

**TOP FY 2000
Project Narrative**

Rural Alliance, Inc.

**Grant # 46-60-00005
Rapid City, SD**

Cherish the Child-A Technology Opportunities Program

OVERVIEW: Rural Alliance, through an enhanced information infrastructure, proposes to partner with two non-profit agencies, one business, and a wide array of community resources to significantly improve, community services provided for rural, poor pregnant mothers and children from birth to three years old. The project will serve Bennett, Butte, Corson, Harding, Perkins, and Shannon Counties, (rural areas in Western South Dakota), and a program based in Pennington County, that works with American Indian parents from all of the surrounding Indian Reservations. The area spans over 250 miles from North to South and at the widest point two hundred miles east to west. The target population are one hundred pregnant mothers and families with children from birth to three years old. Ten percent or more of the children served have disabilities. Over half the families are American Indian; the project will be culturally relevant to their needs as well.

Two servers, fed by a DS-3 line, and a part of a fiber optic link, will serve as the technology hub of the system. The servers will host the Cherish the Child project hub, including an on-line information and resource center with capacity for on-demand ordering of parent materials and registration for training, peer parent support chat and conferencing areas, one-stop application for services registration area, one-stop assessment area for parents to identify their needs, on-line parenting, health, nutrition, education, and employability classes, access to activities and interactions with early childhood teachers and children at selected child care centers via web cam, a pre-natal and well-baby care appointment desk, automated reminders to attend pre-natal and well-baby care appointments and other project events, and a technology help desk.

Parenting, health, nutrition, education, and employability classes will be enhanced by integration of streaming audio and streaming video into the on-line materials.

Selected service providers who are a part of the network will be given password protected access to a pre-natal, well-baby tracking system, a database containing family data and record of services, conferencing areas to help service providers network and staff clients, and list serves through which they can contact all other service providers.

Rural Alliance, Technology for the Rural Enhancement of Communities, and Rural America, the key non-profit partners will be given access to conferencing areas through which they can network with each other to implement this project, host their own Board meetings, and trainings, and carry out management functions with their staffs. The hub servers will also host family web sites and web sites of small businesses operated by participating families.

Web-based services will be accessed by parents and service providers through their own computers at work or home, through public access centers located in selected towns, through laptops carried by home visitors, and through the Badlands Early Head Start Resource van, a mobile unit that contains computers and a variety of resource materials.

Parenting, health, nutrition, education, and employability classes, parent support groups, non-profit board meetings, service provider networking and client staffing meetings, and other events will also be offered via broadband technology offered through Black Hills Fibercom.

Project Purpose: The Cherish the Child project will promote child well-being in low-income families in rural, isolated areas of the nation that have limited access to technology.

Problems to overcome include: Geographic isolation from information and services and peer support, lack of knowledge about and access to technology systems, lack of use of pre-natal and well-baby care, lack of parenting skills, lack of qualified child care providers, and racism. Problems of families served are made more intense because of the poverty of the region. (One county to be served, Shannon County, is the poorest in the nation with an unemployment rate around 80%.)

The Cherish the Child project will serve low income families in some of the most rural and sparsely settled counties in the nation. The service area is one where even the simple definition of rural is inadequate to describe the situation. All of the counties served, except Pennington, have been designated as Frontier counties by federal and state agencies (less than seven persons per square mile). All of the counties served, except Pennington, are designated as medically underserved; some families drive up to four hundred miles round trip to access medical, basic social services, and libraries. Many families live ten to twenty miles from their nearest neighbors. According to a recent survey of parents to be served, less than one percent currently have access to basic technology services like e-mail.

South Dakota ranks 45th out of 50 states in the severity of their infant mortality rate. According to the Children's Defense Fund, South Dakota is one of ten states with the worst record for furnishing pregnant teens with early prenatal care and of reducing the percent of infants born to women who received late or no prenatal care. Immunizations in service counties rank well below the state average.

