

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

**Spring 2007**

**Final Consulting Report**

**Eastside Neighborhood Employment  
Center**

**Ben Goodrich**



# Eastside Neighborhood Employment Center

## Executive Summary

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### I. Background Information

Eastside Neighborhood Employment Center, or ENEC, is located at 5100 Penn Avenue on the second floor. ENEC runs multiple types of programs which range from help with building resumes to interview skills training. At the beginning of the semester ENEC had 4 full time employees, however, due to a restructuring they currently have 1 full time employee. ENEC's mission is:

“To improve the economic and social conditions of the residents of Eastside neighborhoods by providing quality workforce development services.”

### II. Consulting Tasks

The first and second tasks for the consulting term at ENEC were to share client resumes and to share databases over ENEC's network. This was done because, previously, there was some contention for computers due to these two things. Also, time was wasted by clients searching for the computer that their resume was stored on. The two solutions also allow for regular backups of both the resumes and databases.

The third task was to install web blocking software on the computers at ENEC. The installation of the program was necessary because clients and employees were visiting non-work related sites which could have potentially opened up ENEC's network to malicious programs and because playing games and gambling was damaging to the type of environment that ENEC was trying to create, which is an environment conducive to finding jobs rapidly and building job skills.

The fourth task was to create a new internet security policy that the employees would sign which more explicitly banned visiting sites that employees shouldn't be visiting such as myspace, game sites, and others. Visiting these sites opened up ENEC's network to malicious programs and also damaged the environment that ENEC is trying to create in a similar manner to the above task.

The fifth task was to build capacity within the organization to modify and update a potential future website. The task simply involved acquiring a web editing program and then guiding Kraig through the process of building and modifying a simple website using it.

### III. Outcomes Analysis and Recommendations

#### **Outcomes for task 1 and 2**

- Shared folders on network created
- Resumes and databases added to shared folders
- Resume and database access time reduced by up to 20 minutes
- Resumes and databases are regularly backed up now

The only risk to sustainability is that it may not be portable to a new operating system. If ENEC upgrades to Windows XP or Vista a new solution will be have be worked out.

### Outcomes for task 3

- CyberPatrol web blocking software was chosen
- Free trial period was run
- Number of non-work sites visited was 0 after installation

The only risk to sustainability is the annual cost which shouldn't actually be a problem because it is not a very large annual cost for the value it provides to the organization

### Outcomes for task 4

- Issues with previous security policy were identified
- New security policy was created

While the new security policy has not been able to be implemented yet, the only foreseeable risk is that it won't actually be enforced on the new employees.

### Outcomes for task 5

- Dreamweaver chosen as web editing software
- Kraig was guided through the creation of a simple website
- Kraig edited parts of the website
- Kraig viewed the website in his internet browser

Potential threats to sustainability include information being forgotten or the final website being radically different in design which would prevent Kraig from editing it.

### Recommendation 1: Obtain a Website

A website will allow ENEC to more easily and rapidly communicate with local businesses. Currently ENEC communicates with business partners individually using email, normal mail, or by phone. This is inefficient and ENEC would be better able to communicate using a calendar of events on a website. A website will also provide greater visibility in the community. Ideally, ENEC will be highly visible on Google so that they can make more connections with businesses.

### Recommendation 2: Have Wireless Neighborhoods host ENEC's databases

Currently, every time ENEC wants to fill jobs for a business partner, they have to have an employee visit the site who determines the needs of the business. That employee then returns to ENEC and searches the databases for appropriate clients and either returns to the business or emails them the information. Remote access to the databases would cut out all of the time in between finding out the job requirements and providing potential candidates for the position.

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# Eastside Neighborhood Employment Center

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### I. About the Organization

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#### Organization

The Eastside Neighborhood Employment Center is an organization that helps local people to find jobs by providing access to the internet, by helping to build resumes, and by providing some job training. ENEC's mission is:

*“To improve the economic and social conditions of the residents of Eastside neighborhoods by providing quality workforce development services.”*

ENEC has placed over two thousand people in full or part time since 1988 and has helped over seven thousand people in other ways including resume building and career counseling and training.

