

**School of Computer Science
Course 15-391**

Spring 2007

Final Consulting Report

Wireless Neighborhoods

Nik White



Executive Summary

Student Consultant, Nik White
Community Partner, Tim Behary

I. Background Information

Wireless Neighborhoods is a not-for-profit organization committed to helping other non-profits with technology. They provide internet access, computer lab management, and general support. There is also a division which focuses solely on education and providing current advances in education to all schools which partner with Wireless Neighborhoods. The Mission Statement of Wireless Neighborhoods shows how the goals of these two different sides of the business mesh and work towards a common goal.

The purpose of the Wireless Neighborhoods project is to empower communities - to provide access to information technology resources to enable communities to become competitive in education, human development, workforce development, health care and economic opportunity. Many communities, especially those in low-income urban areas, lack the resources required to succeed in these activities, especially in the new era of information technology. Wireless Neighborhoods provides the resources to develop necessary human skills and network infrastructure to help community groups enhance their programs and work collaboratively with schools and other community groups.

To accomplish this, Wireless Neighborhoods creates partnerships with different non-profit organizations in the Pittsburgh area. They provide personalized solutions for internet access and help with management and support. Recently Wireless Neighborhoods has decided to expand their services to become more competitive with other business grade commercial solutions in the sector.

II. Consulting Tasks

During the consulting period, we implemented an application server to make it easy to distribute and support different applications to many of Wireless Neighborhoods partner organizations. This would allow users to log into a Wireless Neighborhoods-managed server from any remote site using Remote Desktop, and have access to any application they which Wireless Neighborhoods supports.

We started by using the Scholastic Achievement Suite as a test application because there was an immediate need in the education sector of Wireless Neighborhoods for this particular solution.

III. Outcomes Analysis and Recommendations

Outcomes

Our solution uses Windows Remote Desktop to forward a desktop environment to a user from any site. From this desktop, users can access any application which is managed by Wireless Neighborhoods, including programs with expensive licenses or difficult to maintain databases.

It should be easy to maintain because Tim is extremely familiar with the system and it is fairly well documented. Certain things must still be done to ensure it is more stable, including upgrading the server's memory, and determining what requirements there are for printing from the server.

Recommendations

Goal 1 Expand Services

In the short term Wireless Neighborhoods should work to expand the services that they offer to their partners. Some great examples include:

- Web hosting
- Email hosting
- Automatic data backup
- File hosting
- Technical training

By offering these, Wireless Neighborhoods should become a more attractive alternative to other commercial providers in the area and help them fulfill their mission to provide access to information technology.

Goal 2. Expand Expertise for Partners

Providing good technical training is an area which Wireless Neighborhoods should expand into. They currently have a lot of technical skill and providing that in a class environment to partners would be very beneficial. It would help partners to become more self-sufficient and encourage much more of a "partnership" relationship by having all of the partners work together.

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I. About the Organization

Organization

Wireless Neighborhoods is a not-for-profit organization committed to helping other non-profits with technology. They have 2 main divisions both working towards similar goals. Their education programs work with different after school programs and other organizations to help with encouraging literacy with computers. The other side of the business provides internet access and other technology services for other non-profits in the Pittsburgh area. They offer wireless internet service through their own network and would like to offer more advanced services like email hosting, application hosting, and data backup.

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Facilities

They have one floor of a building in East Liberty. They have a locked server station with room for at least one additional server. There are 3 offices, a conference room and a little bit of storage space. Right now most of it is filled with old computers waiting to be redistributed. Every employee has their own computer.

Programs

As an ISP they provide internet access through wireless connections (which they own) to a number of non-profits around Pittsburgh. They have computers for all full time employees and a number of servers in various locations to manage the network. They also provide technology assistance and training for their partners computing needs. Right now they also have a collection of old computers that they are managing the distribution of.

The education side of the business uses technology to help with after school tutoring services. Right now they have licenses to a number of educational software products that they would like to make available at any site they visit.

Staff

The business is split into two main divisions. The education side has 2 full time employees. On the technical side there is Tim, my partner and Dan who volunteers about 30 hours a week. Tim was a network administrator and is very technically savvy. Stephe is the main executive and is in charge of the whole organization. He is technically literate, but could not be expected to manage their network by himself.

Technical Environment

Proxim wireless technologies provide the actual wireless link between the WQED tower and each of the locations they provide service to. They are hosted by a 45Mbps pipe at ASPStation. They have an additional DSL line at the office but will soon get up and running on their own network. Each of their customers has a 6 Mb/sec wireless connection and all of them are technically on the same LAN network even though they each have a static public IP address. Some of their customers have DSL backups because they require connectivity at all times.

They have one server currently at their own site in East Liberty. They also have 2 servers at ASPStation, which they own and manage. Additional space is available at both of those sites for more servers.

Technical Management

Tim manages all of this equipment. Dan is able to manage the entire network as well but is not in the office all the time. Any problems in the office get fixed by Tim. Any problems at sites get dealt with by Tim. In reality, if there are major network problems, it is very difficult for Tim to spend time on any of the other services they are trying to implement.

