NAACP National Voter Fund
Pittsburgh Office
Consultant, Roman Mitz
Community Partner, Celeste Taylor

Situation Description

Organization
The mission of the NAACP National Voter Fund is to "be a leading force in informing African American voters of their ability to make a difference in the kind of America they want for themselves and their children." More concretely, they try to register potential voters who are eligible to register, keep currently registered voters involved in the political process, and to educate all registered voters. This is a non-partisan organization, though issue advocacy does play a role. The Pittsburgh Office intends to further these goals in the Pittsburgh area.

Established in January 2001, the Pittsburgh Office's additional goals currently include trying to establish a presence in the community and a relationship with grassroots efforts. Currently there are two full-time employees in the organization, though there are over five hundred associated volunteers (from year 2000 presidential campaign efforts). These volunteers are primarily considered for door-to-door and other canvassing efforts, and are not currently utilized on a day-to-day basis.

Equipment and funds are provided by the NAACP National Voter Fund national headquarters, although there may be attempts to do local fundraising. Budget specifics are still in a state of flux, but the overall budget may be approximately $7,000 per month.

Currently, there is some difficulty in getting new equipment approved by the national organization, but hopefully this will pass and permit expansion of the computing environment.

Facilities
The Pittsburgh Area Office has four to five hundred square feet of space on the second floor of 5907 Penn Avenue, in Suite 215.

Program
The program is, as one can see from above, in its infancy. Examples of events the Pittsburgh NVF will be getting involved in include: recruiting from a Urban League meeting, a community forum on election reform, a black history of voter rights program, and a mayoral candidates forum. Door-to-door/community canvassing in order to register voters is a regular part of the program. The larger events are generally monthly events, though it is not clear that they will continue to be held at this rate, because they do take up a significant portion of time for planning and other concerns.

Staff
Celeste Taylor is the City Director for the organization. She makes high-level planning decisions and decides the direction to take the organization in for the future, as well as planning a good portion of future events. Angela Howze is the Administrative Assistant for the organization, and her responsibility is to implement any details necessary from the decisions made by Celeste.

Both have a good facility with computers. Angela especially, as she has a relatively large number of computers at home that she has worked with and gained experience on. As a recent example, Angela was

able to install a new printer on the primary computer for the organization with only one hitch: there was some slight hardware trouble with the printer itself. Celeste doesn't have quite the same level of experience, but picks up computer concepts/motivations quickly, and has good facility with the Windows system they run.

Technical Environment
The main computer is a Golden Tech Pentium-III 500 with 64MB of RAM, 15GB hard disk (13GB of which is free), 3.5" floppy, 52X CDROM drive, 10/100 Network Controller, a 56K modem and a 15" XGA+ Proview display. The machine was installed at the end of January and is currently the only PC in the office.

At the start of this project, equipment on the way included a desktop machine similar to the above, a laptop of unknown specifications for Celeste, and a combination scanner/laser printer/copy machine which will become the main printer for the site. Also in the works was a DSL connection to be provided by Verizon. So far, the DSL connection has been installed, and a laser printer was purchased, but the rest of the equipment is still to come.

Technology Management
Specifications for computers are mandated from the national office. Locally, Angela has been doing the management/problem solving tasks for computers, but there is no overall plan in place to cover such important issues as: backups, system upgrades, hardware breakdowns, etc. The plan from the national office is rather vague, and other than indicating that they should be using Microsoft products and keeping their databases in Access format, does not help with any specifics. Celeste is the one who makes local purchasing decisions, and once she does, forms are sent to the national office to secure approval and funds.

Problems and Opportunities
The following problems and opportunities were addressed in the scope of this project:

1. Network Design/Installation

While at the present time there is only one PC in the office, and it is using a modem to connect to the internet, there are two more machines currently on order as well as a DSL installation pending. This equipment will need to be arranged in a cleanly designed network so that the various machines can share the resources, such as the printers, files stored on the machines, and the network connection. Having this network will facilitate communication with similar groups, the home office, and volunteers. Additionally, it will allow research for future plans, administration of the web site, and other general internet functions. While not directly related to the mission, it will enable the organization to monitor and enhance their progress in fulfilling that mission.

