Community Networking in Texas:
An Interim Evaluation Report for the Telecommunications Infrastructure Fund Board
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Executive Summary

Goals of the interim evaluation

The baseline data and survey findings presented here provide the groundwork for understanding how practices and organizational structures within each CN project intertwine, and how community characteristics such as size, adjacency to urban centers, location, and community resources come to bear on how community networks are conceived and carried out.

This report is based on assessments offered by people directly involved with the first round of the Telecommunication Infrastructure Fund's Community Networking (CN1) grants. These grants were initiated in 2000 and were available for up to $500,000. Each grant was preceded by a short period of time during which communities used a small planning grant ($20,000) to organize their projects. It was difficult to generate a sample of individuals who worked on each of the 36 projects, and as detailed below, we relied on a snowball sample of contacts, beginning with the people enumerated in TIF's official documentation as project officials. We may have missed important respondents at this stage, but we are confident that at least some of the key people in each community were contacted and asked to complete our initial survey.

The data reported here represent the project's own participants' assessments of their processes and accomplishment, and in this report we particularly emphasize what we have learned about project teams' experiences. The data do not reflect a single, objective standard against which to compare each project. In fact, respondents from the same project often gave different assessments regarding how their network fared, as noted in detail in Appendix 4. Self-report data are subjective, and how members of the sample interpreted certain questions and terms in our data gathering reflects this.

Most of the responses to our mailed survey come from project partners and board members. About half (52%) of our mailed surveys were returned, a very good response rate. Many note that they are not "very involved" with the project, but nevertheless are able to offer detailed and numerous comments in response to the various open-ended questions posed by the survey on aspects of their network's implementation. Most of the analysis we offer here examines the CN respondents and projects as a whole, even though

there are in fact huge differences from community to community. This report is intended to provide a snapshot of the overall Community Networking initiative's operations. Individual communities will be addressed in later reports.

Findings

The main findings elaborated here include the following.

- In general, the respondents reported that their CN1 projects are up and running, and they are characterized as either "fully implemented," or that they were revised to incorporate a "wider range of activities and services" than originally anticipated.
- Most CN1 projects reported that they met or surpassed their main goals.
- Among the most successfully implemented activities of the CN projects, creating new public access sites, increasing access to an existing public access point, connecting local groups and organizations, and producing local content were ranked at the top.
- Independent school districts were identified as heavily involved in planning stages of most of the projects. They were followed by municipal governments individuals and organizations connected with the health care sector, chambers of commerce, community colleges, and individual residents of local communities in terms of involvement as gauged by the respondents.
- Two factors, strong management and providing facilities, equipment, matching funds, support services and staff time by agencies such as school districts, education service centers, universities, and community colleges, were considered most helpful in network implementation. Technical resources of large institutions helped alleviate many start-up problems, as did project teams' ability to identify and delegate local resources and expertise to the tasks needed to get projects under way.
- The groups most involved in planning CN projects in smaller communities included businesses, local residents, and the health sector. In larger communities, universities and community colleges assumed important roles.

- Capable management and staff, and the support and resources of key institutions were considered most essential to network implementation.
- New opportunities for training and learning, enhanced educational opportunities, and better access to information were the most positively assessed program outcomes.
- Respondents indicate that, overall, they were most successful serving adult learners, seniors, low-income families, and low-income families with children.
- Respondents agreed or strongly agreed that their project reflected community needs; their teams worked well together; they had a sufficient technical base; their organizational structure was adequate; and that they met regularly.
- Three areas where there was less agreement across the project respondents concerned the ability of local partners to follow through on their commitments, the performance of subcontractors, and staff turnover. There were mixed reviews from the various projects on these factors.
- Organizational dynamics differed between small and larger communities. Although respondents from smaller communities lacked a local technical skill base informing their projects, they more frequently reported that transportation was not a problem for people trying to use their services, that local businesses were involved, and that the community network was a positive force for local economic development than did respondents from larger communities.
- Respondents indicate that people use networks because of public access (specific locations and hours), because training was offered, because of the nature of the technology and services, because of good management, and because of marketing and outreach.
- Conversely, not being aware of the network, access problems (such as hours of operation, location of access sites, and the availability of facilities), and problems with personnel were the most common hindrances to using the services and facilities of a community network.
- Respondents place considerable faith in the community networks' ability to attract in-kind support as a solution to sustainability. What stands out is the question of whether plans are actually in place to pursue and realize that support.

Introduction

This report presents findings of the first stage of the Telecommunication and Information Policy Institute's (TIPI) evaluation study of the first round of the Texas Telecommunication Infrastructure Fund Board's Collaborative Community Networking program (or "CN1"). The CN1 initiative provided grants to communities across Texas for the design and implementation of community network projects. The program was developed to help communities utilize technologies to enhance collaborative efforts and communication among groups and individuals in communities, especially marginalized or underserved constituencies, and to provide support to agencies working in sectors such as health care, education, economic and social development.

TIPI's evaluation will examine both the outcomes of the individual projects, and the practices used to implement them. We will explore ways that network project partners defined and organized the main components of their projects, and the organizational patterns that emerged as groups came together to bring these projects into being. This evaluation also will assess outcomes at the larger program level, identifying the extent to which TIF's goals for establishing telecommunications infrastructure for educational, social and economic development in Texas communities were met.

In this interim report we are particularly attentive to *how* project teams engaged in various processes intrinsic to community networking: identifying and recruiting key players in the community; tapping into existing networks formed by social groups and actors; determining priorities, targets, and objectives; seeking the best route to achieving these; recognizing obstacles and finding their solutions; and addressing the varied and sometimes disparate interests in communities and regions to better enhance the capability to collaborate.

The focus of this early stage of TIPI's evaluation study was twofold: first, we gathered baseline information needed to construct a CN1 project database that will permit flexible and efficient retrieval of data such as project location, goals and objectives, targeted groups, projected milestones, and key contact personnel. Second, we administered a mail survey to personnel involved with each of the 36 projects to gather data about the processes utilized within the CN1 initiatives to define, implement, and sometimes evaluate their projects. We asked survey respondents to identify the programs

and services that were prioritized within their projects, and the social groups and actors that participated in design, implementation, and use of network services and facilities. We also asked project partners to reflect on day-to-day undertakings and to identify factors that affected the implementation of their networks. In general, we found that most projects reported that they had met or surpassed their main goals although several communities had experienced significant delays due to various organizational and personnel matters, and one community project (Willis), failed to provide any survey responses.

These findings help frame the next stages of this evaluation, in which field research methods such as participant observation of project sites, in-depth interviews with network partners and users, and analysis of key project documents will be undertaken. These baseline data and survey findings provide the groundwork for better understanding of how practices and organizational structures within each project intertwine, and how community characteristics such as size, adjacency to urban centers, location, and community resources come to bear on how community networks are conceived and carried out.

Research Design

a. Database Construction

The starting point for this evaluation was to review the proposals submitted to TIF by each of the 36 projects that eventually received funding. The volume of information contained within these documents indicated to us that while these proposals are a valuable source of information about the projects and the communities and/or regions in which they were conceived, aggregating these materials would help us to customize and select elements of the proposals for use in the field. In addition, as the project evaluation is embedded within a graduate seminar at the University of Texas at Austin (please see Appendix 1), we felt it would be helpful to provide students with a tool allowing them to quickly and efficiently acquaint themselves with the 36 projects.

Using Microsoft Access 2000, TIPI researchers designed a database of summary information characterizing each project according to a set of primary fields: main project information; governance and management; project goals and objectives; target groups; community needs and assets; project milestones; and sustainability planning. We defined the main database objects in order to permit projects to be searched for key fields (such as project objectives and goals), and to enable links to be made both within and across projects (for example, identifying all projects that proposed training local people in Web site development).[1]

b. Survey Procedures

For this initial effort, we sought to survey project participants in order to understand the processes through which the CN1 projects were designed and implemented, and to understand their perceptions regarding the near-term outcomes of

[1] After identifying which attributes would comprise the main fields within the database, members of the research team independently reviewed several project proposals to determine the extent to which we reached agreement on identifying attributes and whether the variables we defined would yield information appropriate to our research concerns. After reaching a suitable level of agreement on these two issues, the project proposals were summarized and entered into the database.

these projects. We aimed to identify factors that intervened as CN1 project members defined their goals and put strategies into place to achieve them. Similarly, we intended to collect data that would clarify how interaction between social groups occurred within these community networks as the day-to-day operations of these projects took place, and the roles played and resources contributed by the individuals and groups that served as project partners.

c. Survey Design

The survey was designed to compile both qualitative and quantitative data concerning the context within which CN1 projects were developed, the processes that guided the main project activities, and preliminary outcomes. Some questions were developed specifically with the CN1 program in mind, while others were adapted from previous studies. With respect to prior work done on community networks, we looked to the U.S. Department of Commerce National Telecommunications and Information Administration's Telecommunications and Information Infrastructure Assistance Program (later renamed "TOPS" or Technology Opportunities Program) for question construction. We anticipate that our evaluation might provide some points of comparison with other projects and programs.

The clusters of questions used in the survey falls into several categories. First, we determine how certain key elements of the CN1 projects took place within the various communities. Some of these questions asked respondents to identify the groups or individuals that had taken part in the planning or the implementation of projects, while others were intended to gauge how the internal dynamics and procedures of key institutions had an impact on the organization and execution of the CN1 projects.

Based on our review of the project proposals, and preliminary discussion with project partners and TIF personnel, we generated a list of the possible groups, agencies, individuals and institutions that may have taken part in the various steps needed to plan and implement the CN1 projects. We ask survey respondents to assess the extent to which these entities and individuals were involved in these processes by means of a scale that measured level of involvement.

We also include several open-ended questions that asked respondents to identify the factors that helped and hindered both implementation and planning, as well as those that played a role in the use of community network programs and services. We also ask participants to describe any evaluation procedures used within their projects, and for the most positive and negative outcomes observed from the community network projects so far. Whether sustainability was a part of the planning and implementation process also is assessed, and we ask respondents to enumerate potential sources of funding once the TIF grant period had expired.

Finally, we identify a series of possible outcomes, processes, circumstances, and activities that are commonly associated with community networks. Here we are particularly interested in the research carried out by other agencies and programs that deal with community networks, as we ask partners in the TIF program to describe the extent to which new public access sites, training, workforce development, and telecommunications applications were implemented within their networks. We also gather demographic data from survey respondents and include several questions asking CN1 partners to give their thoughts on primary target groups and users of their networks.

After a preliminary version of the questionnaire was constructed, Dr. Sharon Strover conducted a focused pre-test of the survey with the Austin Telecommunity Partnership project. This pre-test identified areas where question wording was unclear, suggested other key factors or elements of community networks that we had not anticipated, and assessed the validity of our questions. The final survey appears in Appendix 2.

d. Sampling Procedures

Before constructing survey questions, it was necessary to devise a sampling procedure to determine who would receive the survey. We used a snowball sample construction method that would allow CN1 project officials to help us determine who would be included in the survey process.[2]

[2] This sampling technique involves asking the members of a population or a social group who will take part in a research study to identify other potential research subjects. Each potential participant subsequently contacted is also asked to recommend others, until an acceptable sample has been identified.

TIF's database of CN1 projects provided us with a starting point. We contacted each individual listed as a project official (i.e. authorized official, project director and/or financial officer) by telephone whenever possible, although in some cases, contact could only be made electronically, to confirm their ongoing responsibilities within the project. We also updated contact information, including telephone and fax numbers, e-mail addresses, and street addresses, and entered these into a database.

We then used these initial phone calls to elicit suggestions from project partners concerning other participants who would be appropriate survey respondents and who themselves might supply information about additional contacts. A sample of approximately 400 CN1 project participants was thus generated. Approximately five percent of the initial sample (nineteen individuals) was subsequently excluded from the sample for a variety of reasons. Most commonly, these members asked to be removed. Some declined to participate because they felt that they lacked sufficient knowledge or expertise to participate in the evaluation, some were no longer active in the network projects and chose not to take part, and others had only recently assumed active roles in the community network and were thus just learning about their projects themselves.

In all, 388 surveys were sent out in the initial mailing, with an additional 150 mailed out in a follow-up a few weeks later. One hundred and ninety completed surveys were returned, 12 respondents declined to participate, and 11 surveys were returned due to problems with addresses. Overall, this gave us a response rate of 52 percent, though response rate, as well as the number of surveys sent, varied quite significantly by project (Appendix 3 details response rate by project). Of the 190 completed surveys we received, most (35 percent) were completed by project officials (authorized official, project director, or financial officer) or by project partners (36 percent, which includes board members, committee members, and representatives of partner institutions, for example). The remaining responses came from public access site or training personnel (9.6 percent), individuals who provided various support functions within the network projects (such as fund-raising, grant-writing, public relations and marketing, and Web development), and technical support or Internet service providers (4.5 and 4.0 percent respectively). Roughly 11 percent of respondents were project subcontractors. Finally, just below ten percent of

survey responses came from those who played "other" roles in these projects. These ranged from emergency management personnel to unspecified users or clients taking part in network programs

The institutional bases of survey respondents broke down as follows:

- agencies and entities within the K-12 school systems (including schools and school districts) were the most heavily represented institutional base in our survey with 23.7 percent of the responses;

- community or town governments, non-profit agencies, and community colleges constituted between 11 and 13 percent of our survey responses;

- library personnel provided 9.5 percent;

- other organizations represented included: private sector businesses not associated with telecommunications or technology services (6.8 percent), health care agencies (6.3 percent), telecommunications firms (6.3 percent), and university or four-year colleges (5.3 percent);

- representatives of chambers of commerce or local economic development agencies (1.6 percent), public and privately owned utilities (1.1 percent), university extension services (1.1 percent), and volunteer agencies (.5 percent) provided the remaining responses.

