

NCexChange
and the
**North Carolina Justice and
Community Development Center**

NTIA Award Number: 37-40-96042

Final Evaluation Report

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Final Evaluation Report

on the Community NETworker Demonstration, a project of
NCexChange and the NC Justice and Community Development Center

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Executive Summary

Background

The following paper comprises the Final Evaluation Report of the Community NETworker Demonstration Project of the North Carolina based nonprofit, NCexChange. This 30-month (ten-quarter) project has received major funding from the Telecommunications and Information Infrastructure Assistance Program (TIAP) of the National Telecommunications Infrastructure Administration (NTIA), US Department of Commerce. The report is in partial fulfillment of the conditions of the grant award as determined by TIAP.

The Final Evaluation Report is based on materials provided to the lead evaluator by NCexChange (quarterly reports, funding applications, public documents, and internal documents) and on interviews and field observations conducted in North Carolina and Washington, DC, by the evaluator during July and October 1997, February 1998, October 1998, and December 1998. The period of analysis for this report is October 1, 1996, through December 31, 1999.

Questions Addressed

This evaluation seeks to address two interrelated questions:

1. Can telecommunications technologies promote social and economic development in communities, particularly in the areas of poverty, housing, children's and family issues, women's issues, and minority economic development?
2. Is the NETworker model an effective way of introducing telecommunications technologies into organizations and communities? More specifically, does the model:
 - cause a paradigm shift in an organization, or a change in perception among individuals in an organization, so that low-resource organizations invest the time and resources necessary to use telecommunications technologies regularly, strategically and effectively;
 - promote change at an organizational level, thus developing a kind of "institutional memory" for strategic telecommunications use; and
 - establish is a correlation between organizational transformation and community building through networking?

Project Outline

At a broad level, the Community NETworker Demonstration worked to promote and develop effective uses of telecommunications technologies among community based nonprofit organizations, local government agencies, and small businesses. Led by the nonprofit NCexChange, the project operated in four sites in North Carolina from October 1, 1996 to December 31, 1998 (central office activities continued until March 31, 1999). The efforts focused primarily on distressed communities in 3 isolated, rural areas and one urban center.

More specifically, the project sought to provide a range of technology support services customized to meet the needs of selected users and their communities. The demonstration was designed to promote community revitalization by working progressively through three categories of constituents (or at three constituent levels): among individuals (at a personal level), in organizations (at an organizational level), and out into communities (at a community level).

The model of the NETworker project involved the hiring and placement of a new staff person (called a Community NETworker) with a pre-selected host organization in each of four host sites across North Carolina. The original goal was to hire and train these staff people during the first four months of the 27-month demonstration. With the help of local advisory boards, these NETworkers would subsequently recruit up to 10 local organizations as "target groups" for the project's main intervention. After performing a detailed "Readiness to Network" assessment with each group, the NETworkers would next work with the target groups to develop and implement customized telecommunications work plans.

In working closely with various staff members of these organizations, the goal was to cause a change in the way the organizations perceived technology and its potentially beneficial role in organizations and communities. In addition, NCexChange hoped that the NETworkers' impact would be strong enough to generate enough local support to continue the NETworker positions after the close of the demonstration using local resources. In this manner, the project could continue to ripple through the original communities and NCexChange could turn its attention to promoting the NETworker model in other locations.

While the NETworkers were engaged in their local efforts, NCexChange continued to provide them with ongoing support and training. NCexChange also worked simultaneously on a second, information-supply component of the demonstration. In these efforts, NCexChange led 14 statewide resource organizations through a process to develop an integrated information library of community services, resources, and policy issues. Called the "Gateway Project," this second stream of the NETworker Demonstration sought to provide online information targeted directly to people working in the community development field in North Carolina and across the US.

Principal Findings

Focusing on the question about the overall impact of telecommunications technologies, the key findings fall into two categories:

- 1) The NETworker project confirms that using telecommunications technologies is helpful for many community-based organizations (including those involved in poverty, housing, children's and family issues, women's issues, and minority economic development), because targeted technology use:
 - Provides access to new information,
 - Changes behaviors of people within organizations in a positive way,
 - Promotes "networking," including building new relationships, collaborating, and sharing information,
 - Encourages organizations to think strategically about the ways they manage and use information, and
 - Generates new areas for economic growth in marginalized communities.
- 2) At the same time, the project demonstrates that the overall impact of telecommunications technologies is limited by:
 - Organizations' lack of knowledge of their own specific information needs, which can relate to a broader lack of internal development within an organization;
 - The low priority most organizations give telecommunications, largely based on issues of cost and technical difficulty;
 - The inherent shortcomings in technology at this point in time, including the high marginal cost of equipment among low-resource organizations;
 - The slow pace at which much community development work progresses; and
 - The overall complexity involved in all community-building processes.

With regard to the specific functioning of the NETworker model, there are several important findings. Overall...

Community NETworkers proved to be highly effective in helping their target groups, host organizations, and communities when they could devote time to working them. In this demonstration, the NETworkers were sometimes faced with other issues that limited their interactions with target groups and hindered the implementation of the NETworker model. These issues include the following:

- 1) Collaborative project management and implementation takes special skills and sensitivities. In the NETworker demonstration, much of the energy of the participating staff members focused on managing the project's complex structure rather than in providing direct service to clients.
- 2) The broad range of goals in this project – and the inherent vagueness involved in 'community development' or 'community betterment' – both helped and hurt the NETworker demonstration. The breadth helped because it allowed the project to develop in different ways in response to local conditions; it hurt because it gave room for confusion and conflict among different goal priorities that emerged among different participants.
- 3) In a similar vein, the NETworker, as a newly conceived staff position with no clear model other than a librarian, had to deal with a lot of role confusion. While NCexChange attempted to define and control both the role and the actions of the four NETworkers, most project participants ended up defining the NETworker role according to their (or their organizations') own needs and desires. As a result, even when they used the same language to describe the

NETworker role, people had different expectations about what the NETworkers should be doing in their day-to-day activities.

- 4) The NETworker position, as conceived in this project, was most likely too broad for one person to fulfill without access to additional resources.
- 5) "Networking" involves much more than interacting with computers and other technologies. There are significant social components to any networking project, and these components develop slowly and demand much effort. In the context of this project, building and maintaining functioning networks took longer, and required more time of key staff people than anticipated. Not surprisingly, the project site that had the strongest and broadest pre-existing social networks (Bertie, Martin, Washington, and Tyrrell Counties), derived the most benefit from the demonstration.
- 6) A combination of factors related to points 1-5 (in addition to more general problems in the nonprofit and community development sectors) led to an unexpected amount of staff turnover in the project. This turnover significantly disrupted the implementation of the NETworker project during its first 15 months.
- 7) Staff turnover, collaboration difficulties, and problems with assessing the needs of target groups generated major time and financial pressures for the project participants. Because these pressures led to significant changes in the implementation, they may, in fact, have subverted a full test of the Community NETworker model.
- 8) The Gateway portion of the project, while enormously successful in building new information sources, has yet to develop into the dynamic, interactive locus of information exchange about community issues envisioned by NCexChange. This shortfall is due to:
 - The inability of key NCexChange staff members to devote enough time to the Gateway site's development because they were stretched tending to other portions of the project,
 - The fact that most participants were starting from scratch with web site development and chose to focus on their own sites rather than providing information for the interactive modules of the Gateway site, and
 - An absence of a critical mass of community-based users of the information.

Discussion

The Community NETworker Demonstration was an ambitious project that sought to address the most fundamental problems associated with the strategic use of telecommunications technologies among community-based organizations. NCexChange has, in fact, done an exceptional job over the last decade identifying the range of problems and barriers associated with community networking. Furthermore, the staff of the organization has developed a robust strategy for addressing these problems in the NETworker model.

From a positive perspective, this project has established that telecommunications technologies can help community-based organizations. In certain areas, NETworker participants made important progress in their use of the Internet and their understanding of the role that information plays in the success of their organizations. Furthermore, it is not an overstatement to say that each community in which the NETworker project operated now possesses at least two or three key organizations that report that they will be technology "champions" focused on spreading telecommunications use in their local areas.

At the same time, the Demonstration also showed that the difficulties associated with implementing the strategic use of telecommunications at the community level are complex, and the fix will be neither quick nor easy. In this project, NCexChange sought to address most of the problems simultaneously, through a comprehensive model and strong partnerships. While this was a sound, necessary strategy given the limitations of the NTIA funding program, partnering added another layer of complexity – and another set of issues – that were not anticipated when the project began. These additional issues led to further complications that, even when negotiated successfully, limited the overall impact of the NETworker project.

A result of these complications is that the NETworker model was not as thoroughly and systematically tested as the project directors would have liked. Delays in starting the project at two sites, staff turnover at all levels of the project, longer-than-anticipated acclimation for the NETworkers at their host sites, difficulties with the assessing information needs of target groups, and control issues between NCexChange and the host sites all caused significant interruptions in the project. As NCexChange diligently attempted to stay on track with its implementation schedule, it was forced to make alterations to its model. While this was expected from the outset to a degree, the eventual changes meant that the NETworker project evolved into more customized formats at the target group level. As a result, although the project has had a positive impact and is continuing in all four sites, three of the host organizations have significantly modified the project format to meet their own needs and expectations.

Fortunately, in at least one of the four participating sites, there is an ongoing effort to preserve and expand the core NETworker model. Quite remarkably, this location – Northeastern NC – is the most challenged of the four NETworker communities in terms of resources available to support telecommunications use. The progress made at this site, particularly in how the host organization (BMW CDC) was transformed to think strategically and comprehensively about telecommunications site clearly demonstrates the potential impact that a comprehensive approach (the NETworker model) can have. As this group moves forward with its telecommunications work, it will be fascinating to see the ultimate impact of the NETworker model.

Evaluation Report Outline

The full evaluation report contains three sections. Section 1 gives the background of the problems NCexChange was seeking to address through its intervention and lays out the basic design of the NETworker model. Section 2 addresses the specific implementation plans for the overall project, examines the early difficulties with implementation at the four NETworker sites, and offers a more detailed description of the principal findings of the evaluation. The third section details the methodologies and resources used in the evaluation.

SECTION 1: Overview

To give an idea of the overall construction of the NETworker model, this first section of the evaluation report examines the background of both the issues the model was seeking to address and the design of the NETworker concept.

Problem Statement

In this project, NCexChange confronted three interrelated issues faced by most community-based organizations (CBOs) in North Carolina (and across the US):

- 1) the lack of access to telecommunications technologies,
- 2) the lack of training to use these technologies effectively once access is obtained, and
- 3) the general reluctance of CBOs to commit resources to the continued strategic use of telecommunications technologies.

Based on years of experience in working to encourage the strategic use of telecommunications among CBOs, NCexChange possesses a deep knowledge of the difficulties these groups face when attempting to use information technologies in their work. In its application to TILAP, NCexChange offered striking evidence of the problems.

In data collected before 1996, NCexChange found that few CBOs were online (less than 21% of nonprofits in North Carolina, according to a study by the N.C. Center for Nonprofits), and fewer still were actively networking (only 33% of those connected, according to a survey by NCexChange). To understand the reasons behind these low numbers, NCexChange conducted focus groups during the planning phase of the NETworker Demonstration. They discovered a host of difficulties that CBOs, locally based government agencies, and small businesses experience in trying to use the National Information Infrastructure in addressing the needs of their communities. Among these findings were:

- Groups found it hard to grasp the relevance of information technologies to their work;
- They found the technology confusing, often overwhelming;
- CBOs and local government agencies were wary of the added burden telecommunications might impose on their already overworked staff;
- They were reluctant to trade-off valuable time to master unfamiliar technology for which they don't see a direct benefit;
- Especially in marginalized areas (rural areas and in poor communities), few groups had local access to training and technical support;
- When groups did go online, it was difficult for them to find information that matched their real needs; and
- Perceived cost was another major difficulty and groups needed help in identifying the most cost-effective networking strategies.

Despite the barriers, NCexChange also learned that CBOs were excited about the possibilities in using information technologies in their work. Drawing from a 1995 N.C. Rural Center survey, NCexChange knew that 72% of local governments and 92% of nonprofits said they would use electronic networks if they had the necessary training and support. NCexChange also found that potential local support organizations, such as public libraries and cooperative extension offices, would like to respond to this interest, but most are still developing their own networking expertise and have little or no experience in training others.

Interestingly, NCexChange uncovered another, related problem in its research. It found that many statewide resource organizations that serve CBOs would like to disseminate information electronically in order to improve its usefulness and timeliness. Unfortunately, there were several problems that stood in the way of a broader shift to this information-delivery approach. Most evident were the normal technological and organizational hurdles to moving information onto the web. In addition, because few end user groups have been online, those experienced with online posting had rarely gotten useful feedback about the information they were providing. These statewide resource organizations needed help both in using online communication tools such as Web pages and listservs, and in tailoring their information to the specific needs of their constituents.

Background of the Community NETworker Demonstration

NCexChange, a North Carolina nonprofit project launched in 1990, was the first statewide networking initiative in the country for nonprofit organizations. An important outcome of this effort was the identification of the multiple barriers community-based organizations face in using networking in their work and how much user support is required. NCexChange developed the idea for locally-based Community NETworkers in response to the many lessons learned during that experience and the realization that other sectors in communities such as local government and small businesses faced similar obstacles.

A demonstration of the Community NETworker model was launched in October 1996, funded by a \$543,000 grant from the Telecommunications and Information Infrastructure Assistance Program (TIAP), National Telecommunications and Information Administration, U.S. Department of Commerce. This grant was matched through a variety of sources. TIAP previously supported the planning process for the NETworker model, which was called the Community Information Broker project. NCexChange was the lead organization for the Community NETworker Project and served as statewide coordinator for the demonstration. The organization has also provided initial and ongoing training, technical support, information exchange, monitoring, evaluation, and administrative support to all of the staff of the demonstration.