#### Facilities

The Eastside Neighborhood Employment Center (ENEC) is located at 5100 Penn Ave. ENEC is located in a multi-room single floor area with good lighting. Local people come in and use the computers to find jobs. The first room upon entering is the public computer room which currently has four computers open to public use. The room immediately to the right is one of the offices and currently has one computer in it. The hallway to the left leads to Kraigs office and another office. The public youth computer room is at the end of the hallway. The router and switch for ENECs network are located in a back room in the closet.

#### Programs

ENEC provides several services of which the following are just a small sample:

- Enrollment on PA CareerLink website
- One-on-one career counseling with Job Developer, including skills assessment to better match client with suitable jobs
- Personal job search assistance
- Computer and internet skills development, including creation of email account
- Introduction to resources for self-directed job search
- Resume, cover letter, and application development and review
- Interview skills training

They also provide counseling and some job training. The computer labs in the building are used by local people who are searching for jobs. The clients come in and register with ENEC and then they are allowed to use the internet to browse job search websites and they use the computers and printers to build and print resumes. The staff members help the clients to build the resumes and also help the clients to effectively use the internet to search for local jobs.

## Staff

There are four full time employees at ENEC. The four full time jobs are:

- Employment Support Specialist: is responsible for providing direct services to youth and adults seeking training and/or employment related services through the ENEC/YouthLINK. The major areas of responsibilities for this position are: intake and admissions; case management; data base management; and supervision of other assigned paid and volunteer staff.
- Outreach and Training Specialist: is responsible for providing direct services to individuals seeking training and/or employment related services through outreach, recruitment, training and credentialing services through the ENEC/YouthLINK. The major areas of accountability for this position are: outreach and recruitment of job seeker customers; creation and implementation of a menu of Workforce Development Services; development of a calendar of workshops using community partners to support job seeker customers' employment efforts; and supervision of other assigned paid and volunteer staff.
- Employment Services Representative: is responsible for all employer services to services to our employer customers including prescreening and recruiting services for open positions within their company. The major area of accountability for this position is: recruitment of employment opportunities for ENEC employment seeking customers and recruitment of qualified candidates to fill open positions with our employer customers.
- Executive Director: Maintains day to day operations, make sure all legal, contractual, and financial obligations of the organization are met, create and implement marketing strategies, report to board of directors, and just generally manage the agency.

It also brings in volunteers from the community to help monitor the computer labs. All of the employees have access to their own computer in one of the office rooms. All of the employees help the clients build resumes and use ENECs resources to find jobs. The technology available to them is used efficiently when it is used appropriately but sometimes it is used to access non-work related materials. The computers are used by the staff to store client information and to draw reports from the databases it is stored in. The computers are also used for email and management of local business partners.

## Technical Environment

- 8 Public Computers
- 5 Employee Computers
- All except 1 computer run Windows 2000
- All have updated AVG antivirus and Spybot Search and Destroy which is an antispyware program
- CPUs are generally either 1.4 or 1.8 gigahertz
- RAM is generally 128 megabytes or 256 megabytes
- All computers have USB ports, cd-rom drives and floppy drives

- One portable hard drive as backup
- Most of the staff computers have Microsoft Access
- All computers have standard Microsoft preinstalled applications including MSOffice and Internet Explorer

Up until recently the public computers generally ran Windows 98 but several weeks into the consulting term ENEC teamed up with another local non-profit called Wireless Neighborhoods to upgrade all of the computers in the office to Windows 2000.

All of the computers in the office share one printer. The printer is attached to one of the computers, which is left on all the time, so that the other computers can print through it to the shared printer on the network.

Important information is often backed up by Kraig onto a portable hard drive that he brings with him.

## Technical Management

All of the technical management is done by Kraig. Technical Management at ENEC, up until very recently, generally appears to have consisted of just dealing with technology problems as they arose or finding ways around them until an outside source could come in and fix them. A lot of the network issues and some of the technical computer issues are dealt with by an outside source, namely Wireless Neighborhoods. Wireless Neighborhoods set up the network at ENEC and tries to keep it updated and running smoothly but often it seems when something goes wrong it is either ignored or worked around until a solution can be found in the future which tends to be very disruptive to normal workflow because activities that should be quick and painless quickly become bogged down in paper. Regular software updates are generally performed automatically by the applications themselves and if they can't be automatically updated, they are unlikely to be updated. Kraig regularly updates all of the vital client information onto an external hard drive that he keeps with him.