Our sample was split fairly evenly across gender lines, with 44 percent male and 53 percent female respondents. Almost 60 percent of our responses came from individuals between 46 and 60 years of age. This seems consistent with the strong institutional presence within our sample of project officials and representatives from partner institutions, most of whom were likely to occupy senior level positions. About 20 percent of our respondents were between ages 36 and 45, and ten percent were between 26 and 35.

In terms of survey demographics, it is perhaps most surprising that while a significant number of survey respondents considered themselves still involved in the network project, 44.7 percent also characterized themselves as "rarely involved" when asked about the extent of their participation. About a quarter each of our sample considered themselves either "not very involved" or "somewhat involved" with the project. Roughly three percent said they were "quite involved" and just over one percent characterized their role as "very involved." These numbers are somewhat inconsistent

with the extent of involvement suggested by these same project personnel in their initial contact with our project researchers, but as we did not probe further as to the nature and the frequency of project activities within which these respondents participated, it is difficult to know how "involvement" was interpreted by these respondents in this survey. It may be that because project leaders contracted with project management services that they themselves became less involved. This suggests an area to investigate in subsequent stages of the research.

e. Survey Administration

Each member of the sample received a copy of the survey by mail, along with a pre-addressed and stamped return envelope, a brief letter of introduction from TIPI, and a letter from TIF's Chair Dirk Jameson outlining TIF's expectations for the evaluation. Each survey was assigned an identification number that allowed us to monitor survey returns and manage follow-up contact with survey participants. Ten days after the initial survey mailing, we sent respondents a reminder postcard requesting that they complete and return the survey if they had not yet done so. A second mailing, including the complete survey and another stamped return envelope, was sent after about three weeks to non-respondents. In the two to three-week period following the second mailing, we contacted some project directors and authorized officials to request that they urge their partners and board members to complete the survey (and to return the survey themselves if they had not yet done so). We also identified communities with a response rate of less than twenty percent, and followed up with telephone calls. In two cases, we went out to project sites to meet with project partners and encourage survey completion.[3]

[3] Materials accompanying the survey also contained a statement on the steps taken to ensure the confidentiality of responses. Identification numbers that might potentially be used to link research subjects to numbered surveys and the responses contained within them are in limited access files, and are used only for purposes of tracking response rates. Any records concerning survey identification numbers will be destroyed once all responses have been aggregated into data and analyzed. In addition, all staff working on the project are certified by the University of Texas' Office of Research Support and Compliance in the conduct of research on human subjects.

Results

This section summarizes the findings of our survey. We examine organizational dynamics, discuss objectives and the efficacy of the CN1 projects in meeting them, and address factors that intervene in the design and undertaking of these community networks. In our conclusion, we identify areas for further study in the next phases of the evaluation, and offer preliminary comments on the common experiences and approaches taken by these networks that might inform future community networking initiatives.

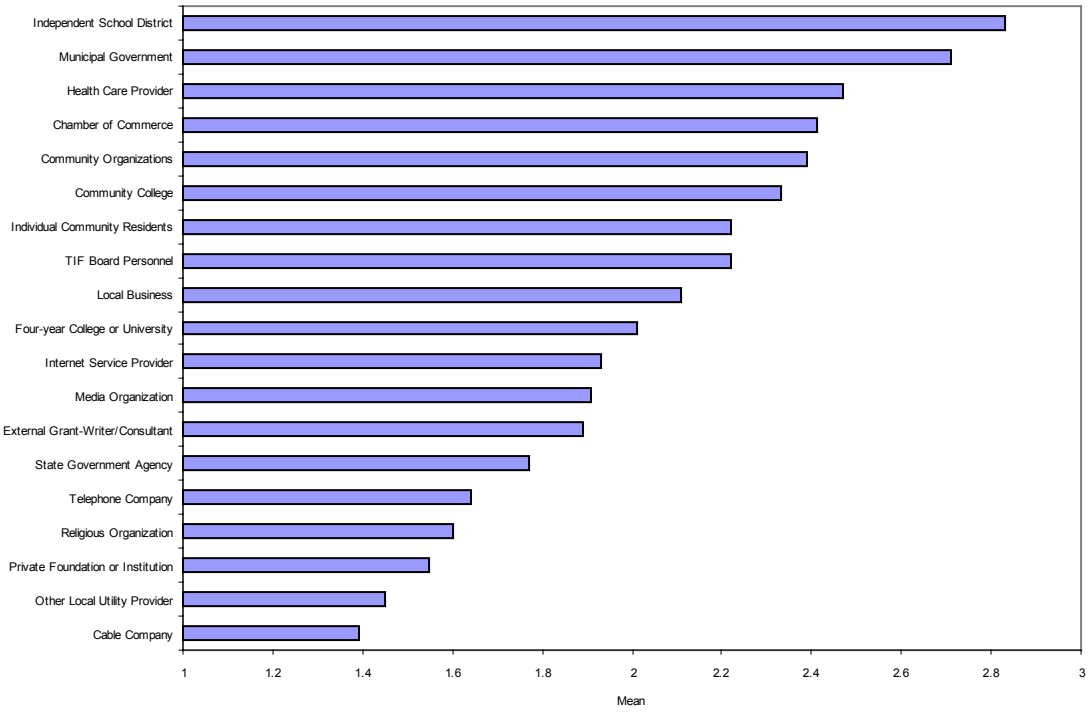
a. Planning and Implementation

Who got involved?

Independent school districts in most communities were identified as most heavily involved in planning stages of the projects. When asked to evaluate the involvement of groups and organizations on a scale where 2 referred to "not at all involved" and 4 meant very involved," the average response for ISDs was roughly 2.8 followed by municipal governments (2.7), individuals and organizations connected with the health care sector, (2.5), chambers of commerce (2.4), community colleges (2.3), and individual residents of local communities (2.2). At the opposite end of this scale, cable companies, local utilities, private foundations, religious organizations, and telephone companies reported marginal levels of involvement that ranged from "not at all" to the lower end of "somewhat involved" (see Figure 1).

Similar trends characterized involvement in the *implementation* of community networks, with independent school districts and municipal governments reporting the greatest degree of involvement. Community colleges were considered somewhat more prominent in implementation than in planning. The groups least occupied in implementation were again, cable companies, local utility providers, religious organizations, private foundations and telephone companies.

Figure 1 Groups involved in planning CN projects



Each of these groups' mean involvement score fell between 1.1 and 2.7, a level of involvement ranging from "not at all" to "somewhat involved." It is interesting to point out, though, that both religious groups and private foundations were more involved in planning than were local utilities and cable companies. With respect to implementation, religious organizations again were more involved than local cable companies. This suggests that perhaps social and cultural aspects of communities merit at least as much, if not more, consideration as technical concerns in the planning and development of networks.

Different sorts of groups were involved in launching projects depending on community size. Local businesses, chambers of commerce, and the health care sectors were much more likely to have been involved in implementing projects in small communities than in larger ones. Communication businesses such as cable companies, Internet service providers and telephone companies were among those groups considered

least involved at planning stages in smaller communities. Virtually all communities with a population under 10,000 identified local residents as having played a role in both planning and implementation of their CNs.[4] Larger communities (25,000 and above) were less likely to involve municipal governments, local utilities, local businesses and chambers of commerce in their implementation processes. Community colleges and universities were involved in implementation to a higher degree in these communities.

Did projects follow the plans they had in their proposals?

We also assessed the extent to which these projects were developed in relation to the plans described in their proposal. In general, the respondents reported that their CN1 projects are up and running, and they are characterized as either "fully implemented," or "revised to incorporate a wider range of activities and services than originally proposed." These two responses account for about 60% of all respondents' reports.

Figure 2 Reported status of the CN projects

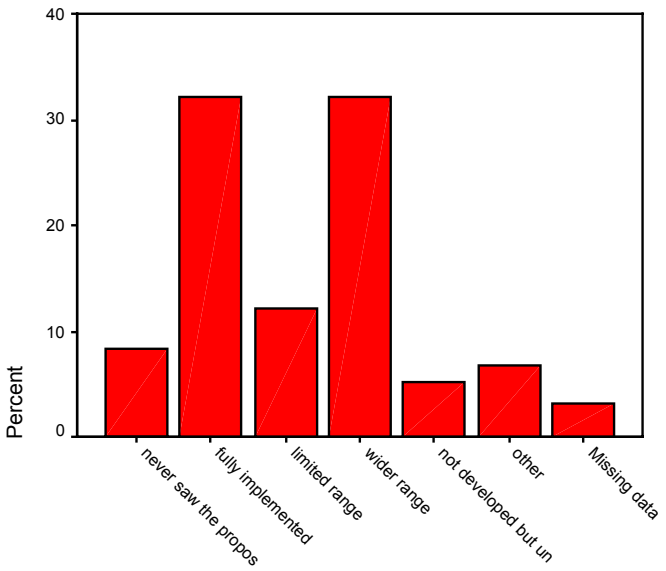


Figure 2 summarizes these responses. Several communities (Bastrop, for example) appeared to be experiencing difficulties at the organizational level which were preventing

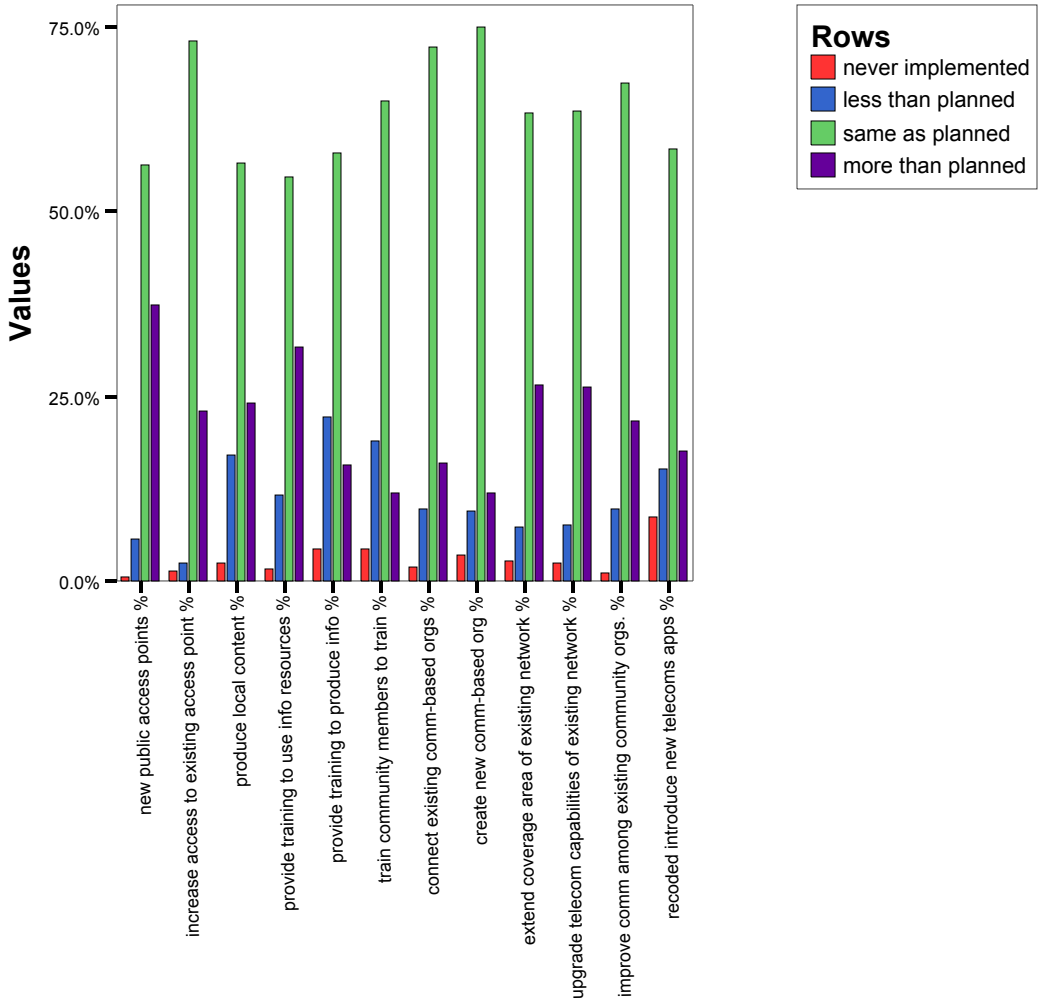
[4] The two exceptions were Burleson County and Fisher County, with one respondent each indicating that local people were "not at all involved" in planning and implementation, respectively.

the technical and training aspects of their projects from being deployed, and some projects experienced delays due to the absence of a project director (Tyler, for instance), but over 70 percent of the project personnel we surveyed indicated that the projects are now well under way. It is worth pointing out that in some cases, the number of respondents from a particular project was rather low. However, it is still possible and, in fact, quite useful to use even these few responses to identify areas that will be pursued further in subsequent evaluation activities.

Respondents also were asked to rate the extent to which specific project activities such as establishing public access sites or offering training were established. Most people reported that creating new public access sites was successfully implemented. Other items described as being successfully implemented included "increased access to an existing public access point," "connecting local groups and organizations," and "producing local content." Responses to these items tended to cluster around values that suggested that these elements were implemented generally as planned. Figure 3 illustrates the overall percentages of responses for each of various CN project activities.

