

Hill House Association

Office of the Executive Director

Jacob Bordens, Student Consultant
Mr. Jim Henry, Community Partner

INTRODUCTION

It is difficult to describe the Hill House Association in words alone. The Hill House is an organization which provides services to its community. Yet it is more than that. The Hill House is a community in itself, working to better the community's health care, education, child care, employment, and housing resources.

Mr. Jim Henry is the Executive Director of the Hill House Association. Like describing the Hill House itself, it is difficult to describe what Mr. Henry's job actually is. Besides the standard administrative duties of an Executive Director, Mr. Henry is a role model and father-figure to many of the members of the Hill House community.

In educating members of the Hill House community, computers are playing a larger and larger role. The Hill House supports a small community computer cluster, known as the Community Access Network, and provides both internet service and instruction. Bringing computer skills to the community is one way that the Hill House helps bring marketable job skills to the community's at-risk families.

Mr. Henry, as leader of this community, is excited about computers and the potential they provide. As such, he is actively seeking to improve his computer skills and to acquire a better understanding. This will allow Mr. Henry to make better decisions regarding the many computer-related programs that might find a home at the Hill House.

Furthermore, as the Executive Director, Mr. Henry will be leading the Hill House administration as the Hill House adopts new technologies. During the term of this project, many options have been discussed regarding the best way to bring the Hill House more into technology.

In the end, the goal was to not only improve Mr. Henry's personal computer skills, but to provide a guide for the introduction of new technologies at the Hill House. The following is an account of the progress of this project, as well as a road map of recommendations for steady and continuing progress.

ORGANIZATION

The Hill House Association provides many different services to the community. Many of these services find their home in the Hill House itself, on Centre Avenue in the Hill District, while others are located in Hill House's other three buildings around Pittsburgh. Each Hill House program is focused on addressing concerns such as health care, education, housing, child care, unemployment.

Child Care and Development Center

Hill House provides a child care center for families with children ranging from 6 weeks to 5 years old. While at the center, children are taught using a Values Based Curriculum, which is designed to give children a positive head start in life.

Department of Education and Support Services

Providing education to young mother and fathers, youth, and those facing welfare reform, the Department of Education and Support Services provides services such as housing assistance, medical services, and parenting skills and counseling. The goal is to bring these individuals into “economic and social self sufficiency.”

The Kaufmann Program Center

The Kaufmann Program Center, located near the Hill House, is the home to the summer camp, the after school program, the ‘Community Access Network’, and the arts program. The ‘Community Access Network’ is a cluster of computers provided for the community’s use.

Kaufmann Auditorium and Canteen

The Kaufmann Auditorium and Canteen is a venue for many events around the community. Besides concerts and other such entertainment, it is often part of other events such as wedding celebrations and family reunions. Perhaps the Kaufmann center’s most important use, however, is as a venue for community forums.

Senior Services

The Hill House provides many programs designed to promote independence and health among senior citizens while preventing depression and loneliness. Some of the services include counseling, job preparation, recreation, and long-term care referrals.

Facilities

The office of the Executive Director is located on the Second Floor of a 30 year old building on Centre Avenue. When entering the office suite, there is an empty desk with an old computer that sits in disuse.

The office suite itself is home to many desks and various offices: finance, public relations, and the operations staff of the Hill House. At one end is the office of the Executive Director. Directly outside this office, you will find the Director’s secretary. Adjacent to the Director’s office is a large conference room.

Many of Hill House’s services are located in this building. The day care center, some of the medical assistance programs, including a dentist and doctor’s office, and a counseling center are all located centrally in this building.

This building is one of several owned by Hill House, with a new building being readied for use just next door. The current plan is to move the hill house administrative offices to this new building temporarily while the Hill House center is renovated sometime later this year.

Staff

There are many people on staff at the Hill House. The office of the Executive Director interacts with many of these staff members on a daily basis.

Jim Henry, Executive Director

Mr. Henry is the community partner for this project, and is seeking to learn how to better use his computer. He is currently comfortable with checking his email, and does so about twice a day.