The intended solution was to inquire about the network configuration from Verizon, order any necessary hardware and software to interface to it, and provide documentation. It was thought to be necessary to ask Verizon because the services they were willing to provide would shape at least part of the rest of the solution, and it would take some time before the DSL connection would be active. Documentation was deemed necessary in order to make the project sustainable and reproducible should something go wrong, or a location be changed.

2. Web Site Design/Maintenance

At the start of the project, there was no web site for the local organization, and the web site for the national organization had been neglected for several months. It is central to the mission to promote the ideas involved, for great numbers of people are required to get these voters more involved in politics. A local web site to promote local issues will assist in the mission.

The initial proposal involved adapting the current national web site to the local organization, and hosting it locally. It was thought that a web site would make the organization more visible, provide a medium for fast updates, and a web presence. While difficult, copying the layout of the national organization would have provided a consistent look and feel to the related websites; however, keeping up with changes would have been difficult. If this proved too difficult, altering the plan to produce a simpler, more easily maintained, website was considered.

3. Database Usage

At the beginning of the project, an Access database for one of the aspects of the organization was available, having been created by someone not in the organization. The layout and data include was not quite right, and there was also much data that had not yet been entered into it. Other data, such as volunteer and mailing lists, were not in databases, requiring a very labor-intensive process for sending out a mailing. Having these databases would streamline these processes, and allow for accessing the data in more flexible and convenient ways, which would provide feedback on how well the organization was accomplishing its mission.

The initial plan was to work with Celeste to construct the various databases in Microsoft Access and have Celeste and staff input all the current data. Also was planned to help Celeste generate some minimal documentation and file format integration for future use. This plan was considered to allow for sustainability and future flexibility in database creation and usage.

Outcomes

1. Network Design/Installation

Actions Completed
The DSL connection has recently been installed, but there is currently no other equipment to set up a network on. I have recommended getting a linksys router so that when other equipment does finally arrive, the installation will be plug and play. I am also providing a document outlining the steps that must be made when the rest of the equipment arrives. There is definitely increased capacity in having an always-on network connection with reasonable download speeds; while the rest of the goal has not yet been attained, this should be a simple matter once the equipment arrives.

Since setup instructions are provided for all elements of the network, it is very sustainable in the event of equipment failure, or network changes. In the absence of these failures, the network will essentially sustain itself. The problem solving skills of Celeste and Angela are sufficient to deal with any other problems; and as the computers and their network will be essential to their operations (I note that they are already dealing with the problems of only having one computer available), they will be motivated to solve any problems that arise.

For example, when the DSL connection was first turned on, it didn't work. Angela actually tried nearly all the debugging techniques I did when I was next at the office. While she was unsuccessful in getting it working, I also failed, because Verizon had something misconfigured at their end, and since Angela had already made an appointment for them to look at it, that was essentially the correct solution to the problem. It is unfortunate that the instructions are essentially untested, but since the equipment has not yet arrived, there is no actual way to do this. That said, the linksys router makes setup extremely simple. The default networking settings for either Windows 2000 or 98 will each work automatically with the linksys router; no configuration settings are necessary. The only necessary configuration settings are those for dealing with Windows file sharing, and these just involve accessing the named server via the Network Neighborhood browser.

Recommendations
The only actions which are needed at this point are the continued pursuit of the necessary equipment, and the following of the instructions given for setup of that equipment. The communication and research benefits are still valid.

Resources
Windows networking setup document
1. http://www.linksys.com/products/product.asp?prid155&grid=5 (Etherfast 8-Port Cable/DSL Router under Cable/DSL products - most similar products of this type can be substituted, though the setup is different for each)
2. http://www.pcconnection.com/scripts/showcase/productdetail.asp?product_id=211698&vendor=Linksys Found via the linksys.com link; pricing is $199.

2. Web Site Design/Maintenance

Actions Completed
So far, a basic web site has been created by Celeste and Angela. They each know how to use Netscape Composer to create and upload web pages to their free hosting site. There is still work which needs to be done with the site, mainly adding additional information, but the ability to do this work is all there at this point. It is not yet online, but will be available at http://trfn.clpgh.org/naacpnvf/.