## Technology Planning

There is currently no concrete technology plan at ENEC. All of the technical decisions are made as ENEC comes upon them. All technical decisions at this point are made by Kraig.

## Internal and External Communication

### **Internal Communication**

Internal communication and organization of files is generally poor with a variety of methods being used to store and transfer files. Communication between employees does not seem to be very strong. There is little communication as to how the resumes and general client information is supposed to be stored and each employee seems to have their own methods for what they need to do regarding electronic information storage.

Up until recently the staff only had commercial IP email accounts. Several weeks into the consulting term, however, it was discovered that Wireless Neighborhoods owns the domain name for ENEC and so they have set up email accounts at ENEC's domain name for the staff members. The organization does have web access.

## External Communication

In terms of external communication, the organization does not have a web site at all and most of their communication is done through more conventional non-electronic means.

## Information Management

The most vital information to the organization is client information which includes personal info, resumes, work history, and other important information. At the start of the consulting term all of that information was stored in a variety of ways including storing actual client info in a database and resumes on assorted computers and floppy disks. The databases were only on one of the office computers and were not shared between all the computers that need access to them. The resumes were stored on whichever computer they were made on and were just stored on the desktop or in the My Documents folder. The rest of the client information, which is mostly personal information about the clients, is managed both electronically and via paper. Some of it goes into the databases and some of it simply goes into paper files in filing cabinets. The information is then accessed later in order to send reports to the board and to other non-profits who work with ENEC.

Data security was also similarly poor. There were no passwords protecting the important documents and computers. The databases are now password protected and only available on the office computers which have passwords to login to Windows as well.

## II. Scope of Work

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### Task I. Create a better organizational system for client resumes

At the start of the consulting term all of the client resumes were being stored on whichever computer they were created on, and since nearly 100% of a client's trips to ENEC involve accessing these resumes, this led to lost time spent searching for the resumes when they needed to be pulled back up. The clients could have been potentially searching 9 computers for their resumes. Also, if someone else was using that computer they would either have had to wait or try to transfer the file to another computer in order to be able to continue working on it and with generally between 2 and 5 of the computers in use, the chance of collision between clients was quite high. This lack of organization with the resumes greatly reduced the efficiency of the employees who were helping the clients which equated to less time spent helping people find jobs. Since finding clients jobs is the primary mission of ENEC, creating a better organizational system for resumes helped employees to better accomplish that mission.

### Task II. Share the databases with all of the office computers

At the beginning of the consulting term the databases that store client information were stored only on one computer. This was cumbersome for the employees, who needed to enter and retrieve information, because if someone was using the computer they had to wait to get the information they needed. This resulted in wasted employee time as well as a general breakdown of communication regarding client data as it was easily accessible to only one person. The previous database storage implementation negatively affected the organization's mission in that it caused employee collisions when trying to access the databases. Since they were only on one computer,



only one person could access them at a given time and if two people needed to access it to make a report, one had to wait, resulting in wasted employee time. This resulted in up to 20 minutes of waiting for one person to finish so another could access the system. This wasted time resulted in lower employee productivity which hindered the organization in trying to fulfill its mission.