Technology Planning

Recommendations are generally proposed by Tim and approved by Stephe. Other requests for services (application hosting) can come from either the community partners of the Education side of the business.

Internal and External Communication

Internally they are fairly well equipped. They have email accounts managed by ASPStation (want to bring inside) and a website, though it hasn't been updated recently. The atmosphere of the office (very open) leads itself well to communication with people coming and going from everyone else's

offices. They want to bring in control of external communications and host it all internally. Most common way of communicating with partners is by phone.

Information Management

All partners are listed in an Excel sheet. It appears that most management of partners is done on paper. All of the nodes of the network can be accessed remotely and have live status reports available from the main office. Among staff in the office, email seems to be the most common way of communicating data, but most interactions happen in person.

II. Scope of Work

Task 1. Implement the Scholastic Achievement Suite on a Small Scale

One application that Wireless Neighborhoods has had repeated requests for is a reading program created by Scholastic, a children's book publisher. This program helps manage a class list and offers online quizzes. It requires a hosted database but there could be clients on many different customers of Wireless Neighborhoods. This makes it an excellent test for application hosting, and should help us set up a process to implement future services Wireless Neighborhoods chooses to implement.

Expected Outcomes

As of right now we are planning on implementing this using Windows Terminal Services, also known as Remote Desktop. In order to use this solution we will have to do the following:

1. Set up the server hardware required to host the database and Remote Desktop. There are two levels for this step.
 - a. Perhaps we will only need to use the current server that they already own.
 - b. Or we may need to purchase more to get an entire class able to use it.
2. Set up a test connection in the office which is able to use the software.
 - a. This will be done when we have a person using the software remotely.
3. Purchase licenses for Terminal Services which allow more than 2 concurrent users.
4. Possibly set up load balancing on the servers to make it possible for an entire class to use the software at once.

Additional Impacts

Different training will be required for the teachers and tutors that work in the education side of Wireless Neighborhoods.

III. Outcomes and Recommendations

Task 1. Implement an Application Server

We used Windows Remote Desktop to provide Application hosting for the Scholastic Achievement Suite. This is a collection of programs to help teach reading to students as well as allow teachers to manage grades and collect data on student achievement. It comes with both client side and server side software. The client software is designed to be installed on each teacher's machine.

Solution

Windows Remote Desktop is hosted on a 1GHz Pentium 3 server located at ASP Station. It is running Windows Server 2003. Currently it has 256 MB of Ram however Tim has already made plans to upgrade that in order to be able to maintain more connections than are currently possible. Our solution is a Remote Desktop server which supports forwarding a desktop environment to a person at a remote site (e.g. a school, a church, a home computer of a teacher). Because of the client/server design of the Suite, the Suite's server software is installed and running on the same computer which hosts the Remote Desktop connections. Any user who logs on via Remote Desktop from any location has access to the Suite's client software.

Sustainability

This system is very sustainable mostly because Tim is extremely knowledgeable about windows networking. Managing user profiles and group policies is probably going to be the most intensive task for the person who manages this server and both of those tasks are extremely easy for Tim as he has done them both in his current position at Wireless Neighborhoods and at his job before that.

Expanded Capacity

The application server most certainly helps Wireless Neighborhoods to fulfill their mission to "provide access to information technology resources to enable communities to become competitive in education." As one example, the Scholastic Achievement Suite is a very advanced technology resource which will help the schools Wireless Neighborhoods partners with to provide the best education they can.

This application server solution also can be expanded beyond just the Suite. It could be used to help distribute any software which requires an expensive license or a difficult to maintain database.

Possible examples include:

- Any office productivity software
- Financial management software
- Project LISTEN (educational software developed at CMU)
- Any development environments which could get used with a future web hosting service
- Combined databases for donor information

Working on this project has helped expand Wireless Neighborhood's vision of what services they want to provide and some of the easier ways of implementing them. Some of these possible services include:

- Web hosting
- Email hosting
- Automatic data backup

- File hosting
- Technical training

Future Risks

There are some possible risks to the continued success of this project. Most of them simply will cause be problems which will prevent the system from being used consistently.

- Printing is difficult currently though some research was done as to what software would be required and how it would be installed.
- There needs to be a minimum level of training for teachers as to how to use the system.
- Without upgrading the amount of memory in the system, there is a very hard bound on the maximum number of people who can log into the system.

Recommendations.

Goal 1: Expand Services

In the short term Wireless Neighborhoods should work to expand the services that they offer to their partners. These should include services that many other business ISP's provide including automatic data backup, and email/web hosting. These are relatively simple features that would provide a lot of functionality to many of their partners.

Data Backup could be implemented on their current server infrastructure, though a new storage solution should probably be implemented. This could be as simple as purchasing a new RAID array for storage with the current server just sending backup requests to that drive. There are many relatively inexpensive to free data backup services available which would simply need to be installed on their server. The larger part of this project would involve educating their partners on how the new functionality could be used. This education task is a completely new challenge which will come up with the current application hosting solution. I give many ideas of how to implement this new teaching problem later.

