

**U.S. DEPARTMENT OF COMMERCE
National Telecommunications & Information Administration**

Evaluation of the
Telecommunications and Information Infrastructure Assistance Program

Case Study Report

**Grace Hill Neighborhood Services
94083**

St. Louis, Missouri
Report Revised: August 31, 1999

Site Visitors: Gary Silverstein and Becky Rak

Dates of Visit: May 11-12, 1998

TIIAP CASE STUDY

Grace Hill Neighborhood Services

A. EXECUTIVE SUMMARY

The Grace Hill Neighborhood Services project was designed to strengthen and expand an existing service delivery network in St. Louis, Missouri. This network, the Member Organized Resource Exchange (MORE), is a community-based network of services that can be exchanged like currency between neighbors. The MORE system allows neighbors to earn and save "time dollars" when they volunteer their services to one another. Residents receive a MORE Time Dollar for each hour of service they provide. Conversely, they must relinquish a MORE Time Dollar for each hour of service they receive. These time dollars can then be used in lieu of cash to barter or "purchase" (1) commodities at neighborhood stores operated by Grace Hill; (2) a range of services offered through Grace Hill (e.g., counseling services, wellness services, employment assistance; and (3) a range of services offered by other neighborhood residents/volunteers.

The grant recipient, Grace Hill Neighborhood Services, is a full-service agency that provides assistance to over 40,000 disadvantaged persons in the St. Louis metropolitan area. Founded in 1903 (by and in continued partnership with the Episcopal Diocese) as a settlement house, Grace Hill is a United Way agency with a 1997 budget of \$16.3 million. The agency's mission is threefold: (1) provide direct services to neighborhood residents within the self-help traditions of the Settlement House movement through neighborhood organization; (2) work for social change within society to foster greater support and understanding of the disadvantaged; and (3) work in disadvantaged neighborhoods to create strong, healthy, helping communities by encouraging and supporting neighbors helping neighbors.

Grace Hill facilitates the exchange of services by making it possible for residents to credit and debit their own time dollar accounts (based upon the services or goods that a given resident has provided or consumed). In addition, Grace Hill operates eight neighborhood Time Dollar Stores that contain goods and supplies that cannot be purchased with food stamps, e.g., toiletries, laundry detergent, diapers, paper supplies.

The TIIAP project was used to increase the number of neighborhood residents who would have easy access to the MORE system. Specifically, Grace Hill used TIIAP funding to (1) upgrade the capacity of the computers that are used to link residents with community services, and (2) increase the number of publicly accessible computer workstations in the low-income neighborhoods served by Grace Hill. These steps dramatically increased the number of residents who learned about and participated in the MORE system and the Time Dollar Exchange Program and other Grace Hill Services.

The TIIAP project also greatly facilitated the agency's ability to strengthen existing relationships and to forge new partnerships with community service providers. According to the project's closeout documentation: "The NTIA/TIIAP grant was instrumental to the development of a dynamic partnership that has been engineered with the State, the local government, and the private sector."

Project staff provided insights as to the lessons they had learned as a result of their participation in the TIIAP project. These lessons are summarized below.

- Involve consumers in the design **and** testing of the network.

- Budget more time for programming tasks.
- Develop formal agreements with other agencies that will be using agency computers.
- Anticipate staff turnover.
- Train residents in how to use the Internet.

Project staff indicated that they feel the system they have developed is effective and, as such, they would not change the way in which services are currently being offered. The project's plans for the future are therefore focused on increasing the number of residents who know about and participate in the MORE Time Dollar Exchange. In an effort to further expand residents' access, Grace Hill is seeking to acquire three vans that would be equipped with personal computers. Finally, project staff are in the process of reprogramming the system so that Grace Hill's services can be made available on the Internet.

B. OVERVIEW

Purpose and General Approach

The Grace Hill Neighborhood Services project was designed to strengthen and expand an existing service delivery network. This network, the Member Organized Resource Exchange (MORE), operates in 11 low-income area neighborhoods in or near St. Louis. MORE is a community-based network of services that includes a time dollar component through which services can be exchanged like currency between neighbors. The MORE system allows neighbors to earn and save "time dollars" when they volunteer their services to one another. Residents receive a MORE Time Dollar for each hour of service they provide. Conversely, they must relinquish a MORE Time Dollar for each hour of service they receive. Exhibit 1 provides examples of services that have been provided under this neighbor-to-neighbor exchange network. These time dollars can then be used in lieu of cash to barter or "purchase" (1) commodities at neighborhood stores operated by Grace Hill; (2) a range of services offered through Grace Hill (e.g., counseling services, wellness services, employment assistance; and (3) a range of services offered by other neighborhood residents/volunteers.

Grace Hill facilitates the exchange of services by making it possible for residents to credit and debit their own time dollar accounts (based upon the services or goods that a given resident has provided or consumed). In addition, Grace Hill operates a network of MORE Time Dollar Stores and Christmas Shops. The eight neighborhood Time Dollar Stores contain goods and supplies that cannot be purchased with food stamps, e.g., toiletries, laundry detergent, diapers, paper supplies. The Christmas Shops are held in December to assure that children have toys and clothes for the holidays. Both of these "retail" establishments provide goods in exchange for the time dollars that residents have earned in the community. Time Dollars can also be used to pay for doctor's visits at Grace Hill's local clinic, thereby helping to promote greater access to medical care.

