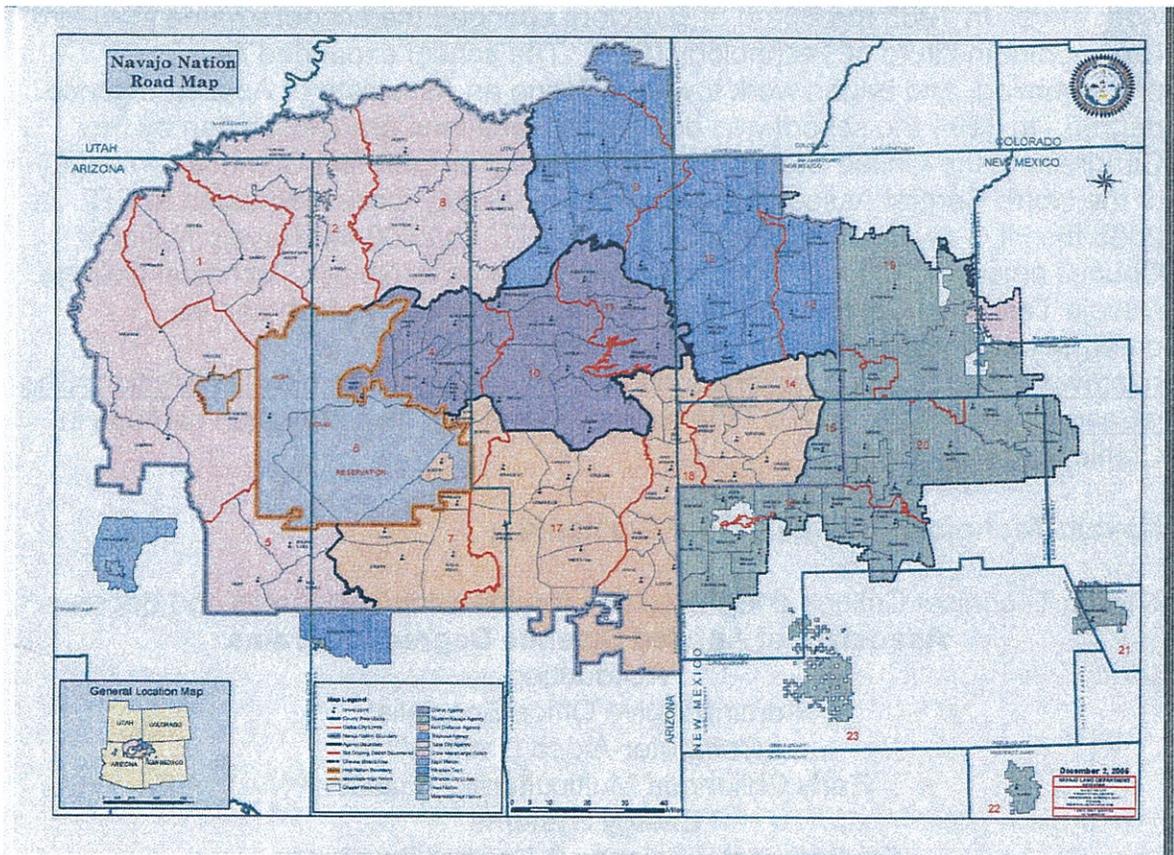


# Navajo Technical College, An Institution of Higher Learning and Economic Development

## The Navajo Nation

The Navajo Nation is roughly the size of West Virginia, stretching over the states of Arizona, New Mexico and Utah, as illustrated below:



According to a 2005 report by the Navajo Nation's Department of Economic Development, the Navajo population grew at the rate of 1.82% annually between 1990 and 2000. Using this growth rate, the population of the Navajo Nation was estimated to be 193,961 in 2004 and 197,472 in 2005."

This population is one of the poorest in the United States. The unemployment rate on the Navajo Nation has stayed high despite low unemployment elsewhere in the United States. The Tribe is concerned that unemployment continues to grow. For example, it was 42.16% in 2001, 46.07% in 2002 47.57% in 2003 and

48.04% in 2004. It has not improved during the last four years (U.S. Department of Labor).

The Census 2000 found 42.9% of Navajo individuals living below poverty level. This poverty is generational, dating to 1863 when the Navajo were defeated by the U.S. Army and imprisoned at Fort Sumter in New Mexico.