Email hosting is already implemented on one of their servers, however very few of their partners have any idea that it is. This represents a huge opportunity for WN to ensure customer retention. If a partner has their email addresses through WN, that added integration makes it more difficult for them to move away. However, setting up each partner currently is a time consuming task for WN so one employee would need to take a significant amount of time if many partners wanted to move their email system to WN.

Having these features would help them expand membership by being headline items for any recruitment that they do as well as be more competitive for customers who might think that they need to go with a bigger host who offered more services or had more resources.

Goal 2: Expand Expertise for Partners

Wireless Neighborhoods has a very large amount of skill in many different areas of IT management. Currently they try to work with their partners to expand the partner's knowledge and self sufficiency. As of right now there is no formal process for this teaching. Many of their partners would get a huge benefit from a class style learning environment. Also, this would help them recruit more members because it would show a commitment to each partner and a very valuable service which wouldn't cost them much besides the staffing time for the class. This would amount to

around 2 hours a month although could also be quickly increased if there was a large response from partners. They could work with one of their partners who manages a computer lab so the facilities are already available.

These classes would:

- Help encourage the use of new services Wireless Neighborhoods implements
- Allow partners to feel more like “partners” by encouraging collaboration
- Help maintain a minimum level of communication with partners
- Take pressure off of Wireless Neighborhoods to handle certain training support calls during the day.

This is a new area for WN to expand into however it has become very necessary recently because of the new services which WN plans to offer. Without the proper education and documentation, these services will sit around on the servers completely unused. The current website is a perfect example of a service that has gone unused for the most part. By providing some level of training, or even just awareness, this could be a very valuable tool to many partners.

About the Consultant

Nik White is a sophomore in Electrical and Computer Engineering with a double major in Engineering and Public Policy at Carnegie Mellon University. He will be working for Cisco Systems in San Jose this summer doing work with teleconferencing systems.

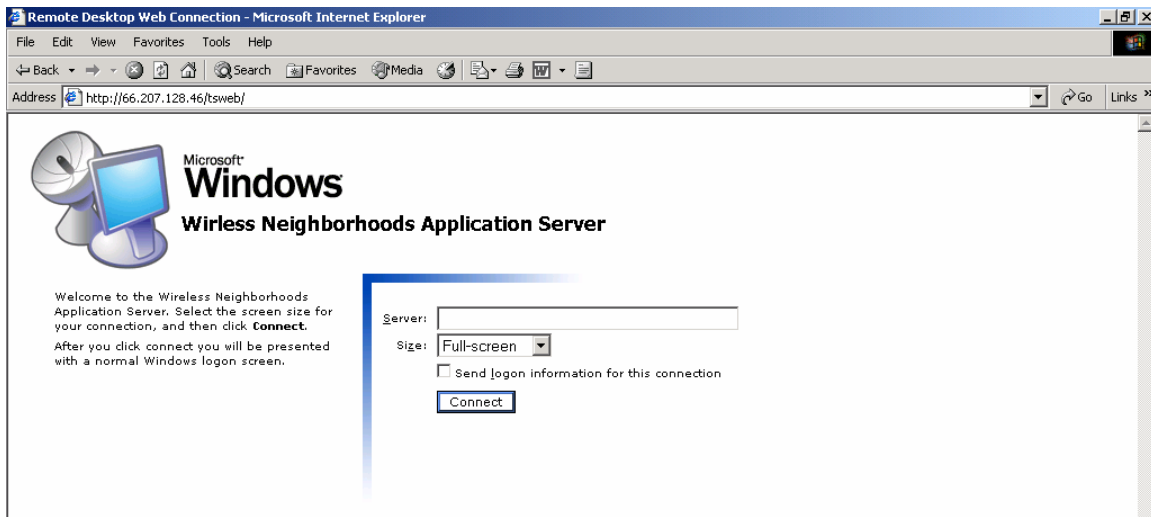
Appendix A.

This is the basic walkthrough for the application server we created. It includes screenshots and instructions which hopefully a non-technical person could use to access the server.

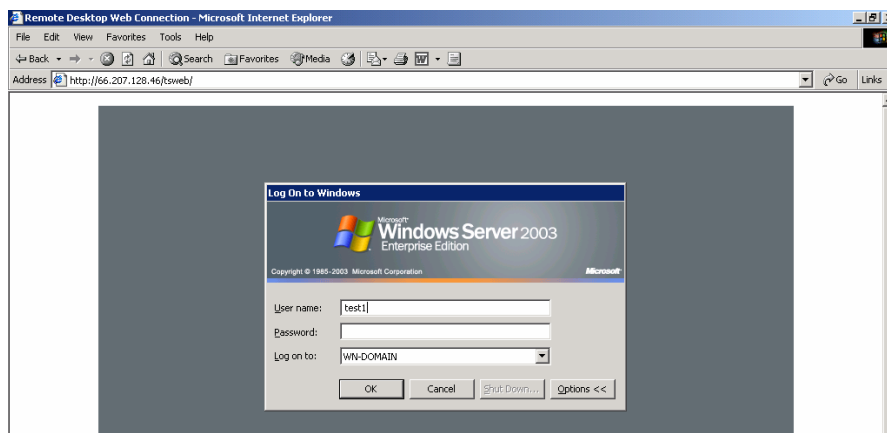
Wireless Neighborhoods Application Server Walkthrough

Abstract: This document should explain the process of connecting to and disconnecting from the Wireless Neighborhoods Application Server using a Windows PC.

