNOLOGY

Ten years ago, many libraries prohibited the use of e-mail on their public computers. Today, e-mail is one of the most popular uses of library machines. The changed attitude towards e-mail reflects an evolution in the way that public computers are viewed. Initially, many libraries felt the machines should only be used for “library-related” things such as *serious* research. It soon became clear, however, that the computers were not only needed for information-gathering, but were needed for communication too. Libraries not only started allowing e-mail usage on public computers, but also started using e-mail to communicate with other library patrons.

Although e-mail is still incredibly popular, people are communicating in many other ways, too. Instant messaging (IM), for example, allows real-time communication. In the past, many library computer policies prohibited the use of IM. These kinds of policies, however, are becoming less and less prevalent as time goes by. Some libraries are using IM to communicate – among staff members and also with patrons.

When the web first became popular in the 90s, people tended to see it as a place to go to search for information and to try to find content. It still plays that role, but it has evolved into a much more social technology, too. People go to the web, not just to view information, but also to contribute. In the past, a person might go to an online version of a newspaper to read an article. Now, many newspapers have made it possible to post comments and enter into a discussion about the article being read.

Other examples of social technologies include such sites as:

- **Flickr** (<http://www.flickr.com>): This photo sharing site allows users to upload photographs. When a photograph is uploaded, the user adds keywords or “tags”, which identify the content of the photograph. People can then perform keyword searches in Flickr. They can also leave comments when viewing photographs.
- **YouTube** (<http://www.youtube.com>): This is another popular site. It is used for video sharing and is very similar to Flickr. Users upload videos and assign tags. Others can then search those videos and also leave comments.

The impact that these sorts of technologies have on library services is still being realized. Many libraries today are thinking about the different ways in which they



can use social sites like Flickr and YouTube to communicate with and meet the needs of library users. Flickr is being used to document library events, library building projects, and more. YouTube is being used to host and share videos featuring tours of a library, explanations about how-to use a library resource, and more.

In addition to thinking about how they can use these sites to communicate with patrons, some libraries are looking into the different ways they can help their patrons learn to effectively use these tools.



OTHER TASTY RECIPES

Flickr and YouTube Information and Examples

- Check out: 365 Days in the Library for an example of how libraries using Flickr.
<http://www.flickr.com/groups/365libs/>
- Check out the Allen County Public Library in Fort Wayne, IN using YouTube as an information resource for staff and patrons:
<http://www.youtube.com/profile?user=askacpl>

Wireless Networks

- Infopeople's overview of wireless networking
<http://infopeople.org/resources/security/network/wireless.html>
- Bill Drew's "Wireless Librarian" blog covering issues of concern to libraries
<http://wirelesslibraries.blogspot.com/>

Learning About Social Networking

- The Learning 2.0 training program from the Charlotte/Mecklenburg Public Library:
http://www.infotoday.com/cilmag/feb07/Blowers_Reed.shtml

ASSISTING USERS OF TECHNOLOGY

Almost all libraries now view the provision of public computers as an important part of the community. A person traveling across the country could pretty much count on being able to stop in libraries all along the way to access the Internet. Upgrading, replacing, and expanding that equipment, as well as network bandwidth will continue to be essential roles for the foreseeable future.

A role which is currently less consistently prioritized, but which could potentially expand, is the provision of technology assistance to community members. Some libraries offer classes for the public. Coverage includes such topics as web searching, using e-mail, and more. In rural communities, there are often no other options for learning about technology, so the library is stepping in to assist in this area.



As the community begins to view the library as a source for technology learning, topics and formats may expand and vary. Libraries may begin to look at the gaps that exist. Are there people currently not using technology, who could, in fact, benefit from its use? Can the library serve a role as an intermediary?

Here are just a few technology learning format ideas:

- **A MySpace Class:** MySpace, a social networking site, is one of the most popular sites on the Internet today. The majority of users of this site are teenagers and they probably do not need or want an introductory class to be offered by the library. Are there parents, however, who would appreciate that kind of class? Consider asking a few regular users of MySpace to participate in the class to provide an insider perspective.
- **An Internet Safety and Security Class:** As more and more business is conducted over the Internet, online safety and security are going to continue to be growing concerns. Is there a role the library can play in helping to educate people about ways to avoid potential threats? Consider inviting a guest speaker who is knowledgeable about the topic. Your state's Attorney General's office may be able to provide valuable information and resources, too.