### **Navajo Technical College History: A Response to Poverty and Unemployment**

Navajo Technical College was founded as the Navajo Skill Center in 1979. At that time the school attempted to meet the immediate needs of an unemployed population. Students learned the rudiments of a trade, graduated, and joined the work force. In 1985 the Board of Directors changed the school's name to Crownpoint Institute of Technology (CIT). The school expanded its programming, and began work toward offering an Associate of Applied Science degree. In 1994 the school was designated as a land grant institution by the Congress of the United States. In 2003 the Higher Learning Commission (HLC) of the North Central Association awarded Candidacy for Accreditation to CIT. In 2005 the HLC awarded full accreditation to CIT. In 2006 the Navajo Nation's Council amended CIT's charter, changing its name to Navajo Technical College. Navajo Technical College is fully accredited by the HLC, which can be determined by visiting the following website:

[http://www.ncahlc.org/index.php?option=com\\_directory&Itemid=192&Action=ShowBasic&instid=2828](http://www.ncahlc.org/index.php?option=com_directory&Itemid=192&Action=ShowBasic&instid=2828). In 2007 the college opened up its first branch campus in Chinle, Arizona.

### **Navajo Technical College's Core Curriculum**

Navajo Technical College currently offers the following certificates and degrees.

#### **Associate of Applied Science Degree Programs**

Accounting  
Administrative Office Specialist  
Computer-Aided Drafting  
Early Childhood Multicultural Education\*  
Energy Systems  
Environmental Science & Natural Resources  
Geographical Information Technology  
Information Technology Technician  
Law Advocate  
Legal Assistant  
Public Administration  
Veterinary Technician

#### **Vocational Certificates**

Applied Computer Technology

Automotive Technology  
Bookkeeping  
Carpentry  
Commercial Baking  
Computer-Aided Drafting  
Construction Technology  
Culinary Arts  
Early Childhood Multicultural Education  
Electrical Trades  
Environmental Science & Natural Resources  
Information Technology Assistant  
Geographical Information Technology  
Pre-Nursing

**Technical Certificates**  
Commercial Driver License

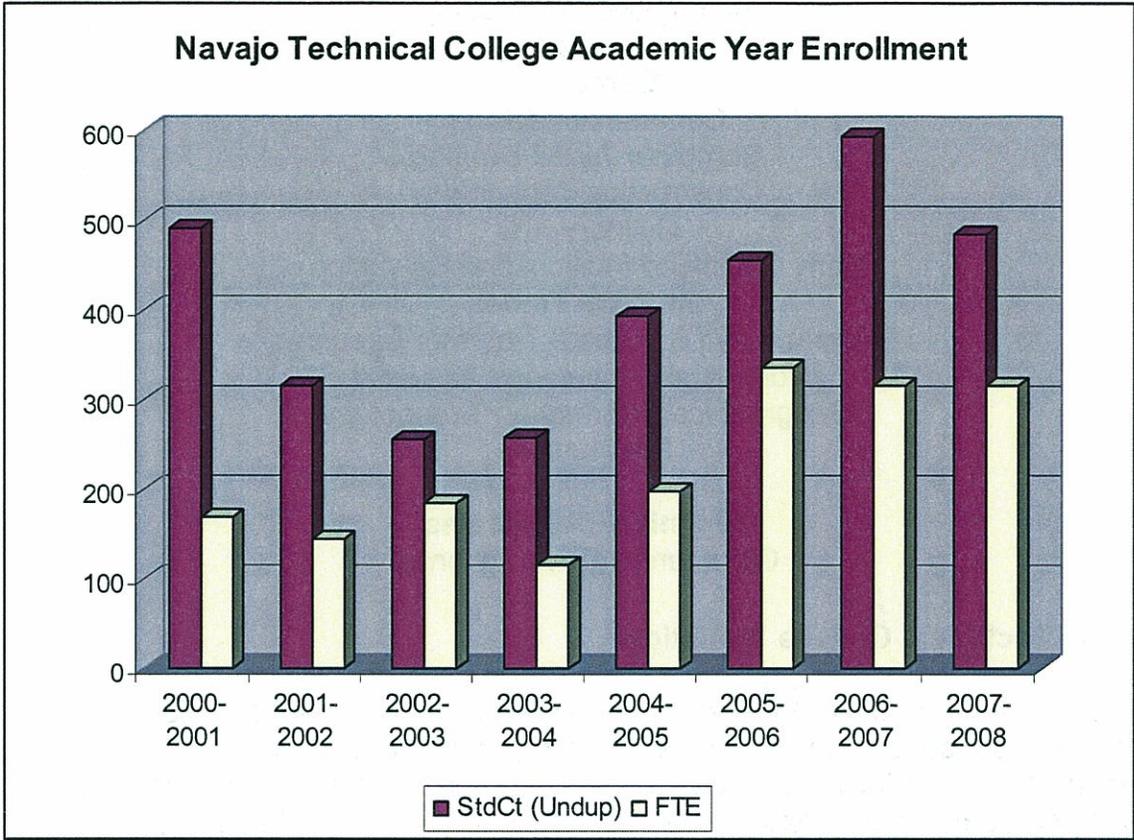
### **Navajo Technical College Statistics**