### Task III. Find and implement solid web-blocking software

Before the consulting term, a lot of ENEC employee time was lost to non-work related sites and activities on the internet such as gambling, games, chatting and social networking sites. Also, several of the youth computers, which are not visible from any of the employees' computers, were being used to look at pornography. This posed a security threat to the entire network, as downloading files from the internet from questionable sources is an easy way for viruses and malware to enter a computer. It also resulted in lost employee time and damaged the environment that ENEC was trying to create. Lost employee time meant that the clients didn't get jobs as quickly as they could have. It slowed down the entire process of finding and getting a job which directly affects the mission. The security threat posed by rampant downloading also posed a severe risk to the organization and its mission. If a very bad virus or a hacker were to break into the network, valuable and confidential client information such as Social Security Numbers could be leaked. Also, some or all of the computers could be temporarily disabled. The leaking of personal information could open up the organization to legal threat on the part of the clients which would obviously directly negatively impact the mission. Broken and disabled computers would also limit clients and employees' ability to locate jobs which would directly affect the mission as well. Both of these issues were dealt with by completing this task. Finally, employees and clients playing games and gambling on ENEC's computers was damaging to the type of environment which is conducive to finding jobs quickly and working on job related skills that ENEC is trying to create. It could have potentially reinforced bad habits in the clients, who were supposed to be learning job skills, if they saw ENEC employees playing games while at work.

### Task IV. Help Kraig to write a more thorough and explicit internet policy for staff members

At the beginning of the consulting term there was an internet policy that staff members had to sign and agree to but it was not explicit in what the internet was allowed to be used for nor did it have any punishments associated with misuse of internet and network resources. Often, it seems, a strictly enforced internet policy is enough to keep people from misusing the internet too much. So, at the start of the consulting term, there was no way to enforce the internet policy which allowed the employees too much leisure time while at work which in turn decreased the amount of time that employees spent helping clients. This directly negatively impacted the organization's ability to fulfill its mission.

### Task V. Build capacity within ENEC to update and edit basic websites

Ideally, in the future, if my recommendations are followed, ENEC will have a regularly updated website that will provide up to date information to local business partners about any events that

ENEC has planned and any other information that ENEC wishes to share with the public. The key to maintaining a website at a low cost would be to have capacity within the organization to modify and update the website. This person would not be required to design the entire site, just to update it with current information so that an outside source would not have to be contracted to update the site. The simplest way to build capacity in ENEC was to have an employee build and modify a simple website using a website editing program such as Dreamweaver. There were not many options besides having an employee with the capacity to update the website if ENEC wanted to have a dynamic website and therefore, instead of hiring a new employee solely for the website, it was necessary to build capacity in one of the members of the organization. Even if what that employee learned was only applicable in a general sense and the website were to be updated in a manner besides direct modification, the general understanding gained by building and modifying a simple webpage will allow that employee to much more easily troubleshoot the website and deal with unforeseen problems as they arise whereas without that knowledge they would have had to contact outside support of some type. This outside support could very well cost money and will certainly cost the employee time both of which could be better spent in other areas supporting ENEC's mission. While this task will not directly aid ENEC in accomplishing its mission, it will support my recommendation that ENEC create a website, so indirectly it will be supporting ENEC's mission through that.

### III. Outcomes and Recommendations

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#### **Task I: Share resumes on network**

Sharing client resumes over the network so that the resumes can be saved to a central location in order to be backed up regularly and so that they can be accessed from any computer.

#### **Outcomes I:**

The first and most visible of the outcomes is that there is now a shared folder on the network which contains all of the client resumes. This folder is accessed about 80% of visits that clients make to ENEC. Prior to sharing the folder of resumes on the network the resumes were scattered around on various computers and disks. Now all of the resumes are centrally located and can be accessed from any computer on the network. The folder is shared using basic windows file sharing. They are also backed up regularly by Kraig onto a separate hard drive.

This shared file space increased the capacity of the organization in several ways. First of all it speeds up the process of clients accessing and modifying their resumes by up to 15 minutes per visit. This means the employees are able to spend 15 minutes less helping the client find their resume and that 15 minutes can then be used to help the client in finding a job or making their resume better. This extra time spent on helping create resumes will increase the overall quality of the resumes that ENEC helps its clients create and so as a result more clients will find jobs. This directly supports ENEC's mission. Previously if the computer that a client had stored their resume on was in use they either had to wait or they had to stop the other user temporarily in order to get the resume onto a disk. Also, if they didn't remember which computer they were on they had to search all of the computers until they found their resume. Now there is never a wait time and the client doesn't have to remember which computer they were on as they can simply choose any computer and get their resume from the shared folder. The system is used by 100% of the clients who visit and need to access their resumes. About 80% of client visits involve accessing the resume. This will allow ENEC to pass more clients through the system quickly and will allow those clients to more quickly find jobs which directly supports ENEC's mission of helping local people to find jobs.

