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PROJECT NARRATIVE

1. EXECUTIVE SUMMARY

Community Technology Institute (CTI) will create access to telecommunications for 15,000 more homeless and phoneless poor people each year by adding four sites (Miami, Phoenix, New Orleans, and Austin) to the national federation of Community Voice Mail (CVM) programs. CVM programs are regional, public and private non-profit collaborations of health and social service agencies that provide community-wide access to telephone messages. CVM programs offer personalized and dignified 24-hour voice mail to homeless and phoneless poor people trying to access social services, jobs and housing, and conduct other mainstream activities. CTI will establish interactive connectivity between all CVM programs to exchange information and innovative applications, to accumulate end user data, and to lay the foundation for connecting CVM agencies and clients to community computer networks.

2. WHAT PROBLEM OR NEED WILL YOU ADDRESS IN THIS PROJECT?

Homeless and phoneless poor people cannot participate in many mainstream life activities because they cannot be reached in a timely manner by potential employers, landlords, or their family and friends. Health and social service agencies cannot provide effective services with reliable continuity when their clients are mobile, in crisis, and incommunicado. Imagine looking for work or housing in today's society without a telephone. Imagine maintaining any relationship without a telephone. Yet this is the common condition of many poor or homeless people who look for social services or jobs, companionship, housing and economic stability.

Social service providers, both public and private non-profit, face tremendous challenges to work successfully with clients who are increasingly poor, homeless, victims of domestic violence, or whose limited English skills are barriers to economic opportunity. According to the Federal Government's own Interagency Task Force on the Homeless, homelessness is regularly underestimated by millions, yet many social service agencies don't even have their own answering machines, computers, or the basic tools that are taken for granted in the business and professional world. Social workers are expected to help rehabilitate clients who fight tremendous odds to compete for jobs and housing in today's world. This is human suffering that is avoidable.

This project delivers a power tool for disadvantaged individuals trying to help themselves and a common sense solution to the effective delivery of social services in our society.

3. WHY IS THIS AN IMPORTANT PROBLEM, AND WHY DOES YOUR PROJECT FIT THE TIAP?

Conventional connectivity, the telephone, is ubiquitous, cheap and easy to use, and a cornerstone of the information infrastructure. Community Voice Mail provides conventional connectivity to disadvantaged, homeless and underserved people to link them to social services, the mainstream world of employers, landlords and loved ones. CVM enables people who are marginalized by poverty, unemployment or homelessness to regain access to phones and reliable messages, to access social services, to compete for work or housing opportunities that offer the chance to recover their self-sufficiency.

Community Voice Mail fits the TIIAP in three important ways:

1. CVM redresses lack of access to basic telecommunications by providing phoneless and homeless people with 24-hour voice mail that is much like a home answering machine: personalized, dignified, and easy to use. CVM lays the foundation for using multiple tools to create multiple points of access to the information infrastructure.

2. CVM is a qualitatively distinct program with values that distinguish it from standard office, or off-the-shelf/phone company voice mail services, e.g.,

- CVM is a community-wide collaboration of public and private social and health services agencies that forms a network coalition to own, operate, and share the costs of CVM systems, and that uses them to facilitate and accelerate the delivery of their services;

- CVM thus has community-wide points of access for homeless and poor people without phones who are seeking social services, jobs and housing;

- CVM is ethical and dignified in its implementation. All end users have their own 7-digit phone number, personalized greeting, passcode, and private access to their messages;

- CVM program values give priority to the benefits of interagency cooperation and universal access for end users. Even so, the cost of CVM voice mail boxes averages less than \$2.50 per month, compared to service bureau charges of \$11.00/month which require a deposit, or telephone company averages of \$7.00 or more per voice mail box per month and a residential line.

3. CVM is inherently scalable both technologically and operationally.

- CVM uses donated, PC-based voice processing systems to cost-effectively serve thousands of people in any given community. Each system relies on DID interface to achieve capacity service levels, which range from 400 - 1600 individuals at any given time; capacity increases are reached by either software upgrades, additional voice cards (Dialogic D41D), or by adding DID VP2000 interface converters to the CPU.

- This configuration does not require system re-design, changes in CVM network management or end user materials. Operating procedures, documentation and manuals are not significantly effected by system growth.

DID² direct inward dial

4. HOW WILL YOU CARRY OUT THIS PROJECT?

Our project has three principal goals:

A. Creating access to telecommunications for homeless and phoneless poor people by expanding the national federation of Community Voice Mail programs.

B. Creating interactive connectivity between CTI and the federation of CVM programs and between those CVM programs and their community computer networks, where they exist.