By employing a neighbors-helping-neighbors approach, the MORE system reflects Grace Hill's belief that everyone has something of value to offer. Although Grace Hill provides the structure and resources needed to support MORE, the approach is essentially designed and operated by the neighborhoods' residents. According to program staff, "by empowering neighbors, MORE becomes a catalyst toward generating a sense of hope for the future and a momentum for change within poor neighborhoods."

Exhibit 1: Examples of Services Exchanged Under the MORE System

- assistance to blind individuals
- assistance with moving
- auto repair
- bathing
- carpentry
- child care
- cleaning
- clerical help
- coupon clipping
- gardening
- hair dressing
- house sitting
- knitting
- lawn care
- laying carpet
- painting
- photography
- shoveling snow
- tax assistance
- transportation
- tutoring
- watching pets
- watering plants
- weatherization
- writing

The TIIAP project was used to increase the number of neighborhood residents who would have easy access to the MORE system. Specifically, Grace Hill used TIIAP funding to (1) upgrade the capacity of the computers that are used to link residents with community services, and (2) increase the number of computer workstations in the low-income neighborhoods served by Grace Hill. This second point is especially important. Prior to TIIAP, there were only a few computer workstations in the communities served by the MORE system. All of these workstations were located in facilities operated by Grace Hill. Thus, residents had to travel a greater distance to access information about referrals (e.g., neighbors who needed or could provide specific services) and account balance information (e.g., number of MORE time dollars earned or used). They also had to visit these sites during normal business hours (unless a site operated by Grace Hill was open evenings or weekends).

The TIIAP funding enabled Grace Hill to establish a PC-based computer workstation in each of the participating neighborhoods. It also enabled them to place computers in facilities not operated by Grace Hill (e.g., libraries, police stations, schools). In many cases, this extended the hours that residents could access Grace Hill services, which in turn, dramatically increased the number of residents who learned about and participated in the MORE system and the Time Dollar Exchange Program.

The proposed end users were residents in 11 low-income neighborhoods in or near St. Louis. Of the approximately 18,000 individuals who participated in at least one component of MORE in 1995:

- Seventy percent had incomes of below \$10,000;
- Sixty-seven percent were women;
- Twenty-seven percent were age 55 or older; and

- Eighteen percent were under the age of 10.

Description of Grant Recipients and Project Partners

Grant Recipient. The grant recipient, Grace Hill Neighborhood Services, is a full-service agency that provides assistance to over 40,000 disadvantaged persons in the St. Louis metropolitan area. Founded in 1903 (by and in continued partnership with the Episcopal Diocese) as a settlement house, Grace Hill is a United Way agency with a 1997 budget of \$16.3 million. The agency's mission is threefold: (1) provide direct services to neighborhood residents within the self-help traditions of the Settlement House movement through neighborhood organization; (2) work for social change within society to foster greater support and understanding of the disadvantaged; and (3) work in disadvantaged neighborhoods to create strong, healthy, helping communities by encouraging and supporting neighbors helping neighbors.

Grace Hill operates five primary care facilities, two housing facilities, and one senior complex. But it is the MORE system that serves as the cornerstone of the agency's service delivery approach. There are three elements to the MORE system: services, linkage, and training. According to a report about the MORE approach:

The model of MORE is unlike the model of most service delivery programs, which focus on provision of direct services to an identified population. With MORE, direct service provision is only one component. The other two components are training and linkage. It is the relationship among these three components and how they combine to support relationship, strengthen community, and promote social change that, along with the resource exchange concept, distinguishes MORE (Lois Wright, *Member Organized Resource Exchange: A Guide to Replication*. Columbia, South Carolina. 1997).

The five areas of *direct service* are:

- **Family and Child Support Resources.** This component includes the following initiatives: (1) CO-CARE program (Care Options for Children at Risk Everyday), which teaches positive parenting skills; (2) Modified Foster Care Program, which helps increase the supply of foster homes; (3) Family Councils, which gather to focus on challenges and answers for family stability; (4) Youth Initiatives, which provide at-risk teens with positive alternatives; and (5) Mothers Asking Mothers and Mentor Dad Peer Support Programs, which provide support to teen parents.
- **Wellness Programs.** This component provides information about how to live physically, emotionally, and spiritually healthy lives. According to program materials, the initiative "is not disease oriented but, rather, preventive and covers asthma management, nutrition, diabetes management, smoking cessation, weight/exercise, lead poisoning prevention, a man-to-man support group, etc."
- **Homeless Support.** This component provides support through two facilities: (1) the substance abuse treatment Family Center for women and their children, and (2) the MORE Home for Transitional Housing.

- **Employment/Economic Development.** This component includes career centers, work experience programs, literacy/GED training, MO FUTURES, a business and career center which encourages entrepreneurship among the poor, and an AmeriCorps project that is working to revitalize neighborhoods along the Riverfront Trail.
- **Resource Availability.** This component is designed to (1) expand the level and quality of resources available within low-income communities and (2) assure that community residents are aware of and are able to access existing resources.

Grace Hill's *linkage* efforts are designed to enhance the capacity of community residents to help their neighbors. This component enables community residents to volunteer as:

- **Community Center Leaders (CCLs).** Individuals who volunteer as CCLs work out of their homes to provide emergency assistance with food, rent, utilities, and referral services.
- **S.T.A.E.S. Team Leaders (System to Assure Elderly Services).** This component matches seniors with homebound elderly neighbors in need of basic support and companionship.
- **Computer Mentors.** These volunteers work with individuals who want to enhance their computer literacy skills. This assistance, provided at a network of Grace Hill's neighborhood computer information stations, is designed to help residents access resources, use mapping software (e.g., to locate residents providing day care services in a given neighborhood), search employment databases, and access Time Dollar Exchange accounts.
- **MORE Board Members.** These volunteers "commit themselves to the health of their neighborhood" by identifying and resolving needs within their own community.
- **MORE Time Dollar Exchange Members.** As described previously, these individuals earn and spend dollars through the MORE service barter system.