South Dakota has the highest percentage of working mothers in the nation with children under the age of six. (71% for SD versus 60% nationally. Kids Count, 1998.) For example, in Perkins County 82.7% of mothers with children under the age of six work. In contrast there are NO licensed child care centers in Butte, Harding or Perkins County.

In addition, a significant difference in income and opportunity exists between American Indian and non-Indian families in Western South Dakota. This reflects long-standing patterns of discrimination based on race and cultural practices. (See section on Disparity). The Cherish the Child project will help families overcome all of these barriers. See additional documentation of needs in the commitment letter of Technology for the Rural Enhancement of Communities attached.

Addressing the Problem-The Cherish the Child project will:

- Intervene early in the life of the child
- Focus on prevention of problems
- Utilize technology to overcome isolation and maximize scarce resources
- Focus on support for primary child caregivers to help them maximize resources

Anticipated Outcomes and Potential Impacts-A self-sustaining, interactive, comprehensive parent information system will be in use in Western South Dakota to support these objectives:

- One hundred parents per year for three years will increase parenting skills as measured by pre-and post project year Ages and Stages Assessment.

- One hundred parents per year for three years will increase by 30% their access to information and resources to enhance their family's well-being as measured against baseline data.

- 90% of pregnant mothers in the project will participate in early and consistent pre-natal care resulting in better mother and baby health.

- 90% percentage of participating babies will receive well baby care and all needed immunizations.

- Participants will have a lower infant/neonatal mortality rate than the county rate.

- At least five parents per year for three years will become employable as child care workers or entrepreneurial child care providers as a result of their completion of parenting classes.

Innovation: This project is innovative because it is being carried out in a very rural area, on a limited budget, and with end users who currently have very limited access to or knowledge of accessing an information infrastructure. The project is making the best use possible of low-end Internet services available in the very rural areas and at the same time maximizing benefits of a fiber optics system. Early Head Start programs are themselves a new development in the nation; based on the premise that early, positive intervention in the lives of low-income families, provide the maximum benefit, especially if pregnant mothers can access pre-natal care at an early stage of pregnancy. Finally, the project will make adaptations to meet the cultural needs of American Indian families served, and at the same time promote multi-cultural understanding among the races.

Diffusion Potential: Cherish the Child addresses a problem common nationwide- the need to improve parents ability to provide for the well-being of their babies and toddlers. Solutions presented in this project that can be easily adapted and replicated in other locations include:

- Skills building by parents through on-line classes,
- Access to on-line parent information and services,
- Peer support,
- Use of telecommunications to involve parents with their children while their children are in the care of another.
- Public access computer areas.
- Pre-natal and well-baby tracking system.

Early Head Start programs exist across the nation, all with the mission of improving the well-being of low-income pregnant mothers and babies. These programs have program infrastructure similar to Badlands and Rural America Initiatives Early Head Start and are ideal candidates for replication.

Replication of the Cherish the Child project will be made easier for others through use of the project publications including:

- Executive Summary
- Major Evaluation Findings and
- Replication Guide.

Dissemination will be conducted electronically through the Cherish the Child information center. Other dissemination efforts will be conducted primarily through the Head Start Association, through presentations at Head Start state and national conferences and the National and South Dakota Indian Education conference, and through publications of these organizations.

Project Feasibility- Interoperability and Scalability-The proposed telecommunications system will feature a wide area network fed by DS-3 lines, and accessible by dial-up for remote locations. This approach was chosen primarily based on local input, staff recommendations, and information from the Governor's Report on Telecommunications (most recent report describing the status of telecommunications systems in South Dakota.) Priority was given to linking to the Internet because this appears to offer the best opportunities for interoperability, is the most practical in terms of maintenance, and offers opportunities to expand and enhance the systems as new needs arise and as new technology emerges.

Black Hills FiberCom, a subsidiary of Black Hills Corporation, is now providing bundled video entertainment services, high-speed Internet, local and long distance telephone service, and a full suite of telephony products to residential and business customers in Rapid City and the Northern Black Hills in a small portion of the Cherish the Child service area.