Although respondents from the same community differ in their assessments, it is apparent that "providing training for local community members to produce information resources," "training local community members to train or educate others," and "introducing new telecommunications applications" were the activities that seemed less likely to have been developed, according to these self-reports. One community, La Grange, stood out in terms of its failure to develop various aspects of its program, but again, due to the very low number of completed surveys obtained from this project (n=3) we may not generalize from these results without gathering further empirical data. In Appendix 4, we provide an overview of each community's planned and implemented activities.

Figure 3 Completion of various CN activities



b. Users

The CN projects targeted various constituencies. Indeed, the original call for proposals noted the needs of rural and underserved regions in particular. Adult learners, low-income families and low-income families with children were targeted to the greatest extent by network services and facilities in most communities, closely followed by ethnic

groups and seniors (Table 1). Other groups and sectors that were prominent among network users included K-12 students and small businesses. Groups such as non-English or limited English speakers, persons with disabilities, and ethnic and cultural minorities were clustered around values falling between "some" and "quite a bit" in terms of the degree to which they are served by CN1 projects; other constituencies were limited to certain geographic areas (such as border communities and "geographically isolated" groups).

Table 1 Targeted user groups

	Low Income Family	L-I Families with children	K-12 Students	Post-secondary students	Adult learners	Seniors	Non-English speakers	Isolated persons	Disabled	Border Communities	Small business	Ethnic minorities
Not a target	.6%	1.1%	6.2%	9.8%	.6%	1.1%	4.6%	8.9%	8.9%	45.3%	14.5%	4.2%
Target user	99.4%	98.9%	93.8%	90.2%	99.4%	98.9%	95.4%	91.1%	91.1%	54.7%	85.5%	95.8%

Other intended users identified by survey respondents included people with health challenges or problems, travelers and tourists, non-profit organizations and government employees. We asked respondents to indicate the extent to which their targeted communities were in fact served by their network's services or facilities. The means range from 1 ("not at all") to 5 ("a great deal") in Table 2 below. Respondents indicate that overall, they were most successful serving adult learners, seniors, low income families, and low income families with children. That said, however, nearly all of the means (excepting users on the border) are above "3," indicating some success with all the target groups.

Table 2 Mean score on extent to which group was served by CN project

	N	Mean
low income family	175	4.0971
low inc with kids	172	4.0756
k-12 students	166	3.7349
post-secondary	156	3.5128
adult learners	177	4.1864
seniors	175	4.0743
non-English	167	3.2814
geog isolated	154	3.2013
disabled	153	3.0327
border	93	2.9785
small business	147	3.2653
ethnic minority	161	3.7019

c. Organizational procedures and dynamics

In general, the community respondents reported very few major problems around their organizing efforts. The results in Figure 4 indicate respondents agreed or strongly agreed (a score of 4 or 5 on our scale) that:

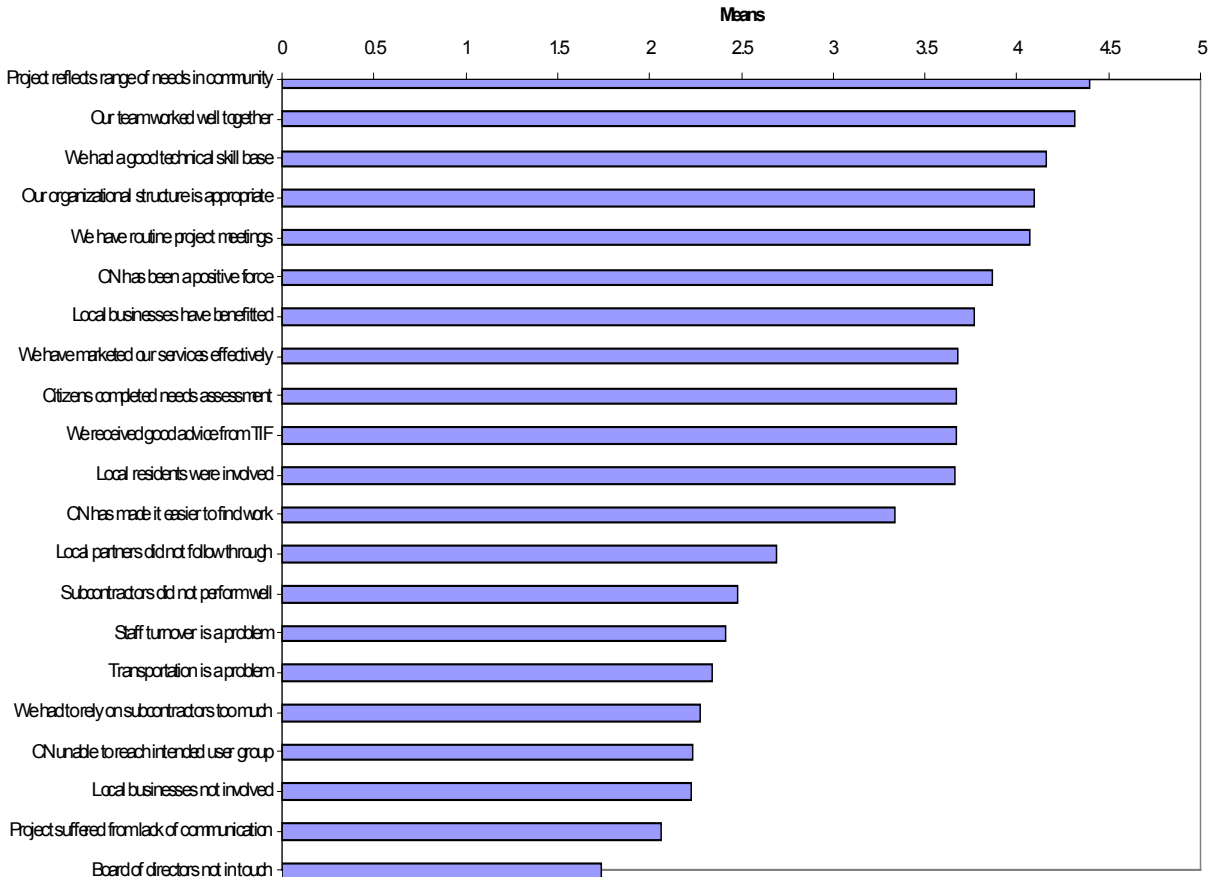
- their project reflected community needs;
- their teams worked well together;
- they had a sufficient technical base;
- their organizational structure was adequate;
- and that they met regularly.

There was agreement, albeit less strong overall, as well that that the CN project benefited local businesses, that project teams marketed network services effectively, that project planning included completion of a community needs assessment, that TIF provided good advice, that local residents were involved in the network projects, and that these networks had helped some people to search for jobs..

Three areas where less agreement occurred across the project respondents concerned the ability of local partners to follow through on their commitments, the performance of subcontractors, and staff turnover. There were mixed reviews from the various projects on these factors.

Our data indicate that when compared to larger communities, smaller communities found certain resources less available (such as technical personnel) but that they had sound organizational dynamics, a contrast to the situation in larger communities (see Figure 5). Compared to respondents from larger communities, respondents from smaller communities lacked a local technical skill base informing their projects, for example, but they more frequently reported that transportation was not a problem for people trying to use their services, that local businesses were likely to be involved, and that the community network was a positive force for local economic development than did respondents from larger communities.

Figure 4 Agreement with statements regarding project activities[5]

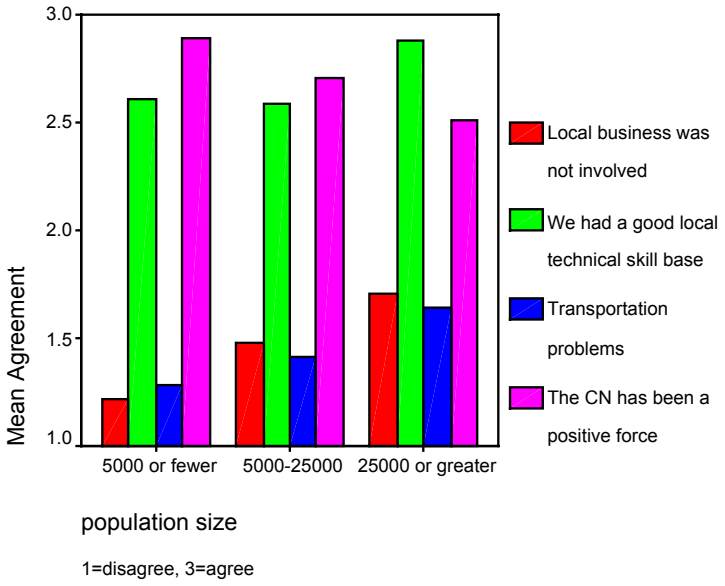


These community comparisons were statistically significant when comparing small (under 5000 people) to medium (5000-24999 people) and large communities (over 25000 people).[6] On the other aspects of project organization, however, there were very few differences across the projects in terms of the size of the community. A few trends (that did not reach statistical significance) stand out for additional investigation. For example, all the communities reported strong agreement with the statement "Our team worked well together," but the means from smaller communities were somewhat higher (4.38) than were those from larger communities (4.28).

[5] In this question, "1" means "strongly disagree" and "5" means strongly agree. Note that the wording in various items is sometimes framed positively, and sometimes negatively. Thus disagreement with the statement "The Board of Directors is not in touch with the project" is actually a positive reflection on the projects.

[6] Analysis of variance on the mean scores of each item were significant at the .05 level.

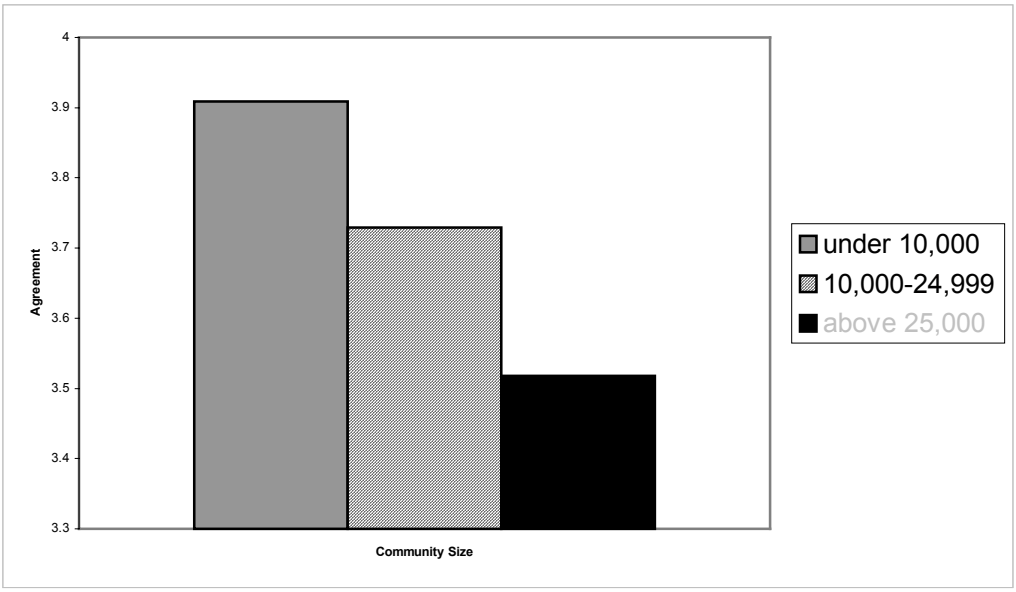
Figure 5 Community Size by Aspects of CN Projects



Our data also suggest that project partners honored commitments more frequently in smaller communities than in larger communities. However, since we have no means of determining how "team" is identified across different projects nor by different project partners, it is prudent to bracket these findings for further study in the field.

With respect to the efficacy of organization and governance, survey participants indicated general satisfaction with the way that their project teams were organized and managed. Few respondents expressed strong agreement when asked if their projects' board of directors were out of touch with their local communities or if their projects relied on subcontractors too much. As noted above, most expressed disagreement when asked if partners on their teams did not follow through on responsibilities and obligations originally established in their proposals, though this disagreement was stronger among respondents from smaller communities. As Figure 6 indicates, respondents in smaller communities were more likely to agree that local businesses benefited from the community networking project.

Figure 6 Agreement with "Local businesses benefit from our community network" by Community Size



With respect to the day-to-day management of network planning and implementation, we looked at functions such as internal communication. Most CN1 project teams held meetings on a regular basis and few project teams believed that lack of communication was a problem. Again, it is interesting to observe that, among the communities with the lowest response rate to our survey, answers to items concerning the efficacy of communication patterns, interaction among team members, and integration of a variety of groups in project processes tended to be lowest. While we hesitate to draw conclusions due to the low numbers of surveys returned, we also expect that these response rates might reflect the lack of contact among project partners alluded to in the survey data.

d. Using the Community Network: What Helps, What Hinders

In addition to comments on the management and governance of project teams, we also sought information concerning the processes and factors that influenced local use of community networks. Use of CN1 project sites and facilities hinges on issues related to access (primarily number of sites, their location, and their hours of operation), and on the capacity-building provided by network training programs. In response to our open-ended question on what helped people to use the network, five categories recurred frequently:

the availability of specifics of public access, offering training, the nature of the technology and services, good management, and useful marketing and outreach.