The *training* component is provided through Grace Hill's Neighborhood College. This institution, begun in 1982, currently offers 35-40 courses per year. Many of these classes focus on providing community members with leadership and life skills. The college serves as the training facility for residents interested in participating in the volunteer activities described above (including computer mentors). Community residents can also take courses in the following types of topics: voter promotion, retail skills (e.g., working a cash register), how to tutor others in reading, helping neighbors with minor home repairs and weatherization, home management (e.g., budgeting, marketing, shopping with coupons), how to start and operate a small business, typing and word processing, parenting, wellness, nutrition, stress management, and exercise. Each year, a graduation ceremony and honors assembly are used to recognize students' course-taking accomplishments.

The courses offered through the Neighborhood College do not require tuition. In most cases, residents receive a stipend and/or Time Dollars upon completing a course. According to a recent report:

Awarding Time Dollars, the currency of the MORE Time Dollar Exchange, not only recognizes trainees' achievement but also brings them into the Time Dollar economy, further promoting integration of the three MORE components and MORE aims (Wright, 1997).

In addition to providing stipends and/or Time Dollars, successful completion of certain courses enables graduates to be listed in a computerized inventory of residents with specialized skills. Thus, the Neighborhood College represents an important vehicle for providing residents with the skills needed to earn Time Dollars (which can then be used to barter for services or goods). Of course, it also provides training that can be used to gain employment in the public and private sectors.

Project Partners. Project partners included a variety of city, county, and federal social service and welfare agencies:

- The Missouri Department of Social Services worked with Grace Hill to identify employment and training options for community residents who needed to comply with national and state welfare reform legislation.
- The St. Charles County Economic Development Council worked with Grace Hill to (1) expand opportunities for self-employment, and (2) identify individuals who could provide their skills and technical expertise in participating neighborhoods.
- The St. Charles County Administration provided space for network sites and services.
- The St. Charles County Division of Family Services co-located staff at neighborhood sites. These workers provided such services as family preservation, case management for AFDC participants, and family counseling.
- The St. Charles County Community Council, a coalition of human service organizations, contributed a community resource directory for use on the online system.
- A local bank provided electronic benefits transfer to residents as part of a pilot study.
- Southwestern Bell Telephone Company provided the information network and transmittal lines necessary for a neighborhood-based computer network.

The application materials also identified numerous secondary participants who agreed to test and recommend changes to the online system. These included the St. Louis Police Department, St. Louis Schools, Washington University Computer Science Department, St. Louis Community Development Agency, St. Louis Public Library, and United Way of Greater St. Louis.

Project Costs

The project cost was \$1.2 million, of which \$600,000 was provided through the TIIAP grant. Of this amount, approximately 41 percent was budgeted for personnel and fringe benefits, while 26 percent was budgeted for equipment. Matching funds were provided by Grace Hill, Southwestern Bell Telephone Company, Boatmen's National Bank, and a private philanthropist.

C. PROJECT CONTEXT

Community Description

The project focused on St. Louis City's north and near south sides. The total population of the service area is approximately 70,400 (29,000 households). According to information submitted with the application:

- Over one-third (38 percent) of residents in the service area have incomes at or below the poverty level. An additional 58 percent fall at or below 150 percent of the poverty level.
- Over 65 percent of residents in the service area have no health insurance.
- At the time of the application, the unemployment rate for the service area was 21.5 percent.
- The majority of the population in the service area is African American.
- Approximately 10 percent of the population is elderly.

The project was also conducted in several towns in St. Charles County, an adjoining semi-rural suburb with a population of 223,900. Approximately 15 percent of the county's population has family income under 200 percent of the federal poverty level, with 5 percent falling below 100 percent of the federal poverty level.

Status of Telecommunications/Information Infrastructure Environment Prior to the TIIAP Project

A critical requirement of MORE is an accounting system that can track the flow of Time Dollars across all participating residents. This system must be able to maintain up-to-date information on (1) the number of hours that each participating resident has provided services within the community,¹ and (2) the number of Time Dollars that each participating resident has saved, expended (on goods or services), or donated.

When the time dollar approach was first implemented in 1982 (as the Service Credit Exchange), its accounting system was maintained on index cards. However, as the number of services, programs, and users increased, it became necessary to automate the accounting process. In 1985, Grace Hill computerized its resource list (i.e., the inventory of skills that residents could share with their neighbors). Moving the resource list to a computer enabled Grace Hill staff to more easily update, categorize, and share information about residents' skills and abilities. Soon after, Grace Hill also automated the system used to track neighbor-to-neighbor transactions. Automating these two functions had immediate benefits:

The listing of neighbor skills and abilities in this database provided a way to view and *understand neighborhood assets*, while the recording of services requested made it possible to *track unmet needs* and to use this information in service planning (Wright, 1997).

¹Under the MORE system, one hour of any service is equivalent to one hour of any other service. Thus, for example, one hour of child care had the same trade value as one hour of house painting.

Automating the inventory and tracking functions also helped facilitate a massive increase in the number of residents who participated in the MORE Time Dollar Exchange system. This, in turn, necessitated an upgrade in the computer system. The upgrade improved the overall functionality of the automated MORE system (although staff indicated that many of these new features and components were never used).