For Patrons Who are Hungry for Technology Information

"We offer classes for the public ranging from computer and Internet basics, to computer maintenance and Internet safety classes. Our goal is to teach patrons about using computers properly and safely. Visit our web site and use our lesson plans at www.hibbing.lib.mn.us."

*Chris Magnusson
Hibbing Public Library, Hibbing, MN*

CHANGING DEMOGRAPHICS

Technology is about serving people! Meeting the needs of the people in your community should be at the core of all technology decisions. When you think about the future of your library technology, you must also think about the future of the people in your community. How has your community changed in the last ten years? Are there an increasing number of older adults? How many teens live in your area? Has there been a rapid increase in the number of new Americans in your community? These types of demographic trends and changes could and should have an impact on the services your library provides. Think about the various demographic groups in your community. Which groups are you serving well? Which groups might you be missing? Then think specifically about the way various groups use technology. The specific technology needs that you identify from a brainstorming session with teenagers in your community will most likely differ from the needs identified in a brainstorming session with older adults. Find ways to directly work with these groups to determine and design services that will be most effective.



Keeping Up in the Kitchen—What You Need to Stay Future-Focused

Looking out at the flow of activity in the library, success is felt when it is apparent that needs are being met, when users are being pleasantly surprised by the innovative range of services the library offers, and perhaps at the core, when the library is making a difference in people's lives. By creating an environment of continuous learning, by finding ways to stay aware of changing trends and needs, and by staying committed to thoughtful planning, it is possible to achieve that vision in your rural library.

KEY CONSIDERATIONS

The four trends just covered are only a few of the many technology possibilities for libraries. How can your library achieve goals and prepare for an unknown future? When doing strategic technology planning, here are six key areas to consider:

- **Staff technology skills (and volunteers and trustees) as a continuous priority.** Make learning an expected part of everyone's work routine. Find ways to teach one another and to help keep each other apprised of changes and ideas. This culture of learning will help alleviate some of the stress around not feeling "caught up". The reality is, there will always be more to learn. Try to embrace this thought and even make it fun!
- **The continued development of patron skills.** Some people come to the library with strong technology skills and high expectations. Find ways to stay aware of popular tools and "gadgets". Are you noticing a lot of people carrying iPods or other MP3 players? Ask questions and pay attention to the uses. There is also a need, however, to always look at the gaps. Who does not know about technologies that could potentially benefit them? What role can the library play in closing that gap?
- **A means for continued awareness and planning need to be in place.** Some ideas to be discussed in more depth later in this section include the development of a new technology advisory group, a guest speakers series, and/or panel discussions on technological topics.
- **A larger library world connection to glean new ideas/create partnerships for learning, purchasing, and more.** Use online resources like WebJunction (<http://www.webjunction.org>) to connect with librarians from many places. Consider organizing face-to-face meetings or partnerships with libraries in your geographic area, too.
- **Community outreach and communication to develop relationships.** The goal here is for the library to be seen as a center of technology in the community. Are there other technology resources that exist in the community? Can partnerships be formed?



- **The Pew Internet Reports** (<http://www.pewInternet.org>) **site offers an overview of the changing ways in which people use technology.** You may also find it useful to view census data (<http://www.census.gov>) for your community – past, present, and future predictions – and to think about the implications they may have for library services, including public computers.
- **Advocating for the library!** Make sure that you get the word out about all of the great services you offer. Do not take for granted that people know about the technology that is available in today’s libraries. Many do not. When you begin offering a new service, make sure to highlight it prominently with publicity efforts. Develop relationships with your local legislators. When a library technology issue is being discussed in the legislature, make sure your local legislators know how the issue affects your library and community.