Most of the correspondence is sent using his secretary, to whom Mr. Henry will dictate messages and

then enter them into her own computer's word processor, before seeking final approval from Mr. Henry. Currently, Mr. Henry's secretary is "retired" and works only three days a week.

Steve MacIsaac, Director of Operations

Mr. MacIsaac is the only other member of the Hill House administration by which Mr. Henry can communicate via email. Mr. Henry does not know specifically of any other staff members who have access to email.

Dan Toller

Mr. Toller is a GED Math Teacher. When computer problems arise, he is usually asked to troubleshoot. Much of the time, he is able to solve the problem. However, should he be unable to fix a situation, then an outside technician is usually called to perform the repair.

Technical Environment

In Mr. Henry's office you will find a Pentium with 64MB of ram and a 28.8k modem. The machine runs Windows 95. Currently, this machine is used only to dial up to America Online, for checking his email. The machine has Microsoft Office 97 installed, but currently this sits unused. Otherwise, there is ample hard drive space for more applications and user files. The machine also has a HP Inkjet printer attached.

Mr. Henry's secretary has a similar machine. She primarily uses this machine for word processing. The machines appear to be not networked. Other than the word processing capability of this machine, it seems to do little else.

Other various people have computers as necessary, and they are used for their own individual tasks. For example, the person in charge of public relations has a computer that is used to print mailing labels and generate PR literature. The financial office keeps track of the numbers using a computer. Again, these machines are not networked, and email is not available.

There is wiring throughout the building for an old, Unix based system. This 10-based-T cabling could be used in the future for a standard Ethernet, assuming that the cables are still in working order. Most offices and desks have an Ethernet jack, which runs to a central wiring closet which houses several Ethernet hubs. Of particular relevance, Mr. Henry's office, and the computer used by his secretary, are both situated near an Ethernet connector.

Technology Management

There is no technology management infrastructure in place at the Hill House. As discussed earlier, Dan Toller, an amateur troubleshooter, is the only form of support that the Hill House currently has on staff. When larger problems arise, an outside consultant is usually called.

PROBLEMS AND POSSIBILITIES

Mentoring Mr. Henry

Mr. Henry is looking for some training on several computer related subjects. Besides basic training in how to use Microsoft Windows, Mr. Henry would like to learn how to use the World Wide Web more effectively and learn how to use his word processor. He has also expressed interest in learning how

to install software, and how to choose software that can run on his machine, when shopping at a local computer store.

This would leave Mr. Henry greatly more productive. Considering that his secretary is only available three days a week, learning to use a word processor would be a valued skill.

Learning such skills is usually a long process, and there might be some concern that it is not possible for Mr. Henry to learn all he'd like to in the weeks available. However, it seems that even an improvement in Mr. Henry's proficiency in using his computer could translate into a greater gain in productivity. While it seems unlikely that Mr. Henry will learn all there is to know about word processing, it seems certain that this training could allow him to use a word processor effectively, nonetheless.

Of greater concern, however, is that as a leader, Mr. Henry would greatly benefit from the understanding that goes along with normal computer skills. With this understanding, comes a broader perspective when evaluating the many computer-related projects which cross Mr. Henry's desk.

Networking the Computers

While Hill House does have many computers, it does lack an effective computer network. It seems like the organization would benefit from a system that would allow the exchange of information. Other features that would likely benefit the staff include scheduling, email and web access.

Currently, there are very few staff members that have access to email or the web. This seems like a problem. Email can be a highly useful tool in an organization of Hill House's size. Furthermore, the ability to schedule meetings among staff members with different schedules might also save time. However, all of these tools require a computer network with each staff member connected in order to be truly effective.

Unfortunately, at this time, it seems like this project is infeasible. Installing an entire network architecture requires both funding and planning. Furthermore, Mr. Henry is most interested in improving his own computer skills.

A plan and some guidelines for developing this infrastructure is included later in the document.