Table 3 Frequencies on factors that helped people to use the community network

Helped people to use the network	training	76
	public access	86
	management	19
	technology	35
	marketing/outreach	27

Project members commented that providing computers to people who lack Internet access from their homes, for instance, significantly enhanced people's ability to use networks, as did situating access sites in appropriate locations. One respondent succinctly summed up the thoughts of many on matters of access: "Access at no cost at several locations in the network service area makes using the community network easy for most people." While location and price were prominent here, network services such as training also need to be scheduled with the demands of those who work full-time in mind: evening and Saturday class times and access hours were frequently mentioned as factors that promoted use of network services.

A well-designed Web site also goes a long way to promoting use among community residents and other users. Several respondents noted that a "one-stop" Web site providing access to multiple services and information sources greatly enhanced the likelihood that users would access other network services. Providing pertinent, timely, and local content was considered a key part of network accessibility.

In addition to making training programs available, the quality of trainers and the provision of appropriate programming (in terms of skill level, language spoken, and teaching methods) further enhanced use of these networks. One project partner observed that "offering classes in Spanish [and] effective instructors with patience" enabled people's use of network facilities. Another commented on the benefits of training that promoted "the use of the Internet in a non-intimidating environment."

These findings resonate with the accompanying question, which asked survey respondents to identify factors that hindered network use.

Table 4 Frequencies on factors that hindered network use

What hindered network use?	Institutional factors	7
	Management	11
	Personnel Issues	19
	Lack of awareness	45
	Community attitudes/education	27
	Technological problems and shortcomings	10
	Access issues	41
	Other	15
	No hindrances	9

Access (such as hours of operation, location of access sites, and the availability of facilities), at 41 percent of the responses, and problems with personnel (at 20 percent) were the most common hindrances. In the latter category, the lack of qualified instructors or coordinators at public access sites, and staff turnover were perceived as barriers to network use. Respondents also noted that in some projects, training and other personnel-driven aspects of their networks had been so successful that demand had far exceeded the ability to staff their sites and training courses. Thus, personnel shortages were also noted here.

Access may also be linked to the knowledge and awareness of network programs and services. The lack of effective marketing of CN1 projects seemed to be the key factor impeding use of community networks. Responses here referred to the failure of CN1 project teams to identify ways to disseminate information to target groups: "getting information about programs to people who need it most (they don't read newspapers, listen to radio, or go to church)." Others made more general observations about the "lack of knowledge of what [this CN] is" and the "need [for] more advertisement about location of access sites." Still others commented on how this problem emerged as part of a specific project team. In one case, for example, a lack of a centralized management structure prevented a CN's activities and programs from being promoted. The guidelines of the TIF grant program were also identified as a factor affecting how project teams managed their marketing activities: "marketing dollars are not budgeted nor is a

fundraiser position covered. We know from free publicity that we work to get, that the community interest spikes when articles appear. Classes fill up . . . linked businesses get more hits too. These grants should cover professional staff and marketing money to make things work perfectly."

Problems at the level of project management and administration (though less prominent, at just over ten percent of these responses) also were thought to prevent use of community networks, as were technical shortcomings of network components. In the latter category, reliability and speed of network connections were important, and some respondents noted that physical location or other topographical or geographical characteristics of network communities made it difficult to overcome these problems.

Finally, in the "other" responses to this question, the fear of technology or the reluctance to try something new were the most commonly cited factors preventing use of the network. Here, project partners suggested that attitudes such as "being afraid they will ruin the equipment," "fear of admitting they had no computer experience," and simply "fear of computers" kept people from using network programs and services.

It is interesting to note that discrepancies emerged when respondents considered some of the same issues within different contexts. For example, concerns associated with personnel, including turnover, significantly hindered the use of project services and facilities. However, there was general disagreement among participants when asked if they felt staff turnover had been a problem in the previous set of questions. This suggests that project teams assessed the impact of some concerns and issues differently when it came to governance and management than when they addressed matters specifically related to network services and facilities.

e. Implementing Networks

While access issues governed the use of networks, capable management and staff, and the support and resources of key institutions were considered essential to network implementation. Over 40 percent of the responses referred to the importance of competent management personnel in these projects. In many cases, individual project directors were cited as indispensable to the network. Project managers from communities including Cuero, Austin, PineyWoods, Laredo, Arlington, Commerce, Andrews,

Amarillo, Plainview, Burleson, and Wharton County were all identified, by name, as the key factors ensuring project implementation.

Table 5 Frequencies on factors that helped implementation

Helped implementation	Management	83
	Local support	22
	Key institution(s)	41
	Tech/Telecom support	15
	Partner collaboration/communication	30
	TIF program/personnel	10
	Misc.	2

Network project implementation also relied heavily on the various resources, roles and processes afforded by good local support and collaboration among partners. Institutional support was prominently mentioned. The provision of facilities, equipment, matching funds, support services and staff time provided by agencies such as school districts, education service centers, community colleges and universities accounted for about 20 percent of the factors considered helpful in network implementation. Technical resources of large institutions helped alleviate many start-up problems, as did project teams' ability to identify and delegate local resources and expertise to the tasks needed to get projects under way. For instance, one survey participant noted: "Members of the Board of Director's technology committee provided excellent information and support in selecting and installing necessary equipment in the various access points."

Communication between partners and the ability to collaborate were also important factors. One participant observed "the city, county, school district, hospital, and Chamber of Commerce make up the board and actively work to keep this project working." Another person pointed out that, in terms of joint participation, "the wide variety of viewpoints and efforts ensured a successful project." Support of the local community (that is residents and individuals not associated only with partner institutions) accounted for just over ten percent of these responses, and access to local

telecommunications service providers or technical support provided fewer than 20 of some two hundred items listed by respondents in this question.

The commitment and skills brought by individual project members were mentioned most often with respect to enhancing network implementation. It follows, then, that shortcomings in these areas were named most commonly among factors that *prevented* network implementation. Though not always to the same extent, our results indicated that project success or failure, at least in terms of implementation, was often attached to the work or role of a specific individual.

Table 6 Frequencies on factors that hurt implementation

Hurt implementation	Partners/project management	61
	Institutional factors	22
	TIF CN1 program	17
	Personnel (lack of	30
	Technological	19
	Location/size of	6
	Other	15
	No hindrances	7

In most cases, a project manager or director was identified here. Turnover of this key position was considered particularly problematic. Several projects had experienced significant delays implementing key components of their networks while staffing issues were being resolved: one participant reported that a 16 month void in project leadership had prevented effective implementation. Other comments provided in the context of this project underscore a significant problem in CN1 program design whereby full-time project staff positions were not funded, making it necessary for many key functions to be undertaken by volunteers who often held full-time work elsewhere. It has also been suggested that various "creative" measures have been taken to divert funds towards paying salaries for personnel who should not be eligible.

Many respondents situated this problem within an overall lack of guidelines from TIF on a first-time project, while others attributed these kinds of dynamics to the institutional bases most partners maintained. One person commented at length on these

factors: "the prohibition against hiring 'staff.' We have paid a huge price in turnover and orientation expenses because we had to work through contract trainers. In addition, relying on in-kind time from some partners has proved to be problematic. Some ended up placing their 'volunteer' work for [our network] such a low priority that they did not meet deadlines and placed a strain on the whole implementation." Indeed, another institutional constraint for some participants was finding either the time or the administrative support to meet the objectives of the CN1 projects. A member working within a community college noted that "members of the consortium doing their primary function in their own organization" was detrimental to advancing network goals.

Efficacy of project implementation was also hindered by "unduly stringent and restrictive" policies of the organizations and agencies supplying facilities, resources, and personnel. "Red-tape" issues included the need to secure legal or other forms of administrative clearance from major institutions, particularly when contracts and agreements were involved. These were, obviously, matters of concern to institutions such as universities, community colleges, and hospitals. One surprising finding was that some institutions had imposed restrictive security measures following September 11, 2001, which held up the implementation of project components, particularly when connectivity to large mainframes and other networking systems was involved.

If the diversity of project partners enabled design and implementation of community networks, divergent and sometimes conflicting sets of rules and procedures among the agencies collaborating in the projects hindered them. As one respondent succinctly observed, "organizations working together using different practices" can become complicated. Several others remarked that competing agendas and priorities sometimes inhibit the collaborative nature of these networks.

For some, the design of the TIF grant program – notably, the stipulation against hiring full-time management personnel from among the partner institutions, as mentioned above – impeded implementation. Participants also identified the lack of guidance and clearly defined expectations from TIF and attributed these to the CN1 projects being the first phase of the community networking program: "[we lacked] a clear sense of direction on the project since this was the first round for a community network grant. There were no guidelines to follow from another successful grant, or no one to ask for help."

Other significant factors that prevented network projects from being realized included technical problems and delays – particularly, greater than anticipated costs for technical infrastructure, the lack of reliable or amenable Internet service providers or, in a few cases, poor telephone connectivity. We also coded for basic characteristics of a project site (location, demographics, location, or topography, for example) that created difficulties. In Fisher County, for example, which is designated as not adjacent to a metro area, "engineers, tower specialists, sales reps, etc., were harder to meet one-on-one than would have been in a large city."

It was clear from this set of questions that the collaborative nature of this grant program, combined with the fluid and evolving character of network structures and components were simultaneously the CN1 projects' most serious advantages and disadvantages. On one hand, the breadth and diversity of project teams meant a wide range of resources and expertise guided some projects through successful implementation. On the other, however, diverging agendas and institutional cultures of partner agencies, and the demands of participants' full-time jobs sometimes made it difficult to bring the full weight of these resources to bear in the successful implementation of networks.

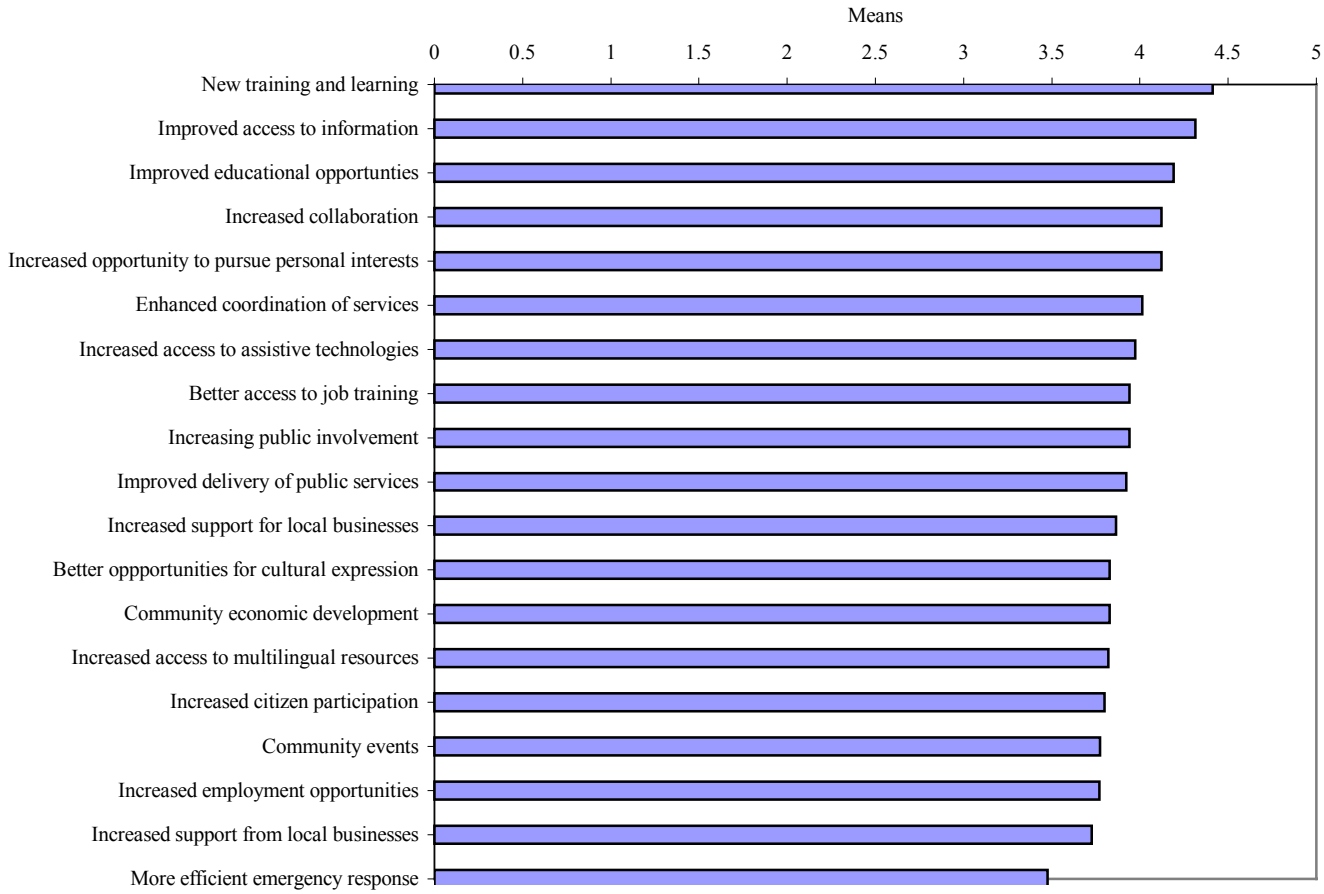
f. Network Outcomes

Respondents were asked to provide some initial assessments as to whether a number of potential program outcomes had been achieved (Figure 7). Again, we offered a five-point scale where "1" meant "not anticipated in this project" and "5" referred to "more than expected." New opportunities for training and learning, enhanced educational opportunities, and better access to information were the program outcomes that were assessed as most accomplished, with mean scores ranging from 4.2 to 4.5.