TECHNOLOGY COLLABORATION

Keeping up with technology and generating innovative ideas for library services are not solitary activities. When you involve more people, you will bring more energy and creativity to the projects. There are numerous ways to create collaborative new technology sessions. Examples include:

- **Start a new technology committee.** Involve members of the library staff and others from the community. Invite people who are excited about technology and are interested in getting together several times a year to share new discoveries and ideas. Consider inviting a local teacher or school media specialist to participate. Ask individuals with hobbies that involve technology (e.g., like digital photography) to join the group.
- **Use a teen advisory committee.** If you have one (or are interested in starting one), consider asking that group’s participants to devote some time each year to exploring new technologies.
- **Host a technology guest lecture series at the library.** Invite speakers from the community. Local schools, local business, and local clubs and organizations would all be good places to seek out speakers.
- **Participate in or organize a technology fair once per year.** Highlight new technology in use at the library. Invite local groups and classes to display examples of their technology projects.



Collaboration is the Key

“We are connected to the Internet through a cooperation between the county, the local school, Henrietta ISD, and the library. Because we’re a county library, the county paid for a fiber optic cable from one of the school offices down the alley to the library, and we’re hooked into an aerial wire to the main school building. We do not pay anything for our Internet connection.”

*Norma Herne
Edwards Public Library, Henrietta, TX*



More Chef Ideas on Technology, Support, and Fundraising

Almost every innovative technology or technical support story revolves around one key thing—connection. Rural libraries are creating success stories by reaching out to other libraries, groups and individuals within their own community, and others. Sometimes these connections result in financial benefits to the library. They can also result in greater awareness and enhanced services. All of the connections expand the reach of the library far beyond its physical walls.

YOUR TECHNOLOGY CONNECTION

As you read these inspiring stories, be thinking about your library's connections. On a sheet of paper, inventory the connections you have made or could make which would enhance the library's services and technology:

- Individuals within the community
- Groups within the community
- Individuals and groups beyond your community
- Legislators
- Other libraries
- Others

Creating and maintaining these relationships is an ongoing process. Try to find ways to thank your existing connections. When you approach a potential new connection, be sure to highlight the ways in which the library can help them.

FUNDRAISING

The key to successful fundraising is to know what you want and need, and have the ability to articulate those needs to others. Asking for \$500 for the general library fund is not quite as powerful as asking for \$500 for a specific need. Help potential donors see the benefits that will be derived because of their contribution.



A Smart Plan for Funding Technology

"Our library took to heart the recommendation by the Gates Foundation to anticipate upgrading the Gates computers received in the late 90's. Allowing for time to establish some very positive statistics, the library staff and trustees approached the local town council and asked for a small amount to be added to our current budget to set aside each year for such upgrades. It was our feeling that it was better to gain a little, rather than ask for the full amount in one year. It was approved and within five years, there was enough saved to upgrade the computers and maintain a quality service to our citizens. The town and library board continues to maintain that "fund" to save for the next upgrade."

Crystal Hamrick
Nutter Fort Public Library, WV



Baking on a Tight Technology Budget

Special grants and fundraising events can help a library expand the amount and types of technology they are able to offer. It is important, however, to realize that technology costs are going to be ongoing and recurring. A computer purchase is not a one-time expense. You need to create technology specific line items in the library budget. In addition to hardware, software, and network connectivity dollar items, you should consider including staff continuing education as a budget item.

When making technology purchasing decisions, strategic planning will require weighing the costs versus the benefits. When considering the costs, do not forget to include staff time for training and support on an ongoing basis. Also consider replacement costs that will be ongoing.



OTHER TASTY RECIPES

Rural Library Funding

- WebJunction
Resources and best practices for rural libraries seeking ways to cultivate funding which supports library programs and services.
<http://www.webjunction.org/do/Navigation?category=13283>