As is discussed in the next section, the TIIAP grant was used to purchase and deploy a network of personal computers in agencies and public sites throughout the Grace Hill service area. Thus, the TIIAP project represented the third upgrade and expansion of the automated system used to support the MORE system.

D. PROJECT IMPLEMENTATION

Activities/Milestones That Occurred Prior to the TIIAP Grant Period

Grace Hill staff indicated that they learned about TIIAP from one of two sources: a notice in the *Federal Register* or a member of the Grace Hill Board (a computer science professor at Washington University). Given the project's ever-increasing need for enhanced computer support, Grace Hill staff determined that TIIAP could facilitate their efforts to upgrade their computers and expand the number of PC-based workstations. The proposal, prepared in 3 weeks, outlined the following objectives:

- **Enhance the MORE system's linkage and referral capacities.** This was to include (1) a database of 6,000 community programs offered at 3,500 sites; (2) geo-spacial mapping software to, for example, diagram job sites and corresponding bus routes; (3) online referrals among participating community service agencies; (4) electronic mail; and (5) enhanced electronic tracking of services exchanged via the MORE Time Dollar Exchange system.
- **Downloading of Selected State Information.** This function was designed to enable community residents to access information on eligibility for entitlement programs, jobs bank for employment, and immunization records from neighborhood-based computer workstations.
- **Dial-Up Access to Existing Information Systems.** This function was designed to enable community residents access to a variety of information services, e.g., electronic mail, the Internet, the St. Louis Public Library.
- **Electronic Benefits Transfer.** This function was designed as a demonstration project to recruit, enroll, and train neighborhood residents to receive direct deposit of their public entitlement or payroll into a specially designed bank account. Funds could then be accessed via a debit card. This function was also designed to provide residents with computerized access to their bank accounts for (1) reviewing account status, (2) transferring funds, (3) allowing computerized bill payment (e.g., for telephone, gas, electric companies, rent), and (4) assisting residents with managing their household budgets. Outside sources provided software and hardware for this demonstration.

It is important to note that Grace Hill already knew where they wanted to go before learning about TIIAP. As such, while TIIAP served as a source of funding, it did not serve as a catalyst that inspired new

ideas or a new direction. In the words of one individual, "TIIAP was a way to fund something we had always wanted to do."

Activities/Milestones That Occurred During the TIIAP Grant Period

Grace Hill's Computer Services Department used the TIIAP funding to obtain, program, and maintain the 25 PC-based MORE work stations that were installed in agencies and public sites throughout the community. In preparation for this task, the MORE Time Dollar System was completely reprogrammed for use on a PC-based system. Five or six of the Computer Services Department's nine staff received funding through TIIAP to work on these tasks during the start-up phase. One of the biggest challenges, according to project staff, was developing the programming that enabled users to touch the computer screen to navigate the system (this approach was viewed as being more user friendly than a mouse). While users liked the touch screens, some project staff were not sure whether the additional costs (\$1,000 per computer) warranted maintaining this function when the system was upgraded.

By the time of the site visit, the MORE Time Dollar System encompassed 43 personal computers (some of the additional computers were obtained with funding from a grant from the City's Enterprise Zone). These computers were installed in a variety of community settings (e.g., a police station, libraries, an ambulance station, an economic development center, public schools) and Grace Hill facilities (e.g., housing projects), that were accessible to neighborhood residents. Grace Hill used several criteria in selecting these sites, including (1) the need for a computer workstation in a given neighborhood, and (2) the extent to which the location would be open and accessible to residents during business and non-business hours. Grace Hill also required that host agencies would not charge their clients for access to the computer workstation. Once the workstations were operational, staff resources were required for ongoing maintenance and repairs.

TIIAP funding was also used to develop a computer mentor program. This class, offered through the Neighborhood College, developed a cadre of residents who were then able to train community residents in the use of the computer workstations.

In addition, TIIAP funding was used to help the Missouri Department of Labor and Industrial Relations develop and implement MO Works, an online database containing information on job opportunities. At one point, Grace Hill staff were informally loaned to the Missouri Department of Labor and Industrial Relations to help in the design, development, and programming of MO Works. Once the database had been created, community residents were able to use the Grace Hill computer workstations to access MO Works (in fact, Missouri's Governor used a Grace Hill site to inaugurate the MO Works system). Grace Hill's contribution to MO Works was completed toward the end of the 18-month grant award period.

TIIAP funding was also used to develop a comprehensive online resource bank of services available in all of the neighborhoods served by Grace Hill. This list was compiled from several different sources, including United Way agencies, neighbors offering services through the MORE Time Dollar Exchange System, local schools, and churches. A database manager was hired to manage and monitor use of this information, which was made available to community residents via the PC-based computer workstations. An additional feature of this resource directory was a geo-spacial mapping system. This feature allowed users to search for all available resources within a given geographic boundary and printed out maps with the location of the referral. Thus, for example, users could search for all day care providers (e.g., residents offering this service through the MORE Time Dollar System) within a six block radius of their house. Because the city's public transportation department did not make the necessary information available to

Grace Hill, the geo-spatial mapping feature did not include the capacity to match bus routes with neighborhood services.

