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Project Narrative

1. Project Purpose

Defining the Problem: The information technology access gap between the "haves and have nots" increases daily in our society. Family income and parent's education are statistical predictors of computer ownership. A July 1996 Nielsen survey revealed that 40% of American families own home computers, yet less than 10% of low income families are computer owners, placing children in these homes at a distinct disadvantage in terms of access to information technologies.

With eight million Americans currently telecommuting to work, 46 million Internet users in the United States and 60% of all jobs requiring computer skills by the year 2001, technology literacy has become a fundamental skill for all citizens. Clearly, strategies need to be developed to make learning and information technologies more accessible to the homes of lower-income families.

The two school districts presenting this proposal represent a microcosm of the current national situation in terms of information technology access. Their 38,000 students come from a wide range of social economic status, and thus large disparities in student access to home computers exist. These wide gaps of technology access in homes range from families on their second and third computers to families who cannot afford telephones. Both districts have widespread, state of the art access to information/educational technologies in every classroom, media center and office (computers, software and networks) and offer extensive technology training options to their staff. As our schools move into the 21st century offering students more timely and greater access to information technologies, we cannot afford to leave a segment of our families behind. If we don't bring in that "have not" segment of our learning population and their families now, they will be at an even greater educational disadvantage as the years progress.

Proposing the Solution: We propose an innovative approach to bridge this "access to information technology gap" in our students' homes and learning communities. Our project will offer information technology access via extensive training, hardware, software and telecommunications systems, and existing social services/community support mechanisms to families who could not otherwise afford current information technologies.

This project will target 150 low income fourth grade students and their families. Fourth graders are an ideal population due to their academic motivation and parental involvement. We will provide ongoing training and support, laptop computers and software to these students in five targeted elementaries in the two districts, and facilitate dial-up access into district information technology infrastructures. This will allow access to local, county, state and national information services, and Internet email accounts. Not only will families receive

essential technology skills and access, they will also be linked to vital community and educational services.

The project's delivery strategy is unique in that it involves the entire family, has a built-in support system, and is community based. Successful participation in the program by students and their families will result in ownership of the laptop at the end of the fifth grade school year, thereby providing sustained, long-term access to information technologies. Our project will have four major strands:

Strand 1: Information Technologies Training Training will be provided on hardware and software applications in a variety of content areas and physical settings that fit the needs of students and their families. Experienced trainers from the current collaborative training project will be used.

- Training options will include after-school classes for students only, joint evening and weekend classes for students and parents, and parents only classes. Classes will take place at schools, community centers and local housing complexes.
- Core classes will include: Intro to Computers, Intro to Word Processing, Intro to the Internet, Accessing County Services via the Net, Accessing Your Local Library, Using Email, Budget Management on a Spreadsheet, Intro to Multimedia, etc. There will be several home to school "project-based" sessions that involve students and their parents.
- Parent training in vocational skills, budgeting, English as a Second Language, General Ed Diploma, and topics such as "skills for the 21st century" will be available.
- A library of software will be available for check-out.

Strand 2: Enhanced Home to School Communication We will facilitate home to school communication in a variety of ways which will result in decreased family isolation from school and community, improved school attendance and greater academic success for students.

- Students and parents will have access to Internet Web Pages developed for this project. The fourth grade web pages will provide timely homework and school information, and allow home to school interaction.
- Several student-parent projects will incorporate the Internet to enhance home to school communication.
- Email accounts will be provided to facilitate parent to teacher as well as parent to parent communications. Email bulletin board access on topics such as homework, computer use, school activities and concerns, and community activities will be provided for parent participants.

Strand 3: Linkages for Ongoing Support and Follow-up This project capitalizes on established partnerships that include the Family Services Collaborative, Adult Basic Education, Early Childhood Family Services, Enhancing Student

Learning Through Technology (ESLTT) trainers, and Frontier Communications.

- Participants will be provided additional support to ensure student and family success in the program via our existing Family Services Collaborative Advocates. These advocates currently work with families in the participating schools, and will participate in several components of the project.
- Parents will also be trained on accessing on-line local, state and national social/community services via the Internet, such as First Call Net, a county services program that offers information on housing, food sources, services for disabilities, emergencies and education.
- Families without home telephone access will be provided lines for the duration of the project by Frontier Communications, one of our local telephone service providers.
- Regular meetings with students and families will be held during the fourth grade school year, and follow-up meetings will take place during their fifth grade year.