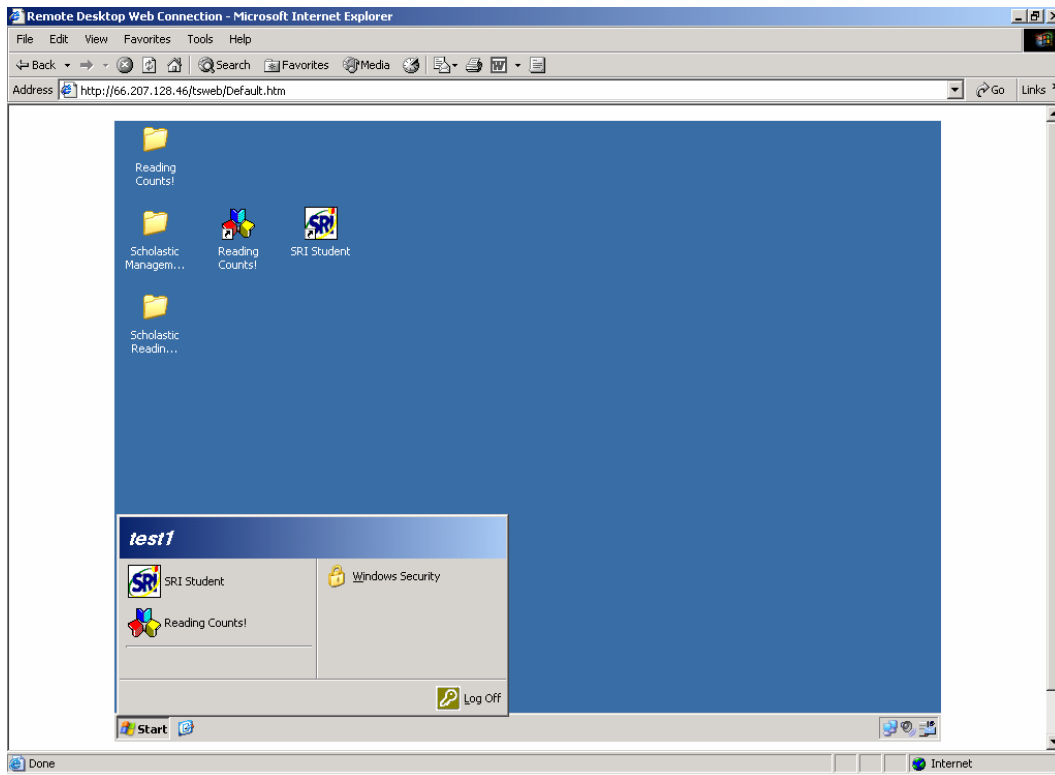
1. First open Internet Explorer.
2. Enter <the URL provided to you> (deliberately removed) into the address bar.



3. Upon entering this screen leave the server field empty and the box labeled “Send logon information for this connection” unchecked.
4. Select the screen size
5. Click “Connect.” This should bring up a normal windows logon screen.

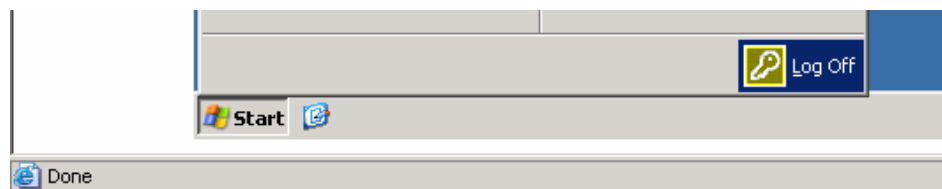


6. Log in using the **username** and **password** provided to you by Wireless Neighborhoods. Leave the “Log on to” field as “WN-DOMAIN”
7. You will be presented with a familiar Windows Desktop.



To Log Off:

1. **Do not just exit out of your web browser.**
2. The correct way to log off is to go to the “**Start**” menu and click “**Log Off.**”