As long as the free hosting service (graciously provided by Three Rivers Free-Net, http://trfn.clpgh.org/), is around, their changes in their usage instructions are not too dramatic, and desire to work on the site is continued, there should be no problem in continuing progress on the web site. The first two are pretty much a given, since the site is working with groups such as this. However, the third issue, desire, is most critical.

The power of a web site comes with continual updating and making available timely information very quickly. Maintaining this sort of site is non trivial, however. Celeste has taken a class from Three Rivers Free-Net on using Netscape Communicator to create web sites. The time commitment, even with the knowledge of how to do the work, however, is significant. Other organizations who have developed their web sites have found that if it is found that the web site is having a significant impact; that is, people are using it and finding it useful, the necessary motivation to continue updating the site will be there.

Another factor one can look at, is are new people going to be reached by the web site? Potential voters, volunteers, donators, etc. If they will be (perhaps some surveys can answer this question), then will they be reached more effectively in this manner? These are two important questions which need to be examined when determining whether or not to continue work on the web site.

Recommendations
I recommend completing the basic web site, and after significant publicity is generated, by announcements at public events, and perhaps inclusion along with the organization's address on flyers, evaluating the usage level, perhaps via a hit counter. An evaluation must be made after sufficient time has passed to weigh the cost of regularly updating the web site versus the benefit/usage evident in the target audience. The site may have a significant impact on the mission, however, one can never be sure until after it has been attempted, which makes this cost evaluation necessary.

Resources
HTML for Dummies (provides an overview/reference to HTML and website design)
• http://www.csulb.edu/~jvancamp/composer.html (reference/guide to using Netscape Composer)
• http://faculty.acu.edu/~armstrongl/geography/net.html (tips for using Netscape Composer)

- Since these links can change, search for "Using Netscape Composer" or "free hit counter" for more useful web pages on http://www.google.com/
- http://msdn.microsoft.com/workshop/management/planning/sitebld.asp (a very thorough analysis of what it takes to build and maintain a web site, as well as publicity information.)

3. Database Usage

Actions Completed
Celeste and Angela have learned how to use Access for creating and maintaining databases. They have created at least one database for recording volunteer information, and added/updated information in several others, which includes modification of fields. These databases allow them to easily perform mail merges, distribute emails, and update information.

Both Celeste and Angela have done mail merges from their mailing list database to create labels for mailings, as well as: merge new data into their outlook address book, add new fields to the database, and add new entries to the database.

Recommendations
In the future, the existing databases will continue to be updated. There will also be new databases created for special purposes from time to time. Due to the actions already taken by Celeste, this would seem to indicate that these goals are possible and progress thus sustainable. However, I will here recommend some additional resources which will aid in maintaining progress.

Resources
Access 2000 Bible (search for this title on Amazon.com; this is a useful reference for intermediate level Access users)
> http://www.microsoft.com/office/access/using.htm (Microsoft's site for tips and tricks, as well as how-to articles; information is also available on other office programs. One can find this site by searching for "using access 2000" on http://www.microsoft.com/)

Recommendations for Future Consideration

1. Presentations

It seems clear that we will be able to use technology to save time when it comes to presentation preparation and management. The question is, how should it be implemented? Where do the benefits outweigh the costs?

The most obvious place it seems technology can be a benefit is in the management of an existing presentation. Changes can be made effortlessly, allowing one to always keep the presentation up to date. Another possibility enabled is the ability to include changing digital graphics and evolving presentation structure. In addition, it is possible to merge the creation of the presentation on the computer with the display of it on low-tech devices, such as overhead or slide projectors, which has definite benefits in the lower likelihood of failure, more ease in debugging on-site problems, and in possibilities for finding replacements.

This obviously will require the creation of the original presentation in a digital format. The de-facto standard at this point is the Microsoft PowerPoint package, and there's no reason to not use it here, since the software is already provided from the national organization.

At this point, there are several possibilities in the presentation of the digital creation to it's final audience. I allude to a couple possibilities above, but I'll list them again here.

1. The first possibility is the creation of physical posters to show to the audience, and flip through them during the presentation. While there are definite benefits in that the only way for something to go wrong is in the physical destruction of the posters, the cost of printing and re-printing the posters can become exorbitant (20"x30" poster: $20-25, without color).