Eighty-five percent of students at Navajo Technical College are Navajo. Students from several other tribes are also represented as well as a small percentage of non-Indians. The average student is 21-41 years old, resides 100-500 miles from campus, has a family income of less than \$20,000 per year, and comes from a single family home. Seventy-nine percent are the first in their family to attend college. Slightly more males than females enroll at Navajo Tech.

Enrollment at the college over the past eight years is summarized by the following chart:

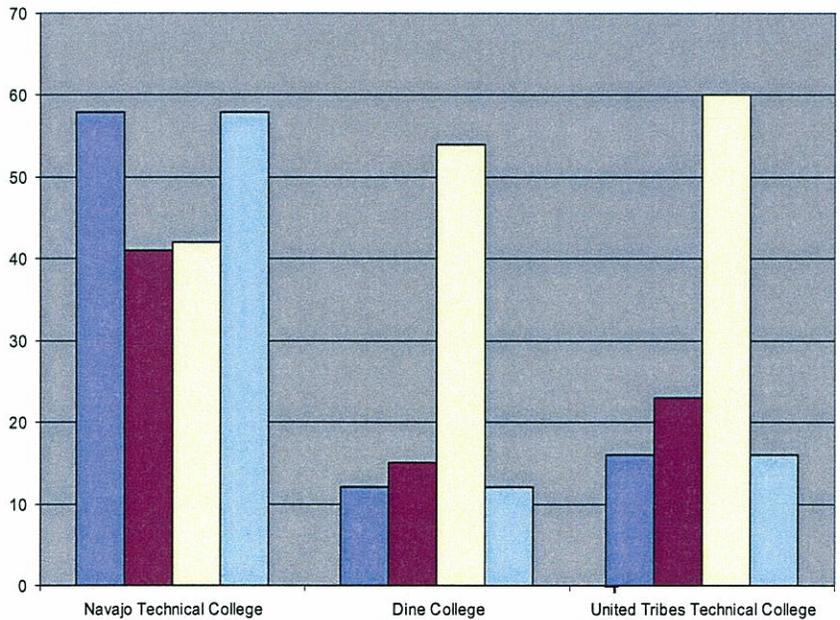
The dark bars, labeled stdct, represent \_\_\_\_\_.

The white bars, labeled FTE represent \_\_\_\_\_.



Navajo Tech's retention rates tend to be high compared to other tribal and community colleges. The retention rate for 2007/2008 was 75% using a cohort base. Graduation rates are also strong.

- Graduation rate overall full-time first-time degree/certificate-seeking undergraduates
- Graduation rate cohort as a percent of all undergraduates: Fall 2006
- Graduation rate cohort as a percent of entering class: Fall 2006
- Graduation rate overall full-time first-time degree/certificate-seeking undergraduates 1



## **Economic Development Efforts by Navajo Technical College**

In order to significantly reduce poverty within the Navajo Nation, the college has initiated a number of economic development efforts. The college is continuously working to increase its academic and workforce standards. Following the economic development models developed in, economies that have moved up from third world status, Navajo Tech, in partnership with the Navajo Nation, has been guiding students in the development of 21<sup>st</sup> Century workplace skills.

Navajo Tech is Pursuing Six Major Economic/Workforce Development Strategies:

1. Providing technical training designed to help students attain jobs based upon the market needs of the region.
2. Reforming curriculum so that it provides increased experiential education, internships, or research opportunities.
3. Using Navajo Tech resources, on projects that can help Navajo communities achieve a better economic future.
4. Reaching out to area schools to help develop education methods that encourage students to become interested in science, technology, engineering, and math.
5. Using Navajo Tech assets to attract high growth industries to the Navajo Nation.
6. Working toward development of a technology transfer strategy pioneered by major U.S. universities.