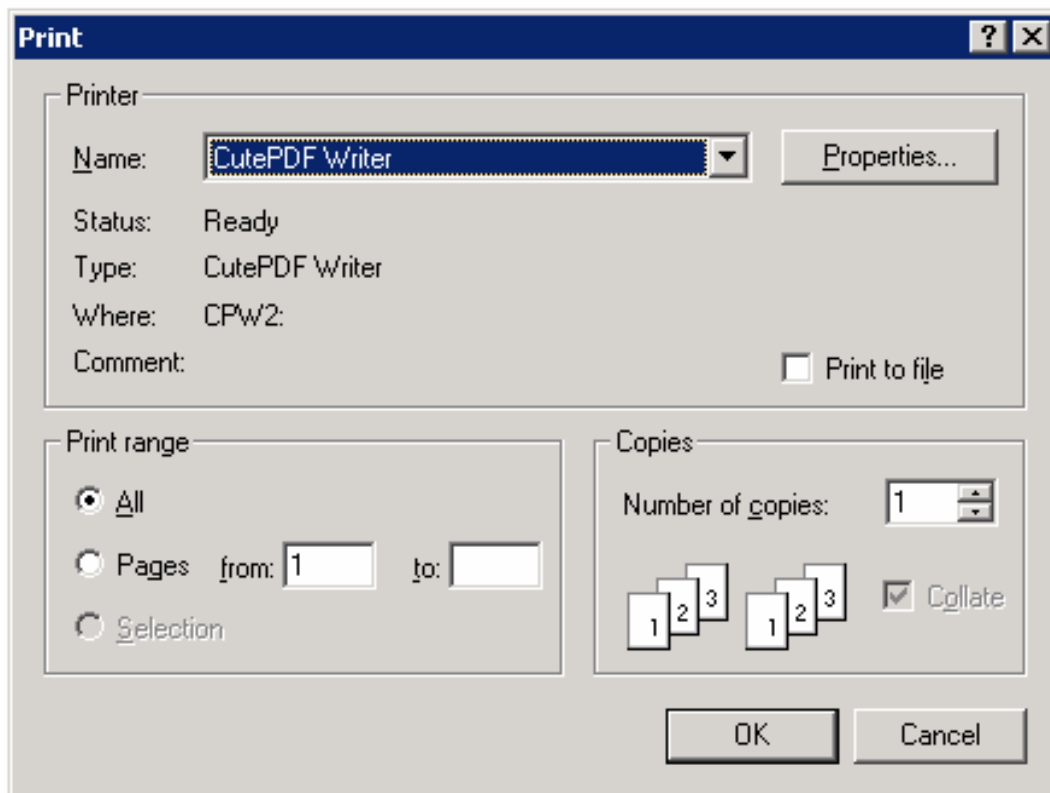
3. When asked if you are sure you want to log off, click “**Log Off.**”

Appendix B.

This document gives separate instructions for teachers about how to print using the application server. This is one area which will probably change in the future because it is not terribly easy to do right now.

Wireless Neighborhoods Application Server Printing Guide

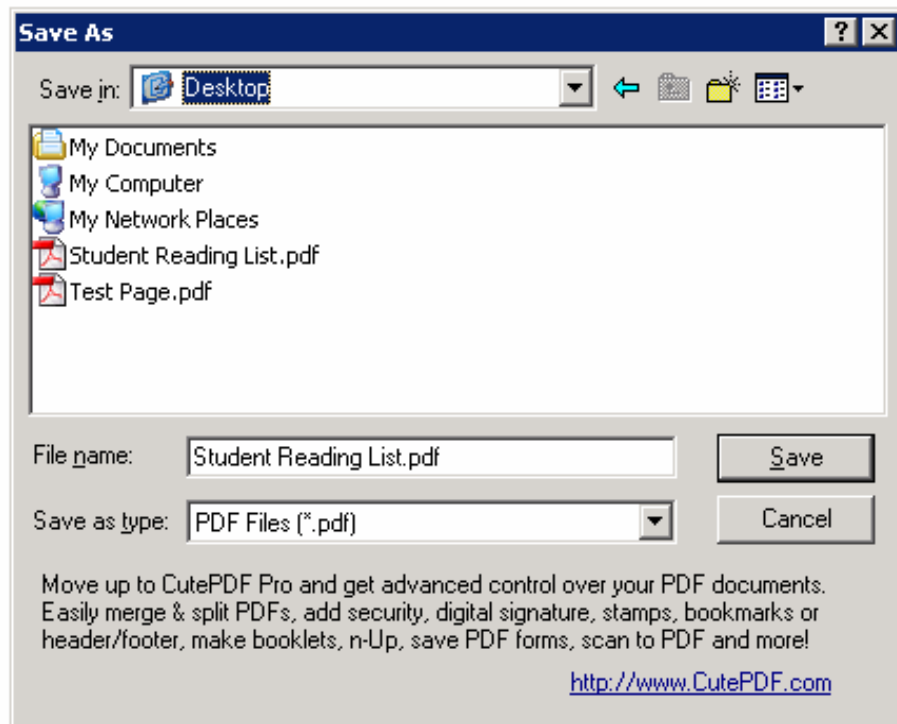
1. When you would like to print a document, click on the appropriate **“Print”** button.
2. The **Print Dialog Box** will appear with **“CutePDF”** as the selected printer.



3. Click **“Ok”**

4. Select your personal share folder as the save location. Your share folder is in the location:

C:\ Shared\<>your school>\>your username>\



5. After the PDF of the document has been saved, on your own computer, Open a Web browser and go to:

>your shared space> (deliberately removed)

6. Navigate to your school and your username.
7. Click the file which you just saved to download the pdf document. You must have Adobe Acrobat Reader to view the document.

Appendix C.