Fast Food—Meal Plan 5 Summary

- These four trends reflect technology changes and developments that will most likely have an impact on your public computer resources.
 - Wireless technology
 - Social uses of technology
 - Assisting users of technology
 - Changing demographics
- If your library currently does not provide wireless access, it might be something you want to consider. Wireless access is a relatively low-cost service to implement and it can expand the library's ability to serve community needs.
- The web has evolved into a much more social technology, too. People go to the web, not just to view information, but also to contribute. For example, many newspapers today have made it possible to post comments and enter into a discussion about the article being read. Other examples of social technologies include such sites as **Flickr** (<http://www.flickr.com>), a photo sharing site that allows users to upload photographs, and **YouTube** (<http://www.youtube.com>) for video sharing.
- A role which is currently less consistently prioritized, but which could potentially expand, is the provision of technology assistance to community members. Some libraries offer classes for the public. Coverage includes such topics as web searching, using e-mail, and more. In rural communities, there are often no other options for learning about technology, so the library is stepping in to assist in this area.
- When doing strategic technology planning, consider:
 - Staff technology skills (and volunteers and trustees) as a continuous priority.
 - The continued development of patron skills.
 - A means for continued awareness and planning need to be in place.
 - A larger library world connection to glean new ideas/create partnerships for learning, purchasing, and more.
 - Community outreach and communication to develop relationships.
 - Advocating for the library!
- Almost every innovative technology or technical support story revolves around one key thing—connection. Rural libraries are creating success stories by reaching out to other libraries, groups and individuals within their own community, and others.



MENU 5 CHECKLIST

- Beyond simply providing wireless access, consider:
 - Space for laptop users.
 - Printing.
 - The benefits of laptop purchases (rather than or in addition to the PCs in the library).
 - Wireless availability promotion.
- Look at the technology learning gaps that exist in your library. Are there people currently not using technology, who could, in fact, benefit from its use? Can the library serve a role as an intermediary?
- Think about the different ways in which your library can use social sites to communicate with and meet the needs of your users.
- Keep up with technology and generate innovative ideas for library services:
 - Start a new technology committee.
 - Use a teen advisory committee.
 - Host a technology guest lecture series at the library.
 - Participate in or organize a technology fair once per year.
- Inventory the connections you have made or could make which would enhance the library's services and technology:
 - Individuals within the community
 - Groups within the community
 - Individuals and groups beyond your community
 - Legislators
 - Other libraries
 - Others?
- Create and maintain these relationships is an ongoing process, and try to find ways to thank your existing connections.
- Create technology specific line items in the library budget. In addition to hardware, software, and network connectivity dollar items, consider including staff continuing education as a budget item.



Appendix A:

Library Spotlight: Tips & Techniques

Tip #1

Take a low-tech alternative to time-management software.

The Modoc County Library operates five branches in the Northern California county and only has funds to pay six full-time staffers. Modoc doesn't receive any money from the county and could not afford the software it needed.

“Even grants aren't free because you have to have the time to apply for them,” said Modoc County Library staff member Cheryl Baker.

As such, the Modoc County Library had no means to purchase a time-management application, software that controls the amount of time that an individual can use a public computer. As an alternative, the library has implemented a time-management system that's very similar to the process of checking out a book, a solution that didn't require expensive software.

When a patron wishes to use one of the computers, he or she must visit the front desk and sign up for a time slot. A Library staff member then “checks out” the computer and hands the user a slip, which is due back in one hour.

Tip #2

Disk-Protection software equals automatic computer maintenance.

On any given day, dozens of different users with varying levels of technology skills might work on a library's public-access computers. And while more experienced users might remember to leave the computers just as they found them, novices may forget to delete documents they've been working on, neglect to remove software they've installed, or inadvertently contract a nasty computer virus — leaving your library's small staff to clean up the mess.

To minimize the time staffers spend maintaining their public computers, some libraries have chosen to install disk-protection software, an application that automatically reverts a computer to a previous state. Disk-protection programs first take a snapshot of a system in its “clean” state. Then, the disk-protection program's administrator configures the software to automatically shut down each computer at a specific time — say, midnight each day — and restore it to its original state. That way, no matter what changes computer users have made over the course of the day, the machines will return to their original state as soon as they are rebooted.

The Suwannee Regional Library System, which operates eight libraries across three North Florida counties, has had positive experiences using Faronics' *Deep Freeze*, a disk-protection program that offers volume pricing discounts to libraries and nonprofits.

“We've been using Deep Freeze for a little while and really like it,” said Sherry Millington, a staff member at the Suwannee Regional Library System. They have also locked down user profiles to help further strengthen their computer configurations. “We set up a profile that's for the public access [computers with] limited access to administrative type things like getting into the device manager,



that sort of thing. And they're all password protected so that the staff can restart the machines between users to clear everything out and bring everything back to square one."