A Plan for Mentoring Mr. Henry in Computer Skills

Aside from his everyday use of e-mail, Mr. Henry uses his computer for very little. He wishes to become more proficient in using his PC. Skills that Mr. Henry would like to learn include word processing, searching the web effectively, and learning to purchase software.

Examining Hill House's Mission

As Executive Director of Hill House, Mr. Henry performs many different tasks each day. While many of these tasks do not involve a computer, others could be accomplished more quickly with the aid of a PC. For example, Mr. Henry currently has his secretary do all of his typing and correspondence. On days when his secretary is unavailable, word processing skills could be of great value.

Furthermore, many computer-related programs and projects cross Mr. Henry's desk. By providing Mr. Henry with a foundation of basic computer skills, he will be better able to evaluate the merits of these programs and projects.

Proposed Solution

Simply teaching Mr. Henry the computer skills he wishes to learn in a teacher/student fashion may not be the ideal solution. Showing Mr. Henry how to solve problems in the context of his everyday tasks seems like a better option. It is this parallel from computer to everyday life that makes these skills relevant and important.

Impacts

By allowing Mr. Henry to accomplish many everyday office tasks on his own PC, the office of the Executive Director can become more efficient and productive. For example, where once composing a letter required both Mr. Henry's time as well as his secretary's, learning a word processor could facilitate the drafting of letters when his secretary is unavailable.

Currently, Mr. Henry has great enthusiasm for computer related projects, such as community learning programs and skill workshops. This enthusiasm might grow with his own learning process, resulting in new and exciting programs for the Hill House community.

Feasibility

While it is not reasonable to expect that Mr. Henry will become a computer savant in the few weeks that are available, it is most certainly possible to lay the groundwork for future learning. Mr. Henry is incredibly excited about computers and learning these new skills. Mr. Henry's computer sits in his office, only used for a fraction of the things it might.

There is a risk that after the consultant leaves that the skills gained by Mr. Henry might fall into disuse. This would be unfortunate, but unlikely given Mr. Henry's enthusiasm and the potential benefits of his computer use in his everyday tasks. Furthermore, the concepts and ideas behind these skills will be of great use, even if the skills themselves fall into disuse. By understanding a little more about how computers are used, Mr. Henry can make better decisions regarding computer-related projects and programs.

Building a Company Intranet

The Hill House runs a Computer Access Network, a small cluster of PC's and a modem pool for use by the community. This network resides in a building adjacent to the Hill House Center, and is connected to the internet by multiple ISDN lines. Currently there are plans to extend this network to a small computer lab in the Hill House Center.

Nonetheless, there are few plans to provide interoffice connectivity to the Hill House administration. Currently, few members of the Hill House staff use e-mail, even though many have computers on their desktop.

Laying the groundwork for an interoffice intranet would allow the Hill House to communicate with greater ease and speed.

Examining Hill House's Mission

Many of Hill House's community services are information based. By providing a means for the quick and easy exchange between the various parts of Hill House, an interoffice network, used properly, could speed the development of new programs, and help current programs continue to grow.

Proposed Solution

Possibly working in concert with other Computer Science in the Community students, extending the Community Access Network's internet access to the office computers should be possible. The Hill House Center will be having an ISDN line connection transferred from the Community Access Network, providing a link to the building. Using old 10-based-T wiring, it should be possible to bring connectivity from this ISDN line to the office computers. Due to the fact that the 10-based-T old and in unknown condition, other options may need to be explored.

Impacts

The impacts of providing internet access to office workstations might not all be positive. There are concerns that providing web access to each computer might result in the misuse of internet resources. Hence, we will need to explore some options, such as not providing web access, or providing limited web access to these terminals.

Feasibility

Extending network access to the computers throughout the Hill House administrative office could be quick and simple. Many of these PC's have Ethernet connections and connectivity to the old 10-based-T network. However, should this 10-based-T network wiring be damaged or unusable, other options may need to be explored.

Providing this access to each office workstation also might require further training of some of the staff. Depending on the services provided to these workstations, it might be necessary to provide the users with basic instruction on the use of the new network applications.

See appendix A for a proposed work plan for building a company intranet.