The survey also provided the opportunity for project participants to themselves identify positive and negative outcomes of their projects. While establishing access sites was the most frequently mentioned positive accomplishment, the corresponding item pertaining to negative outcomes was generally answered according to respondents' perceptions of problems (hindrances) associated with undertaking their network projects.

As this question was intended to assess outcomes rather than implementation, we concluded that these responses were of limited validity and we discarded the question.

Figure 7 Means on Network Outcomes



Sustainability and Evaluation Plans.

Plans for sustaining the network upon expiration of the TIF grant period were a key component of the CN1 program. There seemed to be a general confusion among respondents as to the status of their respective networks' sustainability plans. Responses taken across the first round of projects suggest that many projects (58 percent) have implemented sustainability plans while a much smaller proportion believe that no such plans are in place (16 percent). However, we also note that this leaves a significant

number of responses (26 percent) indicating a lack of knowledge as to whether sustainability plans had been devised or implemented. In the case of NOSOTROS, Laredo's CN1 project, for instance, 60 percent of respondents reported they did not know if sustainability plans had been implemented. Thus, it seems that the most significant trend here is the divide between project participants who indicated a positive response and those who are unable to report on the subject at all. This suggests that the issue of sustainability had either not been addressed widely across the full range of networks' partner institutions, indicating failures to communicate, or that the issue had not been addressed at all.

Respondents were also asked to identify sources of support that would help sustain the project after the CN1 grant ends. We provided a range of sources to choose from: seeking other grants, soliciting donations, charging user fees, locating in-kind support, and other sources. In-kind support was the most frequently cited means of sustaining the community network in the future; of the 190 respondents in our survey, 123 selected in-kind support as an important future source of support. The remaining sources drew roughly equivalent, but fewer, responses. The remaining options -- grants, donations, or user fees – each accounted for between 40 and 48 percent of the responses concerning future sources of support. Almost one-quarter (23 percent) of survey respondents told us that they did not know where post-grant support would be found. In light of the lack of agreement on the issue of sustainability plans for the community networks discussed above, the relatively low number of "don't know" responses to this question coupled with the higher incidence of "in-kind" responses suggests that our respondents are placing considerable faith in the community networks' ability to attract in-kind support. What stands out is the question of whether plans are actually in place to pursue and operationalize that support.

Community networks were asked to provide evaluation plans for their project as part of the granting process. Again, a gap in either project planning or communication seemed to be at work here, as almost half of these responses (47%) indicated a lack of knowledge about plans to implement an evaluation plan for their networks. However, a significant portion (34%) reported evaluation plans had been developed and implemented, while about 20 percent indicated that their network had implemented no evaluation plan. Collecting and analyzing user data was the most commonly mentioned

method of evaluating CN1 projects. This process encompassed activities such as generating demographic breakdowns of network users, keeping logs of user hours for various network facilities and components, and compiling statistics detailing attendance and hours spent in training classes. Directed evaluations of training courses, including instructor evaluation, focus groups, and post-class skills and knowledge testing, were the next most frequently employed method of appraising network projects, followed by analysis of project Web sites (including numbers of hits and evaluation of content), and ongoing, formative evaluation techniques.

Conclusions

This information from project participants suggests that the first round of community networking projects largely met their goals and have been implemented, for the most part, as they were initially planned. The projects' most successful aspects appear to be the creation of public access sites and the provision of training to use information resources, presumably the Internet. Even with the financial resources of a sizeable grant from TIF, however, some difficulties emerged around finding successful ways to share resources and expertise and to lead the project.

The organizational dynamics of implementing these projects underscore that collaboration is difficult. Collaboration was a requirement of the grant, and many of the partners involved in these efforts (educational institutions, for example) are seasoned veterans of joint projects. However, the sort of collaboration required in these grants posed some leadership challenges. The findings repeatedly stress the importance of a strong direction and strong leadership. Even when project partners share the same goals and when financial resources exist, learning how to direct and manage the projects and to cope with problems involving staff turnover and subcontractors proved difficult for some. Having different organizations involved, each with its own ways of doing things and its own priorities, automatically introduces complications. Without templates from other communities whose models could be reproduced, some of these communities experienced fits and starts in their projects and suffered from the lack of strong guidance.

It was clear from the survey results that the collaborative nature of this grant program, combined with the fluid and evolving character of network structures and components were simultaneously the CN1 projects' most serious advantages and disadvantages. On one hand, the breadth and diversity of project teams meant a wide range of resources and expertise guided some efforts through successful implementation. On the other, however, diverging agendas and institutional cultures of partner agencies, and the demands of participants' full-time jobs sometimes made it difficult to bring the full weight of these resources to bear in the successful implementation of networks.

The results here point toward many questions that subsequent fieldwork will answer. More information on how project groups found or developed leadership will be

germane, as will the role – particularly for sustainability purposes – of the larger institutions that appeared to be critical to many projects in their start-up phases. The issues of staff turnover and human resources also deserve greater attention. We will look to the fieldwork component of our evaluation as well for data on the outcomes - both negative and positive – associated with the Community Network endeavors. As the material in Appendix 4 notes, there is divergence within each community on different accomplishments of their networks. Examining the evaluation efforts of the projects that did gather data will be a useful first step in obtaining more information about how the projects were received in their communities, another dimension about which we have little information to date.

Appendix 1: Course Syllabus

RTF 393N Local Telecommunications in Texas
Thursday, 2-6, SRH 3.109
Dr. Gary Chapman; email: gary.chapman@mail.utexas.edu, 471-8326
Dr. Sharon Strover; email: sstrover@mail.utexas.edu, 471-6667
Strover Office Hours: Monday 2-4 and by appointment
Chapman Office Hours:

Course Description
RTF 393N investigates how new communications systems are being used by local communities. The course blends an examination of telecommunication policy with fieldwork in several Texas communities and exposure to evaluation techniques. We will consider how networking projects succeed – or fail – at the local level, and try to understand the ways in which community networking intersects local, state, and federal policies attempting to encourage broadband deployment and other goals such as economic development.

By way of background, in 1995 Texas implemented its statewide Telecommunications Infrastructure Fund, a ten-year, $1.5 billion grant program for investments in telecommunications infrastructure for public schools, public libraries, and nonprofit medical institutions. In 2000, the TIF Board launched a "community networking" grant program to help entire communities connect to the Internet and online resources. The Texas community networking grant program is the largest of its kind in the world.

The goal of this Policy Research Project is to evaluate the performance of the community networking projects that have received TIF funding so far. The evaluation will identify strengths and weaknesses in each community's project, as well as to generate a "best practices" guideline or prototype for other community networking endeavors. We will note the problems that communities have in common, and assess the procedures or practices that appear to ameliorate those problems. We will focus on the 36 Texas communities that received funding in the first round of TIF community networking grants, but our evaluations may extend to a second round of grantees as well. Evaluations will consist of both quantitative assessments from survey data and qualitative assessments from interviews and site visits.

More broadly, this PRP will give you a chance to examine how a wide ranging and innovative state program rolled out a unique sets of projects, and how the constituencies involved in that project – the communities, the vendors, the state agencies (TIF and others), the legislature, and the broader policy community at the federal and international levels - think about its accomplishments. Your will develop an array of research skills and analysis abilities even as you learn a great deal about telecommunications technologies, industry structures, and the broader policy context.

Readings

We have assembled a reading packet that you can either purchase from Longhorn Copies on Guadalupe at 26th, or obtain from Electronic Reserves. We also order two required books for the course: Carol Weiss' Evaluation (Prentice Hall, 1998) and Annabel Dodd's The Essential guide to telecommunications (2000). Two other books were ordered as optional supplements: Robert Yin's Case study research design and methods (Sage, 1994) and Andrew Cohil and Andrea Kavanaugh's Community networks: Lessons from Blacksburg Virginia (Artech, 2000).

Grading

Schedule

August 29	Introduction to the course; history of communities and communication technologies.
September 5	The Texas community network program and the evolution of the Telecommunications Infrastructure Fund. Guests: Wendy Latham and Rajasvini Bhansali, Texas Telecommunications Infrastructure Fund program. Reading: Skim website for the Telecom Infrastructure Fund at www.tifb.state.tx.us; Rothenbuhler, Revising communication research for working on community;
September 12	Overview of communication technology; the Lonestar Broadband site (www.lonestarbroadband.org); the policy context for broadband Reading: Skim Parts 1 and Chapters 6-7 of Dodd;
September 19	Evaluation research. Reading: Weiss Chapters 1-5.
September 26	Strategies for linking research to policy: determining what matters, what is possible, and what is important. Reading: Weiss, Ch. 14.
October 3	Profiles of various Texas community networking projects. Guests from different projects in class. Reading: Cohill and Kavanaugh, Ch 1, 2 and 3.

October 10	Fieldwork methods: case studies; focus groups; interviewing; observations. Reading: Weiss, Chapters 6-11; Yin, Chapters 1-4
October 17	Analyzing data: how to make sense of what you see, hear and read. Reading: Weiss, Chapters 12-13;
October 24	Overview of economic development theories and practice. Reading: TBA
October 31	Technology alternatives: wireless, Wi-Fi, satellites Reading: Dodd, Chapter 8-10;
November 7	Possible fieldwork dates
November 14	Possible fieldwork dates
November 21	Policy applications of research on community networks: what lessons from the projects should or could affect contemporary policies? Reading: Dodd, Part 2;
November 28	Thanksgiving Holiday
December 5	Final class presentations

Useful URLs
http://www.afcn.org/resources/

http://databases.si.umich.edu/cfdocs/community/index.cfm

http://ofcn.org/whois/ben/Free-Nets/

http://www.scn.org/ip/commnet/abshome.htm

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Appendix 2: Survey Questionnaire

1. A number of common activities within community network projects are listed below.
Please indicate the extent to which each activity was proposed and implemented in your community network.

	Extent of Implementation				
	Never Proposed	Never Implemented	Less than Planned	Same as planned	More than planned
a. Establish one or more ***new*** public access points or centralized locations for information access and exchange	1	2	3	4	5
b. Increase access to an ***existing*** public access point or centralized location for information access and exchange	1	2	3	4	5
c. Produce local content	1	2	3	4	5
d. Provide training for local community members to ***use*** information resources	1	2	3	4	5
e. Provide training for individuals to ***produce*** information resources (such as website construction)	1	2	3	4	5
f. Train local community members to train or educate others ("train the trainers")	1	2	3	4	5
g. Connect existing community-based organizations	1	2	3	4	5
h. Create a new community-based organization	1	2	3	4	5
i. Extend the coverage area of an existing network	1	2	3	4	5
j. Upgrade the telecommunications capabilities of an existing network	1	2	3	4	5
k. Improve communication among existing community organizations	1	2	3	4	5
l. Introduce new telecommunications applications (such as videoconferencing or distance education)	1	2	3	4	5

2. What is the current status of your community network project in relation to the TIF proposal? (Choose one)

I never saw the proposal	1
The project is fully implemented as originally proposed.	2
The project has been revised to offer a more ***limited range*** of activities and services than originally proposed.	3
The project has been revised to offer a ***wider range*** of activities and services than originally proposed.	4
The project described in the original proposal has not been developed, but plans are underway for its implementation.	5
The project described in the original proposal has not been developed and is not likely to be implemented	6
Other (Please specify):_____	7

3. Please indicate the extent to which you agree or disagree with the following statements.
Mark a box for each statement: SA=strongly agree, A= agree, N = neither agree nor disagree,
D = disagree and SD = strongly disagree.
If the statement is not applicable to your project, please check "NA" for "Not Applicable".

	Strongly Agree		Neutral		Strongly Disagree	
a. Our project reflects the range of needs and interests in our community.	__SA	__A	__N	__D	__SD	__NA
b. The local business community is not involved in this community network project.	__SA	__A	__N	__D	__SD	__NA
c. We have marketed our services and activities effectively to the community.	__SA	__A	__N	__D	__SD	__NA
d. Staff turnover has been a problem.	__SA	__A	__N	__D	__SD	__NA
e. We had a good local technical skill base for this project.	__SA	__A	__N	__D	__SD	__NA
f. Our team worked well together.	__SA	__A	__N	__D	__SD	__NA
g. Our organizational structure is appropriate to the activities/programs developed.	__SA	__A	__N	__D	__SD	__NA
h. Our project has suffered from a lack of communication.	__SA	__A	__N	__D	__SD	__NA
i. Transportation is a problem for people trying to use our network facilities.	__SA	__A	__N	__D	__SD	__NA
j. Our community network has made it easier to find work in our community.	__SA	__A	__N	__D	__SD	__NA
k. The community network has been unable to reach its intended user groups.	__SA	__A	__N	__D	__SD	__NA
l. Local businesses have benefited from our network.	__SA	__A	__N	__D	__SD	__NA
m. The board of directors for this project is not in touch with the needs of people living in this community.	__SA	__A	__N	__D	__SD	__NA
n. We have had to rely on subcontractors too much.	__SA	__A	__N	__D	__SD	__NA
o. Local residents were involved in all phases of the project's planning.	__SA	__A	__N	__D	__SD	__NA
p. The community network has been a positive force for community economic development.	__SA	__A	__N	__D	__SD	__NA
q. We received good advice from the TIF Board.	__SA	__A	__N	__D	__SD	__NA
r. Some local partners did not follow through on the responsibilities and obligations originally agreed to in the original project proposal.	__SA	__A	__N	__D	__SD	__NA
s. Our subcontractors did not perform as well as we hoped.	__SA	__A	__N	__D	__SD	__NA
t. Citizens completed community needs assessment surveys as part of our planning.	__SA	__A	__N	__D	__SD	__NA
u. We have routine project meetings with agendas and minutes.	__SA	__A	__N	__D	__SD	__NA

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4. Please indicate below whether your community network project intended the following groups to be end users of network equipment and services, and indicate to the best of your knowledge the extent to which these groups are served by network equipment or services. Choose all that apply.