C. Provide public information through World Wide Web.

Since the small Seattle coalition of five agencies that in 1991 piloted the first use of voice mail to help 150 of their clients, the CVM federation has grown to include more than 250 health and social service agencies nationwide with the capacity to provide voice mail to more than 10,000 people at any given time and nearly 30,000 per year. CTI has launched eleven CVM programs in eight states: San Jose and San Diego CA, Salem and Portland OR, Seattle and Aberdeen WA, Madison WI, Minneapolis-St. Paul MN, Raleigh NC, Schenectady and New York City NY. (See Appendix 4-A, National CVM Replications Matrix).

To implement the goal to create access, CTI has identified Austin TX, Miami FL, Phoenix AZ, and New Orleans LA, as appropriate and timely additions to the national CVM federation because we are already engaged in the early stages of dialogue, their community-wide coalitions are formative yet viable, and they are thus most ready to begin intensive planning and preparation for starting CVM. These activities require two strategies for maximum, long-term benefit. The first, and most challenging, is developing strong local CVM coalitions under a lead agency to launch and sustain a regional telecommunications system. The second is straightforward: system installation and training the new CVM manager and local CVM network.

All Community Voice Mail replications begin with community interest and an individual or coalition assuming the responsibility to form a CVM network. The CVM network, through dialogue and consensus, then decides which agency will take the lead; fiscal responsibility, and manage CVM. CTI staff play a critical role in each phase of this development: assistance to community organizing and education, program planning, developing local partnerships, and deciding the appropriate administrative structure.

The requirements for a city to replicate CVM are:

- 1) A community-wide network or coalition of health and human service agencies must exist to provide planning and oversight to develop a community-wide program;
- 2) The CVM coalition must represent key public and private-non-profit social service providers;
- 3) The CVM coalition must decide which agency will take the administrative responsibility to request CTI technical assistance and equipment, to secure the balance of capital costs, phone company costs, staffing, and to house and manage CVM. This lead agency must also be an

established 501(c)(3) organization and/or in partnership with a public agency, have a history of interagency cooperation, federal or municipal funding, and private sector support.

Once these conditions are met, the community is readied, a local technologist or voice mail dealer is contracted to install CVM hardware to interface with the local telephone company. CTI has documented all requirements in a *CVM Technician's Guide*. CTI then goes on site, installs CVM prompts in English or Spanish, customizes all user manuals and documents for references to their local conditions, trains the site system manager on Repartee/CVM software, administrative procedures, system log records, maintaining stats on end users. After technical training, CTI trains the system manager to train agency workers. System manager and CTI co-present the policy and procedures to the CVM network or agencies, conduct training for agency workers at their agencies who can immediately put clients on CVM.

A CVM system looks essentially like this: a 486-PC with monitor and keyboard to house the voice processing software, an additional chassis for the direct-inward-dial (DID) interface that connects to phone company trunk lines that carry hundreds or thousands of 7-digit DID numbers. Because DID numbers only cost between \$.10 and \$.40 each per month, depending on the phone company, this strategy creates extremely cost-effective conditions for growing systems. The CVM system manager "distributes" client DID numbers to participating agency workers, along with a *Case Manager's Handbook* on using CVM effectively. Agency workers and clients only need a touch tone phone to use CVM. ✓

Please refer to CTI implementation schedule for this project in Appendix 4-B.

CTI promotes in-house voice mail systems because they can be re-configured for both client and agency use, are owned and managed by the community, and the prompts can be customized for cultural needs. We counsel potential CVM communities that the *technology is the easy part*, and we have assembled a cost-effective configuration of hardware and software that does not require a technician to use or maintain. This is especially important in the human services industry where many workers are not accustomed to high tech and rarely receive training for new technologies. CTI uses the following equipment because it is the most user-friendly, adaptable software and hardware available.

Repartee 6.5R2, a PC-based call processing system selected for jargon-free "1 for yes" and "2 for no" conversation, space for 50-3000 voice mail boxes, self-enrollment/set-up capability, 30+ hours storage, prompts changeable to non-English languages.

Voicemate with monitor, modem and tape back-up. This is a CPU formatted and partitioned for the Repartee.

Nicollet Digitrap (DTS-1015 & DT-1015) or VP2000 interface converters. These cards allow hundreds or thousands of 7 digit direct-inward-dial (DID) numbers to be directed at the voice mail with each port supporting up to 100 DID numbers.

Dialogic D41D voice cards are an industry standard-bearer to store voice digitally.

Hayes Compatible 2400 baud modems, used for remote management, training and troubleshooting between CTI and the national CVM federation. They will also be our conduit for transmitting files, data, and email through our local computer networks.