The shared file space also allows Kraig to back up all of the resumes onto a separate hard disk. This will avert a potential disaster in losing all of the resumes on a given computer if it were to break. Previously, if a computer's hard drive were to break, all of the resumes on that computer would be lost completely. Now, if a computer breaks, Kraig will have a backup copy of the resumes and no resumes will be lost.

The solution is very sustainable in the long term. It has no costs associated with it and Kraig helped to set up the system the first time so he knows how to set up the entire system so that in the event the network goes down he can set it back up. The only foreseeable issue with the solution is that it may not be portable. If they upgrade to a new version of windows everything will have to be set up again and it won't be the same on a newer version of windows.

#### **Task II: Share databases on network**

Sharing the client databases on the network and giving access only to the computers that need it so that any employee can access the databases when necessary.

#### **Outcomes II:**

The most visible outcome of the project is that now there is a shared folder on the network that contains all of ENEC's databases. This database is accessible from all of the office computers. Initially there was no way for all of the employees to access the client databases unless they went to the database computer and accessed it locally. Now there is a shared folder on the network that contains all of the client databases and all of the office computers have remote access to the databases. The databases were originally rarely backed up as it was a pain for Kraig to go to the database computer and get all of the databases off of it onto a remote hard drive, especially since the database computer was generally turned off by the time he left. Now the databases are backed up every night so that in the event that the computer that stores them is lost, Kraig will have a backup and the vital client databases will not be lost.

This solution increased the capacity of the organization in similar ways to that of the shared resume folder. Now less time is wasted by people who need to access the databases. Originally if the database computer was in use, the employee trying to access the database would have to wait until the current user was done which could be up to 20 minutes. Now, however, anyone can access the files from any computer even if the database computer is being used so the solution can save up to 20 minutes per attempt to access the database.

The shared databases also allow Kraig to more regularly create backups of the vital client data. Originally he only sporadically created backups, but now they are created on a regular basis because he can access them from his computer. Originally, backups were probably made only once a month. Now they are made several times a week. This allows ENEC to avert the potential catastrophe of losing all of their client information. This has the potential for saving hundreds of hours of work by both the employees and the clients.

This solution is also very sustainable. Kraig helped to set the system up the first time and knows how the system is set up so in the case where it goes down, he can simply set it back up. The only potential hurdle to sustainability is the same one that the shared resume folder faces. The solution may not be terribly portable. If ENEC upgrades to a newer version of windows, setting up the system will not be the same as it was before. However, Kraig understands the general principles behind file sharing now, so if they do upgrade he will hopefully either be able to set it up with a little experimentation or he will at least know that it can be done and will find someone willing to set it up for him.

### **Task III: Install web blocking software**

Installing CyberPatrol web-blocking software on all of the public computers at ENEC. Categories blocked include games, socializations sites, gambling sites, pornography, among others.

### **Outcomes III:**

The program that was chosen as a solution to this problem was CyberPatrol, which is a well known security product used by schools and other businesses to prevent computers from being used for non-work related things, and a 14 day free trial was run. The product was chosen because it provided a simple to use and manage interface for blocking all of the things that ENEC wanted to block on its public computers. The only configuration necessary to the base product was for a games filter to be set up which simply involved adding several keywords to the filter. Prior to the installation of the software approximately ten percent of the cookies and ten percent of the internet histories on the youth computers were comprised of inappropriate and non-work related material. This included myspace, hotmail, pornography sites, and gaming sites. After installation of the software the actual number of

sites successfully visited dropped to zero. The attempts to access these sites also dropped off over time.

First of all it increased the efficiency of the clients when they come in to use the computers. The clients are no longer able to visit time wasting sites like myspace and therefore will either spend more of their time working or will open up the computers for other clients to use in the case where the organization is crowded. The clients who were coming in and using the computers for non-work programs were creating an environment that was contrary to the environment that ENEC was trying to create. Part of ENEC's goal is to create a serious environment conducive to finding jobs and people playing games on their computers are counteractive to that environment. Clients who are there to learn jobs skills could have bad habits reinforced by seeing ENEC employees playing games and gambling while they are working.