Strand 4: Large Scale Access Strategies Given the nature and scope of this project, business, community and educational leaders must collaborate to provide initial and ongoing large scale access. Our collaborative partners offer the wide range of information, experience and resources necessary to address large scale replicability of this model. In order to establish the feasibility of providing technology access to a large number of low income Americans, we must first demonstrate that the model will work locally, under these optimum circumstances. Once the project is underway, partners will meet regularly to assess project success and identify strategies to replicate this model to other communities and school districts. Community stakeholders as well as participants will be involved in these sessions.

Measurable Outcomes: This project will empower 150 at-risk, low income students and their families in two school districts by giving them the technological access and training they will need to become lifelong learners and successful in the workforce of the 21st century. Project impact will be measured by several indicators linked to activities in the four major strands. We anticipate that 90% of selected fourth graders and their families will successfully complete the project. In addition to collecting basic pre/post project surveys and project evaluations from parents, students, fourth grade teachers and family advocates, we will measure the following via baseline Vs end of project data:

- Increased and enhanced home to school and home to community involvement
- Improved school attendance and homework completion
- Reduction of family transiency rates
- Greater academic success for participating students
- Improved work force skills for participating parents
- Increased technological skills and competencies for participants

Describing Project Innovation and Model: This project is a shift from the traditional training/support approach in that parents and students will learn and work side by side, families will be empowered to facilitate their own learning with a variety of class "options," training and support will be provided in more than just the traditional school setting (community centers and local housing complexes will be utilized), and the entire family will be encouraged to be involved.

This project can serve as a model for tapping into existing technological and human resources for other school districts who have current or proposed technological information infrastructures. Instead of adding "more," we are capitalizing on and enhancing existing programs. We will work with our current Adult Basic Education, Family Services Collaborative, Early Childhood Family Services, Dakota County Social Services and Enhancing Student Learning Through Technology Training programs. We are also strengthening the existing collaborative relationships between our two districts, which is an innovative and necessary approach in an age of waning educational resources. And finally, by meshing this project with our successful family services collaborative and technology training model, we can help students and families succeed with support and follow-up along the way.

2. Project Feasibility

Technical Approach: Compaq laptop computers, printers and modems will be provided to all 150 participating families. Dial-up access (via dial-up Cisco Routers) to the wide area network infrastructures of both school districts will be established so that families may access the Internet and email services. Web Servers offering services to the current training collaborative for both districts will house the Fourth Grade Web pages that will offer interactive homework and project-based options. The Microsoft Office 97 Suite (Word, Excel, Works, PowerPoint and Mail), HyperStudio and Netscape will be installed on all 150 laptops. A software library of English as a Second Language, GED, and vocational skills software will be established for family checkout.

Thirty participants will be selected at each of five schools by a project team composed of the classroom teacher, family services school advocate, principal, English as a Second Language teacher if applicable, and Title I teacher. Criteria for selection will include family income, current parental involvement, current access to a home computer, number of children in the family, standardized test scores and other educational risk factors. Selected families will be invited to attend an informational meeting; sign-up for commitment and program participation will take place soon after. A schedule of training opportunities and locations will be provided for all participating families after an preliminary meeting. Parents will sign-up for a total of 50 hours of training/activities for themselves and their students.

Interoperability and Scalability: Both districts currently offer high speed Internet and district-wide email access to every office, media center and classroom via T1 lines. Software, hardware and local and wide area network infrastructures are similar and 100% compatible with existing local, county and state services and systems.

Due to the extensive network and training services available in both districts, as well as long-term plans to allow dial-up access for every staff member in both districts, this program can easily grow to accommodate a large number of families. Once we successfully implement this model program, it could easily be replicated in nearby communities, counties and schools. Strand 4 addresses large scale implementation.

Technical Alternatives: Both districts utilize state of the art file servers, data routers and networking services. Using existing resources from the two district infrastructures, experienced trainers from the ESLTT project, and successful Family Services Advocates is the most cost effective approach to deliver this project. The computers and software chosen for this project are industry standard (pentium 100 processor, color screen, 16 Mbytes RAM, CD ROM Drive, 810 MB Hard Drive).