Location

The NETworker demonstration was based in four low-wealth communities (see Attachment 1) in different parts of North Carolina: Swain County in the western NC mountains; inner-city

Greensboro; the small and racially diverse eastern city of Rocky Mount; and Bertie, Martin, Washington, and Pantego Counties, rural, mostly African American counties near the NC coast. At each of these sites, a local Host Organization agreed to work with NCexChange over the course of the grant period. These organizations were:

- **Greensboro Host:** The Greensboro Self-Help Credit Union. In addition to its community lending functions, this organization owns and operates the Self-Help Building, which houses 20 nonprofits and the Greensboro Community Networking Center.
- **Rocky Mount Host:** The Down East Partnership for Children. This group is one of the Governor's innovative Smart Start organizations. It funds and coordinates 52 projects designed to deliver quality services to family and children and to promote family economic security in the region.
- **Northeast region Host:** The Bertie, Martin, Washington Community Development Corporation (BMW CDC). This host is a grassroots collaborative that is nurturing eight emerging community based organizations in its region. The CDC is building 40 units of affordable housing and provides a variety of human services to its rural constituency. In the NETworker demonstration, BMW CDC worked in Bertie, Martin, Washington, and Tyrrell Counties.
- **Swain County Host:** The Swain County Cooperative Extension Office. This group is co-located with Southwestern Community College and manages a state-of-the-art technology facility. They sought to balance the efforts of the NETworker between small businesses and service organizations.

Duration

The Demonstration was originally scheduled to begin on October 1, 1996, and conclude at the end of September 1998. Due to several delays at the four sites and because of a significant budget revision, the project end date was moved back six months to the end of March 1999. All site-based activities finished on December 31, 1998.

The Community NETworker Model: Stream 1

In each of these four communities the host organization hired a 'NETworker' to coordinate local NETworker demonstration activities. Community NETworkers were locally-based technology champions who helped groups in low wealth communities benefit in practical ways from the information highway. They were trained to enable area organizations to use telecommunications resources strategically to address identified community problems. They served as guides for those who need assistance in "getting connected" and applying new technologies to the work of community revitalization. In addition, NETworkers identified the information needs of not-yet-linked groups and disseminated online resources to them that demonstrate the value of networking.

To achieve maximum impact in distressed communities, NETworkers focused their attention initially on the needs of groups, rather than individuals. Within their local communities, these

NETworkers subsequently recruited up to ten 'target groups' (or 'partners') which were the primary clients of the demonstration. They also worked with local communities to establish local advisory committees consisting of representatives of the target groups and local information sources. The committees agreed on workplans for the NETworker and provided local consultation. The NETworker project sought to complement but not substitute for other telecommunications projects in each community.

In working with these various partners, the NETworker aimed, in the words of the project director, "to use a variety of telecommunications tools in a strategic way to address community issues."¹ The NETworkers served local entities involved in community revitalization efforts such as community-based nonprofit organizations, local government agencies, and small businesses. About 90% of the target groups were small, community-based nonprofits, and each worked either directly or indirectly on sustainable, grassroots community development. Activities ranged from legal services to low income housing development to child care and family preservation.

In addition, the NETworkers attempted to build and expand the capacity of traditional information sources in the host communities – public libraries, cooperative extension offices, and government agencies – to serve as NETworkers for those people who are representing or working on behalf of underserved populations. All these groups were encouraged to use online resources to serve the needs of local citizens and to support telecommunications initiatives that address community needs. In this manner, the project openly promoted cross-sector collaboration.

The Community NETworker Model: Stream 2, The 'Gateway' Project

In a second portion of the NETworker Demonstration, at least fourteen statewide (NC) resource organizations worked on developing Web sites, which NCexChange hopes will evolve into an integrated information library of community services, resources, and policy issues. NCexChange held regular meetings with these important advocacy groups to assist and motivate them in developing targeted Web pages. It was intended that each of these groups would include as many of the following areas as possible in their Web design:

1. Description of the organization or program: includes the purpose or mission, how and when it was formed, and contact information for staff, board, and advisory committee. Special programs would have their own Web page or could be divided by the following sub-categories.
 - *Direct Services to individuals*: target group(s) and/or eligibility requirements, types of services, limitations, hours of service, service area
 - *Resources to organizations*: description of grants, loans, technical assistance, consultation, site visits, speaking engagements, conferences, workshops, trainings, and other special events
 - *Community services*: speaking engagements, trainings, workshops

¹ Letter from Terry Grunwald, NCexChange Executive Director to Alan Abramson, Feb 23, 1998.

2. Public awareness: Explanation of key issues around each topic area (affordable housing, child welfare, community reinvestment, etc.) appropriate for laypersons; statistical data to demonstrate problems; research and analysis; and responses to common fallacies and arguments of those who oppose the goals of the organization.
3. Advocacy Agenda: Use of the Web to (1) introduce new legislative and regulatory initiatives; (2) report on the progress of that initiative through the legislature, including assignment to committees, committee and floor votes; (3) provide talking points around pending legislation; (4) inform undecided legislators who need a special effort; (5) disseminate quick alerts; (6) provide draft "sign-on" letters of support; and (7) report on final outcomes. The same strategies can be used in widely publicizing new regulations and administrative procedures.
4. Resource Development (Wish List): A detailed list of specific needs of an organization or information on how citizens can get involved. Organizations can use the Web to solicit funds, request in-kind support, find volunteers, or get donations of space or equipment.

NCexChange maintained (and is continuing to maintain) the Gateway, and it provides Web-based entry points to all organizations for these four categories of online information

Implementation Plan

The intent of the project designers was to follow these two streams as closely as possible according to a detailed work plan. The executive director (the designer of the project) was assisted by a NETworker project manager hired specifically for this project. The project manager was the main contact for the four NETworkers, and she assisted them with most issues (training, etc.) that arose during implementation. A third NCexChange staff member was responsible for all of the Web design and maintenance for the demonstration. Together, these three people had primary responsibility for guiding and supporting the project implementation.

The next section will show that implementing Stream 1 of the NETworker model according to the work plan proved quite difficult once the project began. The discussion examines the details of the work plan, outlines the problems that took place in trying to follow the work plans, and discusses the evaluation's principal findings. The section also includes a more involved description and discussion of Stream 2.

SECTION 2: Implementation Issues and Discussion of Principle Findings

Part 1 Implementation Issues: Overview of Stream 2 Implementation Work Plan

Although the bulk of its work involved activities in the four NETworker sites, NCexChange also pursued a strategy with statewide organizations to provide timely, useful information to community groups via the World Wide Web. In this portion of the demonstration (called the Gateway Project), NCexChange worked with 14 groups to design a "Gateway" web site for advocacy-oriented information. Specifically, this project progressed through the following series of steps:

1. Recruit statewide advocacy organizations to join the Gateway Project. Groups must provide \$10,000 match.
2. Meet with organizations to explain the NETworker project, define an overall agenda / work plan for the Gateway project, and work out a structure for the Gateway site.
3. Work with each statewide group to generate content for the Gateway site, including general organizational information, advocacy agendas, job and event listings, and wish lists.
4. Create site with "ownership" of content held by the participating organizations (meaning the statewide groups would be responsible for generating and maintaining content).
5. Roll out the site with the goal of completing all of the sections by the end of the project.
6. Work with statewide groups to maintain the Gateway site with current information supplied by participating organizations. This will help provide timely, easily accessible information to communities in NC (esp. nonprofit and advocacy organizations and networks).
7. Allow other interested groups to join Gateway site based on the format piloted with the original Gateway organizations.
8. Have an impact on public policy in the issue areas of poverty, CED, housing, children's and family issues, women's issues, minority economic development, through access to information and coordinated advocacy.

Examinations of NCexChange quarterly reports and interviews with Gateway participants indicate that this process went more or less as planned, with few problems.

Discussion of Stream 2 Implementation

Development of the Gateway web site proved to be highly successful in moving the participants onto the web, but the site has yet to become the interactive community development tool that NCexChange originally envisioned. This should not be read that the Gateway efforts were a failure. The fact that there are now more than a dozen important statewide organizations with new web sites and newfound motivation to provide information electronically is a significant accomplishment. The Gateway web site achieved its basic mission: there is now a single, easily navigable point where advocacy organizations can access continuously updated information on important issues affecting all North Carolinians. This portion of the NETworker project has generated momentum for an online advocacy community, and the foundation now exists for continued improvement in this area. There also appears to be real momentum and commitment on the part of Gateway participants to expand and update their individual sites.

The shortfall in the Gateway site development exists around the more interactive goals in the original plans. While the site has sections on job postings, a "wish list" for nonprofits, and a dynamic advocacy agenda, these modules have not been used much to this point. Part of the problem lies with the Gateway members, who have used their own web sites to provide this kind of information. NCexChange staffers, who were stretched meeting other needs during the NETworker demonstration, were not able to push the development of the other sections. In

addition, the delays in the demonstration and the overall lack of access to the Internet among many local community advocates limited the demand for the interactive portions of the site.

Nevertheless, the Gateway site implementation plan worked quite well as a way of creating this new resource. The hope is that NCexChange will be able to continue to build on the solid foundation it has created.

Implementation Issues cont'd: Overview of Stream 1 Implementation Work Plan

In much the same way as with Stream 2, the project designer had a detailed work plan to manage the activities of Stream 1. Prior to the launch of the NETworker Demonstration, NCexChange spent several years (including a two-year planning phase with support from NTIA under TIAP) creating and refining its approach to community networking. The development process culminated in 1996 with the publication of a 150-page networking handbook called *Making the NET Work: Online Strategies for Community Based Organizations*. At the most basic level, the handbook sought to help community-based organizations in two ways:

If your organization is not yet on line, this guide will help you assess the potential usefulness of electronic networking to your organization and give you the background you need to make informed decisions about this technology. If your organization already is on line, this guide will help you make the most of the capabilities of electronic networking.²

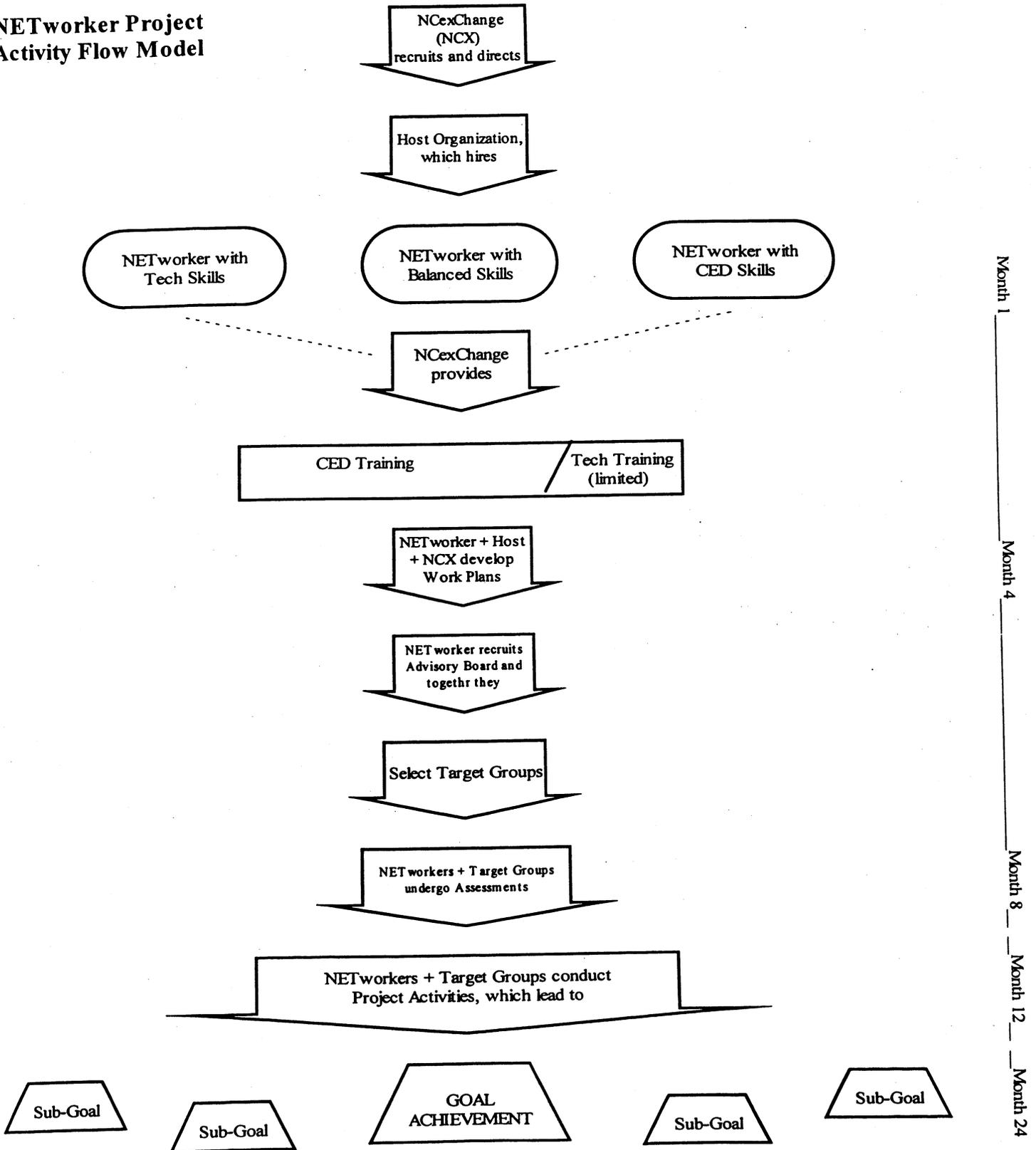
Overall, the NETworker project was a field test of the knowledge and strategies contained in *Making the NET Work*. To guide the test, NCexChange designed a detailed implementation plan, which it sought to implement uniformly at the four host sites. The specific steps were to:

1. Choose host (partner) organization that has interest in the project, that has the capacity to match project funds (\$50,000 match per site), and that is well positioned to manage and spread the project in the local community.
2. Hire a good person as a NETworker, preferably someone with community-based experience and some technology experience.
3. Provide training for NWs in issues of: a) community economic development and social change, and b) building collaborative processes.
4. Add more trainings as necessary based on requests from NETworkers (e.g. presenting/promoting the NETworker project to community members).
5. Build representative advisory boards at the host sites, including partner groups (Division Community Assistance, Cooperative Extension, the library, local CDCs), local groups from the project's communities of interest (poverty, CED, housing, children's and family issues, women's issues, minority econ. development), and any other organizations chosen by the local host site.
6. Generate a work plan for the NETworker.
7. Recruit target groups based on suggestions by NCexChange, the host organizations, and the local advisory boards.
8. Execute a memorandum of understanding with each target group.
9. Conduct "readiness to network" assessments with each target group based on the framework modeled in *Making the NET Work*.
10. Develop work plans for the target groups.
11. Follow through on work plans for the target groups.
12. Spread or 'ripple' the project in the local community through the target groups, the host organization, and the local advisory board.
13. Assist grassroots community development, focusing on poverty, CED, housing, children's and family issues, women's issues, minority economic development.