CTI's approach to interactive connectivity is also straightforward. We will connect by modem to four CVM cities that are not currently linked for technical support: San Jose, Salem, Portland and Minneapolis-St. Paul. We will plan and implement standard reporting mechanisms, resource sharing, and regular postings on World Wide Web for the CVM federation and the inquiring public, including setting up a home page and FAQ sheets. We will design, implement and document ways in which CVM programs can connect to their local community computer networks, using Seattle Community Network as our model, including exploring giving email addresses to clients when they get their CVM number.

5. WHAT ARE YOUR QUALIFICATIONS, AND WHO ARE YOUR PARTNERS?

Community Voice Mail was created in Seattle in 1991 as the first community-wide telecommunications network in the country designed for social services application **from a client's perspective**. Community Voice Mail, an internationally recognized transfer of technology, won the 1993 Innovations in State and Local Government Award sponsored by Harvard University and the Ford Foundation and continues to inspire similar solutions and to draw spectacular media attention around the world (See Appendix 5-A, newsclips). The initiators of Seattle CVM founded Community Technology Institute (CTI) in 1993 as a national non-profit to promote and develop telecommunications technologies to solve human problems and improve access to social services. Principal CTI activity is advising and assisting other cities and regions to replicate CVM.

CVM inspires people because it makes good common sense. CVM is a magnet for talent, energy, and good will, attracting technologists, corporate leaders, philanthropists and citizen activists. CTI work is accomplished by the initiators of CVM, Rich Feldman and Patricia Barry, with significant collaborations from software engineers and telecommunications technologists who donate their time and skills to assist CTI to customize voice processing systems and re-design standard software features for social service applications. Feldman is an economic policy analyst and computer specialist; Barry is a program planner and community organizer and is executive director of CTI.

CTI has leveraged resources and skills by developing critical and model partnerships with corporate America and with infrastructure experts to support this project:

Expanding access through replications. CTI has secured support from the corporate sector to further the national replication campaign. The Active Voice Corporation and Dialogic Corporation, both leading American manufacturers of voice processing hardware and software systems have donated their products to CTI to customize for CVM systems to benefit other cities. These donations represent over 60% of the capital costs for a region to start a CVM program. Both corporations are immensely impressed with CTI adaptations of their products for community benefit and have been models of corporate involvement in large scale, quality solutions to human problems. The Active Voice Corporation has also provided CTI with technical support to develop user-friendly voice mail prompts in Spanish and English. CTI customization of these donated products are exclusively for CVM replications and have no other market value to the manufacturer.

Interactive connectivity. Douglas Schuler will facilitate electronically linking the entire CVM federation to each other and to CTI for information and data exchange.

Schuler will also design and document how CVM networks connect with the nascent community computer networks that are forming in many cities, using Seattle Community Network, one of the early free public access networks in the nation, as a model. Schuler is a software engineer, founding member of Seattle Community Network and National Chair, Computer Professionals for Social Responsibility.

6. WHO WILL BENEFIT FROM THE PROJECT?

The end users who will benefit most from this project are underserved poor people who do not have phones, homeless people and their families, and Spanish-speaking people for whom commercial voice mail services are not a usable option. CVM restores self-esteem, helps put a distressed person back in the driver's seat and on the road to recovery with dignity, and reduces the time spent reliant on social services. Other beneficiaries are social service agency workers themselves. CVM reinforces the relationship between case worker and client, facilitates and accelerates their work with a hard-to-serve population (See Appendix 6-A, excerpts from Final Report and Evaluation).

CVM originated as a solution for homeless workers to get competitive access to the job market, but has naturally evolved as the critical key to the whole spectrum of health and human services. Agency workers on CVM networks constantly devise innovative uses that add significantly to the benefits of CVM end users and, through electronic linkages, will be passed on to other CVM sites. For example, Twin Cities Community Voice Mail is currently testing and studying the impact of using voice mail for chronically unemployed and addicted populations; Seattle CVM expanded into community health clinics after a successful pilot targeting pregnant teen and neonatal mothers at risk to reduce infant and neonatal mortality; New York City Gay Men's Health Crisis uses CVM to provide multiple layers of services to its clients; and Twin Cities and Seattle have pioneered significant new territory by expanding CVM into an array of domestic violence agencies to provide victims of abuse and their families a safe way to stay connected with select relationships. San Jose, California, has instituted a shelter hot-line on their CVM network, a model application other CVM programs want to employ. CTI has developed multiple strategies to address end users' needs. Some examples:

- Because office or commercial voice mail systems can contain overly chatty or menu-laden prompts, CTI redesigned the prompt pathways, substituted professional with casual language, and designed an enrollment dialogue that walks a client successfully through the set-up process with one call.
- CVM customization seeks to mimic a simplified home answering machine and only gives clients the options to hear messages, change their greeting, and save messages.
- To reduce the time and printed materials necessary to train clients how to use voice mail, CTI developed a Client Wallet Card, the size of a standard business card, that has 1-2-3-steps to using CVM and accessing messages.
- To help reduce agency workers' time to reassign voice mail boxes to new clients, which at one point required cleaning out old messages, greetings and security codes, CTI developed a "re-set" feature so agency workers now only have to use one step to clean out and set up a new client box.
- CTI has developed a full range of documents and user materials that support CVM implementation, from a how-to CVM PRIMER to a technician's manual, System Manager's