This document was formed with the recommendations as an outline for how to go about the training courses which hopefully will become an integral part of Wireless Neighborhoods services. It is not complete and is just a working document.



I. Services

Application Server

The application server itself will require some rather involved training. Teachers are the primary users who will need training. This can either be done by inviting the IT managers or administrators from each school who would then train teachers or, in my opinion the better option, invite actual teachers to come in to Wireless Neighborhood run training sessions. By inviting teachers themselves, it further encourages the use of the system because it is not an idea being pushed down on teachers but instead a system that they can see the benefits of first hand while working with other teachers.

These training sessions need very well defined goals. They should:

- Show the basics of what the system can do and what it can't.
- Prepare teachers to use the system themselves by using hands on examples. This will probably require every teacher have access to a computer during the training session.
- Quirks of printing, or lack of. Go over how each teacher can get access to their students' work.
- Go through the process from a student's perspective so that each teacher can show their students how to use the software.
- End with a full round trip example done by each teacher, perhaps have one teach the teacher next to them as they would a student and then change roles.

In order to make the system maintainable, there will also need to be an easy way for teachers to get instant support. Either have a person onsite at each school (department head, administrator, knowledgeable teacher) or have an easy to reach contact at Wireless Neighborhoods. If this route is taken, the phone number or (not as useful) email should be available on <the homepage for the application server> (deliberately removed).

Email Systems

This training will most likely be for IT administrators although some of the smaller partners should be able to have a regular volunteer attend and still get the same benefits. It one course like that is difficult, perhaps offer two separate classes, one for IT administrators who need a higher level of control and management of their systems. And a second for the average partner who just wants to have their own organization email accounts as opposed to hotmail accounts. Course should include the following training tasks:

- Registering a Domain Name (Advanced)
- Forwarding that name to the Wireless Neighborhood's servers (Advanced)
- Creating user accounts. (Basic)
- Getting and receiving email using a mail client (configure POP3 or SMTP forwarding) (Basic)

Web Hosting

This is probably the next area where individual users may need training. Some users may simply just want to know how to post their static website on the web however, a website is most useful when it is constantly updated with current events, staff information, newsletters, and other new and interesting information about an organization. It should be in active use both internally and externally.

Like the email training, this training is easy to break down into basic tasks that everyone needs to know how to do, and advanced tasks that only system administrators should do and infrequently.

All users should be able to:

- Create a simple (2 pages with 2 images?) website using a simple template application.
- Upload that website to the Wireless Neighborhood servers.
- Get statistics about their website from the server if these stats are available. This is useful to all partners because it makes an easy metric of how many people view their website which is useful for grant proposals.

In the future, the process of uploading the website will probably be very similar to the process for file hosting so this could be done after training for FTP transfers. Also, perhaps some partners will want to use a Content Management System (CMS) to manage their website. This is probably more advanced than most partners need however some may find it a very useful way to manage a calendar, blog, wiki, or forum on their website. This software is available for free (Joomla, Plone, Drupal, see <http://opensourcecms.com/>) and could be hosted on the application server. If these do become available it they would probably warrant another training session because it is somewhat advanced for the average user however extremely useful (and FREE) for a non-profit in creating a great website.

File Hosting

This is probably going to be a rather niche group of users until it is expanded for automatic data backups. Automatic backups will certainly require training to make sure that partners are aware that it is available and ensure they keep it up to date.