Finally, TIIAP funding was used to develop a debit card that provided residents with computerized access to a bank account. These cards were viewed as a tool for helping neighbors preserve their limited cash, become familiar with computer technology, and access their financial resources. Examples of functions included check cashing and direct deposit of funds into personalized accounts. Once the system was in place, Grace Hill recruited participants, developed training manuals, provided instruction in the use of the cards, and generated monthly activity reports for users. By the end of the project, over 500 residents were using the cards to manage their financial resources. By the time of the site visit, however, the bank holding the clients' accounts had been acquired by an out-of-state bank. This new bank subsequently decided to end its participation in the debit card project.

Activities/Milestones That Occurred Following the TIIAP Grant Period

As is discussed throughout the remainder of this report, the Grace Hill project has been sustained and continues to expand. At the time of the site visit, 43 computers were available to community residents. In addition, work is currently underway to upgrade the computer system and provide additional access through the use of mobile vans equipped with personal computers.

Problems

Project staff identified a number of problems that slowed the overall pace of the initiative. With one exception, none of these problems affected the scope or success of the project. Significant barriers are discussed below.

- **Staff Resources Required for Ongoing Maintenance.** Maintenance and repairs consumed more staff resources than was originally envisioned. One contributing factor was that some of the participating agencies added their own software to the computer workstations. Grace Hill resolved this problem by requiring that agencies sign an agreement of usage. This agreement included a provision that no new software be added to the workstations.
- **Change in Bank Ownership.** Although successfully implemented, the debit card initiative was in the process of being discontinued at the time of the site visit because the bank that was holding the clients' accounts had been acquired by another bank. This new out-of-state bank subsequently decided to end its participation in the debit card project.
- **Software Became Obsolete.** The software used to operate the MORE Time Dollar System became obsolete over the life of the 18-month project. Project staff indicated that TIIAP requested very specific information in the application materials regarding the hardware and software that would be purchased and used. As such, it was perceived that it would have been difficult to change the specifications for any project-related equipment purchases.
- **Politics of the Site Selection Process.** One respondent indicated that the need to secure broad-based political support eventually affected the site selection process. The location of 12 additional computers, purchased in 1996 with non-TIIAP funds, was partly determined by a need to place a workstation in every assemblyman's district. This factor was considered as

part of the site selection process in spite of the fact that the need for Grace Hill's services was not equal across these jurisdictions.

- **Time Required to Implement Complex System Functions.** Two of the system functions (i.e., allowing users to navigate the system by touching the screens, geo-spatial mapping) took considerable time and resources to program. Nonetheless, both of these features were viewed as being especially useful for Grace Hill staff and end users.

In the end, however, the geo-spatial mapping feature did not include any information on bus routes because the city's public transportation department did not come through with the necessary information. This limited the system's value, since users were not able to use the mapping feature to identify public transportation options for a given job or community resource.

- **Proprietary Databases.** The local United Way agency had a massive database that contained information on community resources across the region. In 1993, the United Way and Grace Hill reached an agreement whereby the United Way would transfer, via data tape, quarterly updates of all resource bank data (this data tape included information on 6,000 programs offered in 3,500 sites provided by 1,500 agencies). The goal was for Grace Hill to provide these updated data on its computer workstations so as to make this information available to staff and residents.

This guide to services was included on the computer workstations for 5-6 months. However, due to a policy change at United Way, Grace Hill was eventually required to pay a \$365 per year fee for including the database on its workstations. Also, other conditions were added that were unacceptable to Grace Hill. As a result, Grace Hill eventually dropped the United Way resource guide from their system. This represents a long-term problem for Grace Hill, since it lost access to an extensive inventory of resources that is only maintained by the local United Way.

- **Input From the State of Missouri Was Lagging.** State resources were focused on (1) the implementation of their own FAMIS computer system (for the state AFDC population); (2) designing and implementing welfare reform; and (3) designing and implementing an online employment assistance system (as discussed previously, Grace Hill staff eventually used some of their TIIAP funding to assist in the development of the state's on-line database containing information on job opportunities). These delays at the state level in implementing the FAMIS system eventually limited some of the information and referral functions that were originally envisioned for the Grace Hill project.

E. PROJECT ACCOMPLISHMENTS AND IMPACT

Grace Hill staff indicated that the project was an overwhelming success. Evidence gathered during the site visit clearly demonstrates that TIIAP enabled the agency to (1) increase the number of residents who knew about and used Grace Hill's neighborhood services; (2) increase the number and quality of services offered through the MORE Time Dollar Exchange; and (3) implement its debit card system. Each of these accomplishments is discussed below. In addition, some respondents indicated that the resident's participation in the More Time Dollar Exchange helped to increase their computer literacy skills, bring more neighbors together, build a sense of community, and to increase participants abilities and skills.

Technology-Related Accomplishments

TIIAP funding was used to upgrade and expand the computer system used to implement the MORE Time Dollar Exchange program. Specifically, the project was used to:

- **Reprogram the previous MORE Time Dollar System for use on a PC-based system.** This enabled the system to be provided on additional computers in a variety of agency and neighborhood settings.
- **Make the MORE Time Dollar System more user friendly for community residents.** Revisions to the underlying programming resulted in a system that was user friendly (e.g., touch screens instead of a mouse for navigating the system, easy accessible help screens), an especially important feature for residents with no previous computer experience.
- **Purchase 25 personal computers.** This significantly expanded residents' access to the MORE Time Dollar System in the neighborhoods served by Grace Hill (18 additional personal computers were eventually purchased with non-TIIAP funds). In some cases, TIIAP funding was used to replace older computers. In others, it was used to expand the number of neighborhood sites that had computer access. It is important to note that the TIIAP project represented the first time that Grace Hill was able to situate computers beyond its own facilities.
- **Provide computer training to community residents.** An important component of the TIIAP project was the development of a new computer training course. This class, offered through the Neighborhood College, provided computer instruction to 294 residents. Individuals who completed the course were assigned a computer workstation where they help community residents navigate the system.