² *Making the NET Work*, Introduction

A different way of looking at the implementation plan is in a flow chart. This structuring emphasizes how NCexChange saw the project as a series of logical steps organized according to progressive time line.

NETworker Project Activity Flow Model



Discussion of Stream 1 Implementation

Interviews with the NETWORKERS, NCexChange staff, and the directors of the four host organizations reveal that there were significant problems with the implementation of the NETWORKER demonstration. These problems were most prevalent during the project's first 15-18 months, they were fairly uniform across the four sites, and they caused disruptions that influenced the entire demonstration. While the presence of problems does not mean that the project was a failure, it is important to look at the specific issues these people raised to see what factors may have compromised its effectiveness and impact.

In their final interviews, the key project participants spoke of the main implementation problems in four categories:

1. Staffing,
2. Assessment of target group needs,
3. Goal interpretation, and
4. Partnering.

It is helpful to look at each of these categories in detail to get a better sense of how they affected the demonstration.

1. Staffing problems

1.1 Hiring and Turnover

Working according to the flow model, NCexChange initiated the project in the four host sites with strict time lines and work plans, all of which were set forth in the original NETWORKER proposal to NTIA. Many of the project's components were planned around a common implementation schedule, which relied on the NETWORKERS being in place and ready to begin work at roughly the same time. This mutual starting point would allow NCexChange to conduct activities such as trainings with all four NETWORKERS simultaneously, thus saving time and money and generating an experience-sharing network among key project participants. It would also help the project manager meet the tight two-year schedule that had been outlined in the TILAP proposal.

Once the demonstration began, project directors quickly found that executing the model at the four sites was not as straightforward as they had hoped. Most visibly, major problems emerged with the hiring and retention of the four local NETWORKERS. A brief look at the project's actual staffing time line provides one line of insight into the difficulties NCexChange encountered in the demonstration's first year:

- NCexChange program manager hired 11/16/96.
- Rocky Mount NETWORKER (NW) hired 12/96. Swain NW already on staff at extension office to work 50% time on project.
- Greensboro and Bertie, Martin, Washington CDC (BMW CDC) sites begin recruiting for NW position, 11/96.
- BMW decides to split NW position between two existing staff members, one at 70% time and the other at 30%. Activities scheduled to begin January 1, 1997.

- First training for NWs held over 3 days in early February 1997. Greensboro NW not present for initial trainings, the first of which is quite extensive.
- Second training for NWs and host site directors held in mid April 1997.
- Swain County NW resigns effective April 30, 1997 to take a job in the private sector.
- Greensboro still has no NW as of the end of May 1997. The host organization is given a deadline to hire a NW or be dropped from project.
- Greensboro NETworker hired in June 1997.
- NCexChange program manager resigns in September 1997 to take position with organization that sponsors NCexChange, placing added burden on NCexChange director.
- Rocky Mount NETworker resigns in September 1997 to take job as a children's librarian. The host organization agrees to move forward quickly to search for a replacement.
- New NW in Swain County hired in August 1997; starts September 3, 1997.
- New program manager joins staff of NCexChange on December 1, 1997.
- New Rocky Mount NW hired in December; start date January 7, 1998.
- Training session held on January 9, 1998 with the full presence of all key staff people (NWs and NCexChange staff) for the first time.
- The "30%" NW at BMW CDC resigns in July 1998 but is replaced by early August.
- NCexChange executive director leaves on August 15, 1998.
- December 31, 1998: NETworker project ends.

This rough timeline shows that only one site (BMW CDC) was able to stay on schedule with the original personnel and follow the basic project design from start to finish (taking into consideration the fact that one of the original NETworkers was in place throughout the project). Quite understandably, work at the other sites suffered from the delays and interruptions associated with late starts and employee turnover. Although these sites were able to recover and engage in many of the planned NETworker activities, the delays hurt NCexChange's ability to test its community networking model thoroughly across the four sites.

1.2 Complexity of Job

1.2.1. Skill Set

A major reason that hiring and turnover was so problematic was due to the awareness among NCexChange and the host organizations of the importance of the NETworker position. When NCexChange designed the NETworker Demonstration, they knew that much of the project's success would lie in the hands of the four NETworkers. As the primary staff people at the local sites, they would be responsible for recruiting and working with target organizations, building support for the project among the local advisory boards, and generating enthusiasm for the project within the host organizations.

Because the NETworkers were such an obviously vital part of the success of the project, NCexChange developed specific goals for these "front line" staffers. According to the TIAP proposal, the four NETworkers should "be experienced with networking, and have sensitivity to the needs of communities." These workers were to be measured according to their ability to:

- Identify goals and objectives of each end user and design a communication and information strategy to meet those goals;
- Serve as a networking expert, matching information available online with strategic information needs;

- Promote, through demonstrations and site visits, the active use of telecommunications services to address community problems and help groups integrate networking functions into their ongoing operations;
- Provide training, technical support, and follow-up directly or through screened volunteers;
- Create and promote, through cross-sector cooperation and collaboration, self sufficiency and empowerment within the community; and
- Document successes and failures in case study format and participate in project evaluations.³

This list outlines a broad range of skills and tasks that the NETworkers needed to perform. Although there were concerns about finding four people who could meet this broad job description, NCexChange felt going into the project that they would be able to provide the NETworkers with the training necessary to perform their jobs.

Unfortunately, The NETworker position, as conceived in this project, was most likely too broad for one person to fulfill without access to additional staff support. The sheer number of different skills needed for the position – all of which the NETworkers needed to be able to use during the projects earliest weeks – was more than one person could reasonably be expected to possess. Under normal circumstances, it would be expected that a new staff person with one set of skills could develop new skills through training and experience, and indeed, NCexChange offered frequent training events. But because the NETworker demonstration followed a tight implementation schedule that was made even tighter after several delays, the NETworkers mostly had to figure out their positions quickly as they worked. There was little time to reflect on their personal development needs. The skill-set problem was also exacerbated by the frequent technical problems that arose in all of the sites. Though it was not intended in the project design, the NETworkers had to know (or learn) a great deal about computer technology to keep the project running smoothly.

This idea that the NETworkers were stretched too far was agreed to by all of the NETworkers during a focus group session during the project's last month. A representative statement from this session explains the problem this way: "I have to admit that there were times that I would have liked to have had someone working at the site with me who had different skills than I did and wasn't necessarily strong with, and I could have concentrated on the parts of the job I was more skilled with."

NCexChange took a slightly different view of this situation as the project entered its final weeks. Recognizing that additional personnel consume even greater amounts of already-stretched resources, the project director suggested that a "network of NETworkers" had emerged to extend the skill sets of individual NETworkers by allowing them to work together as one unit. She wrote:

"One of the interesting things that is becoming evident about this project is that each of the NETworkers has developed a niche that allows him or her to communicate a different area of expertise. When the project began the idea was to hire four different people with

³ NCexChange, Proposal to TIAP

the same mix of technical, personal, and community skills to function in this role. However, what has emerged from the demonstration is a situation in which four people with a different mix of skills and technical expertise have begun to draw upon each other's strong points to fill in the gaps of their own skill set. This is a more efficient model because it allows a particular organization or community to select a person with the skills they deem most appropriate to local goals but still have access to other useful resources through the larger network of NETworkers"⁴

In individual and group interviews, the NETworkers agreed strongly with this statement and used this idea to emphasize the need for a support network of individuals who are performing this type work. This need becomes even greater given the groundbreaking nature of being a 'networker.' It is no exaggeration to say that these individuals were writing the employee handbook as they went along.

1.2.2. Relationship networks

Contributing to their general burdens, the NETworkers also had to learn to manage an extensive set of relationships as the demonstration evolved. One way of understanding the scope of the task faced by the NETworkers in this project is to examine the relational diagrams that represent the networks of relationships that each NETworker had to manage as the focal point of the project. These diagrams (see Attachment 1) indicate that the NETworkers' attention and time had to be divided among as many as five independent networks, including the network of NETworkers, the primary target group network, secondary target group networks, the advisory board network, and a governance (or project management) network.

In responses to questions about their allocation of time and energy, the NETworkers indicated that their efforts were spread out more or less equally among these networks. The successful management of these networks required the NETworkers to utilize a variety of interpersonal skills, as they found themselves moving from one social group to the next. In their various network roles, the NETworkers were recruiters, salespersons, coaches, trainers, engineers, spokespeople, negotiators, mediators, and facilitators. This work distribution decreased the amount of time they could spend on direct service for the target groups, and it ultimately reduced their overall effectiveness when pursuing their original work plans.

This situation explains much of the NETworkers' sense of being overwhelmed in the project, especially during the early months. Although they were not technically 'alone' in the project (e.g. they had a non-local support system of NCexChange and the other NETworkers to draw on), the four NETworkers did carry the vast majority of the implementation and management burden at the local sites. They also had the special challenge of pursuing all of these activities without the benefit of a clear model to emulate. For this reason, the NETworkers had to navigate through these networks with only the most basic of maps.

⁴ NCexChange, Seventh Quarter Report to NTIA

1.2.3. Newness of the NETworker position

The newness of the NETworker position caused other problems besides those related to skills, training, and relationship networks. Adding further to the complexity of the position was the fact that the tasks performed by the NETworkers were often quite new within organizations. The NETworker, as a newly conceived, experimental staff position with no clear model other than a librarian, had to deal with a lot of role confusion. While NCexChange attempted to define and control both the role and the actions of the four NETworkers, most project participants ended up defining the NETworker role according to their (or their organizations') own needs and desires. As a result, even when they used the same language to describe the NETworker role, people had different expectations about what the NETworkers should be doing in their day-to-day activities.

This problem is quite prevalent in telecommunications projects, where new words are often created and/or are used in ways that the general public is not used to. When this happens, people apply old associations to the unfamiliar words, despite the fact that these old associations may run counter to the impression that the new wordsmiths are trying to convey. An interesting confirmation of this point occurred in two of the sites in which the NETworkers ended up referring to themselves as "Internet coaches" rather than NETworkers. They found that the word coach captured more of what they were trying to accomplish in the early stages of the project and led to less confusion among target groups.

1.3. Supervision issues

A final staffing problem relates to way the NCexChange chose to structure the project at the host sites. In order to achieve maximum impact and sustainability at the local level, the NETworker demonstration called for the NETworkers to be employees of the host organizations. In two cases, the host directly hired the NETworkers; in the other sites, the host had significant input on who was hired. The NETworkers were housed by the host organization, and they reported either to the organization's executive director or to another supervisor assigned by the executive director.

While NCexChange would support the NETworkers and coordinate the development of their overall work plans, the host organization was responsible for much of the NETworkers' day-to-day supervision. Although this arrangement made sense at the beginning of the project, it soon proved to be a significant source of tension as problems between NCexChange and the host sites developed. Effectively, the NETworkers were caught in the middle of struggles over the goals and progress at three of the four NETworker sites. This serious problem will be discussed in the in the fourth part of this section on partnering issues.

1.4. Conclusion

While the previous discussion has focused on the staffing problems in the demonstration, it should be pointed out that similar issues arise in almost all projects and organizations. It should also be noted that the NETworkers did an excellent job working through the complications associated with their groundbreaking tasks. The demonstration accomplished the important goal

of documenting the experiences of the four NETworkers and translating this documentation into practical suggestions for implementation of community networking projects.

Ultimately, the staffing problems that did exist in the project had mixed effects on the success of the demonstration. In the worst cases, difficulties with job complexity and supervision contributed significantly to the resignation of two NETworkers in the project's first year. On the other hand, the remaining (and replacement) NETworkers were able to withstand the rougher early months and achieve a level of comfort and confidence with their various roles. As their comfort levels rose, so did their enthusiasm for the project.

The most significant impact of the issues with staffing seems to be that they were the source of many of the delays during the demonstration's first year. These slowdowns (either slow getting off the ground or slow to make progress) were often caused by the difficulty and newness of the NETworker role, and they generated even more pressure for the NETworkers as they struggled to press ahead more quickly to catch up on their work plans. Although they eventually learned how to work quite efficiently and successfully through trial-and-error, information sharing, and training sharing, the delays did reduce the amount of work with target groups that the NETworkers could perform.

2. Assessment problems

One of the primary aids that the NETworkers were supposed to use in the earliest phases of the demonstration was the Assessment toolkit from *Making the NET Work*. The plan was that once target groups were selected, the NETworkers would use the detailed worksheets from *Making the NET Work* to determine the appropriate strategy for working with each target group. The worksheets encouraged the target groups to think strategically about their current – and potential future – uses of telecommunications technologies, focusing on how these uses could help them work more effectively. This assessment process was designed to take about three-to-four weeks at each site to develop plans for all the target groups.