The college has a number of projects underway designed to meet both community and student needs as part of its efforts to implement these strategies:

### *Chinle, Arizona Campus*

Navajo Technical College requested permission from the Higher Learning Commission to open a campus in Chinle, Arizona. Based upon a request from the Chinle, Arizona Chapter and the President and Legislature of the Navajo Nation a Focus Group team sponsored by the Higher Learning Commission visited the Chinle site in the winter Of 2008, reviewed the plans and the limited operations underway, and recommended approval of the site for accreditation purposes. That approval gave the college permission to dramatically expand course offerings and enrollment in Chinle. A total of 150 students is expected for the Fall 08-09 school year carpentry, culinary arts, and legal advocate. The new campus will make it more possible for students from the center of the Navajo Nation. To earn certificates and associate degrees.

### *Advanced Placement and Workforce Development Efforts*

Nearly 90% of Navajo Technical College's freshmen, enter with basic skills deficiencies. The college has been working with high schools in New Mexico and

Arizona to provide advanced placement courses and launch technical/vocational programs that award technical college credit. This program is in its infancy, but involves the college in an effort to minimize the lack of adequate academic preparation by freshmen students.

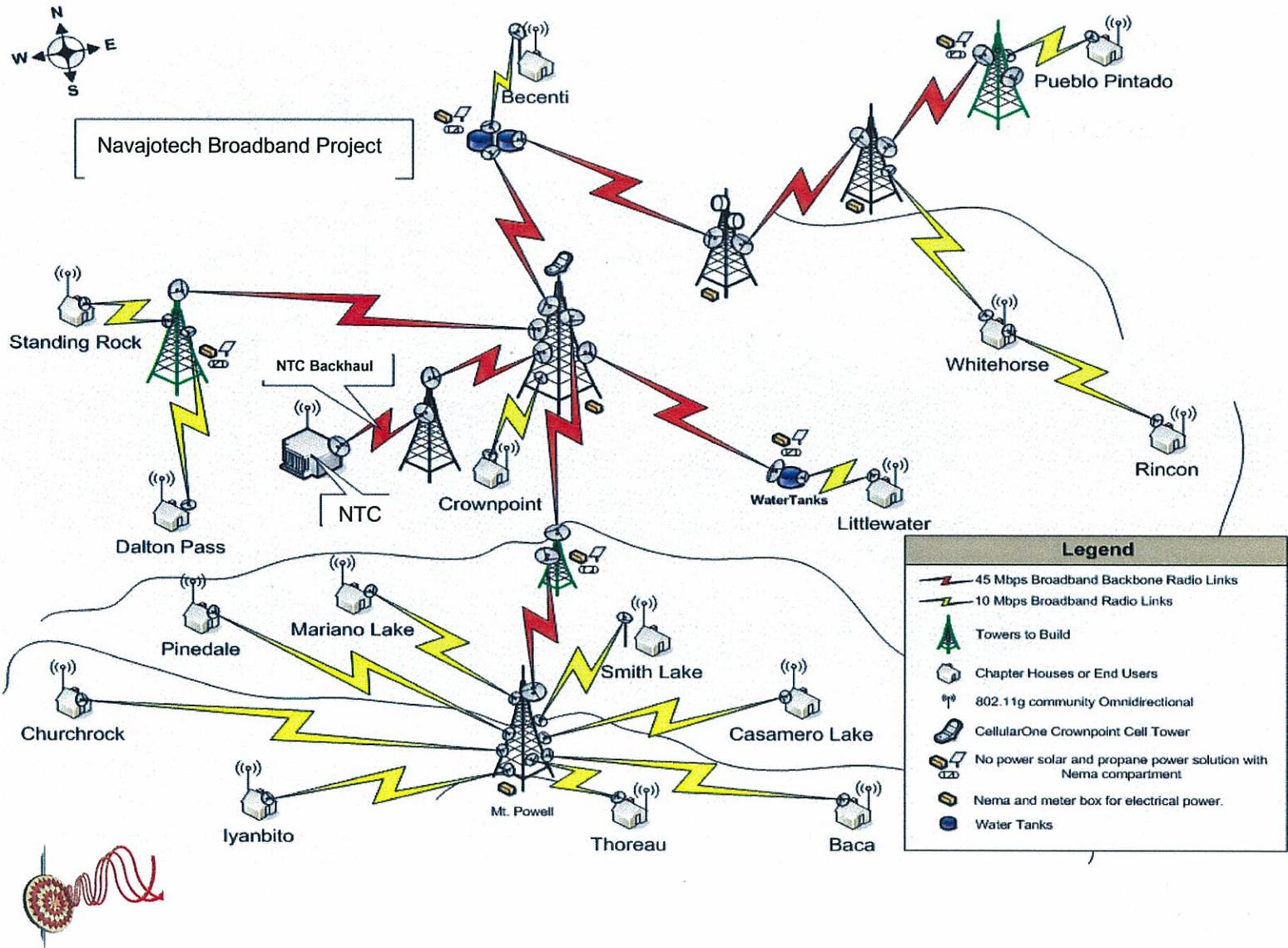
The college is also working with the Navajo Workforce Development program, which is primarily funded by the Department of Labor. This program targets education and training for unemployed and underemployed participants.