Community Loan Project

The Community Access Network provided by Hill House is an excellent resource. Not only does it provide a cluster of internet-connected PC's for the community's use, but it also provides a modem pool for home users to dial up to the internet.

However, many members of the Hill House community do not possess computers at home. Thus, learning and using the internet effectively is difficult.

Examining the Hill House's Mission

This project is right in line with the Hill House's mission of providing services to the community. Providing the community with valuable job skills such as computer and internet proficiency has long been a goal of the Hill House. This project is a new and exciting way to extend the internet's reach to the Hill House community.

Proposed Solution

HP and other manufacturers make small laptop-like computers that run a slim version of Microsoft Windows and have modem internet connectivity. The Hill House could acquire approximately 10 or so of these machines, and "loan them" to the community for home use. While these machines are not full laptop PC's, they do provide the necessary features for internet access, web browsing, email, and simple word processing.

Impacts

Gaining access to the internet is extremely difficult for people who do not own, or cannot afford their own PC. By providing "loaner" machines to the community, Hill House can continue its mission to bring internet skills to the community.

Feasibility

Currently, Carnegie Mellon University has a large number of these HP machines that were donated by HP through a grant. These HP machines have a defect, which makes them unusable for the wireless networking project that were intended for. It is unrealistic to believe that these machines could be reallocated to Hill House, however, applying for a similar grant through HP might be one way to obtain these computers at a limited cost.

The most time consuming portion of this project would be obtaining the computers themselves. This is also the area of greatest risk, considering that we might be unable to do this at all. However, there are many things that make such a grant appealing to HP—a possibility of an outlet for the defective CMU machines, the possibility of building a brand loyalty to HP, and the tax incentives of donating to a non-profit organization.

See appendix A for a proposed work plan for building a lending library of portable computers.

IMPROVING MR. HENRY'S COMPUTER LITERACY: OUTCOMES

As mentioned earlier, Mr. Henry is very interested in improving his skills as a computer user. Currently, he uses his PC for reading e-Mail, and not much else. He is interested in not only increasing his skill set, but learning about computers so that he can make more informed judgments about computer related programs that cross his desk.

Outcomes

There are many indications that Mr. Henry has become a more powerful computer user already. When the consultant first began working with Mr. Henry, reading e-Mail was the only skill which Mr. Henry was truly comfortable with. Now, a 'My Documents' folder, complete with subfolders can be found on Mr. Henry's hard drive. Furthermore, reading e-Mail attachments is no longer a problem.

Mr. Henry's typing skills are improving. Furthermore, his speed is improved by the fact that he now knows how to use the standard editing commands used in many programs. Cut, copy, paste, and highlighting are all functions which help Mr. Henry better correct his mistakes or revise the draft he is composing.

Finally, an interesting indication of Mr. Henry's progress is his secretary. Mr. Henry himself has stated that he thinks that his secretary feels "threatened" by his progress on the computer. "Threatened" might be a strong word, but even so, this is an interesting, and powerful indication of Mr. Henry's newfound computer skills.

Sadly, much of our planned sessions were left uncompleted. Mr. Henry was unavailable for the last few weeks of the project. However, nonetheless, the work that was accomplished seemed to be both exciting and rewarding for both the consultant, and Mr. Henry as well.

Recommendations

Mr. Henry needs to continue working with his computer. Practice is by far the best way to learn, especially when it comes to computers. Mr. Henry should, for example, compose documents on a weekly basis, making sure to practice the word processing skills he has learned, and to add new ones. Only through practice will these skills become easy to rely upon.

Books and classes are a good way to learn, however, they are not always the best way. The Hill House really does need a person who is responsible for maintaining the computer systems of the organization. This person could provide tech support for the staff, and also could provide direction and aid as Mr. Henry continues to improve his skill set.

Some things still will pose a challenge for Mr. Henry. For example, file versioning may still cause problems for Mr. Henry when downloading file attachments. His computer is equipped with an older version of Microsoft Office, which may not read some Office 2000 documents. Furthermore, his PC is not equipped with viewers for some other popular file formats, such as Adobe Acrobat Reader. This problem should be addressed during Hill House's technology planning process, discussed later.