Handbook, and Case-Manager Manual on how to train clients to use CVM and on effective case management practices. (See Appendix 6-B, CTI Blueprints)

To address privacy and "ownership" issues, CTI has added a software feature to Repartee systems that give control or ownership of client boxes to the agency serving those clients. The agency worker and client decide the passcodes and parameters of use.

All CVM programs benefit from having CTI as the center of the federation. CTI services include technical support via modem to seven cities and conventionally to others; support to data base development, new technical and program applications and software improvements. But there is a larger, national benefit as well. CTI is able to broker new relationships between service providers, technologists, the corporate sector and phone companies, and to evolve from a one-to-one technical assistant to promoting program practices and values that give this work a qualitative edge and a human face. (See Appendix 6-C, letters)

CTI has responded to over 2,000 requests for information on CVM replications from U.S. mayors to the vice president of South Africa, people who recognize the common sense of Community Voice Mail and who want to transfer the greatest good to the greatest number cost-effectively. CTI plans to reduce much of the time it takes to verbally describe CVM development by publishing the CVM Primer and other educational documents on a World Wide Web home page.

7. HOW WILL YOU KNOW IF YOUR PROJECT IS SUCCESSFUL?

The first level to measure the project's success is direct. At the conclusion of this 12 month project: A) four CVM systems will be added to the existing federation of eleven or more* with the capacity to serve 14,400 additional end users; B) each CVM system will be electronically linked to CTI and to each other; and C) a documented blueprint on connecting CVM systems to community networks will be available to the public on the Web and on paper.

The second level of measurement is qualitative. CVM systems do not start at capacity levels of either agency participation or client end use. Rather, they grow steadily within the health and social service community as agency workers (case managers and counselors) integrate CVM as a new delivery tool for client services. To be cost-effective, each CVM program increases the technical capacity (by turning on more components, e.g., trunk lines, direct-inward-dial numbers) as the number of end users, agencies and clients, expands. An expanding CVM network with new agency participants and new clients is a standard measure of success.

A third level of measurement is quantitative and qualitative. The move to standardize CVM measurements is underway as we seek common reporting and evaluating tools. By electronically linking all programs to CTI and to each other, we will be able to share and evaluate cumulative statistics on type and number of agency participants, on number of client end users, and most

* Please note that a northwest campaign is also underway to start CVM in four cities in Washington State. CTI currently consults more than a dozen other cities who want to start CVM but face challenges that will take longer to resolve than the four sites targeted in this proposal.

importantly on client outcomes. Client outcome reports are a standard feature of CVM programs and measure the benefits each end user achieved by using voice mail to navigate the social services delivery system or to get jobs or housing. (See Appendices 7-A, Sample Client Outcome Form and 7-B, Client Outcomes, Seattle CVM). CTI is only linked by modem to seven CVM software systems at this time, primarily for troubleshooting, technical support and additional training. Our secondary project activity, interactive connectivity, will provide the federation with a central depository for national end user data, a resource file for implementing new applications, and a means to access other instruments for program evaluation. In 1993, Seattle CVM developed an evaluation instrument to measure the qualitative benefits of CVM (See Appendix 7-C, Evaluation Instrument), that all CVM programs will employ in 1995. Evaluation findings and cumulative statistics will be published and posted quarterly on CTI's Web home page.

8. ABILITY TO SERVE AS A MODEL.

CVM is scalable and replicable, and a unique model of creating partnerships with the public, private and corporate sectors. CVM's principle innovation is adapting telecommunications technology to social services, cost-effectively and on a wide scale. CVM replications are capitalized on the front end with equipment donations and installation charges; beyond that, CVM sites must staff the program with a system manager and pay phone company charges only, costs that when shared by the CVM network are under \$2.50 per voice mail box per client number per month.

CTI replication strategy seeks to extend community benefit through the CVM federation and beyond. CTI services to the federation are extensive, from the earliest consultations to launching a CVM program and on-going technical support. CTI has also responded to nearly 2,000 requests from around the world for information on how to duplicate or replicate CVM or how to use other telecommunications to help poor and homeless people. CTI has provided consultation to phone companies, service bureaus, technologists and scores of others on voice mail applications in human services. **As a national resource, CTI is able to promote the principal program values of Community Voice Mail: collaboration, community-wide access, ethical implementation, and maximum use of available technology.**