The software also helped protect ENEC's network and computers from infestation with spyware and viruses. Before the installation of the product the download history was comprised of about 5% downloads of executable game files which could have easily contained viruses or spyware that was not easily detectable by the antivirus programs. Since the installation of the product, there have been no executables downloaded at all which is appropriate as clients have no reason to be installing software on the computers. The software automatically blocks dangerous sites and prevents clients from downloading many potentially damaging files. In the long term this will help with maintenance costs as well as averting possible catastrophe in the form of confidential information being released. It will allow ENEC to focus the funds that they would have had to have spent repairing their computers on more valuable and productive things that help them better achieve their goal.

Unfortunately, the grant that is going to be used to purchase CyberPatrol was not obtained before the end of the consulting term, so the product has not been purchased as of this report. The grant will be forthcoming, however, and a portion of it will be used to purchase the program and then Kraig will install it on all of the computers that need it.

ENEC will be able to sustain this solution. Kraig knows how to operate the software and if any questions arise, since it is commercial software, there is tech support available through the company. He is also able to reinstall the software and change settings within the software in order to keep it running smoothly and in order to keep the software compatible with user needs. Proof that Kraig will be able to maintain the system comes from the fact that he installed and configured the software on about half of the computers when we initially installed it and took notes on the process in case he ever does forget. This knowledge will allow him to maintain the software as is necessary. The costs are also maintainable; they are only several hundred dollars every two years which is very maintainable for an organization of ENEC's size.

#### **Task IV: Create new employee internet policy**

Creating a newer internet policy for the employees to sign that has more explicit penalties for misuse of company internet.

#### **Outcomes IV:**

ENEC now has in place a much stricter internet policy that their employees must sign before they are able to use the internet. Prior to creation of a new internet policy at ENEC there were no repercussions for misusing the internet. The employees could abuse their internet privileges and would never be reprimanded. Now, however, there are explicit penalties for misuse of the internet which wastes time and could potentially damage ENEC's computers.

Unfortunately, before the policy was able to be implemented with the employees, ENEC went through a restructuring and all of the employees who would have been under the new policy were let go. Even though it was not possible to test the new policy on any employees it is clear that once this policy is implemented with new employees it will benefit ENEC in several ways. One important way in which it will benefit ENEC is that it will aid in keeping ENEC's client information secure. Previously, employees would often download game applications and other assorted applications to the computers. These applications could and did contain spyware. Among the computers, many of them had a program that allowed the user to insert smilies into text files. However, this application also came caused pop ups when browsing the internet. There were several other similar applications on most of the computers. Kraig was not able to punish the employees for downloading these applications because it wasn't mentioned in the internet policy. Now, however, this is not allowed and even if the new employees were able to get past the web blocking software and download something similar, Kraig would be able to punish them for it. This supports ENEC's mission in that it greatly reduces the chance of valuable client information being stolen as well as greatly reducing the chances of malicious programs shutting down functionality at the ENEC facilities. This new policy also aids in creating the type of atmosphere that ENEC is trying to create. ENEC doesn't want to provide their employees or clients with entertainment, they exist to provide a way for clients to find jobs and the ability for clients and employees to play games when they should be focusing on finding jobs is contrary to this atmosphere that ENEC is trying to create.

This solution is very sustainable. Kraig actually wrote the policy and will be the one implementing it. The only role I played in creating it was suggesting it and critiquing it after he wrote it. The only potential issue is that it won't be enforced, however, with all new employees at ENEC it will be easier to enforce the policy from the beginning than it would have been to change it for the old employees.

### **Task V: Build website editing and management capacity within ENEC**

Teach an employee to use a website editing program such as Dreamweaver so that when ENEC completes the website in the recommendations portion of this report that employee will be able to maintain and edit the website in order for it to provide up to date information to local business partners.