Developing the Technological Infrastructure at Hill House

Strategic Technology Planning

Hill House over all requires a long term technology plan. This, to some extent, is in the works, however, a more proactive and careful process would benefit the organization. It is important to take into account the opinions of the staff when assembling this plan.

- Determine what path its technology use will take, taking into account the opinions of the staff, the board, and the administration.
- A budget needs to be drafted to help the organization achieve this plan.
- A working group responsible for technology maintenance and implementation should be put together.

Technology Use – Staff

It is important that the staff have access to the technology resources that they need to better accomplish the goals of the organization. However, there is more to successfully integrating technology. The staff should be using compatible toolsets, so that information can be easily shared. Furthermore, it is important that minimum standards be set for technological literacy and that a program is developed to help bring the staff up to those levels.

Many of the staff do not possess the skills necessary for effective use of any infrastructure that may be put into place. Furthermore, unless this infrastructure is standardized across all workstations, the staff will have difficulty sharing information and communicating effectively through the use of these technologies.

Mr. Henry, through this project, has been introduced to many of the things which technology can do to improve productivity, share information, and expedite repetitive tasks. However, this same understanding must be brought to all who are to use technology at the Hill House. This is why it is important that the all of the stakeholders in technology have input regarding its introduction at the Hill House.

By engaging all of the various staff members in the rollout of new technological tools, the staff will be more likely to be excited about these tools that they themselves helped chose and develop. Mr. Henry's first steps into learning computer skills can help bring his excitement about computers to this project.

- Determine what toolset will be made available for use as an organization-wide standard
- Determine the level of computer literacy that the staff members should have to be the most productive.
- Budget for a technology training program to help bring the staff up to date on current technology
- Develop a set of guidelines and policies for the use of technology and be sure to keep these policies up to date.

Technology Use – Origination Business Systems

The Hill House currently does have automated accounting systems and databases that they for normal business operations. These systems were outside the scope of this project and analysis, however, some basic guidelines are included below.

- Automated accounting and financial systems should be kept up to date. These systems can tend to be left behind during upgrades since they continue to satisfy needs.
- Databases, where appropriate, should be used for tracking large sets of data, for example members, volunteers, donors, addresses, and staff.
- A plan for support should be in place for these systems.

Technology Use – Networks and Internal Communications

Currently there is no real internal network for the sharing of information. However, plans are being worked on for the development of such systems. Below are recommendations in the area of organizational communications.

The staff will obviously need to be trained in the use of the network. Again, the best way to perform such learning is by drawing parallels to the tasks that the staff already performs, and to show how this technology can better the process by which certain tasks are completed. Hopefully, the staff, having been included in the plans for a technology rollout, will be ready to learn and use any newly introduced systems.

- Staff members should understand the concept of a computer network and the importance of information sharing
- Staff members should be trained in the proper use of a network. They should know how to share resources when appropriate, such as disk space, files, folders, printers, and other networked hardware. This should be part of the technology training program mentioned earlier.
- Important information should be backed up on a regular basis. Staff members should be made to understand that computer files need to be protected by regular backups or loss of data may result.
- An electronic mail system should be developed. The staff members should be trained in the proper use of email.

Technology Use – External Communications

Using technology for external organization communications is nearly a given. However, it is very important to make sure that these technologies are used properly, and for the productive benefit of the organization.

Sadly, one of the items which we were unable to complete was to give Mr. Henry a better understanding of the information available on the internet. This would be a great tool in determining how the Hill House could use technology for both communicating with the outside world, as well as for collecting information for bettering the organization itself. However, this is something that can be done on an organization-wide basis as the technology plan is being developed. Mr. Henry, the administration, and the staff should spend some time exploring the resources available as part of determining the requirements for technologies used for external communication.

- Web, e-Mail, and other internet resources should be available to the members of the staff which *require their use or would benefit from their access.*

- Guidelines and policies for the appropriate use of these resources should be drafted. Again, staff input should be considered strongly when developing these policies and guidelines.
- These resources could be used to better communicate with donors, volunteers, board members, and vendors related to the Hill House.