The broadband technology Black Hills FiberCom is deploying is rare in rural areas. 200 miles of fiber optic backbone and more than 100 miles of fiber coax distribution plant have been built during 1999, and will continue to expand with another 300 miles or more of distribution this year. BH FiberCom technology provides enough bandwidth to provide a full suite of bundled services and allows for future services such as voice-over-IP.

The fiber optic link will enable customers to receive telephone, cable television, Internet, and high-speed data and video services all through one cable coming into their businesses and homes. The network is designed to provide greater reliability because there will be redundancy built into the system. Compared with the present telecommunications network in the Black Hills, connections to homes initially will have 4 to 700 times greater capacity; connections to schools and businesses will have from 65 to 1750 times greater capacity.

This broadband technology will also be employed, particularly to provide classes for parents in the Northern Hills area.

The central services will be housed at Fibercom/Black Hills Corporation, utilizing their state-of-the-art hardware, software, facilities, and skilled technicians. Fibercom's commitment to the Cherish the Child Project will assure that the system will be able to keep up with new technology as it happens even though the participating non-profits cannot afford the technology.

Public access computer centers will be housed in project sites donated by Badlands Early Head Start and Rural America Initiatives Early Head Start and on computers owned by the non-profits. Home visitors, as a part of Initially all partners and participating individuals and agencies will have local dial-up and telnet ftp privileges to the server. (Local dial-up is available in all of these communities through independent telephone companies for a minimal cost.)

Technical Alternatives: South Dakota has a video teleconferencing system supported by state funding. Partners indicated during planning that they would rather not use the system since most do not have local access, and usage is relatively expensive.

System Maintenance and Upgrades: Fibercom, a company of Black Hills Corporation, will provide for equipment/software/facility upgrades of the main servers and video conferencing system. Upgrades will be necessary to keep their own system state-of-the art, and the Cherish the Child project will have the advantage of

Plans to Adapt to Unforeseen Developments: The Fibercom technical team has the expertise to deal with unforeseen technical developments.

Qualifications of Project Staff: The Cherish the Child Project will be coordinated by Lily Mendoza, an American Indian entrepreneur. She was chosen as project coordinator primarily because of her demonstrated rapport with American Indian and rural poor families, and because she has experience in offering technology services in rural South Dakota.

Lyn Tysdal and Laura Schad, as directors of the Early Head Start programs involved will provide, at no cost to the project, early childhood education and program management expertise. Center teachers and home visitors will also provide expertise, although their resumes are not included here.

Primary technical expertise will be provided by Fibercom. Day-to-day network operations will be overseen by Jason Erickson. See attached.

Proposed Budget-See attached.

Sustaining the Project -The Cherish the Child Parent Information System, once the model is established and tested, can be sustained through the regular budgets of the Badlands and Rural America Initiatives Early Head Start programs. Server hosting fees will be split by the organizations and the Fibercom contract will no longer be needed.

Implementation Schedule-Attached at the end of this section.

Community Involvement-A comprehensive needs assessment process preceded the development of this project. Data about needs of parents was drawn from a variety of sources including the South Dakota Kids Count Factbook, Census data, the Head Start Association, State agencies of Health, Social Services, and Education, and others. In addition, parents were surveyed through the Parent Training and Volunteer Survey and personal interviews. Information was also drawn from Family and Community Partnership Agreements and Enrollment Forms. TREC, Rural America Initiatives, and the Rural Alliance Boards were polled; Parent Policy Council and Center Committees provided and will continue to provide input into the implementation of the project. Service providers also provided input.

In this needs assessment process, parents identified as priorities the need for parenting classes, support to utilize pre-natal and well-baby care, and training for parents who wish to become qualified child care workers. They expressed the need for public access computer centers, ease of use, and a multi-faceted technology approach. These priorities were reinforced by service providers.