2. Another possibility is the creation of slides for use in a slide projector. There are a couple problems with this too--the cost is not insignificant, the slides can't be created in-house, and a slide projector is no longer a very common piece of equipment. Transparencies could be created instead of slides, and this eliminates the above problems. The cost tends to be negligible since they can be created with commodity equipment, and while an overhead projector is a bulky, somewhat expensive piece of equipment, it is also relatively common and easy to deal with. (Transparencies: approximately $1 a sheet, Overhead Projector: approximately $150-$1500 depending on lens quality).

3. A final possibility to be considered is using a laptop with a small portable LCD projector. While this is a rather costly solution, there are benefits in that last-minute changes can be made, and change does not require a reprint of any materials. However, I believe that the overall cost, difficulty in troubleshooting under pressure, and overall potential for system failure is too great at this time. (Laptop: $1500-3000, Projector: $3000-5500)

I would recommend with going with a system of preparing PowerPoint slides and printing them out on transparencies for presentations. Information on preparing effective presentations in PowerPoint can be found at http://classes.monterey.edu/CHS/CHS303-01/world/powpoint/, and the other physical aspects of the system are fairly straightforward.

Resources
- http://www.projectorcentral.com/ - A very good site which does reviews and links to various online retailers, such as http://www.projectorpeople.com/. A very nice, small projector, the NEC MultiSync LT150, can be found there for around $4000.
- Overhead Projector sample pricing: http://www.shopcousinsvideo.com/ovproj.html (get final recommendation from national office)
- http://www.zdnet.com/products/stories/howtobuy/0,7561,2251749,00.html is an excellent guide going through choosing a printer, of which the sections involving color printers are useful. Found by searching for "what kind of printer should I buy" at http://www.google.com/. Since the current color printer is on loan, it will become necessary to purchase one to use effective color in presentations. The Hewlett-Packard Deskjet 950C (http://www.necxdirect.com/hai/prod_page.html?key=0000148324&nonce=guest) is a reasonable first consideration.

2. Backups

Backups are a necessary part of any disaster recovery plan, regardless of the size of the computing installation. Requirements include: capability to recover from site disaster (fire, burglary, etc.), capability to recover from user error (accidentally deleting/corrupting a file), and capability to recover from computer error (random corruption/file loss). Two main branches of solutions follow from these requirements.

One set includes backing up all data on the machine, so a complete restore can be done after identical hardware is acquired. For the first set of solutions, we need: a backup device, backup software, and the ability for the backup device to be removable. The main solutions for a backup device which satisfies these requirements at this point are either some inexpensive tape drive, or a CDR/RW drive (a drive which writes data to specially produced CD blanks; 650-700MB per disk). Generally, when purchasing one of these devices, it will come with appropriate backup software. The national office can be referred to for additional

purchasing instructions. Drawbacks to this option include: cost, difficulty in installation, and difficulty in restoration if all hardware is lost.

Some of these drawbacks are averted if one purchases an external device which uses a simple interface, like USB. This will make installation very easy, allow for re-writing a backup multiple times, and allow for storing a much greater amount of data than can be stored on a floppy. In addition, it could simplify the backup process to dragging the contents of the "My Documents" folder to the CD-RW drive, or using the aforementioned WinZip or other backup software. Ultimately, this solution reduces or eliminates all three of the drawbacks mentioned above.

The other set of solutions includes only storing user data, and assumes that all the applications and setup can be re-installed/set by hand. This set requires the same type of removable device, but it can be of significantly smaller size. The floppy drive included with nearly all computer could be a suitable solution. This means that no equipment other than spare blank floppy disks need be purchased, and backups can be easily accomplished by freely available compression software. Drawbacks can be substantial, however. Media is less reliable, so multiple backups would have to be made. The files which need to be backed up have to be specified, and updated over time, though this could be as simple as backing up the My Documents folder, and making sure that all new files are created in that directory.

In either case, backups should be made daily, or whenever files are changed, whichever is less often. Backups need to be stored locally, as well as at least at one off-site location. I would recommend the floppy disk solution initially, as this solution can be implemented now at minimal cost (far less than $1 a floppy). However, in the longer term, I would recommend combining the two branches of solutions by purchasing an external CD-RW drive ($150-400) which connects to the computer via USB, and using it to backup user data only, as this will minimize the time and effort expended maintaining the backup system.