Maintenance and Upgrading: Because the networks and Web servers are maintained by the districts, there will be no additional maintenance and upgrading costs.

Applicant Qualifications: Both districts are highly qualified to successfully implement this project due to their current technological infrastructures, successful training track record and existing family service advocacy collaboratives.

Key Personnel: Denise Griffith and Steve George, technology coordinators in their respective school districts and project directors for the \$637,000 Enhancing Student Learning Through Technology project will be the project directors, along with Marge Gruenes, Family Services Advocacy Facilitator. Refer to Appendix D for resumes.

Institutional Capabilities: School districts 191 and 196 are known as educational technology leaders in the state of Minnesota. Both school districts have experienced a rapid infusion of technology access during the past several years. Each district installed a computer in virtually every classroom, local area networks for all schools with access points to every classroom and media center, and a wide area network to facilitate high speed Internet access to each classroom, district wide electronic mail, and sharing of district resources. Successful staff development programs have been institutionalized in both districts via projects such as technology mentorships, integrated technology curriculum and graduate level instructional technology classes.

Community/Family Services: Successful family services advocacy programs in both districts offer support for the entire family and a bridge to community services with optimal support and minimal intrusions. Existing family service advocates in participating schools will be brought into the project.

Budget and Implementation Schedule:

Budget: Due to the strong infrastructures and staff development programs in both school districts, the majority of grant funds will be spent on 150 laptop computers. In order to establish the feasibility of providing information technology access to a large number of low income Americans, we must first demonstrate that the model will work with state of the art equipment, training and ongoing support. Scalability and feasibility will be best measured under these optimum circumstances. District matching funds encompass all aspects of the project. See Budget Narrative for details.

Implementation Schedule: The project duration will be from September 1997 to July 1998. However, six follow-up meetings and optional refresher training sessions for participants will occur during the 1998-99 school year. Activities for Strand 4 will also occur during the 1998-99 school year, but funding will be at district expense.

Activity	Timeline	Participants
Laptops and software purchased and set-up.	9/97	Project Trainers and District Tech Staff
Project teams select students and families. Kickoff meeting and training sign-up begins.	9/97	School Team, Project Trainers Family School Advocates, Families
Families commit to completing the program and sign-up for training options and dates.	9/97	School Team, Family School Advocates, Families
Training occurs in schools, community centers and local housing complexes.	9/97-5/98	School Team, Project Trainers, Family School Advocates, Families
Email and Internet accounts established.	9/97	School Team, Project Trainers
Large scale access strategy meetings held.	9/97-5/99	Collaborative Partners, Stakeholders
Fourth Grade Web Pages developed/used weekly.	10/97-5/98	Project Trainers, Fourth Grade Teachers
Email Bulletin Boards established.	10/97	School Team, Project Trainers
Family on-line projects selected and implemented.	10/97-5/98	Project Trainers, Fourth Grade Teachers, Families
Regular meetings held.	10/97-5/98	Project Trainers, Fourth Grade Teachers, Family School Advocates, Families
Evaluation of project.	9/97-7/98	Evaluator, School Team, Project Trainers
Follow-up meetings for 1998-99 school year.	10/98-5/99	School Team, Fifth Grade Teachers, Families, Collaborative Partners

Sustainability: This project will be easily sustainable for many years due to the fact we are using existing district infrastructures, resources, trainers and support personnel. Our telephone company partner Frontier Communications has committed phone lines, including installation and monthly service fees, for families who have phone services terminated during the project. In addition, large term sustainability is addressed in Strand 4.

3. Community Involvement

Partnerships: Most of the project partnerships have already been established and will simply continue, with this project as another strong link.

- The Adult Basic Education Program will support the project by bringing staff expertise and experience in working with families involved with General Education Diploma, English as a Second Language and other adult basic needs. They will provide trainer assistance for special needs of families currently served.
- The Family Service Collaborative, an existing group that assists families by coordinating local and county comprehensive services, will provide family service advocates for all participants, and coordinate building facilities for training. For example, they will coordinate the use of community centers and local apartment complex facilities for training. The use of these locations for meetings and training will allow families with limited transportation resources to walk to their evening or weekend classes.
- Early Childhood Family Services will link with the project by providing information and connections for families involved in their program (i.e. Family

School, Family Connections Plus, Bridge to School), facility use for training and meetings, and coordinating child care assistance during training sessions.