Past Community Partners

4 Kids Early Learning Centers
Addison Behavioral Care, Inc.
Alafia Cultural Services
Alcoa Collaborative
Allegheny County Housing Authority
Allegheny General Hospital Pastoral Staff
American Association of University Women
Animal Friends, Inc.
Animal Rescue League
ASSET, Inc.
ASTEP-Grace Memorial Presbyterian Church
Auberle
Bedford Hope Center
Bedford Initiatives
Bethany House Ministry
Bethlehem Haven
Bishop Boyle Center
Bloomfield-Garfield Corporation
Borough of Crafton
Boys & Girls Club of Duquesne-West Mifflin
Boys & Girls of Wilkensburg
Braddock Carnegie Library & Community Center
Braddock Redux
Brashear Association, Inc.
Breachmenders
BTC Center
Calliope: The Folk Music Society
Career and Workforce Development Center East
Carnegie Library of Homestead
Carnegie Library of Pittsburgh
Carnegie Science Center
Center Avenue YMCA
Center for Creative Play
Center for Hearing and Deaf Services, Inc.
Center of Life
Central Academy
Central New Development Corporation
Child Watch of Pittsburgh
Children Youth Ministry
Children's Museum
Christian Life Skills
Citizens to Abolish Domestic Apartheid
Community Day School
Community House
Community Human Services Corporation
Community Technical Assistance Center
Competitive Employment Opportunities
Conflict Resolution Center International
Consumer Action Response Team
CONTACT Pittsburgh
Creative Nonfiction Foundation
Dance Alloy
East End Cooperative Ministries
East End Neighborhood Employment Center
East End Neighborhood Forum
East Liberty Development
East Liberty Presbyterian Church
East Side Community Collaborative
Eastminster Child Care Center
Eastside Neighborhood Employment Center
Education Center
Every Child, Inc.
Fair Housing Partnership
Faison Development & Opportunities Center
FAME
Family Services of Western PA
Family Tyes
First Charities/First United Methodist Church
Friendship Development Association
Garfield Jubilee Association, Inc.
Gateway to the Arts
Girl Scouts - Trillium Council
Glen Hazel Family Reading Center
Greater Pittsburgh Community Food Bank
Greater Pittsburgh Literacy Council
Greenfield Senior Center
Guide Runners
Gwen's Girls
Hazelwood Senior Center
Hazelwood YMCA
Heritage Health Foundation
Hill House Association
Hill/Oakland Workforce Collaborative
Himalayan Institute of Pittsburgh
Hope Academy of Music and the Arts
Hosanna House
Housing Alliance of Pennsylvania
HUB Downtown Street Outreach Center
Hunger Services Network
Interfaith Volunteer Caregivers
Jane Holmes Residence
Jewish Family & Children's Service
Jewish Residential Services
Joy-Full-Gospel Fellowship After School Program
Just Harvest
KidsVoice
Kingsley Association
Lawrenceville Development Corporation
League of Young Voters
Light of Life Family Assistance Program
Madison Elementary School
Manchester Academic Charter School
McKees Rocks Terrace
McKeesport Collaborative
McKelvy Elementary School
Mental Health Association of Allegheny County
Message Carriers
Methodist Union of Social Agencies
Miller Elementary School, Principal's Office
Mon Valley Initiative
Mon Valley Providers Council
Mon Valley Resources Unlimited
Mon Valley Unemployment Committee
Mon Yough Community Services
Mount Ararat Community Activities Center
NAACP National Voter Fund
National Alliance of the Mentally Ill
National Association of Minority Contractors /
Black Contractors Association
Negro Educational Emergency Drive
New Beginnings Learning Center
New Penley Place

Past Community Partners (continued)

Northside Coalition for Fair Housing
Northside Institutional Children Youth Ministry
Northside Leadership Conference
OASIS Senior Center
Opera Theater of Pittsburgh
Operation Better Block
Orr Compassionate Care Center
Outreach Teen & Family Services
Parental Stress Center
Pennsylvania Biodiversity Partnership
Pennsylvania Low Income Housing Coalition
Peoples Oakland
Phase 4 Learning Centers, Inc.
Pittsburgh Action Against Rape
Pittsburgh Citizens' Police Review Board
Pittsburgh Foundation
Pittsburgh Health Corps
Pittsburgh Interfaith Impact Network
Pittsburgh Mediation Center
Pittsburgh Social Venture Partners
Pittsburgh Toy Lending Library
Pittsburgh Vision Services
Pittsburgh Voyager
Pittsburgh Youth Symphony Orchestra
POISE Foundation
Program for Health Care to Underserved
Populations
Project Educate
Providence Family Support Center
Radio Information Service
Reading Is Fundamental Pittsburgh
Regional Coalition of Community Builders
River Valley School
Rodef Shalom
Rodman Street Missionary Baptist Church
Ronald McDonald House Charities of Pittsburgh
Rosedale Block Cluster
Sacred Heart Elementary School
Rx Council of Western PA
Salvation Army Family Crisis Center
Sarah Heinz House
Schenley Heights Community Development
Center
Second East Hills Social Services Center
Sharry Everett Scholarship Fund
Sixth Mount Zion Baptist Church
Southwest Pennsylvania Area Health
St. James School
St. Stephen Elementary School
Sustainable Pittsburgh
Thomas Merton Center
Three Rivers Center for Independent Living
Three Rivers Youth
TLC-USA
Turtle Creek Valley Council of Governments
Tzu Chi Wen Chinese School
Union Project
United Cerebral Palsy
Univ. of Pittsburgh - Division of Applied Research
and Evaluation
Urban League of Pittsburgh
Urban Youth Action
Ursuline Services
Vintage Senior Center
Weed & Seed Program, Mayor's Office
Wesley Center
West Pittsburgh Partnership
Wireless Neighborhoods
Women's Enterprise Center
Working Order
YMCA McKeesport
YMCA Senior AIDE Center
Youth Fair Chance
YouthBuild
YWCA Bridge Housing
YWCA of McKeesport

Community Partner Information FAQ

(continued from back cover)

7. What does it cost to be a Community Partner?

The cost for participating in this experience is your time and your commitment to follow through as agreed. As leaders of community organizations, we know your time is of premium value. Those who have made this investment of time have reaped returns many times over.

8. What does the Community Partner have to offer Carnegie Mellon students?

- Students learn to structure unstructured problems. Community organizations are complex environments with complex problems. Your organization provides excellent environments in which to practice the art of structuring problems.
- Students come from different cultural backgrounds and most have never been in a nonprofit organization. They are practicing how to communicate across cultural differences and across technical knowledge differences. They need to be able to make mistakes and learn from them. Community partners provide a supportive relationship in which students can take risks and learn about how to communicate, how to relate, and how to maintain professionalism.
- Students get the opportunity to practice process consulting. They are learning that expertise is only as valuable as the ability to help others solve authentic problems. You provide a context in which students can practice these skills.
- We've found that Community Partners are very appreciative for the students' assistance. There is nothing more rewarding than to experience your efforts as valuable and rewarding for others. You provide that experience for students.
- Finally, you offer a glimpse into career opportunities in the nonprofit arena. Students learn to appreciate those who work in the nonprofit sector, and they grow to appreciate the role and function of community organizations. We hope this appreciation not only informs the choices they make in life, but also encourages them to care and give back to the community throughout their professional careers.