### **Outcomes V:**

The most visible outcomes of this task were that Kraig can now update and edit a simple website. Kraig now also understands how web pages work and why websites are structured the way they are. In the future it will be advantageous for ENEC to have a website for the reasons given in the recommendation. It will be vital, however, for a staff member to be able to regularly update the website with current events and up to date information about ENEC. All of the staff was let go around the beginning of April, and as of this report, the only person to build capacity with in the organization was Kraig. Ideally, when more employees are hired, Kraig will be able to pass this knowledge on to them so that they are able to update the website. The program that was selected for this solution was Dreamweaver because it is simple to use and well documented in paper and on the internet. In order to teach Kraig how the basics of the program work, Kraig created a simple website for ENEC over a couple of meetings with guidance from me and the documentation. Previously, Kraig did not know how a website functions at all and now he understands the general ideas behind how a website operates as well as how to create and modify a simple table based website. While Kraig will more than likely not be creating the website for ENEC, it will be greatly helpful in the day to day operation of the site to understand how websites operate.

The solution itself is, of course, very sustainable. One potential threat to sustainability is that since Kraig is the only person currently in the organization, this information will be lost if Kraig leaves before he can adequately teach a new employee how to manage the website. This, hopefully, won't be much of an issue as it is unlikely that Kraig will leave before employees are hired and settled into their new jobs.

## **Recommendation I: Create and maintain an informative website**

The organization needs to be able to communicate with business partners which are partners in the community who are searching for employees. One option to create a stronger communication system with the outside would be to create and regularly update a website. For example, as of right now, every time ENEC wants to inform its business partners about a career fair that it is having, it either has to contact them all individually by email, physical mail, or by phone calls. The last two methods require an employee to sit down and devote at least an hour to contacting each of these partners by one of these methods. Even if they use email, there is the potential for one of the partners to be left out of the mailing list. If they had a website that corporations could regularly check, it would save time in contacting them all initially and ENEC wouldn't have to worry about making sure each business was contacted individually. Instead, they could simply contact everyone by adding something to the calendar of events on their website. This would also apply to local people who are looking for jobs and already have computers. They could find ENEC events to attend simply by visiting the website. It would greatly increase ENEC's chance of contacting people and business partners who they don't have in their mailing lists as well if the website had a good enough page rank in Google so that when something like "Pittsburgh jobs" was searched people would find the website and could then plan to attend one of ENEC's events. The website would be used simply to provide contact information on the web to prospective business partners and to keep current business partners up to date on what ENEC is planning on doing.

The idea for a website was proposed by Kraig at the very beginning of the consulting term, however, at the time it was not seen as a priority. The security of ENEC's network was a much higher priority at the time. Now that the network is secured, the creation of a website can be considered. It is an important priority for ENEC at this point because they don't have many ways of attracting new business partners and clients outside of traditional paper methods. As more people and businesses regularly use the internet it will become more valuable for local people looking for jobs and local businesses looking for employees to be able to find ENEC on the internet.

The website would provide a new avenue for ENEC to make initial as well as continued contact with business partners. Instead of ENEC contacting every new organization the website could provide enough information that interested businesses in the community could contact ENEC. The website could perhaps provide a testimonial or "successes" section that would increase the chances of a new business becoming interested in partnering with ENEC. If a business can see that ENEC has had many successes in the past they are more likely to partner with ENEC when searching for new employees. This will directly increase ENEC's ability to find clients jobs as they will have more partners and more job openings for their clients to consider.

## **Implementation**

- Determine what information ENEC wants to display online (this could include contact information, a calendar of events, testimonials, etc.)
- Gather the necessary information
- Map out the site in a more traditional fashion (ie. Pencil and paper)
- Have an employee learn to use a website creation program such as Dreamweaver  
This will allow an employee to hopefully modify and update the website as necessary instead of having to have an outside source update and modify the site
- Contract website design to an outside company or create website internally. The outside design will add several hundred dollars minimum to the cost but will greatly improve the quality of the site. Creating it internally will cost much less but the site will, generally, not look as good without the web design background of the contract company.
- Contact Wireless Neighborhoods and give them the files to host on their server
- Have an employee update and maintain the website.