The following narrative, taken from a 1997 Grace Hill brochure, summarizes the impact of TIIAP-purchased technology on the provision of the agency's services:

As it has grown, the More Time Dollar Exchange has turned to technology to more responsibly manage the resource referral database as well as the monthly account statements provided to each member. By moving to computers, a number of additional opportunities have become possible. For example, all participating neighborhoods can be networked together, broadening the foundation of this community-based program.

Additionally, technology has broken through the information barrier usually isolating low-income neighborhoods from the wealth of resources available through computerized networks. The MORE stations can access not only the referral database to participants in the MORE Time Dollar program, but also an agency referral database and state employment resources. The agency referral information has been compiled through a combination of private lists and member usage. It would also be possible to use other community data bases. The employment resources are provided through the Missouri Department of Labor & Industrial Relations. Before, neighbors could only utilize this information through state offices. Now, it is available right in their neighborhoods...Once linkages such as the MORE boards, the CCLs, the STAEs leaders, the MORE Time Dollar Exchange, and technology are solidly in place, services can more easily flow into the neighborhoods.

Impact of Project on Direct End Users and the Overall Community

Increased Usage of the MORE Time Dollar Exchange. The technological advances described above transformed Grace Hill's capacity to serve its consumers. First, the purchase of new personal computers enabled Grace Hill to increase the number of computer workstations throughout the community. Over time, the installation of new computers at new sites increased residents' exposure to the MORE Time Dollar Exchange and all associated initiatives (e.g., the Neighborhood College, the computerized listing of community services, online access to MO Works). This, in turn, had a multiplier effect on a combination of systems. Specifically:

- The number of residents participating in the MORE Time Dollar Exchange increased dramatically over the life of the project.
- The number of residents participating in the Neighborhood College also increased over time.
- The establishment of additional workstations also increased community members' access to benefits and services. Many neighborhood residents did not know about programs for which they might be eligible until they started using the workstations.
- These increases eventually led to a significant expansion in (1) the number of residents who were included on the MORE Time Dollar Exchange's inventory of available skills; (2) the number and range of services available on the MORE Time Dollar Exchange's inventory of skills; and (3) the number of annual transactions handled by the MORE Time Dollar Exchange. For example, as shown in Exhibit 2, the total number of annual transactions increased from 14,798 in 1995 to 21,338 in 1997.

Exhibit 2: Annual MORE Time Dollar Activity Totals

Year	Goal for total value of Time Dollars to be exchanged	Actual value of Time Dollars exchanged	Total number of transactions
1997	65,000	70,610	21,338
1996	65,000	58,564	18,641
1995	45,000	45,026	14,798
1994	n/a	26,839	n/a
1993	n/a	26,690	9,305
1992	n/a	9,552	n/a
1991	n/a	11,890	n/a

Source: Grace Hill Management Reports.

Project staff used a variety of techniques to identify residents who might be interested in participating in the MORE Time Dollar Exchange. For example:

- In some neighborhoods, Grace Hill volunteers went door to door to promote the MORE Time Dollar Exchange. This resulted in significant increases in the number of residents who learned about and participated in the project.
- Telephone calls were made to participating members to find out the types of services (1) they needed done for themselves, and (2) they would be able and willing to do for someone else. According to program staff, this resulted in growth in the program in targeted neighborhoods.
- Inactive members were contacted by phone and letters to invite them back to the program. According to program staff, this resulted in some inactive members returning to the MORE Time Dollar Exchange to barter their services.

One way of documenting the impact of TIIAP on the Grace Hill project is to track increases in the number and range of services made available to community residents over time. Shown below are the most frequently used services that were "purchased" using MORE Time Dollars in 1993 and 1996:

1993

- Babysitting (6,155 dollars)
- Friendly Visits (2,797 dollars)
- Homemaker Services (2,351 dollars)
- Cooking (1,373 dollars)
- P.D. 100 Neediest (1,399 dollars)

- Transportation (1,297 dollars)
- Other Odd Jobs (1,158 dollars)
- Literacy Tutoring (735 dollars)

1997

- Babysitting (10,308 dollars)
- Homemaker Services (7,648 dollars)
- Cooking (6,640 dollars)
- Friendly Visit (4,851 dollars)
- Transportation (4,117 dollars)
- Cleaning (3,544 dollars)
- Meals on Wheels (3,435 dollars)
- Shopping and Errands (2,693 dollars)
- Odd Jobs (2,581 hours)
- Painting (988 dollars)

Another benefit identified by Grace Hill staff was the increase in confidence and self-esteem that resulted when residents increased their computer skills. While difficult to quantify, the attainment of computer skills has the capacity to boost a resident's capacity to compete in the local economy.

Training End Users. A major goal of the TIIAP project was to increase the number of residents who (1) participated in the MORE Time Dollar System, and (2) used the computer workstations to access information about time dollars and other topics, e.g., via the Internet. This training was accomplished through a special course that was offered by the Neighborhood College. This 40-hour course provided an overview of all MORE computer applications, including (1) Windows and electronic mail; (2) MORE Time Dollar resource and referral; (3) Missouri State Employment Services and Department of Social Services databases; and (4) Community Bulletin Board. It also included instruction in how to conduct outreach and training of other neighbors. Residents who completed the course received a \$35 stipend and 5 MORE Time Dollars. Approximately 10-15 residents took the class at any given time.