Once the NETworkers began the process, they discovered that it was effectively unworkable. The target groups found the worksheets to be difficult and confusing, and they required a level of detail that was not important for, and really could not be provided by, most of the participants. In the Third Quarter report to NTIA, the program manager described this problem – and the eventual response NCexChange made – in the following way:

“One of the issues that continues to be a challenge is the assessment process. Some of the NETworkers continue to struggle with assessment methodologies. Target groups are at different levels and it has been difficult to determine where to start the process. We continue to work with [the NETworkers] and encourage them to experiment freely with different approaches, to discuss the challenges with each other and learn from their experiences. However, we are considering the possibility that full-blown assessments may not be the best approach with the short time remaining in the demonstration. We will be discussing a new approach with the evaluators which might ‘short circuit’ most of

the remaining assessments to respond directly to the most pressing needs of the target groups and other strategic technology needs of the site communities.”

As this quote indicates, the difficulties with the assessment process dragged out for several months and remained an issue during most of the project’s first year. In the early months, before the NETworkers had the confidence or understanding to make independent changes to the implementation process, they chose to follow the model more or less step-by step. This contributed even further to the slowdown in the progress of the project.

Eventually, one of the NETworkers built on the difficult experiences of her counterparts and designed a two-page document summarizing the key concepts from the Assessment worksheets. This briefer version proved to be a viable solution to the complexity problem, and once the NETworkers began using these forms, the work with target groups moved forward much more smoothly. The noteworthy realization was that small community based organizations do not need to go through an intensive process to determine their information needs. Their small size, combined with a modest level of organizational complexity and development, suggest that online access and training/coaching are the most important needs to address when working with these groups.

While solving the assessment puzzle greatly aided the NETworkers’ progress, it did not solve many of the other problems that they were experiencing in the friction between NCexChange and the host site directors.

3. Goal interpretation

3.1 The emergence of goal problems

The staffing section of this paper strongly suggested that NCexChange and the local host organizations at times had differing opinions about how the project was supposed to function, especially on a day-to-day level. This is a difficult problem to explain, because everyone involved – from NETworkers to host site directors to advisory board members – endorsed both the broad (e.g. “community revitalization”) and specific (e.g. “overcoming perceived barriers”) aims of the demonstration. In early interviews, most of the participants used the same or similar words to explain what the project was going to do for their organizations and communities. Moreover, most of these explanations drew directly from NCexChange materials, indicating that there was direct agreement with the project’s design. It appeared as the project began, that everyone was well briefed and working from a point of common understanding about how the demonstration was going to progress.

As has been established in the previous sections, however, problems quickly arose during the early stages of implementation. Although the staffing and assessment difficulties contributed to these problems, the seriousness of the conflicts that developed between NCexChange and at least two of the host sites suggests that there were more basic differences about how the demonstration should have been progressing.

From NCexChange's point of view, the main problem was that the host sites did not "get" the goals of the project. They believed that the host organizations, while possibly understanding the overall aims of the demonstration, did not have a full grasp on how the NETworker model worked. They also felt that some participants had competing goals for the project born out of desires to address pressing internal needs. A series of excerpts from the quarterly reports that NCexChange submitted to NTIA gives a good survey of this issue:

➤ Quarters 1 and 2

- There is fear that NETworker (NW) #4 could become more of a staff person for a 'community technology center' than a proper NETworker.
- Site #1 is totally focused on groups with which they already have contracts (pool of 52 groups).
- NW#2 has surveyed only small business – no community-based organizations (CBOs).
- Host site #2 was asked by NCexChange staff to recruit community-based organizations since they are still completely business focused.
- Host sites are not getting the 'specific and limited' goals of the demonstration. They are instead establishing their own 'technology agendas' for the NWs. NCexChange has to negotiate with the sites since the NW is actually employed by the local host organizations. NCexChange realizes that the host site is an important target group and that experience in meeting the technology needs of the host can be transferred to the target groups. We will have to watch the host organizations closely to make sure the needs of the non-host target sites get adequate attention.
- Site #1 is focused too much in-house; working on technical issues more than strategy issues.

➤ Third quarter

- Site #1 is still focused mostly on internal staff and their in-house technology plan.
- Continued concern that the NWs have not devoted as much attention to the specific tasks of the demonstration as we would like.... As a result, there continues to be some tension between NCexChange and the host organizations around productivity issues. The sites also feel that NCexChange staff...is not positive enough about the progress they do feel is being made. However, activities seem to be increasing and we feel that the projects are slowly but surely getting on the right track.

➤ Fourth quarter

- Site #1 still has significant problems focusing on networking activities (defined by NCexChange as activities outlined in the work plans involving strategic use of telecommunications technologies by target groups and the host organization). This is partially due to the nature of host site building being the location for several nonprofit organizations (target groups and non-target groups). This proximity allows the NW to be pulled in many directions according to the individual technological needs of the in-house groups
- Site #2 agrees to recruit more CBOs into the project.
- NW still tends to get pulled in many different directions to help with immediate needs within host organization. Most are broadly relevant, as they have to do with volunteerism, community involvement, and general networking.

➤ Fifth quarter

- We understand that the earlier problem with Site #1 in which the host focused the NW's time primarily on internal activities will be resolved, but we will be monitoring the site closely.
- We still would like Site #2 to recruit more CBOs for the project. The site agrees to try but responds that there are few community organizations in the county to choose from. They see this as a cultural issue because of 'the strong traditions of independence and self reliance and self pride' in the mountain culture.

➤ Seventh quarter

- Differences between the goals of the demonstration and those of some of the host organizations continue to frustrate us and especially the NETworkers. While immediate supervisory staff have been very supportive, it is less clear what the ultimate decision-makers in the host organizations think about the progress of the project. They have been difficult to engage and in two cases, early friction in the project around hiring and implementation has disrupted lines of communication. One of them has consistently refused to participate in meetings.

➤ Eight quarter

- One of the important lessons learned is that the model of split administration of the project between host organizations and NCexChange was not the optimal situation. With the exception of one site, none of the host organizations developed a true sense of ownership of the project in its broadest goals of serving as a resource for the wider community. As a result, the conflicts between the hosts' own internal agenda for the project and the needs of the community has been an ongoing reality for the project.

It is interesting to see how the same problems – all pointing to conflicts over either the understanding or prioritization of the project's goals – continued throughout the demonstration.

NCexChange clearly attributed this problem to the demonstration's "split administration," meaning their lack of complete control of the NETworkers hampered the success of the implementation. When asked about this problem near the end of the project, the NETworkers – who agreed that the dual supervision was not optimal – added another idea of what the source of the problems might have been. They suggested the following:

NETworker 1: Sometimes I think our goal is too broad. So because the goal was so broad, we tried to do all these things and we weren't as effective as we could have been.

NETworker 2: I think that's it, too, because each goal was formed by each organization.

NETworker 3: That might have been why the sites ended up so different because there was one overall sort of goal that wasn't very well defined and we just sort of took that and defined it for our communities and host organizations. And that may have been part of the reason each site turned out to be different because we sort of highlighted or sort of took parts of the broad goal and implemented it

NETworker 2: Which leads back to, it may have been too broad.

There are two important points in this exchange, one obviously being the problem with goals being too broad. This goal breadth allowed room for the host sites to respond to local conditions (one of the project's governing principles), but it also enabled the sites to define some of their own goals for the demonstration that really were out of step with the implementation plans. This explains NCexChange's concerns that some of the sites failed to limit the NETworkers' activities to those that supported the original project design. The second key point is the assertion that the host sites also reacted to this breadth by choosing to emphasize particular sub-components of the larger goal set. These sub-components then became the focus of the NETworkers' time instead of the full complement of activities that would lead to more comprehensive community development.

3.2 An analysis of the original goals

Because these issues were so central to the problems in the project, it is important to look at the demonstration's original goals to see if there indeed was room for differing interpretations or emphasis. The list of goals in this section draws from NCexChange's proposal to TIAP, from the *Making the NET Work* community networking guide, and from early interviews with the director of NCexChange and the evaluator who analyzed the project during its pilot phase. Accordingly, it reflects the goals that were a part of the project at its inception.

I have broken these goals into three categories: theoretical goals, action goals, and overcoming barriers. Theoretical goals reflect the broadest, often most ambitious, aims of the project. This category includes the social and cultural impacts that the project sought to generate, and it helps

locate the demonstration within a community development framework. Action goals are more specific targets that relate to the project's specific impact and outcomes as a result of the interaction between NCexChange and the many organizations that are a part of the demonstration. These goals point to the practical changes in personal, organizational, and community behavior or status that the project directors hoped to generate through their interventions. Overcoming barriers refers to the process of dealing with the collection of technical and perceptual hurdles that most new Internet/computer users experience.

Theoretical Goals: Within the body of NCexChange's proposal to TILAP, there were several statements about the general aims of the project. In the introduction, NCexChange spoke most broadly about "translating technology into value" as an important part of the demonstration. Three additional statements offered more direct explanations of the project's basic aims:

- In this demonstration, NETworkers will assist designated end users to employ the resources of the NII [National Information Infrastructure] to achieve clearly defined mission statements, goals and objectives, or business plans that support community revitalization.
- A premise of the model is that improved use of online resources can cause a conceptual leap, resulting in recognition of new needs for information and communication.
- The project also seeks to involve traditional support organizations (like libraries or the Extension Service) in telecommunications and networking support. This will often involve these organizations redefining their roles in communities. The goal here is to develop a 'community networking support system' of groups that are 'willing to assume networking functions for their constituencies.'

These goals represent the project at its highest level and speak to the most significant impacts and changes that could take place in organizations and communities. While NCexChange hoped to make progress toward these two goals, the time frame for seeing these impacts goes beyond the 2 1/2-year time frame of the NETworker implementation.

Outcome Goals: Complementing the theoretical goals were more detailed outcome goals. As previously stated, these goals relate to the particular actions or interventions that NCexChange intended to take during the implementation of the NETworker demonstration. The actions would involve direct assistance to clients, and their success would be measured according to an extensive list of outcomes that relate to community economic development. The measures that NCexChange suggested are reproduced in the following list and relate to changes expected in host organizations and target groups during the demonstration:

- Increased telecommunications capacity;
- Overcoming perceived barriers;
- Meeting information needs of group;
- Increase in perceived ability to access, assess, and effectively use online tools;
- Knowledge of, and willingness to, engage in online communication and collaboration;
- Development of more effective community problem solving;
- Improved service delivery and customer service;
- More active participation in the development of public policy;
- Meeting anticipated benefits from telecommunications;

- Achieving unforeseen benefits from telecommunications;
- (for Gateway members) Disseminating information and providing technical assistance to constituents statewide; and
- Fostering the willingness [of local communities and target groups] to pay for the services of a NETworker.

It is important to note that these goals, although more specific than the theoretical goals, still describe the project's aims at a fairly high level. There is still room to interpret both the exact meaning of each goal as well as the best way to achieve it.

Barriers to Networking: In addition, NCexChange intended for the demonstration to address the specific challenges that suppress or inhibit networking among community based organizations. Through its interventions, NCexChange would help target groups overcome the particular, more technical barriers that prevent people from utilizing telecommunications technologies as a normal part of their work. Based on her years of experience, the NCexChange director has developed a laundry list of barriers, which are again listed in the TIIAP proposal. She asserts that for communities and community development specialists:

- it is hard to grasp relevance of NII [National Information Infrastructure] to their work;
- technology is confusing to the point of being overwhelming;
- there is a wariness of added burden technology will place on already overwhelmed staff;
- they don't see the direct benefits of technology, therefore they won't commit time to it;
- there is no local access to training and technical support;
- once people go online, it is hard to find information that meets their needs;
- there is a perceived high cost; and
- people have no help with achieving lowest cost means of networking.

The intention of the project designers was that the NETworkers would help local organizations work through these barriers, they would then start using telecommunications technologies regularly, and they would ultimately commit local resources to promote the use of technologies throughout the community.

Examining these three categories of goals indicates that there was room for divergent interpretations, especially when the participants began to move from the generality of the goals to the specific steps the NETworkers would take in their communities. Except for a selection of the barriers that the project would address (e.g. providing access to training and technical support, assisting with getting connected, etc.), the goals outlined in the TIIAP application and *Making the NET Work* offered a wide area for local organizations to interpret what the project would look like at their sites. This problem was compounded by the novelty of the project, both in terms of the new role of the NETworker and the newness of work with telecommunications technology among most of the participating organizations. As a result, participants felt like their activities fell within the general mandate of the demonstration.

3.3 Discussion of goal problems

The pervasive difficulties with goals frustrated NCexChange and the host sites because each group believed at the beginning of the project that there was overall agreement on what the

demonstration was seeking to accomplish. Although NCexChange had intended for each demonstration site to customize the project outcomes for their communities, the project designer expected that the customization would take place within certain limits. The quarterly reports clearly indicate that NCexChange did not feel that at least two of the local sites were keeping within the boundaries of the project. This orientation was in contrast with the beliefs of the local site administrators who felt that they were directing the NETworkers in activities that fit the project's mandate.

The key point of breakdown around goals emerged when the NETworkers began their specific activities at the local sites. Effectively, this was the point at which the project moved from general work plans to day-to-day activities. Once the demonstration moved into the allocation and prioritization of NETworkers' time, the local site directors (and, to some degree, the advisory boards) asserted their influence over that time. This set in motion the conflicts between NCexChange and the host sites, which would contribute to the delays and lack of progress during the project's first year.

4. Partnering issues

The personnel, assessment, and goal hurdles, while easy to see, are only part of the story about the problems NCexChange encountered in the demonstration. The problems with hiring and retaining NETworkers at three of the host sites, the difficulties with the assessing target group needs, and the conflicts over specific goals were merely symptomatic of the larger difficulties NCexChange sometimes had in working with its local partners.