#### *Preparing Head Start Teachers*

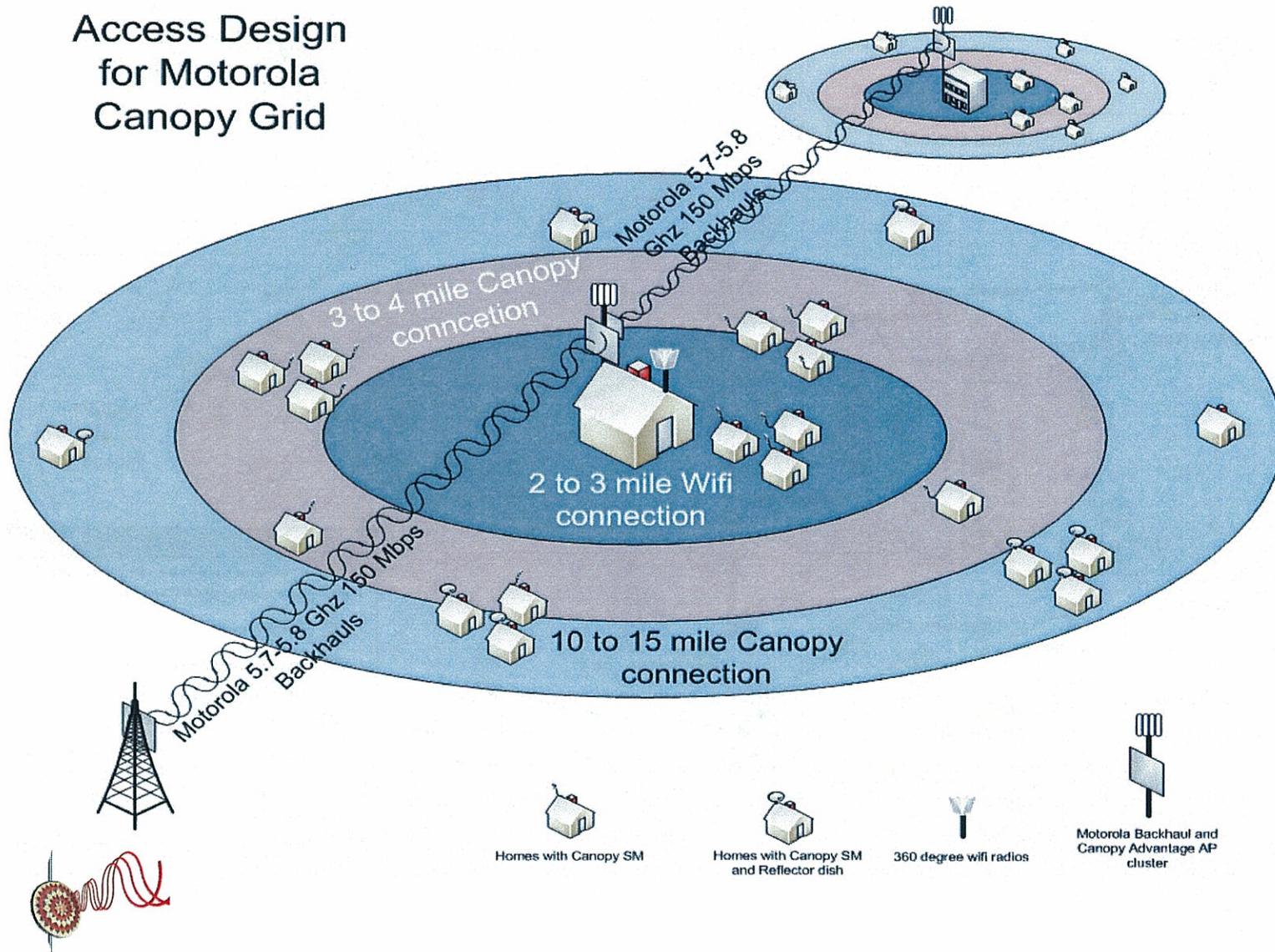
One of Navajo Tech's projects is a partnership with Navajo Nation Head Start to help Head Start teachers and staff earn associate degrees. This effort is designed to help teachers and staff improve their job performance in childcare centers. The college offers classes at Crownpoint and Shiprock in New Mexico; and in Chinle, Cuba, and Fort Defiance, Arizona.