The Badlands and Rural America Initiatives Early Head Start Policy Councils and Parent Committees will provide on-going representation of end users in the project. These Councils/Committees meet at least quarterly and include representatives from all geographic locations served by the project. Their input will increase the probability that end user needs are met.

Training-At the beginning of every project year, parents, non-profit staff, and other service providers will be oriented to the project and given basic training to use the Cherish the Child

Information System. On-line training and an on-line technology help desk will supplement this training.

Safeguarding Privacy-The confidentiality and privacy of end users will be protected to the degree possible. Family information, for example, will be password protected and available only to known service providers. Encryption will be used to protect the privacy of e-mail users. Family records will be kept on stand-alone machines.

Reducing Disparities-Disparities are of two major types: **Income**-American Indians have an average lower income than non-Indian families. For example, a Mayor’s study of Reservation families who moved to Rapid City showed this comparison:

CATEGORY	TOTAL-ALL RACES	AMERICAN INDIAN
Poverty level	10.2%	45.4%
Per capita income	\$12,031	\$5,396
Children living under poverty Ages 0-4	16.8%	62.1%
# families under poverty level with children under 5-married	7.6%	43.8%
# families under the poverty level with children under 5-single female	65.2%	89.4%
Unemployment	2-3.5% statewide	59%

Poverty factors alone make it more difficult for American Indian families to access information systems; on the Pine Ridge Reservation over one-third of families do not have telephones in their homes.

Telecommunications: A wide range of telecommunications systems exist in Western South Dakota. The Black Hills Fibercom system offers the most advanced level of service, but covers a relatively small geographic area at this time. Inexpensive dial-up is offered by most rural electric cooperatives; users then can choose among three or more Internet providers who serve these rural areas. This inequity in telecommunications services means that the Cherish the Child project must facilitate the following:

1. Provide users located in rural areas the ability to interactively access a variety of digital content constructs including; fiber and Internet based video conferencing, access ability to streaming video delivered via broadband fiber, dedicated or dial-up Internet.
2. Provide rural users the ability to develop and distribute local content on-demand.
3. Provide rural users with the ability to redistribute on-demand content in end user selectable format types. For example: a local health care training session could be video conferenced to

user sites, stored digitally and offered as on-demand streaming video that could be selected later by Internet users.

In addition, the system must be upgradable to meet new technologies that will be offered in the region, especially with the convergence of media.

Evaluation and Documentation-Randy Ross, American Indian evaluator, will serve as external evaluator, but the bulk of data will be collected internally. See attached resume of Ross and evaluation design.

IMPLEMENTATION SCHEDULE

QUARTER

ACTIVITY	1	2	3	4	5	6	7	8	9	10	11	12
Project start-up	X											
Orient partners/parents/service providers	X				X				X			
Orient parent councils, committees	X											
Establish base-line data/ develop instruments		X										
Develop initial conferencing and chat areas for parents, service providers, Head Start staff, non-profit Boards and Parent Councils/Committees.		X	X									
Develop initial on-line registration and needs assessment areas for parents		X	X									
Open public access computer centers/ equip mobile van with Internet access, assist home visitors to help families access the Internet via laptops.			X									
Provide end user training to access the system			X	X	X	X	X	X	X	X	X	X
Develop on-line technology help desk			X	X								
Formative evaluation			X	X	X	X	X	X	X	X	X	X
Establish and maintain family data base				X	X	X	X	X	X	X	X	X
Develop and offer on-line parenting and employability classes (thru video conferencing & web access.)				X	X	X	X	X	X	X	X	X
Establish on-line pre-natal /well-baby care appointment desk						X	X					
Develop, with assistance from selected parents, on-line information and resource center. Maintain/expand.						X	X	X	X	X	X	X
Develop and offer on-line health, nutrition, and education classes.						X	X	X	X	X	X	X
Establish web cams at selected Head Start centers and link to project web site.							X					
Implement system to automate pre-natal and well-baby appointment								X	X	X	X	X