Going into the project, the NCexChange staff knew that partnering would be an issue, and if they didn't, they soon became aware that they would struggle to control the activities at certain sites. In her first quarter report to NTIA, the program manager wrote:

- "Some of the host organizations had a less than clear concept of the precise nature and goals of the demonstration. We also found that each host has a number of agenda items for the NW within the context of their own organization – some of which are consistent with the demonstration and some of which are not."
- "We predict there will be an ongoing tension between the needs of the demonstration and the needs of the host organization."

Despite this awareness, NCexChange underestimated the impact that its lack of complete control of certain key issues (hiring, selection of target groups, and the day-to-day work plans of the NETworkers) would have on the actual implementation. Foremost, the collaboration problems disrupted the systematic flow of activities that was the hallmark of the NETworker model. When the project implementation began to stray from the original schedule (because of staffing, assessment, and goal conflict issues), NCexChange pressed the host sites to adhere to the primary, agreed-upon work plan. Conflicts developed, and as the project moved forward, it became increasingly difficult for NCexChange to regain control and get the demonstration back on its original track. Even though extending the project's time line from 24 to 27 months

mitigated some of the disruption, NCexChange had to abandon many of its initial plans for the sites in order to stay on budget and keep within its basic time frame.

From an evaluation standpoint, this is a difficult issue to work out, primarily because NCexChange expected the NETworker project to evolve and adapt to local conditions. Part of this flexibility was necessitated by the requirements of the TIAP program. NCexChange had to partner with organizations that had the capacity to provide significant matching funds as well as a base from which the NETworker could work in the local community. At the same time, the project director was genuinely willing to give away control to people who would best understand local needs and the ways to meet them. Nevertheless, the lack of complete control led to significant disruptions in the project's progress.

This problem seems to have two key points. First, NCexChange was committed to preserving the integrity of the NETworker model, both to satisfy evaluation concerns and to build its understanding of how to introduce the model into communities. Second, the project director wanted to achieve a significant impact in what now appears to be a relatively short period of time. Accordingly, when deviations from the original workflow model appeared, NCexChange responded by reasserting the primacy of the model. These actions served to heighten tensions and misunderstandings at two of the sites and further delay high-value work with multiple target groups.

This does not mean, however, that the host sites do not share in the blame for the disruptions in the project. Even though all of the host site directors reported a good understanding of the NETworker project in their interviews, they often used the NETworkers to meet internal organizational needs that were not a part of what NCexChange saw as the core NETworker project. (This phenomenon was particularly evident at one of the local sites.) From the beginning, NCexChange resisted these activities and attempted to move the NETworkers back into tasks that conformed to the model – a reaction that further compounded the implementation problem.

While this is another issue to unravel, it does not appear that the host site directors were trying to hijack the project. In early interviews, each of the host site directors could articulate the project's goals, and they all agreed with the basic implementation model. Each was excited about the project and what they felt it could do for their organization. At the same time, while the host site directors could repeat the language in the NETworker project proposal to describe the project, later actions indicate that they did not have a full awareness of the specific steps that would be taken in the implementation. Perhaps a better way of stating this problem is that a mutual understanding never developed between NCexChange and the host sites directors about what the NETworker project would look like at the local level. During a focus group with the NETworkers at the end of the project, the participants explained the problem – and a potential solution – this way:

NETworker 1: "I think you need to have the support of the host organization [to make the project work.]"

NETworker 2: "Community support?"

NETworker 1: "No, I mean that the host organization and you are on the same page because I never got on the same page with mine. I just did what I was told. The job I interviewed for and the job I did slightly were

not the same. So we weren't on the same page. So, I don't like...support isn't the right word because they supported the project, but they didn't support the grant as it should have been done.

Interviewer: Maybe you mean mutual understanding of what should be accomplished?

NETworker 1: Yeah, right, right, right.

NETworker 3: Yeah, and that process needs to be...And it needs to be a process, not a 3-hour chat. It needs to be consensus, you know a process that builds consensus with everybody. This should have been a – and they did attempt a group meeting but what happened was only the executive directors were talking with NCexChange, but then as some changes with personnel and everything else, and then other issues started... so, the executive director was here and then however many levels down was the NETworker.

NETworker 1: (laughs)

NETworker 3: What was given to the NETworker was basically given through the ED or one of the supervisors to that person so when you put that barrier or that connection in there, some times all the things don't go through.

NETworker 4: Yeah.

NETworker 3: So there should have been the ED or whoever that person – the immediate supervisor, the NETworker and the host organization and NCexChange all at one table so that everybody knew where everybody was going.

This extract shows that the NETworkers felt like all the key participants in the project – the host organization directors, the host site supervisors, the NETworkers, and the NCexChange staff – never had a chance to sit down together and go through the details of the project. As one NETworker put it, "I think it would have been of great benefit to have all the players at the table...Anybody who has a stake in the project, either because they're giving money, shelling out money, have a say in it, make decisions to spend money, dealing with groups, whoever, has a stake in the project." Another NETworker responded to this by saying, "Yes, yes, I agree. I think that if all the four host sites and all four NETworkers had ever sat down at one time and then we could have said 'this is a statewide project. We're trying to do this, that, and the other...!' Everyone would have been a little clearer about what we were supposed to do."

A NC-based consultant who helped with several of the training sessions for the NETworkers echoed these statements in a separate, unrelated interview. Asked about what important, early change might have had a big impact on the project's outcome, he responded:

Consultant: Well, you know, for some people this might seem rather artificial, but I think what would have helped from the beginning would have been having a team approach, in terms of working through a case example that would have been provided by the host organization, of a problem that they had, and then the team could have sort of looked at how the NETworker and the capacities that the NETworker represented, could have helped solve that problem. And I would have done that with, um, you know, I mean, there would have been an NCexChange staff person involved in this team, there would have been the host organization contact person, there would have been the NETworker, and probably a target group member. That would have been the team. The four of those folks would have gone all the way through a potential problem, concern, whatever, and worked it out. And then at the end of that, the woulda been all going "Oooh, now I see." Do you see what I'm saying? And I would have done that by bringing them all together.

Interviewer: Would you have also included a facilitator in that group?

Consultant: Well, you probably would have needed one, but one who understood how to be kinda hands off. You know, and not interject themselves into the process, but just keep them on track, you know what I mean? A true facilitator as opposed to what some folks call facilitation! [laughs]

Interviewer: A true facilitator meaning what, exactly?

Consultant: Well, meaning somebody that wasn't going to give answers, and wasn't going to find solutions for them, but was simply gonna try to, you know, like I said, keep them on track and point them in the right direction. A facilitator who understood that when you're asked a question, the best way to answer that question is by asking a question, as opposed to giving an answer.

Interviewer: So, not having a mentor or example for the NETworker, doesn't kill the project, it -

Consultant: - slows it down, very much like you said. It retards it. It retards the process and it makes it more difficult for everybody to see the same vision. I mean, one of - I mean, you're right, everybody in the project could have had a strong vision, and it would not have been as successful, because they weren't sharing that vision. And that's what we needed, was more of a sharing of the vision. And like I said, just so that I don't forget - I mean, as I think of things, I want to interject them (*Please do*), because it'll be hard to remember it all, because I did spend some time last evening trying to think through some of that stuff so that I'd be a better subject - I think the, I think the next level of what we're talking about, was also for the statewide organizations to have a better appreciation of that same vision, and I think, I think it was extremely, it would have been extremely beneficial if all the players had had at least one meeting. That means all the statewide folk, all the host organizations, all the NETworkers, all the NCexChange staff, in one, at least one facilitated session, in which they could all appreciate the interplay and the interaction, they could talk about tensions and possibilities, you know what I'm saying? They could look at all of that, and in one room, come to a more central vision of what they were trying to accomplish. It probably would have been an all-day kinda thing, but I think it would have, I think it would have doubled the potential success of the program, had that happened.

Interviewer: What happens in the absence of that?

Consultant: Well, I think people then try to understand each other's vision, and try to share each other's vision, by pretty much having unilateral or at best bilateral conversations about the specifics. That is a tedious and slow process, and in some cases, I think, with host organizations and target groups, it was too tedious, and too slow for them, and so people dropped energy. As opposed to meeting the need with a high energy and a high potential for success, instead they slowed down a little bit, you know, and so therefore probably brought less of their own capacity to the solutions.

Once the NETworkers were in place, new activities that were not a part of the specific work plans agreed to between NCexChange and the host sites began to make demands on the NETworker's time. Five of the eight NETworkers (accounting for NETworker turnover) reported that host site directors occasionally wanted to shift the emphasis of the NETworker activities - at least temporarily - away from the work plan activities. Most of these activities were minor and related, in a general way, to telecommunications, computers, or technology. Moreover, the host site directors indicated in interviews that they felt the tasks fit within the overall goals of the demonstration. For NCexChange, these activities were diversions from the original plans that presented real interruptions in the progress of the demonstration. This set up the basic conflicts that emerged in three of the four NETworker sites.

For their part, the NETworkers felt caught in the middle of misunderstandings between NCexChange and their local host site directors. They agreed that they were sometimes asked to work on things that were not central to the NETworker model, but they had a sense of

responsibility to address issues of importance for their local sites. The fact that the NETworkers were looking to their host organizations for full-time employment at the end of the project exacerbated these desires to please their host directors. At the same time, the NETworkers felt a loyalty toward NCexChange and a real sense of connection to the goals and processes of the demonstration. This put them in the difficult position of having to pursue divergent sets of goals simultaneously in order to please their dual sources of supervision. As a result, the NETworkers did not make as much process on the specific goals of the demonstration as they might have, had NCexChange been their sole supervisor.

Overall, it is fair to say that these problems with partnering hampered the effectiveness of the NETworker project. A summary explanation for the partnering problems was given by one of the host site directors in an interview in the demonstration's last quarter. This person pointed out that successful collaborative project management and implementation takes special skills and sensitivities. It also requires that each partner give up a certain amount of control of what happens in the collaboration. Because of resource constraints, matching requirements, and desire to have significant impacts in local communities, NCexChange set up this project as a true collaboration. The project designer asked and relied on local partners to take large roles in the demonstration. At the same time, she expected that NCexChange would maintain the lion's share of control of the NETworkers' time, particularly in light of the demonstration nature of the project. While this does not seem to be an unreasonable expectation, the reality is that it ended up in conflict with the expectations of some of the local site participants. As a result, differences of opinion about interpreting goals and meeting certain local needs developed into more serious conflicts over how the project would function at the local sites. The outcome was that the demonstration struggled to gain traction through its first year, and only near the end of the project did the NETworkers begin to function in the way that was originally envisioned.

There was one exception to this rule of local partnering issues. BMW CDC managed to avoid most conflicts throughout the implementation, and not surprisingly, their work most closely followed the original implementation model. It is interesting to note that BMW CDC is the only one of the four host organizations that is continuing and expanding the project throughout the northeastern region of North Carolina. This fact is even more noteworthy considering that this area is the most impoverished and geographically distributed of the NETworker sites. The success of BMW CDC is addressed in Part 2 of this section.

Part 2 Discussion of Principal Findings: Key Lessons from the Project

The previous section of this report dealt with the major implementation problems in the demonstration and their effects on the NETworker model. With regard to the broader functioning of the demonstration and the general conclusion that can be taken from it, there are several important findings. Overall...

- Early problems in the project (staff turnover, collaboration difficulties, and problems with assessing the needs of target groups) generated major time and financial pressures for the project participants. Because these pressures led to significant changes in the implementation, they may, in fact, have subverted a full test of the Community NETworker

model. The project established that local NETworkers can make a difference for community based organizations, but there the evidence that the NETworker model is the best way to implement this strategy is inconclusive.

- In the NETworker demonstration, much of the energy of the participating staff members focused on managing the project's complex structure, which took away from their ability to provide direct service to clients. In particular, the dense web of relationships that the NETworkers had to negotiate (see Attachment 1), consumed an important portion of the time and attention of the project's front line workers. The NETworkers had to become acclimated to their new organizations as well as their new roles, much like NCexChange had to learn how to work with partner organizations. These situations contributed to the overall delays and confusions in the project.
- Related to the previous point, "networking" involves much more than interacting with computers and other technologies. There are significant social components to any networking project, and these components develop slowly and demand much effort. In the context of this project, building and maintaining functioning networks took longer, and required more time of key staff people than anticipated by the project designer. Not surprisingly, the project site that had the strongest and broadest pre-existing social networks (Bertie, Martin, Washington, and Tyrrell Counties), derived the most benefit from the demonstration. The basic lesson is that networking is complex, it takes a significant amount of time, and projects must allow for slowdowns.
- In much the same way, organizational change and community change are slow processes with incremental, often small, advances rather than major, quick transformations. Any change process must confront resistance, and the pace of change can be quite frustrating for people who are pushing for the modification in structure or behavior.
- Another issue in the demonstration involves the *type* of change that various participants were seeking. The designer of the NETworker project had a pronounced orientation toward a social change model of community development. This model focuses on inclusiveness, equality, and grassroots activism. Other participants interpreted community development differently, stressing components like assistance to small businesses. While these two models are not incompatible, the lack of a social change agenda in at least two of the sites frustrated the staff of NCexChange. As a result, a good deal of time was spent trying to move these sites into social change activities and away from the areas that certain local participants wanted to pursue. This certainly slowed and minimized the impact at the sites.
- For the first year, the demonstration had no standardized method for reporting and collecting information from the four local sites. NETworkers were required to submit quarterly reports and the program manager kept in constant contact with the NETworkers, but it proved difficult for the NETworkers to communicate effectively what was happening at their sites. Near the end of the first year, the program manager developed a reporting template for the NETworkers, alleviating many of the communication problems. This is important to note because the project worked more smoothly once communications issues were worked out.