#### *Internet to the Hogan and the Diné Grid*

Navajo Technical College's Internet to the Hogan and Diné Grid Project has received national recognition for its vision and world-class leading-edge technologies. Internet to the Hogan and Diné Grid are two aspects of one system, although the two have separate functions. Internet to the Hogan builds a state-of-the-art wireless infrastructure capable of supporting the Diné Grid with 155 megabit connectivity and higher. It brings OC3 connectivity from downtown Albuquerque and a gigapop to Navajo Tech's Crownpoint, New Mexico campus. From Crownpoint, wireless signals are sent to remote community, chapterhouses. From the chapterhouse, wireless Internet connectivity is provided to subscribers in a 30 mile radius. Two drawings illustrate how the system will work in the Crownpoint area:



# Access Design for Motorola Canopy Grid



The Diné Grid integrates into this wireless infrastructure and makes it more effective in providing extended services to remote chapterhouses and the Navajo people. The Diné Grid creates a Scalable Distributed Supercomputing Environment, increasing its computational power as new sites are added.

A scalable system refers to network systems. In this case, the Diné Grid is scalable in two ways. The most important of these has to do with usage. A user at a chapterhouse or home can access the Internet at a minimal bandwidth. they can also access Supercomputing resources through the Gigapop in Albuquerque or through the TeraGrid, the world's largest supercomputing grid and New Mexico's new gateway system. The Diné Grid also enables advanced technologies that serve Navajo needs in:

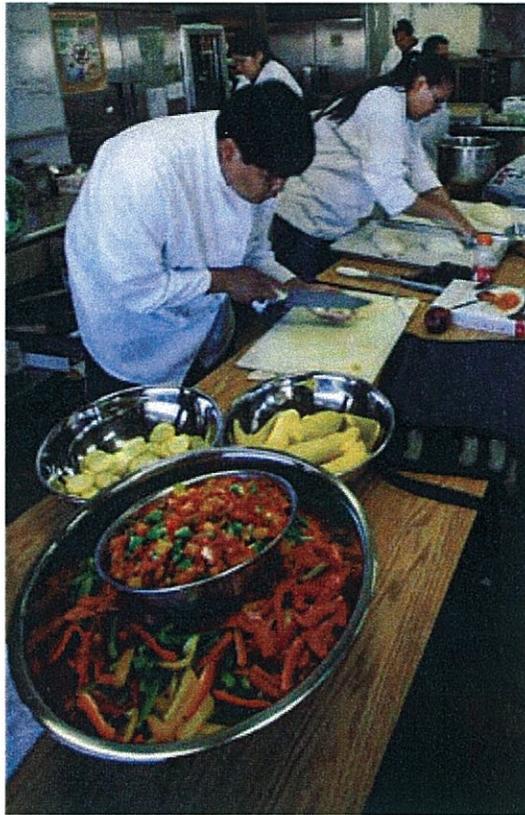
- Education
- Telemedicine
- Public Safety
- E Government
- Economic Development
- Remote Sensing
- Research

Although funding is still being sought, when the project is completed 110 chapterhouses in New Mexico, Arizona, and Utah will have Internet connectivity. This is comparable to or better than the best systems in American cities. Education technologies provide the most superior tools available for instruction, especially in science, technology, engineering, and math. Some of the most remote communities in the country will have available advanced telemedicine tools, developed in conjunction with the medical school at the University of New Mexico.