Potentially ENEC could contract the website design and creation out to an outside source, but it would still be optimal for an employee to learn how to edit web pages so that the site can be kept up to date.

## Resources

At this point as an internal resource, it would be best if Kraig were the one managing the website. There are currently no other employees with whom to build capacity to modify and update a website. Most of the resources, however, would be external. A great asset in setting up this website will be help and hosting from Wireless Neighborhoods. WN already owns the domain names [www.enec.org](http://www.enec.org) and other associated domains and the cost of hosting the website is already included in the \$70 dollars a month that ENEC pays for internet service. WN is also able to provide some tech support regarding maintaining the website. Another excellent outside resource is the manual that comes with the Dreamweaver software. It provides tutorials and instructions for all of Dreamweaver's functions. The budget for this project will vary depending on which path is chosen. If ENEC decides to outsource the design the costs could run well in excess of \$500. If the website is developed internally the only cost will be the man hours necessary to create the website which for a simple website would probably be around 20 hours of work. The domain names have already been purchased by WN and the hosting is free beyond the monthly charge that ENEC already pays to Wireless Neighborhoods.

## Recommendation II: Migrate databases to Wireless Neighborhood's hosting

As of right now, the databases are all available to all of the employees on their computers. However, it would seem to be beneficial to be able to access these databases from outside locations. As of right now, a designated employee goes to local businesses who have expressed interest in partnering with ENEC. The employee visits the business partner and determines exactly what type of employee they are looking for and what the specifications for the job are. Then the employee returns to ENEC and searches the databases for clients who match the requirements. Then the employee either visits the business partner again with the client information from the databases, emails it to them,



or sends it through traditional mail. When an employee visits a potential business partner it would be useful if they were able to pull up clients on a laptop computer that match the business partner's needs. Then, instead of extending the communication over a long period of time, the business could find out right then whether ENEC has clients in its databases that match their needs. It would eliminate the time in between finding out the needs of the business partner and giving them potential employee information.

The potential for this recommendation didn't exist at the beginning of the consulting term. Wireless Neighborhoods has only recently implemented the capacity to perform this service for ENEC so it was not something that could have been completed in the time allotted. Before the consulting term began, Wireless Neighborhoods simply acted as an internet provider for ENEC. Now, however, they are expanding their services and have recently started providing email services, web hosting, and server application hosting. The new web hosting capabilities will allow ENEC to keep their databases on Wireless Neighborhood's servers.

This new capability will greatly increase ENEC's ability to complete its mission. The local businesses would be more able to see if ENEC has potential employees in its databases and if they do those employees would be able to more quickly get a job with the business. The amount of time spent communicating with the business would be reduced greatly, perhaps even by 20%. This would, in turn, allow for more time to be spent with other clients and hopefully in the end would allow for more of ENEC's clients to be hired.

## **Implementation**

- Talk to Wireless Neighborhoods about hosting the database
- Set up security for databases (probably just passwords on ENEC's end)
- Migrate the databases to WN's servers
- Have one employee visit WN and learn how to access the database remotely
- Have that employee teach all of the other employees how to access the database
- Test all employees on their ability to access the database from a remote computer

## **Resources**

The only internal resources necessary to complete this goal are a person willing to talk to WN about hosting the databases and a person willing to migrate the databases to the new hosting site. After that, all that is required is that the databases on WN are regularly updated by an employee at ENEC. The only external resource in this case would be Wireless Neighborhoods. They could easily provide all of the necessary technical support to make the transition and to sustain the solution. They will be able to help with migrating the database and teaching an employee to access the database. . The hosting by WN is included in the \$70 monthly fee paid by ENEC to Wireless Neighborhoods. The only other cost is in the number of employee hours it will take to complete the task which could potentially be substantial depending on the exact implementation but probably won't be more than 15 hours.

## About the Consultant

Ben Goodrich is currently a Junior in the School of Computer Science at Carnegie Mellon University. He will be working as an intern in Boston over the summer of 2007. He plans to be working in a programming position for a medium to large corporation in or close to an urban area when he graduates in 2008.

## 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)**