- The overall demonstration was hampered by not having any funds for computer equipment at the local sites. As a basic part of the project, NCexChange wanted to work with low-resource organizations in low-wealth communities. Unfortunately, most of these organizations did not own or have access to computers with on-line access. The result of this problem was that the NETworkers and advisory boards had to spend valuable time and energy looking for resources to provide access to the target group participants. In the end, each of the host sites was able to generate some kind of public access site at the host organization. Future networking projects should either make sure that some minimum amount of easily available public access exists for target groups, or they should build in funds for computer equipment for low-income participants.
- This project, like many community networking projects, was plagued with technical problems at each of the host sites. The fact is that computer technology is still profoundly unreliable and difficult novice users. Dealing with hardware failures, software conflicts, network problems, ISP and other problems consumes inordinate amounts of time when expertise is not readily available.
- There is a currently limited amount of difference that telecommunications can make for many community-based organizations. While there are still great hopes about the benefits technology can bring to under-resourced areas, the fact is that telecommunications is (primarily the Internet) an evolving resource that is often slow, unreliable, and hard to navigate. As a result, most organizations persist in giving telecommunications a low priority, largely based on issues of cost and technical difficulty. The NETworker project was designed specifically to address this issue, but in only one case (BMW CDC) did the model move an organization to a point of incorporating telecommunications across all its operations. The answer to this problem probably remains what NCexChange asserts: organizations need to be shown the most efficient and effective ways of using technology before they will use it as a matter of course in their work.
- A final, difficult-to-solve problem that NCexChange faced was that many participating organizations lacked knowledge of their own specific information needs. In some cases, this issue related to a broader lack of internal development within the organizations; in others, it reflected a lack of a strategic discipline in organizational planning and management. It was difficult for the NETworkers to help organizations be more strategic with their telecommunications if they were not being strategic in any of their efforts. There is still potential for a NETworker style project to help organizations become more strategic by forcing them to think explicitly about their information needs. In the end, however, what organizations need is assistance in determining those information needs along with developing strategies for using the information to operate more effectively.

The best resource for a more detailed analysis of the specific lessons learned in the project is the NCexChange web site. These lessons, organized in terms of the practical issues involved in implementing the project, can be found at <http://www.ncexchange.org/networker/lessonslearned.html>.

Discussion of Principal Findings: Key Project Accomplishments

Despite the problems that existed during its implementation, the NETworker demonstration produced significant positive results across North Carolina. Overall, Community NETworkers proved to be highly effective in helping their target groups, host organizations, and communities when they could devote time to working them. In this demonstration, the NETworkers were often faced with other issues that limited their interactions with target groups and hindered the implementation of the NETworker model. At the same time, these organizational pioneers were able to work through these difficult times and achieve a meaningful impact at the four host sites. They also developed an important collection of information that can be used by other organizations in their attempts to implement community networking projects.

At the broadest level, the NETworker demonstration confirms that using telecommunications technologies is helpful for many community-based organizations (including those involved in poverty, housing, children's and family issues, women's issues, and minority economic development). Based on information collected in site visits and interviews, it is clear that the project:

- *Provides access to new information for community based organizations.* In this project, more than fifty organizations and two hundred and fifty individuals received training and technical assistance in using the Internet. New public access sites were created in all four demonstration sites, and the Greensboro project essentially caused the Greensboro public library to include a large public access and training facility in a new downtown library. While this prompted the Greensboro host site to rethink the use of their own computer facility (it is now being run as a nonprofit training facility by a group of senior citizen volunteers), the change in the library's plans was a huge win for the city and the NETworker demonstration.
- *Changes behaviors of people within these organizations to include regular use of new information sources.* A good way of gauging this impact is at the level of the host organizations. While many of the target groups did begin to use the Internet in their work, the host organizations saw the largest change in the way people work.
 - Based on the efforts in Swain County, the state Cooperative Extension Office is planning to include more online training in its local service delivery; there is even a suggestion that a NETworker-type model for extension agents will be tested in other areas.
 - In Rocky Mount, the entire staff and resident tenant base of the Down East partnership for Children are now using email and the Internet as a normal part of their operations. DEPC also plans to continue the NETworker position, although in a format modified to meet their particular needs.
 - BMW CDC demonstrated the largest change in this area. The organization has truly internalized the complete set of NETworker goals in its own work and is the only host organization that is currently continuing the NETworker project in roughly its original design. In addition, the BMW CDC leadership has launched a Technology Access and Training (TAT) Initiative to spread the NETworker model throughout northeastern North Carolina. In their description of the Initiative, the project directors write: "During the

NETworker Project we identified a major flaw in the process of using electronic networking for community economic development. We found that training and resources are too sparse and disconnected to effectively utilize the technology on a day-to-day basis. Availability of computers, facilities and training are major impediments for CDC's, CBO's, and their constituents to integrate technology into their daily lives. BMW CDC's TAT Initiative will be able to overcome this barrier by simultaneously providing training and technology access to the community. This in turn will give residents an opportunity to build their technological capacity, increase learning through innovative training centers, and promote electronic democracy." This new project represents the most significant type of impact that NCexChange was hoping to achieve in the demonstration; and while the achievements at BMW CDC in no way prove the validity of the NETworker model, it suggests that there are certain conditions at this site that favored successful implementation. The large, pre-existing social networks in the region, the continuity of NETworker staff, the integration of the NETworker with the host site leadership, and the ease with which BMW CDC works with partner organizations (based on a long partnering history) all contributed to a successful implementation.

- *Encourages organizations to think strategically about the ways they manage and use information.* While this area was difficult for several target groups, the NETworkers did make progress with many of their clients. The big successes in this area involved the discovery of the need to tailor the information needs assessment process to fit the level of the target group, and the recognition that many groups need significant help in thinking strategically and determining their own information needs.
- *Generates new areas for economic growth in marginalized communities.* This success is best seen in Swain County, where the use of the Internet to promote tourism has already had an important impact on the local economy. Through the efforts of the two Swain NETworkers, many local small business (led by the Chamber of Commerce) now have their own web sites and email accounts. The local economy continues to enjoy an increasing influx of new visitors who find out about the community and its amenities through the web. BMW CDC is also thinking about new ways to use telecommunications technologies throughout their service area. Their TAT Initiative seeks to make sure that rural, marginalized citizens are included as the state and national economy becomes more technology based.
- *Promotes "networking," including building new relationships, collaborating, and sharing information.* This area involves the biggest success for the NETworker demonstration and is discussed in the discussion that follows.

At the individual sites, there were numerous other accomplishments that fell in line with NCexChange's original goals for the project. Because of the limited scope of this document, the best way to get a sense of these local achievements is by contacting NCexChange or visiting their web site: [http:// www.ncexchange.org](http://www.ncexchange.org).

Discussion of Principal Findings: The NETworker Demonstration as a "Networking Project"

Perhaps the best way to measure the success of the NETworker Demonstration is to examine the project's impact and viability as a 'networking' project. While many community development efforts currently claim this status, it is unclear what the exact standards are for networking. A brief look at the key components of networking, taken from leading research into this area, will allow a basis from which to assess the networking success of the NCexChange project.

Community Networking Movement

It is a popular opinion among many people in the nonprofit sector that telecommunications technologies can greatly facilitate work in and across communities. The benefits appear to be significant and almost boundless. The following statement, taken from a recent report produced by the Benton Foundation, captures the apparent promise of new telecommunications systems:

With some effort, information technologies could help us address problems of chronic poverty. While they clearly are no substitute for other anti-poverty efforts, they could be used to facilitate the kind of networking and exchange of information vital to community building. They could enable social service agencies to operate much more efficiently and reach a broader public. They could empower individuals and groups who have been excluded from public discourse by allowing them to reach new and wider audiences. New technologies could provide data that communities can use to understand and attack problems relating to housing, crime, health, and other concerns. (Benton Foundation, 1998)

One popular manifestation of this outlook is the Community Networking (CN) movement. In the last few years, more than 300 of these technology-focused coalitions have been formed in the US and Canada, and new networks in the two countries are growing at a rate of more than one a week.⁵ Nonprofit umbrella groups like the Association for Community Networking and the Community Technology Centers Network, and funders such as the US Department of Commerce (TIAP), HUD, and the Kellogg Foundation, now provide significant support for the movement. Many commentators now use these developments to assert that we are in a new "Network Age" and are seeing a movement toward a "Network Society."⁶

Based on reports and evaluations from around the world, community-networking projects have witnessed varying degrees of success and failure.⁷ Most efforts have chosen to focus on the technological side of "networking" by offering computer access facilities and limited computer training to users. Fewer organizations have tackled the more difficult task of leading low-resource organizations through the process of using telecommunications strategically and building up the social networks that support real action for change at the community level.

⁵ Source: CTCNet.

⁶ For a good discussion of these developments, see Manuel Castells *Rise of the Network Society* (1996).

⁷ For information on community networking, see (Benton Foundation, 1998); (Birdsell, et.al., 1998); (Bollier & Firestone, 1997); (Carnegie Mellon University, 1996); (Castells, 1996); (Chow, et.al., 1998); (He & Jacobson, 1996); (London, 1997); (Mark, et.al., 1997); (McClure & Bertot, 1997)

It is clear that NCexChange considers the Community NETWORKER Demonstration to be a “networking” project of this second type. What, though, does it mean to “network,” and when exactly is networking successful? Furthermore, how has the NETWORKER demonstration contributed to substantive development of productive networks? As the previous sections show, these questions may be partially addressed by analyzing how the NCexChange project fits in with current theories about successful community networking.

The following discussion draws on the work of Dr. Patrick Humphreys of the Department of Social Psychology of the London School of Economics and Political Science in his evaluation of the World Health Organization’s Healthy Cities project. Along with several other researchers, Dr. Humphreys has developed a set of guidelines that are useful in examining “networking” at the community level.

Networking Defined

At the most basic level, networking is about working with, rather than for, communities through broad community participation. This means that people who are networking are actively seeking out, using, and contributing to resources according to need, skill, and ability. Second, networking employs inter-sectoral action. Comprehensively, this includes working at inter-personal, local, county, state-regional, state, regional, national, and international levels as well as across organizational, programmatic, public, private and nonprofit boundaries. Finally, from a community development viewpoint, networking improves equity, which means it creates opportunities for all.

Networking in Action

Once networking has begun, there are several characteristics that one can look for to determine successful community networking. These include:

- 1) Exchanging ideas about process to achieve goals, both formally and informally;
- 2) Education and training for wider appreciation and recognition of issues and factors affecting the issue being addressed;
- 3) Building alliances within the community;
- 4) Negotiation of local support and resources;
- 5) Developing local activities;
- 6) Promoting dialogue at community level (negotiating meaning and roles of different stakeholders);
- 7) Promoting community involvement; and
- 8) Disseminating or exchanging results/publicity about innovation.

All of the above are part/processes of a project in action; they are not set up just at the beginning of a project and left to follow a pre-determined course. This means that a networking project changes as often and as rapidly as the characteristics that define it. As a result, it is crucial to generate or locate good information over the course of a project so that managers or analysts can create a meaningful representation of project at any particular point in time.

The Formalized Exchange Process

Another crucial component in networking, community involvement, and participation, is the formalized exchange process. In the romanticized lore of the Southeastern US, one might think of the formalized exchange process as the “front porch” of a small community’s general store. It is was in this location that people from various parts of society interacted and communicated on a daily basis. As people filtered in and out of the store, taking time, perhaps, to sit in a rocking chair and enjoy a soda on the shady front porch, they passed around information and knowledge in an unsophisticated but highly systematic fashion.

There are many important features to a well-functioning formalized exchange process. Among other benefits, it promotes evolutionary change, it circulates information, it balances, and it establishes equilibrium. These processes were eliminated, according to certain scholars, during the Enlightenment with its notion of control of information, resources, and power. The problem today is that the exchange processes that remain are buried, and it is much more difficult to get to the information (especially sustaining, important, enriching information) that resides within individual people at all levels of society. One could also add that the lack of a formalized process also strips much of the practical/social context from information, thus making it less immediately useful for individuals involved in community work. And perhaps most troublingly, there is a still a tendency among many people to control information in order to preserve power for themselves.

It is helpful to view the NETworker Demonstration as a sophisticated attempt to create a formalized exchange process within a community development framework. In part, NCexChange wants to build on the enthusiasm and interest people are now showing in connecting to the Internet – an uninformed but near universal interest, according to interviews with NETworker project participants. The NETworker, as a supportive consultant and technician, is able to establish a relationship with community groups that may eventually lead to discussions about strategic networking. This new community resource (the NETworker) that might not otherwise exist, can subsequently provide multiple benefits and generate a substantive interchange of ideas. If this is indeed the way the project progresses, then the Demonstration is actually redesigning the community infrastructure and infusing it with new “networking” resources. This new networking helps community development practitioners access knowledge that is either buried within the community or withheld from a community. It also helps to legitimize the important information that disenfranchised members of society already possess.

Conclusion

In summary, the technology that supports the NETworker project is a new frontier where people can start afresh and work on helping each other meet needs, communicating in new ways, sharing information, and collaborating to build better communities. As research on the WHO Healthy Communities project has shown, community building is a partnership, and like networking, it requires active participation at all levels. Add to this the desire for cooperation over competition and a commitment to achieve communication across and into diverse perspectives, and one can expect a much greater degree of networking and community development success.

It has taken NCexChange more than a two-and-a-half years to build a functioning network of NETworkers. No matter how quickly the project directors wanted things to move, old fashioned issues of human interaction, project management, and basic human skepticism and resistance to change slowed the process down.