- Frontier Communications will provide phone lines, including installation and monthly service fees, for families who do not have existing home phone service, or who have phone services terminated during the project.

Involvement of the Community: This project was actually conceived by input from low income families from two elementary schools, Glacier Hills and Cedar Park. Parents have consistently indicated concern over lack of access to technology at home. The concern is that their children are at a disadvantage when their peers have home computer and telecommunications access. A survey done with parents from a local low-income apartment complex housing families who attend Glacier Hills Elementary listed access to home computers as one of their top concerns. In addition, potential participants were involved in the creation of this proposal when family school advocates surveyed families during regular meetings asking whether this type of project would be helpful. The resounding answer was YES! The collaborative approach presented in this proposal assures the involvement of participants from the beginning to end of the project.

Support for End Users: Ongoing support for 4th grade students and their parents is a major strand of this project, with support being provided by teachers, family school advocates, trainers, existing family programs, and our local telecommunications companies. Recruitment and technical support are discussed in prior sections.

Privacy: Privacy issues will be handled in accordance with current data privacy policies and regulations both school districts. These policies will be strictly adhered to, and no dissemination of information or project publicity involving identification of specific students or families will take place without parental permission.

4. Reducing Disparities

Description and Documentation: The entire purpose of this project is clearly to reduce the disparities between the technological "have and have not" families in our two participating school districts. We have selected the five elementary schools based on their disparately high number of students on free and reduced lunch, low test scores, high levels of transiency, and lack of parent involvement compared to other schools in our districts. For example, the five targeted schools have 18% to 32% of students on free and reduced lunch programs (district averages are 11%), and have disproportionately high transiency rates. Please refer to the Appendix A for detailed information on each school and the districts.

Strategies for Overcoming Barriers: This entire project provides a thoughtful, detailed approach to solving the "have not" access issue via our four strand approach: training, enhanced home to school communication, linkages for ongoing support and follow-up and a plan for large scale replication. We believe the successful implementation of these four strategies will reduce the technology access disparities

in our districts and communities, thus empowering participants will long term access and information technology skills.

Need for Federal Support: In order to operationalize this model on a large scale basis from our schools and community to others in the state and nation, federal startup dollars are essential. While we have district resources that could be applied to a limited number of families, the purchase of laptop computers for 150 families will allow us to evaluate the level of success on a statistically measurable scale.

5. Evaluation and Dissemination

Evaluation Design: Each major strand will be evaluated using several methodologies including surveys, interviews, academic assessments, technology assessments, focus groups and interviews. In addition to the evaluation of the major strand activities, global outcomes will be assessed for the students and parents involved in the project. Measured indicators will include percentage of parents and students attending sessions, passing training assessments, completing learning projects, requesting additional software, and sign up for additional courses. Improved student achievement test scores and attendance rates as well as increased homework completion and use of school technology resources will be also be measured indicators. Family technology use logs will be utilized. Finally, an impact assessment will be completed by participants. **See Appendix B for very detailed information by strand as well as global outcomes.**

Qualifications of the Evaluation Team: Cheryl M. Lange will be the principal evaluator of this project. Dr. Lange, a researcher with University of Minnesota, has extensive experience in research and evaluation. A complete resume can be found in Appendix D. Steve George and Denise Griffith, Project Directors, will also participate in the evaluation process.

Dissemination: Five dissemination strategies will be employed:

- **Progress reports and successful strategies** will be disseminated on the project's Web page. Monthly updates and student/family projects will be shared.
- **A brochure** outlining the project and its purpose will be completed during the first three months of the project. This will provide background information as well as information on how to access the Web page.
- **Presentations** will be given at one national and two statewide conferences on the project's impact regarding technology access for families not traditionally served by information technologies.
- **Articles** will be submitted to at least three national journals.
- **Site visits and technology demonstrations** will be encouraged by all members of the team. The districts involved in this project are recognized technology leaders; we will use this position to access the state education and technology agencies to communicate project outcomes through their communication systems.