Tonya Boltz, a staff member at the Keokuk Public Library in Keokuk, IA, said that implementing Deep Freeze was the best technology decision her library has ever made. "It has saved me many headaches," said Boltz. "And it is easy to maintain."

Editors Note: Some of the content for this story comes from [WebJunction](#).

Other popular disk-protection programs include [CenturionGuard](#) — in use at the Garnavillo Public Library in Garnavillo IA — and [Norton Ghost](#).

Tip #3 **Short on space? Build a mobile computer lab.**

The Colorado River Indian Tribes Library, located in Parker, AZ, currently has five public-access computers that are networked and equipped with a high speed DSL Internet connection. The library hopes to expand its lab by adding new machines, but its facilities are too small to accommodate any extra computers.

To help solve this lack-of-space problem, Gil Harper — The Colorado River Indian Tribes Library's Computer Technology Specialist — devised the idea of a mobile computer lab, which would house nine wireless laptop computers. According to Harper, a mobile computer lab would not only give the library more room for computers, but would also bring technology to community residents who can't travel to the library.

"It makes more sense because [some] people don't have transportation," Harper said. "They don't have access to a car." Harper notes that this is a particular problem for the community's senior citizens, a demographic that the library hopes to reach with its mobile computer program.

Harper helped write the grant that secured the funds necessary to purchase the laptops, the software, and the vehicle that will house the lab. Once the computers have been configured and the mobile lab has been set up, it will be driven to six different locations around the community so that residents can access technology in a location that's convenient for them.

The Colorado River Indian Tribes Library is planning an open house where it will unveil the mobile computer labs to the community and its partners, which consist of senior centers and schools.

"We're going to put all our laptops out so people can look at those, and have the vehicle open so they can look at the vehicle. It will be a joining of the community and our partners," said Harper.



Tip #4 **Share your tech tips in a blog.**

While many underfunded libraries lack employees who are proficient with computers, others might be lucky enough to have a staff member with a higher level of technology expertise. If your library employs a person with a wealth of technology knowledge, encourage them to help other libraries by sharing their tips and thoughts in a blog.

Rodney Greensage, an IT consultant who works with 45 libraries in the Alamo Area Library System in southern Texas, started a blog — dubbed the *AALS Techie Corner* — as a quick means of rapidly sharing information with his clients.

We have a newsletter, and I have a column that I do in there,” said Greensage. “But the blog allows me to splurge a little more and to go off on a tangent — so to speak — if I want to.”

In his blog, Greensage has tackled a number of topics, from the latest phishing scams to cutting-edge gadgets. Upon the release of Internet Explorer 7, Greensage tested it out and shared his impressions in his blog, so that libraries could make an informed decision as to whether to download and install the new browser.

“I wanted to download it [Internet Explorer 7] to the virtual PC, test it, find out what it’s about, and give information out to the users,” said Greensage. “And the blog really allows me to do that in an easier session than it is to send it out through e-mail.”

Tip #5 **Convert your old computers into thin clients to squeeze life out of them.**

Your library’s old computers may not be able to run the latest version of Windows, but they’re not junk! In fact, Kinney County Public Library in Brackettville, Texas, with the help of IT consultant Rodney Greensage was able to add eight computers to its lab using systems that would have been destined for the junkyard.

By converting your computer network into what’s called a thin client (a network computer without a hard drive that runs its programs from a server), the libraries were able to squeeze life out of old computers and save money at the same time.

“We just needed memory, and we needed to make sure they each had a video card, a network card, mouse, keyboard and monitor. We were able to run a Unix environment terminal services by booting from the CD-ROM,” said Greensage. “We took that library from six public computers all the way up to 14, and it was sharing their DSL.”

Other area libraries are now asking about their own thin clients — not just an overview of the technology, but how to actually set it up. “Individual libraries asking for [thin clients] are definitely capable of starting that,” said Greensage. “And, they know that if they run into issues or problems, they’ve also got me — that I can either help them out, or if I don’t know it, I can find it out.”

So Greensage is talking to another consultant who would train 10 consultants to help Texas State libraries to set up and support their own thin clients.