		Extent to which this group has been served by network services or facilities				
	Not a Target	**Not At all**	**Very Little**	**Some**	**Quite a Bit**	**A Great Deal**
a. low-income families	1	2	3	4	5	6
b. low-income families with children	1	2	3	4	5	6
c. K-12 students	1	2	3	4	5	6
d. post-secondary students	1	2	3	4	5	6
e. adult learners	1	2	3	4	5	6
f. senior citizens	1	2	3	4	5	6
g. non- or limited English speaking persons	1	2	3	4	5	6
h. geographically isolated persons or families	1	2	3	4	5	6
i. developmentally or physically disabled persons	1	2	3	4	5	6
j. border communities	1	2	3	4	5	6
k. small businesses	1	2	3	4	5	6
l. ethnic or cultural minorities	1	2	3	4	5	6
m. Other groups not listed above (specify): _____	1	2	3	4	5	6

5. What has most ***helped*** people to use the community network?

_____

_____

_____

_____

_____

_____

6. What has most ***hindered*** people's use of the community network?

_____

_____

_____

_____

_____

_____

7. Please indicate below whether your community network project was intended to support individuals in the following sectors and, to the best of your knowledge, the extent to which the network is used within these sectors.

	Extent to which the sector has been supported by the project					
	Not	**Very little**	**Some**	**Quite a bit**		**A Great Deal**
a. Individuals in the education sector	1	2	3	4	5	6
b. Individuals in the health care sector	1	2	3	4	5	6
c. Individuals in government agencies	1	2	3	4	5	6
d. Individuals in the small business sector	1	2	3	4	5	6
e. Individuals in human services	1	2	3	4	5	6
f. Individuals in non-profit organizations	1	2	3	4	5	6
g. Other sectors not listed above (please specify) _____	1	2	3	4	5	6

8. How involved was each of the following groups in the ***planning*** stages of your project?

	Don't Know	**Not at all Involved**	**Somewhat Involved**	**Very Involved**
a. Independent School District	1	2	3	4
b. Health Care Provider or Organization	1	2	3	4
c. Municipal Government	1	2	3	4
d. State Government Agency	1	2	3	4
e. Community College	1	2	3	4
f. Four-year College or University	1	2	3	4
g. Religious Organization	1	2	3	4
h. Media Organization	1	2	3	4
i. Community Organizations	1	2	3	4
j. Individual Community residents	1	2	3	4
k. Internet Service Provider	1	2	3	4
l. Cable Company	1	2	3	4
m. Telephone Company	1	2	3	4
n. Other Local Utility Provider	1	2	3	4
o. Local Businesses	1	2	3	4
p. Chamber of Commerce	1	2	3	4
q. Private Foundation or Institution	1	2	3	4
r. External Grant-Writer/Consultant	1	2	3	4
s. TIF Board Personnel	1	2	3	4
t. Other: (specify)_____	1	2	3	4

9. How involved was each of the following groups in ***implementing*** your community network project?

	Don't Know	Not at all Involved	Somewhat Involved	Very Involved
a. Independent School District	1	2	3	4
b. Health Care Provider or Organization	1	2	3	4
c. Municipal Government	1	2	3	4
d. State Government Agency	1	2	3	4
e. Community College	1	2	3	4
f. Four-year College or University	1	2	3	4
g. Religious Organization	1	2	3	4
h. Media Organization	1	2	3	4
i. Community Organizations	1	2	3	4
j. Individual Community residents	1	2	3	4
k. Internet Service Provider	1	2	3	4
l. Cable Company	1	2	3	4
m. Telephone Company	1	2	3	4
n. Other Local Utility Provider	1	2	3	4
o. Local Businesses	1	2	3	4
p. Chamber of Commerce	1	2	3	4
q. Private Foundation or Institution	1	2	3	4
r. External Grant-Writer/Consultant	1	2	3	4
s. TIF Board Personnel	1	2	3	4
t. Other: (specify)_____	1	2	3	4

10. The implementation of this community network was most ***helped*** by:

_____

_____

_____

_____

_____

_____

11. The implementation of this community network was most ***hindered*** by:

_____

_____

_____

_____

_____

_____

12. We have implemented the sustainability plan for this community network project.

___Yes ___No ___Don't Know

13. After the TIF grant ends, this project will receive support from these sources: (check all that apply)

___ Other grants
___ Donations
___ Fees
___ In-Kind support
___ Other
___ Don't Know

14. We have implemented an evaluation plan for this community network project.

___Yes ___No ___Don't Know

15. If you answered yes to #14, please describe the kind of information gathered in the evaluation program. Otherwise, go on to #16.

_____

_____

_____

(please continue on the next page)

16. Some planned outcomes of community network projects are listed below. Please indicate the extent to which these outcomes were achieved in this project.

Outcomes	**Extent to which Outcome was Achieved**				
	Not anticipated in this project	**Not at all**	**Less than Expected**	**Same as Expected**	**More than Expected**
a. Improved access to information	1	2	3	4	5
b. Increased collaboration between local groups	1	2	3	4	5
c. Enhanced coordination of community-wide information and communication services	1	2	3	4	5
d. New training and learning opportunities	1	2	3	4	5
e. Improved educational quality	1	2	3	4	5
f. Increasing public involvement in the project.	1	2	3	4	5
g. Better access to job training	1	2	3	4	5
h. Community economic development	1	2	3	4	5
i. Increased citizen participation in community affairs	1	2	3	4	5
j. Improved delivery of public services	1	2	3	4	5
k. Increased access to multilingual resources	1	2	3	4	5
l. Increased access to assistive technologies	1	2	3	4	5
m. More efficient emergency response and public safety systems	1	2	3	4	5
n. Increased employment opportunities	1	2	3	4	5
o. Increased support ***for*** local businesses	1	2	3	4	5
p. Increased support ***from*** local businesses	1	2	3	4	5
q. Better opportunities for cultural expression	1	2	3	4	5
r. Community events emerging around the project	1	2	3	4	5
s. Increased opportunity to pursue personal interests, hobbies, or crafts.	1	2	3	4	5
t. Other: (please specify) _____	1	2	3	4	5

17. In your opinion, what have been the most significant positive *and* negative outcomes to result from your community network project?

_____

_____

_____

_____

_____

_____

Finally, please tell us a little bit about yourself.

18. What is your age? ___18-25 ___26-35 ___36-45 ___46-60 ___over 60

19. What is your sex? ___Male ___Female

20. What is your race or ethnic group? ___African American ___Hispanic ___Anglo ___Other

21. What organization do you individually work with?
(for example, a community college, library, city government, elementary school, non-profit)

_____

22. Are you still involved with the project? ___Yes ___No

23. How would your rate your own present or past involvement in the project?

__very involved ___quite involved ___somewhat involved ___not very involved ___rarely involved

24. What is/was your role in the project? _____

_____

25. Are/were you a subcontractor or consultant? ___Yes ___No

Telecommunications and Information Policy Institute
University of Texas
Austin TX (512) 471-5826

IF YOU HAVE ANY QUESTIONS ABOUT THIS SURVEY, PLEASE FEEL FREE TO EMAIL US AT tipi@uts.cc.utexas.edu OR TO CALL 512-471-5826.

Appendix 3: Community response rate

	Sent	Returned Complete	Returned Declined	Response Rate % (completed)
A&M BRAZOS	21	7	3	33
AMARILLO/CANYON	32	17	3	51
ANDREWS	10	6	0	60
ANGLETON/BET	27	13	0	48
ARLINGTON	27	12	0	44
AUSTIN	14	9	0	64
BASTROP	4	1	0	25
BURLESON COUNTY	12	5	1	42
CLIFTON/CIM	3	1	0	33.3
COLORADO CITY	3	2	0	66.7
COMMERCE	15	5	0	33.3
CORSICANA	2	2	0	100
CUERO	13	6	0	46
EDINBURG/EMPOWERNET	13	9	0	69
FISHER COUNTY	17	9	1	53
GONZALES	8	5	0	63
HASKELL	12	4	0	33.3
HILLSBORO	4	2	1	50
KIRBYVILLE	7	5	0	71
LAREDO/NOSOTROS	12	10	0	83
LA GRANGE	11	3	0	27
LOCKHART	5	5	0	100
LULINGNET	4	2	0	50
PANOLA /EAST CENTRAL	5	2	0	40
PINEYWOODS	24	13	1	54
PLAINVIEW	7	3	0	43
PRAIRIE LEA /TRI-COMMUNITY CONNECT	3	1	0	33.3
ROCKDALE	9	3	1	33.3
SAN ANTONIO	9	4	0	44.4
SAN MARCOS	15	3	1	20
SMITHVILLE	7	4	0	57
TERRELL COUNTY	9	2	0	22
TYLER	7	4	0	57
WHARTON COUNTY	6	6	0	100
WILLIS	4	0	0	0
WOODVILLE	7	4	0	57
N	388	190	12	

Appendix 4: Individual Community *Reported Project Activities*

This appendix reviews responses from individual communities. In all cases we note the number of respondents who replied to various questions.

Brazos Valley Community Network (BVCN) (n=6)[7]

In the BVCN project, all respondents reported that the community network was implemented to the same extent, or more than planned, for the following activities:

- providing new public access points
- increasing access to existing public access points
- producing local content
- providing training for local community members to use information resources
- providing training for local community members to train others
- connecting existing community-based organizations
- improving communication among existing community organizations
- upgrading telecommunication capabilities of the existing network

On the other hand, three (60 percent) respondents reported that the network had provided *less* training than originally proposed in production of information resources while the remaining two (40 percent) stated that this aspect had been implemented as planned.

Assessments as to whether the CN project had "extended coverage of existing networks" or "introduced new telecommunications applications" were somewhat divided. Regarding the former, three respondents (60 percent) reported implementation as "same as planned," one (20 percent) indicated "less than planned," and one (20 percent) suggested "more than planned." Similar results were obtained concerning the introduction of new telecommunications applications, although the greatest proportion stated that this aspect had *not* been developed to the extent projected. Only two BVCN participants provided a response to the item concerning the creation of new community-

[7] Although we have an "n" for each network, not every question was addressed by every respondent, so the "n" represents only the maximum number of respondents in each case.

based organizations. One member observed this to be implemented at levels anticipated by the project's proposal and the other saw less than expected development in this area.

Amarillo/Canyon Community Network (n=15)

With varying degrees of agreement on whether certain aspects had been developed to the extent projected in the proposal or greater, respondents from the Amarillo/Canyon network (n=15) indicated that the following activities had been implemented:

- new public access points
- increased access to existing public access points
- production of local content
- connections between existing community-based organizations
- extended coverage of existing networks

But certain areas, particularly those concerning training, generate some conflicting responses. While two thirds of this project's respondents (n=10) thought that training to use information resources had exceeded expectations, 13 percent (n=2) reported this activity's development as "same as planned," 13 percent (n=2) described it as "less than planned," and seven percent (n=1) indicated that this training had never been implemented. Ten respondents (80 percent) indicated that the network had met or exceeded its projected levels of training for local community members to *produce* information resources, while one (9 percent) reported that the network had not provided this training to the degree expected. Ten respondents reported that plans to train community members as trainers had been implemented "the same as" or "more than planned," although two respondents also stated that these plans were either not implemented, or had not been carried out to the extent anticipated.

Project members generally agreed that creating new community-based organizations, upgrading telecommunication capabilities of an existing network, improving communication among existing community organizations, and introducing new telecommunications applications had developed to the same or a greater extent than projected in the proposal, although several received "less than planned" or "never implemented" assessments from single respondents.

Andrews Connected (n=5)

All Andrews Connected project participants who responded to our survey agreed that both creating new public access points, and enabling access to existing public access sites had been implemented to the extent planned. Connecting community-based organizations was assessed as slightly better developed, with three respondents (60 percent) reporting implementation as the same as planned, and two (40 percent) stating "more than planned." Similar proportions were recorded for extending coverage of existing network areas, and upgrading telecommunication capabilities of an existing network.

But the implementation of all activities related to training was reportedly lagging. For instance, all respondents (n=4) reported that training community members to use information resources had been implemented less than planned. Similarly, Andrews Connected participants also suggested that training community members as trainers and training to produce information resources had either been implemented less than expected or not at all. Respondents conflicted over several other aspects. The production of local content generated one response of "more than planned" (33 percent), one response of "less than planned" (33 percent) and one response of "never implemented" (33 percent). The introduction of new telecommunication applications was judged to be either the same as or more than expected by half of our respondents, and less than expected by the remaining half. Assessments of the degree to which communication among community organizations had been improved were similarly divided, with one participant (20 percent) indicating better than expected, three (60 percent) suggesting the same as expected, and one (20 percent) selecting less than expected.

Angleton ISD: The Business Education Technology Consortium (BETC) (n=13)

The Angleton project's results generally suggested that most activities had been implemented at least to the point suggested in the proposal, though most network elements were reported as not meeting expectations by at least one or two project members.[8]

[8] It should be noted that BETC yielded one of the highest return rates for our survey and thus the handful of dissenting opinions recorded here does not carry the same weight as the same numbers in projects with lower numbers of survey respondents.