Nevertheless, the NETworker network now appears to be solid and productive. Unlike many community networking projects, NCexChange has helped build a web of relationships that are supported by new technologies and reach deep into impoverished communities across a broad geographic region. They have fostered new alliances, improved avenues for communication, provided new outlets for training and technical assistance, and generated new enthusiasm for using and sharing information for inclusive community building. It will be interesting to see if and how this network expands to include new members of the communities in which the NETworkers are based, as well as people from other communities that were not a part of this project. At that point, once these new relationships are used to promote new action and new solutions within communities, the real success of the Community NETworker Demonstration can be fully measured.

SECTION 3: ▪ **Notes on Evaluation Methodology**
 ▪ **List of Works Cited and References**

Notes on Evaluation Methodology

Process

The NETworker project is the multi-site, multi-environment demonstration phase of a model that was developed over a three-year design period (1993-1995). The 'demonstration' nature of the project includes the inherent expectations of multiple audiences along with the belief that the project might evolve as its scale and scope increased. Meetings with the funders of the demonstration yielded two areas of interest:

- What changes take place in people's lives because of the project?
- What do communities look like before and after the demonstration?

At the same time, the NETworker project director requested periodic evaluative feedback so that she could monitor the project more effectively. She requested that the evaluation focus on the goals that were outlined in the TIIAP application, although she believed that there was potential for unexpected results as the project moved forward.

Early examinations of the implementation plans led to further methodological considerations. Because the project targets small, community-based, mostly under-resourced organizations, there were special challenges related to data gathering. Low literacy levels, geographic isolation, suspicions of outside 'analysts,' the general poor connotations of 'evaluation', and the near-universal tendency of community-based nonprofit workers and volunteers to be significantly overworked strongly suggested specific data collection techniques. Because the project ultimately seeks to benefit disadvantaged individuals, it was also important that the analysis reveal impacts at all the levels of the demonstration – from the project designer and director to the clients served by the community-based participant organizations.

Addressing this set of issues led me to emphasizing interactive, qualitative methodologies (Ritchie, J. & Spencer, L. 1994). Much of the data collected for this project comes from semi-structured interpersonal interviews and focus group interviews. I conducted and transcribed more than 60 hours of interviews with various project participants during 6 trips to NC in 1996, 1997, and 1998. In addition, I have examined more than 1,000 pages of documents generated by the participants during the demonstration (e.g. quarterly reports by the project director, monthly reports from the four NETworkers, weekly online chat sessions among the principle staff that are saved to computer disk, etc.). This information has been supplemented with additional material from questionnaires, though these proved of minor usefulness as a data collection methodology. To compare the NETworker project to other community networking efforts, I also examined several hundred documents produced by other community networking practitioners and evaluators. Although there are special problems associated with all of these techniques, I have

taken systematic precautions to generate reliability and validity (Rossi and Freeman, 1989; Shadish, et. al., 1991).

Regarding data analysis, I have drawn from a group of methodologies related to narrative, textual, and content analysis (Potter, 1996). I have also found useful many of the 'naturalistic' techniques outlined by the evaluation-theory writers Guba and Lincoln (1991). Again, as these are all qualitative techniques, I have placed special emphasis on systematization in dealing with issues of reliability and validity. Reliability and validity are supported by

Finally, to provide theoretical grounding for this research, I have drawn from two bodies of work: those from organizational social psychology and "networking" research by evaluators of the World Health Organization's Healthy Cities project.

Possibilities for Future Research

Although significant public resources have been devoted to community networking during the last 5 years, very little academic research of any kind has been produced analyzing the projects supported with these resources.⁸ Furthermore, while many evaluations of community networking projects have uncovered what works in particular efforts, there are few, if any, systematic attempts to compare different projects. There is thus a pressing need to examine these projects in a variety of areas. Among the most important questions are:

- What makes a networking project successful?
- What makes a project have impact?
- Does success and/or impact vary with time?
- What are the organizational structures and processes that exist within these programs, and is there a common project profile that contributes to success/impact?
- What is the difference in community networking projects that use telecommunications technology versus other, more traditional projects that focus on social networking?

⁸ In a call for papers earlier last year, the editors of the *Electronic Journal of Communication / La Revue Electronique de Communication* wrote: "While community networks are being created at an exponential rate, scholarly research about them remains quite sparse. Although much has been written about the Internet, fewer researchers have studied community networks. The rapid development of these distinctive and diverse new communication systems invites study, analysis, and interpretation." Doug Schuler, author of one of the earliest and most comprehensive books on community networking, has previously given a similar opinion. In that book, he wrote: "Researchers for their part can help make the community networking effort more effective while addressing important social science issues at the same time by concentrating on: (1) informing the community networking community of relevant theory, history, policy and other issues in democracy and technology and; (2) working with the community to establish and monitor conditions that facilitate learning, especially determining objectives, developing strategies, collecting data, measuring success, and evaluating and communicating results, and identifying future research," (Schuler, 1996).

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Annotated Bibliography of Online Papers Related to Community Networking Source: University of Michigan School of Information Community Networking Initiative

The Benton Foundation (1998). [Losing Ground Bit by Bit: Low-Income Communities in the Digital Age](#)

This report examines the barriers (beyond just income) that are slowing the spread of new technology in low-income communities.

Andy Carvin (1998). ["Rethinking Community Networking as Networked Communities"](#)

This is a keynote speech Carvin gave at the Community Information Networking conference in Osage Beach, Missouri, March 1998. [Slides](#) are also available.

Joan C. Durrance (1998). [Public Libraries, CNs, & Collaboration](#).

Slides corresponding to a presentation given at the Canadian Library Association's June 1998 conference in Victoria, British Columbia.

Richard P. Fuchs (1998). ["Little Engines That Did: Case Histories from the Global Telecentre Movement"](#)

A set of case studies of telecentres (CTCs) around the world prepared for the International Development Research Centre's ACACIA Initiative. You can also get a [zipped file](#).

Thomas N. Novak & Donna L. Hoffman (1998). Bridging the Digital Divide: The Impact of Race on Computer Access and Internet Use

A longer version of the article, "Bridging the Racial Divide on the Internet," published in *Science*, April 17, 1998. The authors co-direct Project 2000, a research center at Vanderbilt University devoted to studying the commercialization of emerging media. Also see the Project 2000 Research page for other articles and downloadable versions of this paper.

National Telecommunications and Information Administration (1998). Falling Through the Net II: New Data on the Digital Divide

"At the request of Vice President Gore, NTIA issued this report analyzing telephone and computer penetration rates. The report updates NTIA's findings from its earlier study, "Falling Through the Net: A Survey of the 'Haves' and 'Have Nots' in Rural and Urban America" (July 1995). The new report finds that, while computer penetration has increased nation-wide, there is still a significant "digital divide" based on race, income, and other demographic characteristics. "

Donald A. Schön, Bish Sanyal, and William J. Mitchell, eds. (1998). High Technology and Low-Income Communities: Prospects for the Positive Use of Advanced Information Technology

This book brings together colloquium papers and ensuing discussions from the spring 1996 MIT School of Architecture and Planning colloquium on Advanced Information Technologies, Low-Income Communities, and the City.

Kristin Surak (1998). A Cross-Cultural Comparison of Community Computer Networks

In this honors thesis for the College of Social Sciences at Florida State University, Surak examines variations of structure and function in community computing networks in the U.S., Canada, and Australia due to contextual and cultural factors.

Vlad Wielbut (1998). World Wide Web Elementary: Technologies for Creating Complex Learning Environments on the Web

Wielbut is a community technology specialist with the Alliance for Community Technology here at the University of Michigan's School of Information. This article presents an up-to-date overview of distance learning technologies and a discussion of their virtues.

The Benton Foundation and Libraries for the Future (1997). Local Places, Global Connections

"This report focuses on how libraries are coping with the use of new technologies to maintain their role as society's primary information providers, what challenges they are facing, and who is doing a good job."

Gary Chapman and Lodis Rhodes (1997). Nurturing Neighborhood Nets

Discusses the role of community networks in low-income communities. Includes a set of related links.

Madeline Gonzalez (1997). Community Networking Stories.

Gonzalez has collected "some stories of how information technology has been used to help people." The title could almost be, "Community Networking Success Stories."

Sheryl Cormicle Knox and Joan C. Durrance (1997). Pulling Together: Technology, Community and the Public Library

"This report focuses on the first two years of the Kellogg/ALOT Community Networking Initiative in Flint, (Michigan), a three year collaboratively developed project whose aim has been to experiment with the use of information technology to build community."

Jonathan Lillie (1997). Possible Roles for Electronic Community Networks and Participatory Development Strategies in Access Programs for Poor Neighborhoods

This paper discusses the potential for electronic community networks to "serve as vital links in offering network and Internet access to poor communities in the United States, Canada and throughout the world." Lillie is a graduate student of Mass Communications at the University of North Carolina at Chapel Hill.

Scott London (1997). Civic Networks: Building Community on the Net

In this paper, London argues that "electronic networks, especially when augmented by face-to-face networks, can strengthen communities by serving as 'free spaces,' by fostering dialogue and deliberation, and by enhancing the bonds of trust, reciprocity and connectedness that make up social capital." London prepared this paper for the Kettering Foundation.

Doug Schuler (1997). Community Computer Networks: An Opportunity for Collaboration Among Democratic Technology Practitioners and Researchers

The author argues that community networks and the practitioners who make them happen offer academic researchers a unique opportunity "to study first-hand communication systems that are largely grass-roots, spontaneous, community-oriented, and non-corporate." Schuler presented this paper at a "Technology and Democracy" conference in Oslo, Norway.

Benton Foundation (1996). Buildings, Books, and Bytes

Funded by the W. K. Kellogg Foundation, this report "reveals what library leaders and the public have to say about the future of libraries in the digital age."

Wally Bowen (1996). Community Networks at the Crossroads

This piece ponders the future of community networks in relation to the "increasingly privatized, commercialized Internet." Written by the executive director of the Mountain Area Information Network in western North Carolina.

Doctor, Ronald D. & Ankem, Kalyani. (1996). An Information Needs & Services Taxonomy: for Evaluating Computerized Community Information Systems

A brief paper which introduces a quantitative method for evaluating CNs and then evaluates four of them: Victoria Free-Net, Big Sky Telegraph, Blacksburg Electronic Village, and Mobile Free-Net.

Stephen Doheny-Farina (1996). The Wired Neighborhood

A critical examination of the "electronic neighborhood" and its impact on geophysical communities.

Joan C. Durrance (1996). Reinventing the Community Information Professional: Strategies and Approaches Used to Develop Community Networking Knowledge. School of Information, The University of Michigan.

Written for presentation at the Association for Library and Information Science Education (ALISE) 1997 conference, this paper explores how The University of Michigan's School of Information is developing the skills of community information professionals.

Garth Graham. (1996). What community networks are all about. Telecommunities Canada.

In this article, Graham argues that CNs offer three kinds of access (to technology, to service, and to social interaction) and that they should have four major concerns (community, commons, content, and carrier).

Neil Guy (1996). Community Networks: Building Real Communities in a Virtual Space?

Written for his Master of Arts degree in Geography at Simon Fraser University. Guy is also the vice-president of the Vancouver Community Network.

Kathleen Gygi (1996). Uncovering Best Practices: A Framework for Assessing Outcomes in Community Computer Networking.

In this piece, the author advocates for "the incorporation of evaluation procedures in the planning and implementation of CCNs." She focuses on measuring outcomes related to community economic development and political participation.

Robert D. Putnam (1996). The Strange Disappearance of Civic America

Putnam writes this article as if trying to solve the mystery of the strange disappearance of social capital and civic engagement in America, finally coming up with television as the prime suspect.

Doug Schuler (1996). Developing and Sustaining Community Networks

"This is the outline for a 'Developing and Sustaining Community Networks' workshop conducted at the U.S. Department of Housing and Urban Development (HUD) 'Neighborhood Networks' Western regional conference held in Seattle, Washington on July 15-17, 1996. This workshop is an outgrowth of a previous workshop developed by Aki

Namioka and me and presented at the 1994 CPSR annual meeting held in San Diego, California."

Doug Schuler (1996). How to Kill Community Networks (Hint: We May Have Already Started...)

From the January, 1996 edition of The Network Observer.

Doug Schuler: New Community Networks (1996).

Howard Rheingold interviewed Schuler about his new book, New Community Networks: Wired For Change, for the online journal Salon.

Ben Stallings (1996). A Critical Study of Three Free-Net Community Networks

This study was completed for Intel's Robert N. Noyce 1996 Technology Summer Internship. Stallings is a member of the Grinnell College Class of 1998.

Andrew Avis (1995). Public Spaces on the Information Highway: The Role of Community Networks.

Thesis completed for his M.A. in Communication at the University of Calgary.

Ann Beamish (1995). Communities Online

For her Masters in Urban Planning at MIT. Includes a taxonomy of community networks.

Blacksburg Electronic Village (BEV) (1995). Managing Information in an Online Community

In this piece, BEV describes electronic community information services in practice and theory, and concludes with a discussion of graphic design principles oriented toward public access settings. A good introductory document.

Jeffrey Burrows (1995). Community Information Networking: An Overview. Strathkelvin District Council, Scotland.

Discusses the opportunity and challenge presented by civic networking -- "the opportunity to harness this new technology as a positive force, to improve the efficiency and accountability of local government, and strengthen communities, and the challenge of keeping up with technological change, being ready for and able to cope with the changes it will bring to society."

Steve Cisler (1995). Can We Keep Community Networks Running?

On the sustainability of community networks.

Joan C. Durrance, Charles Hansen, and Sheryl C. Knox (1995). The Flint Community Networking Initiative: Developing a Map, a Model, and a License.

This paper was presented at Ties That Bind: Converging Communities, a conference sponsored by Apple Computer, Inc. and the Morino Institute, at the Apple Conference Center

in Cupertino, California, May 2-5, 1995. Proceedings of that conference were edited by Steve Cisler.

Sam H. Harsh (1995). The Boulder Community Network: Access and Use

Written for the School of Journalism and Mass Communication, University of Colorado at Boulder, in partial fulfillment of the requirements for the degree of Master of Arts.