It is important to note that prior to TIIAP, the Neighborhood College did not offer any computer training. By the end of the project, 294 community residents had completed the course and were thus qualified to serve as mentors. These mentors are assigned a computer workstation where they help community residents navigate the system, e.g., to access their MORE Time Dollar accounts, to be matched with neighbors who have a given skill, to obtain information about a community service provider, and to access information about employment opportunities. Individuals who come in off the street to use the

computers are assisted by these mentors. As such, the computer mentors played a vital role in helping to expand the scope of the MORE Time Dollar Exchange. As one respondent pointed out, the mentors succeeded in making residents' first experience with computers a positive one--something other programs had failed to do.

Impact of the Project on Grant Recipients and Project Partners

The TIIAP project greatly facilitated the agency's ability to strengthen existing relationships and to forge new partnerships with community service providers. According to materials submitted in the project's closeout documentation:

The NTIA/TIIAP grant was instrumental to the development of a dynamic partnership that has been engineered with the State, the local government, and the private sector. It is exceptional in that the MORE Work Stations are not merely a collaboration of services but, instead, true *integration*. Public and private resources actually intertwined with our state-of-the-art computer-based information system called the Member Organized Resource Exchange (M.O.R.E.) Information Network.

Some of these partnerships were clearly in place prior to the TIIAP grant. For example, in 1987, Grace Hill collaborated with the Division of Family Services to establish a MORE/FUTURES Career Center that helps residents make the transition from welfare to work. Although this center was part of the Grace Hill network prior to TIIAP, the grant enabled project staff to add new computer resources and to cycle more residents through employment and training activities (e.g., through the Neighborhood College). In addition, as discussed previously, TIIAP funding was used to help in the development of the state's online database containing information on job opportunities.

Project Goals Not Met

As discussed previously, the project was not able to meet several of its goals. Some of the more prominent unmet goals are summarized below.

- Although successfully implemented, the debit card system was eventually terminated when the sponsor bank was purchased by another institution (the new out-of-town bank elected not to continue supporting the project).
- Grace Hill originally intended to include a United Way database of 6,000 programs on its system. This guide was included on the computer workstations for 5-6 months. However, due to a policy change at United Way, which required conditions regarding users that were unacceptable to Grace Hill, the United Way resource guide was dropped from their system.
- The Grace Hill system was originally intended to interact with the Department of Health's Immunization database. Because the two systems operate on a different environment, this connection has not yet been made. The system for this database was transferred from St. Louis School of Public Health to the Missouri Department of Health (MDOH) directly. Once this problem has been resolved, it is anticipated that this goal will be met.

- Grace Hill originally intended to establish an e-mail system for community members. While TIIAP funding was used to initiate e-mail for Grace Hill staff, development of a "giant neighborhood mailbox" proved to be too big to manage.
- It was originally envisioned that the Grace Hill system would allow online referrals among participating community service agencies. For example, plans were underway to use the system to prescreen and refer residents for programs administered by the Missouri Department of Social Services (DSS). These plans were discontinued, in large measure because DSS was focused on designing its own FAMIS computer system. Grace Hill staff also indicated that their agency's mission is to expand community services. As such, they were uneasy about hosting an eligibility determination process that might create restrictions and limit access to services for some residents.

Impact of TIIAP Support on the Initiative

Project staff indicated that the project would not have been possible without TIIAP's financial support. The grant clearly enabled Grace Hill to upgrade the quality of their computer network and increase the number of residents who actively participated in the MORE Time Dollar Exchange (and all related Grace Hill services). One staff member summed up TIIAP's impact in the following way: "We don't know if we would be where we are today without the grant...TIIAP is central to what we are doing today." The individual went on to indicate that the TIIAP funding came at a key time in the evolution of the MORE Time Dollar System in that it allowed Grace Hill to move from one "plateau" to the next in terms of program support.

Since Grace Hill had already been seeking support for these activities, it is not clear whether alternative funding would have been secured if the TIIAP grant had not been made available.

F. EVALUATION AND DISSEMINATION

Evaluation

The TIIAP project significantly enhanced Grace Hill's capacity to collect and tabulate information about service utilization. For example, the MORE Time Dollar Exchange database enabled project staff to examine and assess:

- number and types of services used, within and across all participating neighborhoods;
- types of services most commonly requested;
- types of services most readily available; and
- extent to which a given individual is participating in the MORE Time Dollar Exchange.

The ability to aggregate and manipulate these data greatly enhanced the project's planning and monitoring abilities. For example, information on service utilization were used to (1) examine the success

of targeted outreach activities; (2) assess whether additional courses needed to be offered through the Neighborhood College; and (3) identify residents who needed to be contacted because they had stopped providing or receiving services.

The project also contracted with a professor of computer science to conduct a baseline study of the computer-based services offered through Grace Hill. The study relied on two methods, i.e., paid personal interviews with 36 Grace Hill volunteers who had taken the course on how to use the MORE system and user surveys of neighborhood residents. Findings were used to determine how the system was being used, to assess users' overall satisfaction with the system, and to describe the characteristics of some of the systems' users. The study found:

- The vast majority of users who were surveyed (89 percent) would use the system again.
- Two-thirds (66 percent) of users found the system to be very useful.
- Over half (54 percent) of users thought the MO Works was useful.
- The majority of users (73 percent) were female.
- Almost half (46 percent) of users had never used a computer before.
- The majority (81 percent) of users would like access to office programs like word processors.
- The majority (85 percent) of users thought basic math and reading skills on the computer would be useful.