9. How do I become a Community Partner

Contact an instructor, Joe Mertz or Scott McElfresh. Send your contact information: name, title, name of organization, address, phone, fax, location of organization and your interest in being a Community Partner. You will have a telephone conversation and possibly an on-site visit. All organizations are considered, though preference is given to organizations providing services to a low-income community or a community at risk for falling into the "digital divide."

**Send email to
instructors@tcinc.org
(email preferred)**

**Or call
Joe Mertz: 412.268.2540
Scott McElfresh: 412.268.4859**

10. Caveats

- We do our best to ensure that students who sign-up for the class are committed to completing the class, however, occasionally, a student ends up withdrawing from the class during the semester. Typically, this happens when a student has underestimated the time they need for this class. We do our best to advise students so this does not happen. When it does happen, there is nothing we can do except to invite the Community Partner to participate in the following semester.
- The semester is short and the student has to do a lot of work in a short amount of time. For this reason, it is critical that you keep your scheduled appointments, do the work you agree to do, and maintain communication with the student. The student will need your feedback on reports quickly, often the next day. When we get to the final consulting reports, we will need fast turnaround time from Community Partners because we also need to get the reports published in time for the Community Technology Forum.
- If there is any chance that you think you will not be able to follow through with the requirements of this partnership, please wait until such time as when you are able to do it. Since the Community Partner is the focus for the student's learning, it is essential that the partnership be sustained for the semester.

Community Partner Information FAQ

1. What is the goal of the partnership in this course?

The goal of this class is to expand the capacity of the Community Partner to use, plan for, and manage technology, administratively and programmatically. The student is learning process consulting, project management, communication, relationship management, problem identification, and analysis.

2. As a Community Partner, what can I expect to happen?

Once you match with a student consultant, you will set a meeting schedule that you and the student will keep for the remainder of the semester. The student comes to your location for 3 hours a week. During this time you and the student work together. This is not an internship in which the student merely works on site. Rather, it is a consulting partnership in which you must work together to achieve your technology goals. The student facilitates a process that moves from assessment, to analysis of problems and opportunities, to defining a scope of work, to developing a work plan, to analyzing outcomes and finally presenting that analysis. As the Community Partner, you are the consulting client. You provide information and discuss that information with the student. But you are more than a client; you are also a learner. In process consulting the client "owns the problem" as well as its solution. The consultant facilitates the client in achieving that solution. The consultant doesn't "do for" the client. Rather, the consultant works with the client.

3. What types of activities are typically included in a scope of work?

Each scope of work is unique and depends solely upon the specific needs and opportunities of the individual Community Partner. Partnerships have focused on a wide range of activities, including: personal information management (how to use Windows, organize files, backup files, use various software packages, use time managers, use Palm Pilots and other personal information management tools, e-mail, etc.), developing a plan for how to train staff and how to incorporate knowledge and skill into job description, designing a local area network, implementing Internet connectivity, designing and developing a web site, determining effective data storage methods, analyzing the needs for an information database, designing and implementing a database, solving technical problems, designing a public community technology access center, determining the specifications for computers, developing disaster recovery plans, and more.

4. Who can be a Community Partner?

This course target individuals playing an administrative or programmatic leadership role within a community organization. Typically Community Partners are Executive Directors, Directors, Assistant/Associate Directors, Coordinators, and Managers. But, we make the selection based on the organization and the role that the individual plays within that organization, regardless of title.

5. Why do you focus on organizational leaders?

For an organization to use information technology effectively, its leaders must have a vision for how it can support the organization's mission, they must be comfortable enough to integrate technology into their personal work practices, and they must know enough to budget, staff, and subcontract appropriately. By partnering one-on-one with a student consultant, the leader has a unique opportunity to build that vision, comfort, and knowledge, no matter where they are starting from.

6. What are the requirements for being a Community Partner?

- Hold a leadership role within your organization.
- Have a computer in your office or one you could or do use in your job.
- Reliably meet with the student consultant 3 hours per week, every week, for about the 13 weeks.
- Come to an on-campus gathering 2 times during the semester. Once at the beginning and once at the end.
- Share information about your organization with the student consultant.
- Read project reports prepared by the student and give the student immediate feedback.
- Complete a brief response form after reading each report and return to the instructor.
- Keep a log of consulting sessions and send to instructors twice during the semester.
- Read the final consulting report. Give feedback to the student immediately.
- Make a brief presentation at the end of the semester (with the student) at the Community Technology Forum. (This is the 2nd on-campus gathering you are required to attend.)

(continued inside back cover)