Alaina Kanfer (December 1995). What are Communities Doing On-Line?

"This paper surveys all communities listed in one of the most popular web site directories for communities on-line, USA CityLink, during October and November of 1995. Areas of investigation included the degree to which an exhibit has 'official sanction' from the community, the sectors of the community represented (eg. health care, education, libraries, etc.), the degree to which businesses are on-line, and the audience for which the on-line exhibit is created."

Sally Ann Law & Brent Keltner (1995). Civic Networks: Social Benefits of On-line Communities

The Morino Institute (May 1995). The Promise and Challenge of a New Communications Age.

Written "to help people gain a balanced understanding of the potential and risks of this powerful new communications medium."

Miles R. Fidelman (1994). Life in the Fast Lane: A Municipal Roadmap for the Information Superhighway. The Center for Civic Networking.

Discusses benefits of community networking, planning and funding strategies, and other meta-issues.

Garth Graham (1994). Free-Nets and the Politics of Community in Electronic Networks.

Abstract: "Examining how social relationships are altered by FreeNets can contribute to our understanding how changing patterns of communication affect the relationship between governors and the governed."

The Morino Institute (1994). Assessment and Evolution of Community Networking. Ties that Bind: Apple Computer/Morino Institute Conference On Building Community Computing Networks (May 5, 1994). Cupertino, California.

Alliance for Public Technology (1993). Connecting Each To All: A Telecommunications Platform for the Information Age.

"Focuses on the need for a 'telecommunications platform' that provides universal access to a wide variety of information services."

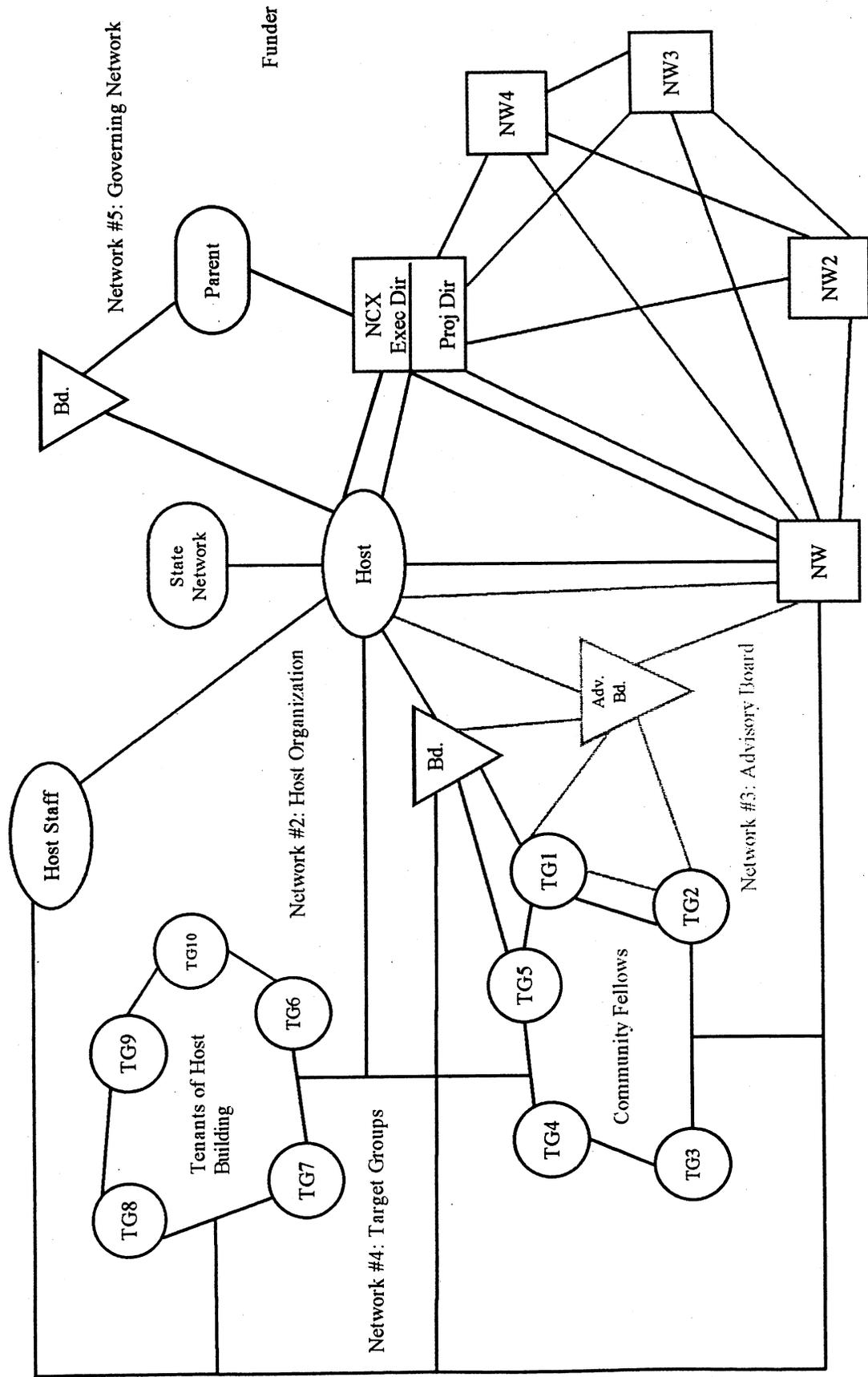
Steve Cisler (1993). Community Computer Networks: Building Electronic Greenbelts.

"What are community networks? What sorts of information and services can you find on these systems? What groups are starting and running community networks? How costly are the systems, and what are the sources of funding?" A community-networking classic.

Richard Civile, Miles Fidelman, John Altobello (1993). A National Strategy for Civic Networking: A Vision of Change. The Center for Civic Networking.

This paper establishes a vision and national strategy for civic networking.

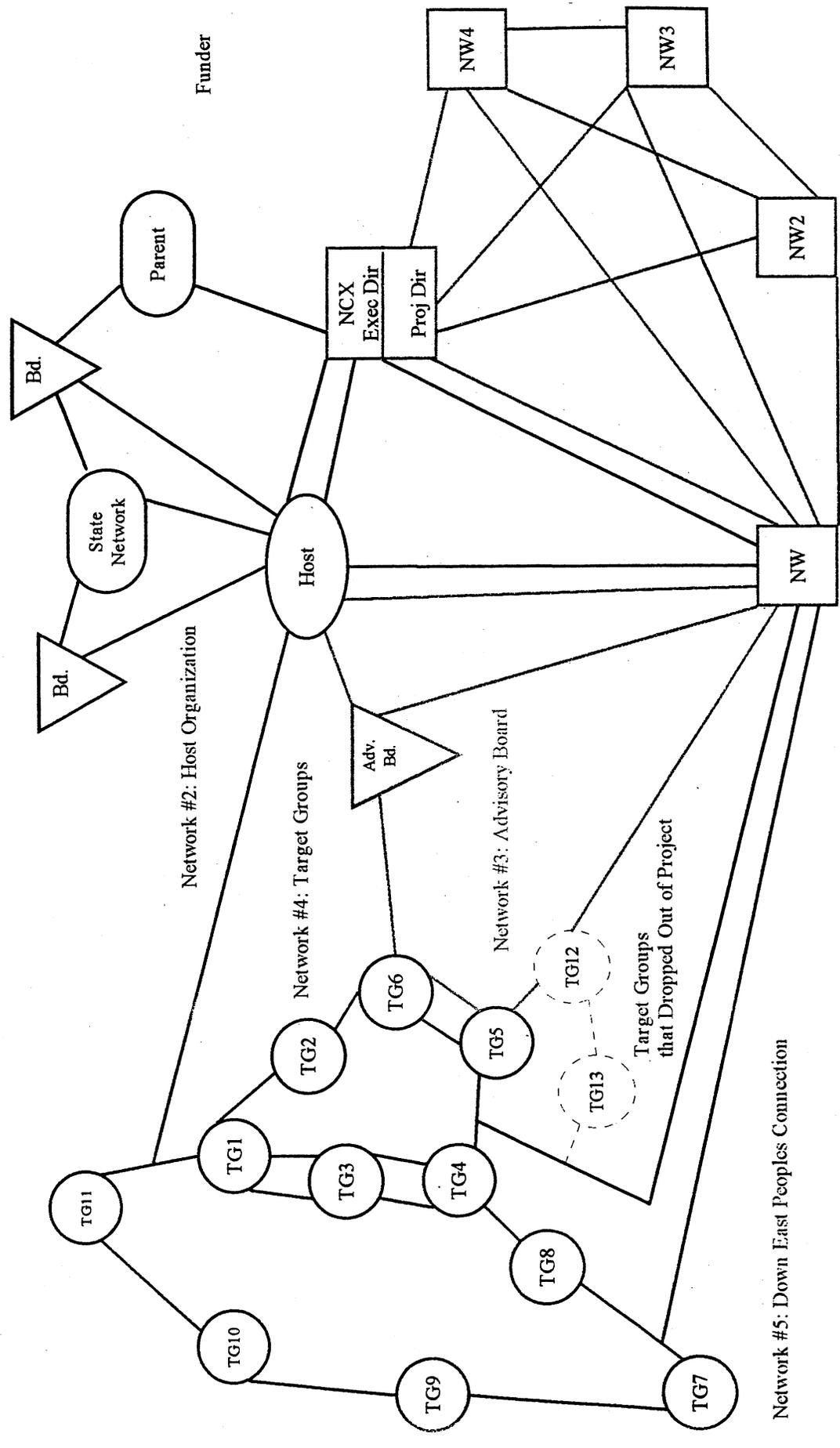
NETworker Project: Network Diagram Rocky Mount



Network #1: NCExchange & NETworkers

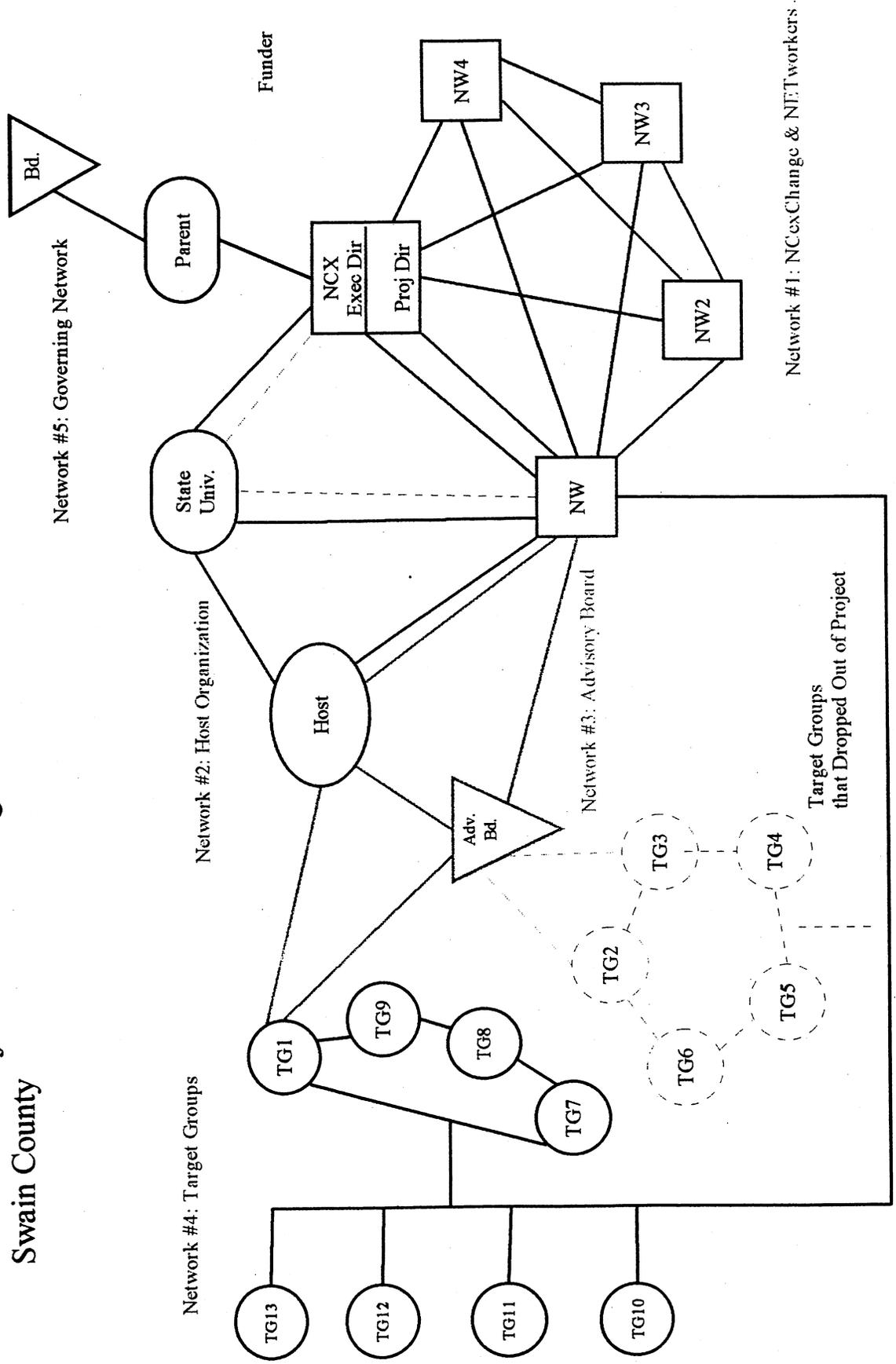
NETworker Project: Network Diagram BMWT Counties

Network #6: Governing Network



Network #1: NCExChange & NETworkers

NETworker Project: Network Diagram Swain County



NETworker Project: Network Diagram Greensboro