The study also identified some issues regarding the way in which computers and mentors were being used. For example:

- Participants wanted the ability to enter their own time dollars in the system.
- Because mentors can accumulate more time dollars than they could ever use, some study respondents suggested providing opportunities for recognition, e.g., awards, t-shirts, parties.
- Some respondents requested additional coursework on computer-related job skills, e.g., word processing, spreadsheet use.

It is important to note that while the project collected information on increases in residents' use of the Time Dollar Exchange, it did not collect any information on the impact of these services. Thus, for example, **at the time of the study** no systematic data **had** been obtained on whether residents who completed a computer course through the Neighborhood College eventually obtained employment. Project staff hope that such an impact evaluation might be conducted in future years.

Dissemination

Grace Hill has traditionally placed considerable emphasis on disseminating information about its services to organizations outside of the St. Louis metropolitan area. Throughout the project, Grace Hill

hosted tours (an average of 4-5 per month) for government officials, university students, professors, social service agencies, and international visitors. The project also mailed informational packets and presented information at a variety of conferences. In future years, Grace Hill is looking to provide technical assistance (for a fee) to service agencies in other states.

G. LESSONS LEARNED

Project staff provided insights as to the lessons they had learned as a result of their participation in the TIIAP project. These lessons are summarized below.

- **Consumers must be involved in the design of the network.** Project staff stressed that a top-down approach to designing a user-friendly computer system does not work. End users must be involved in identifying useful system features.
- **Consumers must be involved in the testing of the network.** Once again, project staff stressed that a top-down approach to testing a user-friendly computer system does not work. End users must be involved in assessing whether the system is easy to navigate. In addition, the test should involve at least some potential end users with no previous computer experience.

It should be noted that the director of Grace Hill's computer division is a former social worker, which helped in the agency's ability to design and test a user-friendly system.

- **Budget more time for programming tasks.** Project staff indicated that, in hindsight, more time was needed to complete some of the key programming tasks. In addition, ongoing maintenance and repair tasks required more staff resources than were originally budgeted.
- **Develop formal agreements with other agencies that will be using agency computers.** As discussed previously, Grace Hill was eventually required to develop agreements with other agencies that delineated how the machines could be used. The need for these agreements came about, in part, because some agencies were adding their own software to the machines. Grace Hill staff were then required to resolve some of the resulting software problems.
- **Anticipate staff turnover.** Several project staff indicated that it is difficult for a social service agency to attract and retain quality programmers. Ironically, prior to the TIIAP project, Grace Hill's programmers were not as qualified to compete in the local job market because they were working with antiquated software. As a result of TIIAP-related activities, Grace Hill's programmers became more marketable because they started working with some of the most up-to-date software packages. In the short run, working with contemporary software made it easier to obtain programmers (who needed on-the-job experience). Once these programmers became proficient in the new software, however, they were able to command significantly higher wages from other employers.

One respondent indicated that the Year 2000 problem has made it even more difficult to hire programmers (since private firms are able to pay 50 percent more for capable staff). In addition, this individual recommended staggering the hiring and training of programmers to reflect the following 3-year cycle:

Year 1: Hire and train new programmer.

Year 2: Programmer is semi-productive as s/he applies skills learned in the first year.

Year 3: Programmer is very productive. As a result, is hired by another company by the end of the third year.

Under this scenario, this individual suggested (1) striving to keep good programmers employed for at least 3 years; (2) always having a third-year programmer on hand to complete the most complicated assignments; and (3) staggering the hiring of programmers so that they are not peaking and/or preparing to leave at the same time.

- **Residents need training in how to use the Internet.** One respondent pointed out that, while residents now have access to the Internet, they rarely use it to inform or improve their lives. This individual suggested that Internet courses be provided through the Neighborhood College.

Finally, one respondent recommended the following approach for establishing and reinforcing an organization's credibility within a given community: "Don't talk about it until you can do it."

H. FUTURE PLANS

Project staff indicated that they feel the system they have developed is effective and, as such, they would not change the way in which services are currently being offered. The project's plans for the future are therefore focused on increasing the number of residents who know about and participate in the MORE Time Dollar Exchange. Specific goals include (1) increasing the number of computer workstations; (2) increasing the number of residents who are trained to serve as mentors at the computer workstations; and (3) allowing some of the activities covered under the MORE Time Dollar Exchange to be counted as work under the new welfare reform regulations.

In an effort to further expand residents' access, Grace Hill is seeking to acquire three vans that would be equipped with personal computers. These vans would then be used to introduce computers, the MORE Time Dollar Exchange System, and all associated activities to residents who are unable or reluctant to visit the existing computer workstations. Along with a health outreach program, funding for one year has been secured and will begin operation in May, 1999. Project staff anticipate that each van would visit approximately 15-20 community sites per month.

Project staff are also in the process of reprogramming the system so that Grace Hill's services can be made available on the Internet. It is hoped that placing the system on the Internet will minimize the effort needed to repair and upgrade the personal computers, facilitate changes to the system in future, and significantly increase the number of residents who are able to access the system (since anyone with Internet access would be able to use the system). Posting the system on the Internet would not lead to a reduction in the number of Grace Hill-sponsored computer workstations, since most community residents do not own a personal computer.

Finally, project staff indicate that a by-product of the TIIAP project will be the development of a patient tracking system. This system, in conjunction with the Grace Hill-operated health programs, builds upon the lessons learned through the agency's participation in the TIIAP project.