All BETC network respondents indicated that the establishment of new public access points had been carried out to the same or a greater extent than planned. Several activities reportedly had been developed to the same degree as projected in the proposal:

- increasing access to existing public access points
- producing local content
- training community members to use information resources
- upgrading telecommunications capacities of an existing network
- introducing new telecommunications applications

For each of the above network elements, however, several respondents (comprising seven to ten percent) indicated less than expected levels of development, and several observed more development than planned (from eight to thirty percent[9]). Similarly, slight differences emerged regarding the project's success in creating new community-based organizations or connecting existing organizations. About 83 percent (n=10) of BETC respondents saw the establishment of new community organizations reaching the same or better levels than planned, while the remaining 17 percent (n=2) saw less development than expected in this area. Roughly 70 percent of respondents (n=7) believed the network had connected existing organizations to the extent planned, but 30 percent (n=3) saw less than expected results.

Finally, there were considerable differences among respondents regarding the implementation of training to produce information resources, training community members to train others, improvement of communication among community members, and extension of the coverage area of an existing network. On each of these topics, one or more respondents indicated no implementation, while proportions ranging from 25 to 95 percent of the remaining respondents suggested the opposite by assessing implementation as the same or more than planned.

Arlington Community Networking Collaborative (n=12)

All Arlington respondents reported that this network project had achieved the following objectives to the same or a greater extent than planned:

[9] Though a proportion of thirty percent is reasonably significant, this only represents two out of the seven respondents who answered this question.

- establishing new public access points
- increasing access to existing public access sites
- providing training to use local information resources
- training community members to train others
- extending the coverage area of an existing network
- improving communication among community organizations

The majority of responses indicated that the network had met or surpassed its goals in producing local content, training community members to produce information resources, and connecting existing community-based organizations, although one dissenting response of "less than planned" was recorded for each item. Respondents were more divided, however, on the subject of introducing "new telecommunication applications," with three responses (43 percent) suggesting that the project had not seen implementation in this area, or had done so to a lesser extent than planned, and four (57 percent) reporting that the network had met this goal. Finally, although the majority reported that the network had created new community-based organizations (n=11; 91 percent) and upgraded telecommunication capabilities of an existing network (n=4; 80 percent) at same or greater levels as planned, one respondent in each case described these two items as never implemented.

Austin Telecommunity Partnership (n=8)

All respondents from the Austin project reported that new public access points had been created, access to existing public access points had been increased, and telecommunication capabilities of an existing network had been upgraded to a similar or greater extent than planned in their proposal. Likewise, there was consensus (n=6) that the project has produced less local content than planned.

Other project activities seemed to raise considerable differences among respondents. Seventy-five percent reported that the network had provided "training for local community members to use information resources" and training for "local community members to train or educate others" to the same extent as planned. Another 25 percent, however, saw the development of these services as less than planned. In addition, while 60 percent indicated that training for information production had been

achieved at levels similar to those projected, the other 40 percent refuted this, reporting "less than planned" development of this training. Fifty percent of the Austin project respondents thought the project had connected existing community-based organizations less than expected while the other fifty percent saw the same level of implementation as expected.

Respondents reported that improving communication among community organizations had been less developed than anticipated (n=8; 62 percent). Assessments of the extent to which new telecommunications applications had been introduced were widely varied. Two respondents (30 percent) thought expectations in this area had been met or surpassed, another thirty percent (n=2) felt that this activity had never been implemented, and 43 percent indicated less than expected implementation. Finally, only one Austin project member each gave responses to items concerning the extension of existing network coverage area, and the creation of new community-based organizations. The former had reportedly met expectations, while development of the latter had not met projected goals.

Burleson County-Wide Integrated Network (BC-WIN) (n=5)

According to BCWIN survey respondents, no network component had been implemented more than planned and none had failed to reach some level of development. Most activities in this project had either met expectations as established in the proposal, or were slightly less developed than planned. All members (n=3), however, agreed that both the coverage area and the capabilities of existing networks had been enhanced by their CN project. At least 75 percent of respondents assessed the following as meeting the expected level of implementation:

- establishing new public access points
- increasing access to existing public access sites
- training local community members to train others
- connecting existing community-based organizations
- improving communication among existing community-based organizations
- introducing new telecommunication applications

One respondent provided a "less than planned" response for these activities.

The implementation of the remaining items was assessed as less than planned by a slightly higher proportion of respondents. This included: the provision of training for community members to both *use* and produce information resources; the production of local content and the creation of new community-based organizations.

Clifton ISD: Connection in the Millennium (CIM) (n=1)

The single respondent from Clifton network reported that several aspects of this project had been carried out to the extent anticipated by the CIM project's proposal:

- production of local content
- provision of training to produce information resources
- connections between existing community-based organizations
- upgrade of telecommunication capabilities of an existing network
- improvement of communication among community organizations
- introduction of new telecommunications applications

Both training community members to train others and providing training to use local information resources had been implemented to a greater extent than planned, results which contrast sharply with most other communities. This respondent also noted that the creation of new public access points had not occurred at the expected level and three activities (creating new community based organizations, extending coverage of existing networks, and increasing access to existing public access points) elicited no response at all.

CCNET: Colorado City Network (n=2)

Both respondents from Colorado City reported that nearly all activities of their network had been achieved at the same or higher levels than planned. Establishing new public access points, increasing access to existing public access sites, connecting existing community-based organizations, and improving communication among community organizations were assessed by both respondents as meeting expectations.

Results for the production of local content, training to *use* information resources, training to *produce* information resources, and establishment of new community-based organizations were evenly divided with one response each of "more than planned" and

"same as planned" for these items. Responses regarding training community members to train others were similarly proportioned, with one reporting the same level as planned and the other reporting less than planned.

Only one response was recorded for the remaining items (extending coverage of an existing network; enhancing telecommunications capabilities of an existing network; and introducing new telecommunication applications). All of these indicated "same as planned" implementation.

The Commerce Community Network (n=4)

Commerce project participants indicated that all network activities and services had been implemented to some degree. Only the development of training programs for local community members to produce information resources was assessed by all four respondents as less than planned. Otherwise, several items were considered by at least two thirds of respondents to have exceeded expectations: creation of new public access points, establishment of a new community-based organization, extension of coverage area of an existing network, and upgraded telecommunication capabilities of an existing network. For both "increase access to an *existing* public access point" and "improve communication among existing community organizations," three respondents (75 percent) reported the same level of development as planned, while one (25 percent) saw greater than expected implementation. Training to use information resources was similarly assessed by half of our respondents as "same as planned" and half as "more than planned."

The majority of the remaining activities and services were considered to have been implemented to the extent planned, with slightly more responses suggesting a lesser degree of development than planned:

- producing local content
- training for local community members to use information resources
- training for local community members to train others
- introducing new telecommunication applications.

ICAN Project: The Corsicana Community Network (n=2)

The two respondents from Corsicana both reported that local content had been produced and communication among community members had been improved more than originally projected in their CN1 proposal. Both also pointed out that expectations concerning most other aspects of this project had been met:

- new public access points
- access to existing public access points
- training for local residents to use information resources
- training community members as trainers
- connecting existing community-based organizations
- creating new community- based organizations

Providing training to produce local information resources was the only activity with less than planned levels of progress reported. No responses were given for three items: extending coverage of existing networks, upgrading telecommunication capabilities of existing networks, and establishing new telecommunication applications.

The Cuero Community Network (n=5)

There was broad consensus among Cuero project participants that implementation of the following aspects of their network had met or surpassed expectations:

- creating new public access points
- increasing access to existing public access points
- providing training to produce information resources
- providing training to use information resources
- connecting existing community-based organizations
- creating new community- based organizations
- extending coverage of existing networks
- introducing new telecommunication applications

One respondent (20 percent) reported that less progress had been made in the production of local content, "train the trainers," and improving communication among community organization. But the remaining four Cuero project members (80 percent) thought that these aspects had been carried out to the same or a greater extent than planned. Finally,

on the subject of whether the telecommunication capabilities of an existing network had been upgraded, participants were divided with one report of "less than planned" and one of "more than planned."

EmpowerNET (n=8)

Components of the University of Texas Pan-American's EmpowerNET project aimed at serving local community members and organizations were reportedly quite successful. All respondents reported that the project had met its goals in improving communication among community members (n=7), connecting existing community-based organizations (n=7), and creating new community-based organizations (n=2). Respondents also generally concurred on the implementation of various technology-related items. Both extending coverage of existing networks and upgrading telecommunication capabilities of an existing network were reported as implemented as the same level or more than planned by all respondents (n=8). Between 80 and 88 percent responded that new public access points had been created (n=7), community members had been trained to train or educate others (n=3), and new telecommunication applications had been introduced (n=5), all to a similar or higher extent than anticipated, with one dissenting voice in two cases. Assessments of other activities showed less consistent results. For example, four EmpowerNET members (67 percent) reported that the project had met its goals for training local community members to produce information resources, and two (33 percent) reported that it had not.

A more notable divergence was found in three areas. Seven respondents (88 percent) reported that access to existing public access points had increased, production of local content had commenced, and training to use local information resources had been made available at the same level or more than planned, but in each activity a single respondent also reported that these three activities remain undeveloped.

Fisher County Network (n=8)

All respondents from the Fisher County project reported that objectives concerning new public access points, existing public access points, production of local content, training to use information resources, contact between community-based organizations, coverage

areas of existing networks and new telecommunication application been addressed to a greater extent than planned. There were single dissenting respondents reporting less progress than planned in both training community members as trainers, and improving communication among community organizations. Otherwise, between 85 and 87 percent of participants responded that the network had met or exceeded expectations for these areas.

Greater divergence concerning training to produce information resources emerged, with four respondents (57 percent) reporting less progress than planned, and three (43 percent) suggesting the same or more progress than expected. Finally, while one respondent (12.5 percent) reported that the network had *not* created new community-based organizations seven respondents (87.5 percent) reported the opposite. Similarly, one quarter of the Fisher County respondents (n=1) reported that telecommunication capabilities of an existing network had not been upgraded, while the remaining three quarters (n=3) suggested that this objective had either been met or exceeded.

Gonzales Community Network (n=5)

Unlike most other CN1 projects, implementation of all activities involving training had met or exceeded expectations for the Gonzales network. Between eighty and one hundred percent of respondents from this project reported "same as planned" development in all three survey items pertaining to training. One participant (20 percent) indicated that training to use information resources had been carried out to a greater extent planned, and one reported that training local community members to train others had been less well developed than expected. All Gonzales respondents (n=5) reported that enhancing communication between existing community organizations had been implemented to the extent planned, and four of the five responding members (80 percent) observed that telecommunications capabilities of an existing network had been enhanced (though one participant also assessed "less than planned" development here).

Respondents disagreed, however, on the extent to which other network activities had been developed. While one respondent (20 percent) described connecting existing community-based organizations as "never implemented," four others (80 percent) observed development as planned. Similar differences of opinion also emerged

concerning the network's progress in establishing new public access points and enhancing access to existing sites. The former was implemented "less than planned" according to two respondents (40 percent), "same as planned" by two people (40 percent) and "more than planned" in one case (20 percent). Similar proportions surfaced in members' evaluation of increased access to existing sites, but the majority (75 percent) suggested that this objective had been met or exceeded. The creation of new community-based organizations and extension of existing networks' coverage saw two respondents (50 percent) reporting implementation as planned, one respondent reporting less development (25 percent), and one (25 percent) observing no progress at all.

The Haskell Community Communications Network (n=4)

Respondents from the Haskell network agreed that most project components had been developed to the same or a greater extent than anticipated by their proposal:

- introducing new public access sites
- increasing access to existing public access points
- producing local content
- training for local community members to use information resources
- training to produce information resources
- training community members to train or educate others
- connecting existing community-based organizations
- creating new community-based organizations
- extending coverage of existing networks
- upgrading telecommunication capabilities of existing networks
- improving communication among community organizations
- developing new telecommunication applications

The Hillsboro Community Network (n=2)

The two respondents from the Hillsboro project indicated that production of local content, improvements in communication among community organizations, and development of new telecommunications applications had been implemented "the same

as" or "more than planned". Network activities that had met, but not exceeded expectations were:

- creation of new public access points
- increasing access to existing public access points
- provision of training to use local information resources
- connecting existing community-based organizations
- creating new community-based organizations
- upgrading telecommunication capabilities of existing networks

Respondents disagreed when it came to the implementation of "training to produce local information resources" and training community members as trainers. While one participant reported both these components as implemented to the extent anticipated in the Hillsboro project's proposal, the other project member indicated less than planned levels of implementation. Extending the coverage of existing networks was observed at levels forecast in project planning by one participant, but the other failed to respond to this item.

The Kirbyville Community Network (n=5)

Kirbyville partners described the following aspects of this network as implemented to the same or a greater extent than originally proposed:

- creating new public access points
- enhancing access to existing public access points
- producing local content
- improving communication among community organizations
- connecting existing community-based organizations
- creating new community-based organizations
- upgrading telecommunication capabilities of an existing network
- introducing new telecommunication applications

There was disagreement on training, however. While four respondents (80 percent) reported that training local community members in the use of information resources and in training and educating others had progressed as planned, one participant (20 percent) indicated that these activities had not met expectations. Implementing training for local

community members to produce information resources was evaluated to be the "same as planned" by both respondents who answered this item.