Resources
- http://www.winzip.com/ - Software to be used in conjunction with floppy-based backups.
- http://www.staples.com/Catalog/Browse/SKU.asp?BCFlag=False&PageType=1&SKU=450793 - An example of the USB CD-RW drive recommended via the preferred supplier, Staples. ($200) "USB CDRW" was searched for on the http://staples.com/ home page.

3. Voter Registrations

It is worthwhile to examine the technology used in voter registrations because they are so central to the mission. It may be useful to use technology to speed along the process and automatically update the relevant databases.

There are many possibilities for different technologies to be used in this situation. Currently, a simple paper form (see figure 1) is filled out and signed by the applicant. While this is potentially a quite convenient format, and currently required by law, there are some drawbacks. At the present time any solution would of course have to be in addition to a paper form of some sort, but in the future this may not be necessary. Problems with the basic format include: required fields left blank, difficulty in interpreting handwriting, and general dictation errors. It is clear that at least the first two can be resolved with some sort of computerized input mechanism.

One possible solution to this problem are current generations of wireless handhelds, such as the Palm or Win CE devices. ($250-400) While each of these devices has benefits and drawbacks, they constitute a general class here. Since the native database is in Access, though, it may be worthwhile to look more closely at Win CE devices. Any of these devices can provide the benefits mentioned above. Additional benefits include:

small size, no keyboard required for input, and can record the applicant's signature digitally with ease.

Another possibility is a small laptop ($1500-3000), running the full Access package under a Windows operating system. Again, the problems above are solved. While ease of update of the main database might be slightly better, overall, the drawbacks of the keyboard, larger size, shorter battery life, and difficulty in standing-up use make it less attractive than the above solution.

With either of these solutions, it may be possible (depending on the law) to attach a printer (or use infrared to print wirelessly) and fill out a completely filled out form, which only needs the applicant's signature. While there exist many small printers with convenient interfaces for either laptops or handhelds, they still add significant bulk to the handheld package, and make use standing-up more problematic. If a printer is not used, corrections can later be made to the data gathered to make them match the digitally collected data.

A possible low-tech solution involves requiring the applicant/volunteer to not use cursive, and to highlight the fields which are required, or commonly forgotten, such as the "birthdate" field, which is obviously necessary for a voting application. This should help solve some of the above problems, though it doesn't make input into the database much faster.

I recommend implementing the low-tech solution now, and looking at a handheld based solution later. It may be that the benefit difference and paper requirement make the low-tech solution superior, at least until electronic signatures are accepted for this purpose.

Technology Literacy Benchmarks

These benchmarks provide opportunities for an organization to see where it can improve in terms of working with technology. The primary benchmark areas are:

- Strategic Technology Planning
- Technology Use – Staff Level
- Technology Use – Organization Business Systems
- Technology Use – Organization Networks and Internal Communications
- Technology Use – External Communications
- Technology Sustainability

Several of these have been addressed in recommendations above, albeit indirectly. Many of the other benchmarks are more tailored to a larger organization, and not a local branch of a national organization. The "Technology Use" categories are all either currently irrelevant, or already being addressed. This leaves the Strategic Technology Planning and Technology Sustainability categories. Both of these categories should be taken care of at the national level; however, it appears that this is not entirely the case.

Information at http://www.techsoup.org/ indicates that having a Technology Plan is the most important thing an organization needs to do to use technology efficiently. While it is tempting to recommend the creation of a large scale plan, it is overkill in the case of this organization. In addition, working together with other branches of the NAACP NVF will be extremely hindered if a plan is not implemented over the whole organization.

While trying to get the national organization to come up with a coherent technology plan is an important goal, this may not be possible. This will force the local organization to at least address technology sustainability issues, since the national organization cannot be depended to take these into consideration. However, doing a full-scale technology plan would not be in the best interests of this organization unless significant growth were to occur. In that case, it would be wise to start by reading the materials at techsoup.org, and working on the worksheets (**http://www.techsoup.org/sub_worksheets.cfm**) mentioned there.