### *Culinary Arts and the Hospitality Industry*

The college, using a combination of Title III, Strengthening Institutions, Department of Education and State of New Mexico funds is in the process of finishing a new Culinary Arts and Hospitality Building. In anticipation of completing the building, the school has added a Baking Program and planned for a Hospitality Management and Food and Beverage Program to expand beyond its current Culinary Arts programming. Its Culinary Arts program has won national and state awards as one of New Mexico's best culinary schools.

One of the strongest, and fastest growing, industries in the Navajo Nation is tourism this is especially true for border towns like Gallup, New Mexico or Flagstaff, Arizona. Expansion in the culinary arts and hospitality industries should help strengthen the area's tourism by providing a more qualified, highly skilled workforce.



### *Contracting Computer Aided Design Services*

A Presidential Executive Order created a Minority Serving Institutions (MSI) set aside for contractors with federal agencies. This Order was designed to help tribal colleges and universities increase the number of high skill, high wage jobs available in American Indian communities. The Order set a 1% goal for government contractors covered.

During the past several years, as part of a program managed by the American Indian Higher Education Consortium (AIHEC), Navajo Tech's Computer Aided Drafting (CAD) program has sent student interns and a faculty advisor to NASA. NASA has worked hard with the college to build the college's capacity in this area.

In the Fall, Navajo Tech hopes to contract with contractors under the set aside. Mr. Harold Halliday, a CAD instructor, has been receiving training from NASA on contracting procedures and management. A number of contractors have been working with the college, so we expect to initiate the first small contracts by October of 2008.

After the CAD program has developed contracts, our plan is to expand to include technology contracts. We will be using the expertise developed through the Internet to the Hogan and Dinè Grid projects.

*Agricultural Education and Training Efforts with Navajo Agricultural Products Industry (NAPI) and Navajo Farmers and Ranchers*

Navajo have farmed and worked with animals for untold generations. Therefore Navajo Technical College provides educational programs to improve farming, nutrition, and animal husbandry throughout the Navajo Nation. Its efforts have not been limited to Veterinary Technician and Culinary Arts programs. These have been extended to community education, college continuing education events, and visits to schools and gatherings centered on ranching or farming.



A sample description of the projects developed under the college's 1994 land grant status:

*NAPI Training*

One of our most important projects is in partnership with Navajo Agricultural Products, Inc. (NAPI), which manages the Nation's huge farming operation. The college is providing certificate programs in irrigation, machining, and other related areas to NAPI employees. Navajo Tech is also working with NAPI on research projects designed to increase the agricultural productivity of Navajo farmland.

*Extension Services as a 1994 Land Grant College*

Navajo Tech works in partnership with New Mexico State University to provide a broad range of extension services throughout the Navajo Nation. Clinics on horseshoeing, breeding, cropland management, traditional Navajo agriculture, and other topics are held periodically throughout the year. The Extension Service works extensively with youth and 4-H programs throughout the Navajo Nation. Research projects through

Extension's greenhouse and garden plots are also continuously in progress. Extension Agents from either Navajo Tech or New Mexico State University Extension are made available to ranchers and farmers throughout the area.

#### *Veterinary Clinic*

The college also operates a fully functional veterinary clinic that is not only a teaching hospital, but also serves the veterinary needs of the Eastern Navajo region. The clinic works with Navajo Tech's Extension program to offer spading clinics, artificial insemination clinics, and other services at low to no cost on an annual basis.

#### *Work on Alternative Energy and Specialized Training with Mining, Power Plant, and Other Energy Related Industries*

A number of projects are underway with alternative energy. The most important of these is the restructuring of the certificate program in Alternative Energy to combine the skills needed for an electrician license with related to wind, solar, and energy conservation and use. This upgrade qualifies students for an associate of applied science degree. Alternative Energy classes have also installed solar energy systems on campus and built by hand a windmill designed to generate electricity. Both systems are also hooked into the power grid.

#### *Transition from GED to College Partnership with Navajo Workforce Development*

Navajo Tech's General Equivalency Diploma (GED)/Adult Basic Education (ABE) program has been expanding services to an increasing number of Navajo communities. This effort has increased both the number of students in GED education and the GED graduation rate over the past 12 months. In order to expand job placement, Navajo Workforce Development with the college to provide a transition for high school students who have graduated or are near graduation. Navajo Tech's Continuing Education Department offers college level courses to students whenever there are enough for a cohort. These students are given special help by the Tutoring Lab at the college and provided with a number of intense follow-up services through the college's Title III, Strengthening Institution's First Year Experience program.