Technology Sustainability

Many of these benchmarks have sustainability in mind. However, it is important to remember that sustainable technology is not something that comes automatically, but only with hard work and planning.

During Mr. Henry's learning process, it has been stressed that computer skills need to be used in order for them to become truly part of one's tool set. Likewise, any technology infrastructure installed in the Hill House will need to be maintained in order for it to continue to be useful for the staff and administration of the organization.

- As stated earlier, a plan for technical support is needed. This includes a budget for technical support in the technology budget, as well as staff positions related to maintaining and upgrading technology.
- Hill House should examine its technological situation every two to three years. A board made up of staff, administration, and other stake holders should examine the current state of technology within the organization and make recommendations for the improvement and upgrading of the technological environment.
- Input from such a technological review committee should be taken into account during the annual technology budgeting process.

Resources

To aid in the pursuit of the previous recommendation, the following resources are provided. Each contains many relevant articles to the development of a sound, sustainable technology infrastructure within nonprofit organizations such as the Hill House Association,

- Coyote Communications (<http://www.coyotecom.com>) has many useful articles on technology, technology planning, and management.
- The Benton Foundation (<http://www.benton.org/Nonprofits/>) as an online toolset for technology in nonprofit organizations
- Nonprofits.org (<http://www.nonprofits.org>) has an online library containing information related to technology management.
- Helping.org (<http://www.helping.org>) has a large library of articles on enhancing the way individuals in non-profit organizations work.
- The Non-profit technology resources (<http://www.libertynet.org/ntr/>) provide information about technology and consulting services in the Philadelphia area. Website is still a great resource.

CONCLUSIONS

The success of any project of this nature might be gauged by the progress made of the pupil. In mentoring Mr. Henry, in building the skills and concepts of using computers, is hopefully a better equipped Executive Director. Not only can Mr. Henry better relate to the projects and programs related to computers that cross his desk on a regular basis, but Mr. Henry himself has a broader basis on which to build his own computer skills.

These successes are only part of the story as it relates to this project. The consultant as well has learned much from his time with Mr. Henry. One might say that spending any time at the Hill House is a learning experience. This consultant would certainly agree.

And so, with the completion of this project, the Hill House stands really at the beginning of the process to better integrate technology. Both on its own, as well as in partnership, perhaps, future student consultants from this program, the Hill House will continue to grow technologically.

Appendix A: Work Plans for Proposed Projects

Work Plans for Proposed Projects			Week												
Task	Who Responsible	Target Date	1	2	3	4	5	6	7	8	9	10	11	12	13
Discuss Project and Options	cp w/ consultant	3/3/2000	■	■	■	■	■	■	■						
Simple File Management Skills	cp w/ consultant	3/13/2000				■	■	■	■						
Drives, Folders, Files		2/21/2000				■									s
Organizing Files		2/28/2000					■								
Downloading Files and Attachments		3/6/2000						■							
Searching for Files		3/13/2000							■						
Word Processing Skills	cp w/ consultant	4/3/2000					■	■	■	■					
Text entry and manipulation		2/28/2000					■								
Formatting text and paragraphs		3/6/2000						■							
Tools (Spell Checker, Thesaurus, Etc.)		3/13/2000							■						
Tables		3/20/2000								■					
Word Draw		4/3/2000									■				
Using the Web Effectively	cp w/ consultant	4/10/2000								■	■				
Introduction to the Web		3/20/2000								■					
Visiting sites of interest (bookmarks, etc.)		4/3/2000									■				
Searching the web effectively		4/10/2000										■			
Purchasing Software for a PC	cp w/ consultant	4/24/2000										■	■		
Learning about System Requirements		4/10/2000										■			
Matching System Requirements to your PC		4/17/2000											■		
Visit a computer store		4/17/2000												■	
Installing new software		4/24/2000													■
Wrap-up	cp w/ consultant	5/1/2000													■