NOSOTROS: The South Texas Community Network (n=10)

NOSOTROS project members indicated that several features of their network had been carried out either as expected, or to a somewhat lesser degree. These included: increasing access to existing public access sites, providing training for local community members to use information resources, providing training to produce information resources, training community members to train or educate others, and extending coverage of existing networks. On most of these items, results clustered around 50 percent reporting implementation "less than" and 50 percent reporting "the same as" planned. This trend generally held for the creation of new public access points and the production of local content, but in both these cases, one respondent (11 percent) suggested greater levels of implementation than planned. We saw considerable variation in the responses surrounding three items:

- connecting community-based organizations
- creating new community-based organizations
- introducing new telecommunications applications

In these cases, project members were fairly equally divided between implementation as "less than planned" and "same as planned," but each also generated single responses indicating either greater degrees of development than expected or the failure to implement these at all. Similarly, when asked the extent to which telecommunication capabilities of existing networks had been upgraded, five (55 percent) reported "same as planned," three (33 percent) answered "less than planned" and one (11 percent) said "more than planned." But nine NOSOTROS project participants seemed to agree that the improvement of communication among existing community organizations had taken place to the extent anticipated or greater (90 percent).

La Grange Community Network (n=1)

The single respondent from La Grange gave negative responses to all items in this question. According to this project member, each of the activities listed had yet to be implemented to any extent.

Lockhart Community Network (n=5)

Responses from the Lockhart project indicated that network implementation had proceeded more or less according to initial projections. "Increase access to an existing public access point," "connect existing community-based organizations" and "create new community-based organizations" had reportedly been implemented as planned, according to all respondents. Implementation of the following items was described as either "same as" or "more than" planned:

- creation of new access points
- production of local content
- training local people to use information resources
- training local people to train others
- extend coverage of an existing network
- upgrade telecommunications capabilities of an existing network
- improve communication among existing community organizations.

Very few activities connected with the Lockhart project were considered less developed than planned or undeveloped. While 75 percent of responses indicated that training local community members to produce information resources (n=4) and introducing new telecommunications applications had taken place to the extent anticipated (n=3), each activity received one "never implemented" assessment.

LulingNet (n=2)

According to both respondents from the LulingNet project, their CN1 project had enhanced an existing network. While "upgrading telecommunications capabilities" was considered "same as planned" and "more than planned" by one respondent each, the corresponding item, pertaining to extending network coverage, was thought to be carried

out to the extent planned. Otherwise, the majority of LulingNet's activities and programs had been undertaken as planned:

- facilitating access to existing public access sites
- producing local content
- training to use information resources
- creating new community organizations
- improving communication among existing community members

These two participants diverged on various other items, however, including: the creation of new public access points, training to produce local information resources, and connecting existing community-based organizations. One respondent reported that these activities were implemented the same as planned while the other characterized these as less developed. Both seemed to agree that training community members as trainers had not been carried out to the degree proposed, as one reported this as never implemented and the other respondent selected "less than planned" for this item.

Panola College: East Central Educational Network (n=2)

In the East Central Educational Network, participants concurred that training community members as trainers had not been implemented to the expected degree. One (50 percent) suggested that training for the production of local information resources had also failed to meet the expected level of development, but the other respondent disagreed and identified this item as surpassing initial expectations. Similarly, the production of local content was assessed as both equally and less developed than planned by one respondent each. However, the majority of activities associated with this project were reportedly carried to an equal or greater extent than planned. Activities that had seen more implementation than planned were: creating new public access points (100 percent), training to use information resources (100 percent), and extending coverage of an existing network (100 percent).

Creating new community-based organizations, introducing new telecommunications applications, and facilitating access to existing public access sites were all considered "same as planned" by both respondents. Participants indicated that upgrading telecommunications capabilities of an existing network, connecting existing

community-based organizations and improving communication between such organizations, had all either met or surpassed the level of implementation planned in their initial proposal.

PineyWoods Freenet (n=13)

Most activities undertaken by the PineyWoods project were implemented to the same or a greater extent as planned, with some conflicting answers from respondents. The creation of new public access points, increasing access to existing public access points, providing training to use local information resources, training community members to be trainers, connecting existing community-based organizations, and creating new community-based organizations were generally assessed as having met or surpassed this project's plans. While one respondent each (7.7 percent) indicated that the production of local content and provision of training to produce local information resources had *never* been implemented, most other participants (about 90 percent) indicated that these activities had been implemented to the same extent as planned, or greater.

The least developed aspect of this community network seemed to be improvement of communication among existing community organizations with two respondents (16.7 percent) reporting less than planned levels of implementation. However, eight other members (66.7 percent) suggested "same as planned" and two (16.7%) thought this activity had exceeded plans. Similarly varied accounts were given for upgrading telecommunications capabilities, extending coverage of existing networks, improving communication among community organizations, and introducing new telecommunication applications. The mean, or statistical average generated by these responses clustered around the "same as planned" option, indicating that most elements of this network project had been implemented to the extent anticipated.

Plainview Community Network (n=3)

Respondents from the Plainview project indicated that the following aspects of this network had been implemented to the same or a greater extent than planned:

- introducing new telecommunication applications
- creating new public access points

- increasing access to existing public access points
- providing training to use local information resources
- extending coverage of existing networks
- upgrading telecommunication capabilities of an existing network

Very slight indication of greater or lesser degrees of implementation were recorded for several of these items, but in general, most activities in this project seemed to meet members' expectations.

All three respondents agreed that connections and communication between existing community organizations had been enhanced, and that the creation of new community-based organizations had been facilitated. There was some suggestion that several training components (training to produce information resources and training the trainers) had not been carried out to the degree anticipated. Likewise, while two thirds of these respondents stated that production of local content had take place as planned, the remaining respondent felt that it had been less developed than planned.

Prairie Lea ISD: Tri-Community Connect (n=1)

The single respondent from Prairie Lea reported that implementation of new public access points, upgrading of telecommunication capabilities of an existing network and improvements in communication among community members had surpassed levels anticipated by the project's proposal. Activities that met, but neither exceeded, nor failed to meet expectations were:

- increasing access to existing public access points
- providing training to use local information resources
- providing training to produce local information resources
- connecting existing community-based organizations
- creating new community-based organizations
- extending coverage of existing networks
- introducing new telecommunications applications

According to this respondent, both the production of local content and training of local community members as trainers had not been implemented to the extent planned.

GREAT: The Greater Rockdale E-Access Team (n=3)

Respondents reported that the GREAT community network had either met or exceeded its implementation goals in most respects. New public access sites, better access to existing public access sites, training to produce information resources, and upgrades to existing networks had all been carried out either "as planned" or "more than planned."

Unlike most other CN1 projects, the Rockdale network had surpassed its expectations in terms of providing training to local community members to use information resources. It had not, however, met its objectives for the introduction of new telecommunications applications. Two thirds of this project's members reported less than planned implementation while one third assessed this as "never implemented." Rockdale project participants were somewhat ambivalent about the production of local content: while two (66.7 percent) reported less than expected levels of implementation, one respondent (33.3 percent) thought this activity had exceeded plans. Similarly, two thirds of these respondents reported that connections between community organizations had been facilitated, but the remaining participant felt that this aspect had been less developed than planned. Training community members as trainers, creating new community-based organizations, improving communication among community organizations, and extending coverage of existing networks were reported by most to have been implemented at the same level as expected.

Alamo Area Community Information System (AACIS) (n=4)

AACIS, the San Antonio community network project, reported that many aspects of their project had been implemented as expected or at slightly higher levels. Notably, both access to and creation of public access sites had met or surpassed goals, as reported by all project members who responded to our survey (n=4). Very few items were assessed by AACIS's members at "less than planned" levels of implementation and most of these were simultaneously reported as either "same as" or "more than" planned by other respondents. For instance, both improving communication between community organizations and establishing new telecommunications applications were assessed as "less than planned" by one member each (25 percent), but three other respondents (75 percent) reported the implementation of both these items as "more than planned."

Similarly, minor differences of opinion emerged regarding the provision of training to produce information resources, the production of local content, and the creation of new community-based organizations, though the statistical average for each item indicated that implementation had been carried out at least to the extent anticipated.

The remaining components of the AACIS project were each assessed by two members as "same as planned" and two members as "more than planned":

- providing training to use information resources
- training local community members as trainers
- connecting existing community-based organizations
- extending coverage of existing networks.

San Marcos Community Net (n=4)

Respondents from the San Marcos project concurred on many aspects of the implementation of this community network. Between 75 and 100 of respondents agreed that increasing access to existing public access sites, connecting community-based organizations, creating new community-based organizations, and introducing new telecommunications applications had been implemented to the extent planned. Similarly there was complete agreement that training community members as trainers had *not* met projected levels. Several items were assessed as having met or surpassed the level of development anticipated in their proposal by 100 percent of respondents: creation of new public access sites, upgrade of capabilities of an existing network, and expansion of coverage of an existing network. It should be noted, though, that only two respondents answered questions corresponding to the latter two items.

The production of local content, training to *use* local resources, and training to *produce* local resources were reported by 3 respondents (75 percent) to have been implemented to the extent planned, but in each case a single respondent (25 percent) reported less progress than planned. When asked whether the network had improved communication among existing community organizations, fifty percent reported "less than planned" and fifty reported "same as planned."

Smithville Community Network (n=3)

Respondents from the Smithville project agreed that more new public access points (100 percent) and more training to use information resources (100 percent) had been provided in their network than originally proposed. Likewise, two participants reported that more training to produce information resources had been provided than anticipated, while the third respondent assessed implementation of this activity as "the same as planned."

Smithville respondents concurred that most other components of their community network had been implemented to the extent planned. All reported that the network had met or surpassed expectations in these areas:

- training for community members to train or educate others
- new telecommunication applications
- improved access to existing public access points
- extended coverage of existing networks.

Community organizations in particular seemed to be served by this community network, as better communication among community organizations, creating connections among these entities and creating *new* community-based organizations had all been implemented to the extent planned.

Responses diverged slightly concerning the network's development of local content, with one third each describing implementation as "less than planned," "same as planned," and "more than planned". This was the only component in the Smithville results identified with less development than anticipated, although none of the three respondents answered the question concerning upgrades to the telecommunication capabilities of an existing network.

CactusNet: Terrell County Telecommunity (n=2)

Terrell County's CN1 project largely met or exceeded the goals stated in its proposal. In fact, only the implementation of training for local community members to train others and connecting existing community-based organizations were identified as "less than planned", and only by one respondent (50 percent) in each case. Both respondents reported that the production of local content and the provision of training to use local information resources had been implemented to a greater extent than planned. Improving

communication among community organizations, and creating new community-based organizations, as well as training community members to produce information resources, had reportedly met or exceeded project objectives.

Both respondents agreed that various network components had proceeded as planned:

- new public access points
- increased access to existing public access points
- enhanced telecommunication capabilities of an existing network
- new telecommunication applications

Finally, the question concerning extending coverage of an existing network failed to elicit a response from either Terrell Country participant.

ConnecTyler: The Tyler Area Community Network (n=4)

All participants (n=4) from the ConnecTyler project reported that creating connections between community-based organizations and upgrading telecommunications capabilities of an existing network had been implemented to the same extent planned. For each of the following network components, three respondents (75 percent) stated implementation at the same level anticipated, with the remaining ConnecTyler members (25 percent) reporting a higher degree:

- establishment of new public access points
- facilitation of access to existing public access sites
- production of local content
- provision of training for local community members to produce information resources
- provision of training for local community members to train others
- creation of new community-based organizations

Respondents divided over the extent to which communication among community organizations had been improved: half (n=2) reported "same as planned" while the other half indicated "more than planned." The introduction of new telecommunications applications appeared to have been the least developed aspect of this network. Two

members saw this activity as never implemented at all, with the remaining two divided -- each reporting the same or lesser degrees of development than expected.

The remaining items generated some ambiguous results. Descriptions of the extent to which both training for the use of information resources and extending the coverage of existing networks had been implemented were split quite evenly between "less than planned," "same as planned," and "more than planned."

Wharton County: WCJC-Net (n=6)

All respondents from the Wharton County project were in agreement that the following activities were implemented to the same extent as planned:

- creation of new public access points
- production of local content
- training of local community members to use local information resources
- training of local community members to produce local information resources
- training community members to train or educate others
- connecting existing community-based organizations
- creating new community-based organizations
- extending coverage of existing networks
- upgrading telecommunication capabilities of an existing network
- improving communication among community organizations
- introducing new telecommunication organizations

Only two of the six WCJC project members responded to the item concerning the facilitation of access to existing public access points – both indicating implementation as planned. However, since the majority of respondents from this CN did not assess this component, it is difficult to draw any conclusion from this result.

WillisNet

No completed surveys were returned by Willis project participants.

The East Texas Community Consortium (Woodville) (n=5)

Creating new public access points, increasing access to existing public access points, and training to use information resources were all reported by at least forty percent of this project's respondents to have been implemented to a greater extent than planned. Similarly, most of these participants (between three and five members, or 75 to 100 percent) agreed that the following network services and functions had reached the planned level of development:

- introduction of new telecommunications applications
- production of local content
- improvements in communication among community organizations
- extension of coverage areas of existing network
- upgrade of telecommunications capabilities of an existing network.

Both the creation of new community-based organizations and connecting those that already existed in the community were reported as either meeting expectations (66.7 percent and 75 percent, respectively), or falling short (33.3 and 25 percent).

Finally, ambiguous results were found concerning the provision of training to produce local information resources and the training of local trainers. In these two cases, three members (75 percent) reported the same level of development as planned, while the remaining respondent (25 percent) suggested there had been no implementation at all.