The technology sustainability issues are as follows:

1. The organization has adequate, ongoing technical support.
2. The organization keeps an updated inventory of all computer hardware and software.
3. The organization budgets for technology and associated staff training as a regular part of its annual budgeting process.
4. The organization budgets for technology upgrades every 2 to 3 years.

Of these items, those of primary interest are issues 3 and 4. Since the national organization may not be scheduling upgrades, they will have to be brought up ahead of time so that the computers may remain current. This may necessitate local fundraising, etc. It is important, however, even if computers are purchased separately, that the national organization be checked with in order to ascertain current standards.

Appendix A – Windows 2000 File sharing Instructions

Server configuration:
1. Boot up and log into computer.
2. Right click on "My Computer". Select "Properties".
3. Click the "Network Identification" tab.
4. Check to see if "Full computer name" lists a good name for the server, and that "Workgroup" is set to WORKGROUP. If either of these is not correct, click "Properties".
    a. Type the desired computer name in the "Computer name" field.
    b. Type WORKGROUP in the "Workgroup" field, after making sure "Workgroup" is the field selected.
5. Go to Start->Settings->Network and Dial-up Connections
6. Right-click on the Local Area Connection and select "Properties".
7. Make sure "Client for Microsoft Networks" exists and is checked. If it's not checked, check it. If it doesn't exist:
    a. Click "Install"
    b. Double-click "Client"
    c. Double-click "Client for Microsoft Networks", and follow the instructions for installation. You may need to restart the computer.
8. Make sure "File and Printer Sharing for Microsoft Networks" exists and is checked. If it's not checked, check it. If it doesn't exist:
    a. Click "Install"
    b. Double-click "Service"
    c. Double-click "File and Printer Sharing for Microsoft Networks", and follow the instructions for installation. You may need to restart the computer.
9. Open the Hard Drive and find a folder you wish to share. After you find one, Right-click it, and select "Sharing".
10. Give the share a name as desired by typing in the appropriate text boxes on the screen.
11. If access restrictions are desired, click "Permissions" and change the checkboxes as desired.
12. Click OK.
13. Server setup complete for this folder. Repeat steps 8-10 for any additional folders.

Client configuration:
1. Boot up and log into computer.
2. Right click on "My Computer". Select "Properties".
3. Click the "Network Identification" tab.
4. Check to see that "Workgroup" is set to WORKGROUP. If it is not, click "Properties".
    a. Type WORKGROUP in the "Workgroup" field, after making sure "Workgroup" is the field selected.
5. Go to Start->Settings->Network and Dial-up Connections
6. Right-click on the Local Area Connection and select "Properties".
7. Make sure "Client for Microsoft Networks" exists and is checked. If it's not checked, check it. If it doesn't exist:
    a. Click "Install"
    b. Double-click "Client"
    c. Double-click "Client for Microsoft Networks", and follow the instructions for installation. You may need to restart the computer.
8. Go to the desktop, and double click "My Network Places". You should see the server machine listed. You can double click it, and then enter any shared folders.

Appendix B – Work Plan

Activity	Who Owns	How long?	Target Date	W1	W2	W3	W4	W5	W6	W7	W8	W9	Resources
Database Usage	CP/C	6		▓	▓	▓							C
Migration from Word to Access	CP/C	1		░									C
General Access Usage	CP/C			░	░	░							C
Data Entry	CP					à							Angela
Acquiring Other Databases (data)	CP				░	à ?							Stu, NAACP, etc.
Web Site Design/Maintenance	CP/C	3+						▓	▓	▓			C
Basic HTML coverage	CP/C	1						░	░				C, HTML guide
Determine editing program	C	1						░					Web
Determine design	CP/C	1							░				Current national site, other examples
Content Creation	CP	2								à			C, guide, examples
Network Design/Installation	CP/C	4+			▓	▓	▓	▓					C
Networking Fundamentals	CP/C	2			░	░							C, documents
Determine design need	CP/C	3				░	░	░					C
Determine equipment need	CP/C	3				░	░						C, documents
Purchase equipment	CP	1	??										Pricewatch.com
Set up network	CP	1	??										documents