

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 8672

3013 SCOMM 136 : HOUSE SPEC. COMM. ON EC. DEV. ON TRADE, TOURISM '05-'06

Technology, by itself, is not the answer. Using technology to develop Knowledge Workers, with the focus on learning, is the road to the future. This is a story of a small Yupik Eskimo village, on the southwest coast of Alaska, that is using technology to enhance it's quality of life while still maintaining it's native lifestyle

A Joint Effort of:

- **Nelson Island Schools**
- **Hewlett Packard Computer Corp.**
- **Alaska Wireless Technology**
- **MIT Media Lab**

Population:

550 Residents, 2 Schools:

Grade K-3 School Pop:

80; Grade 3-12 Pop: 85

Economy:

Subsistence Hunting,

Trapping, Fishing, Grass

Basketry, Ivory Carving,

2 Stores, 1 Airstrip

Demographics:

98% Yup'ik Eskimo

55 Houses

Juneau, AK:

1000 Miles ==>

Seattle:

3200 Miles ==>

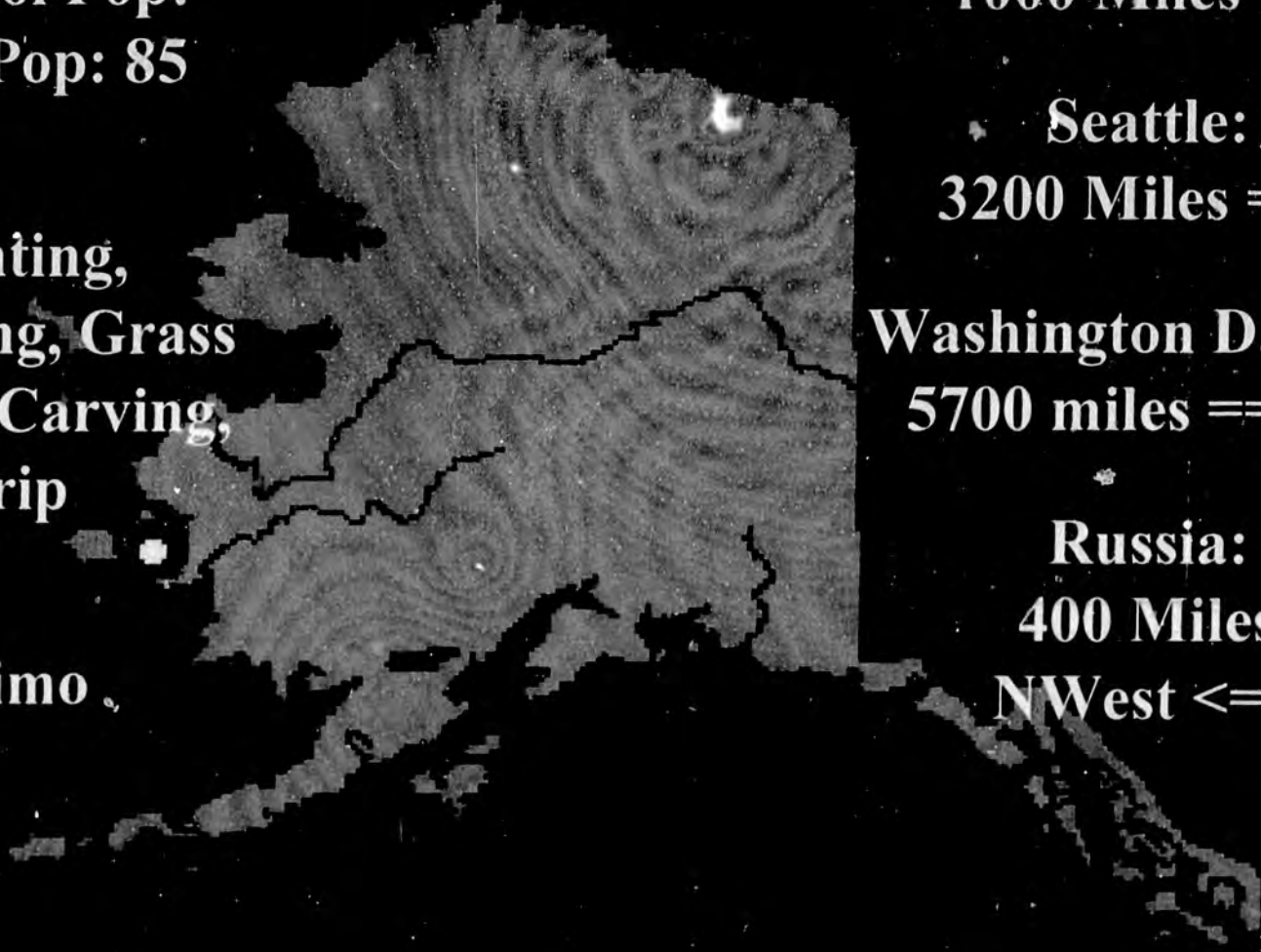
Washington D.C.:

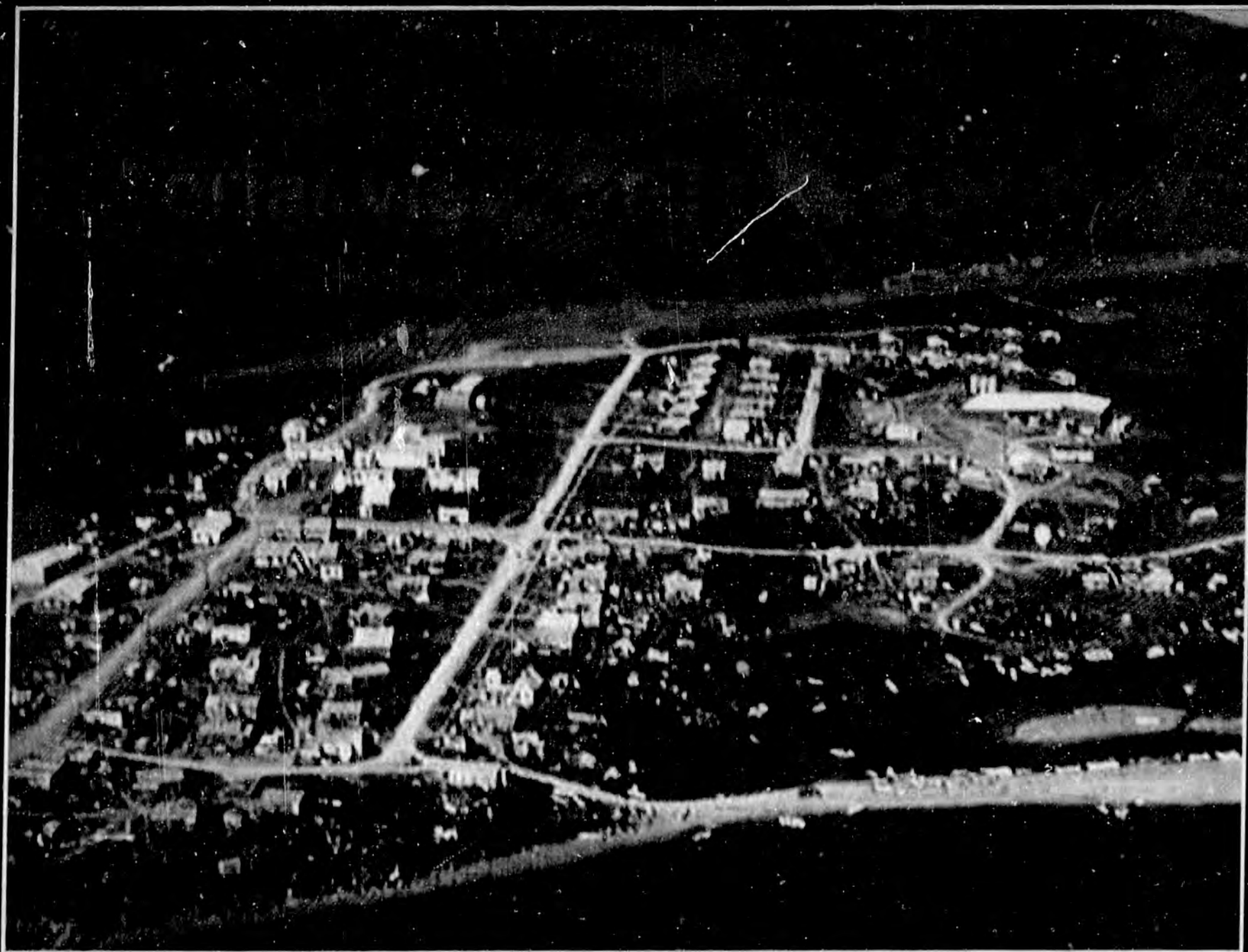
5700 miles ==>

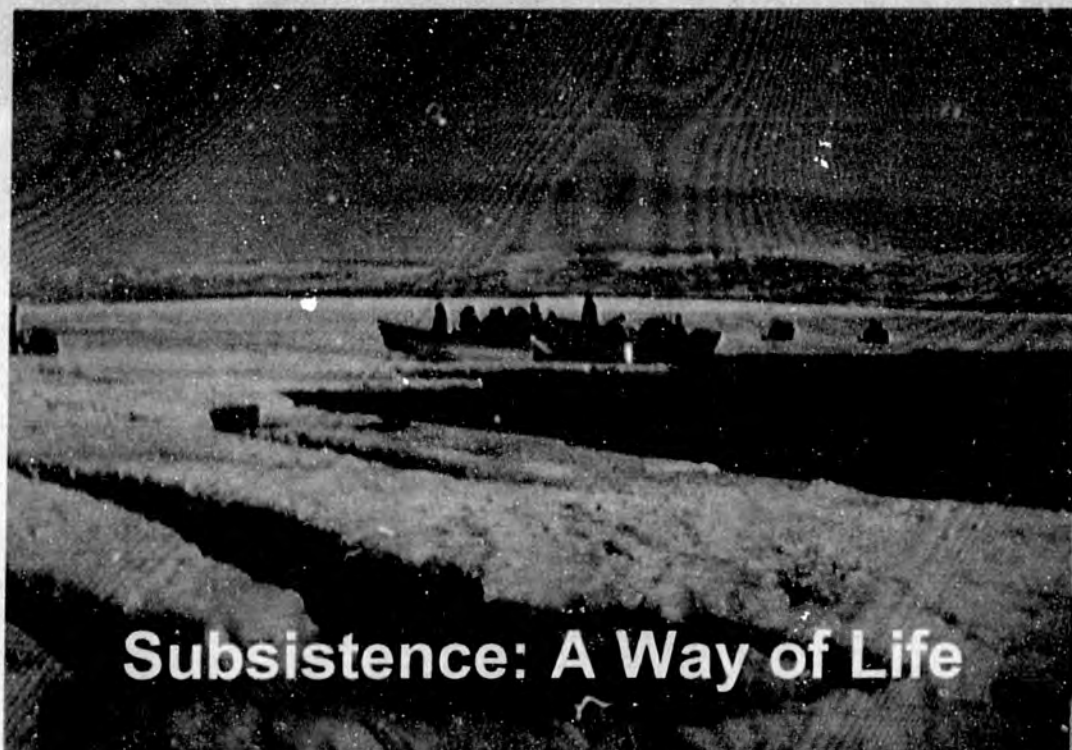
Russia:

400 Miles

NWest <==







Subsistence: A Way of Life

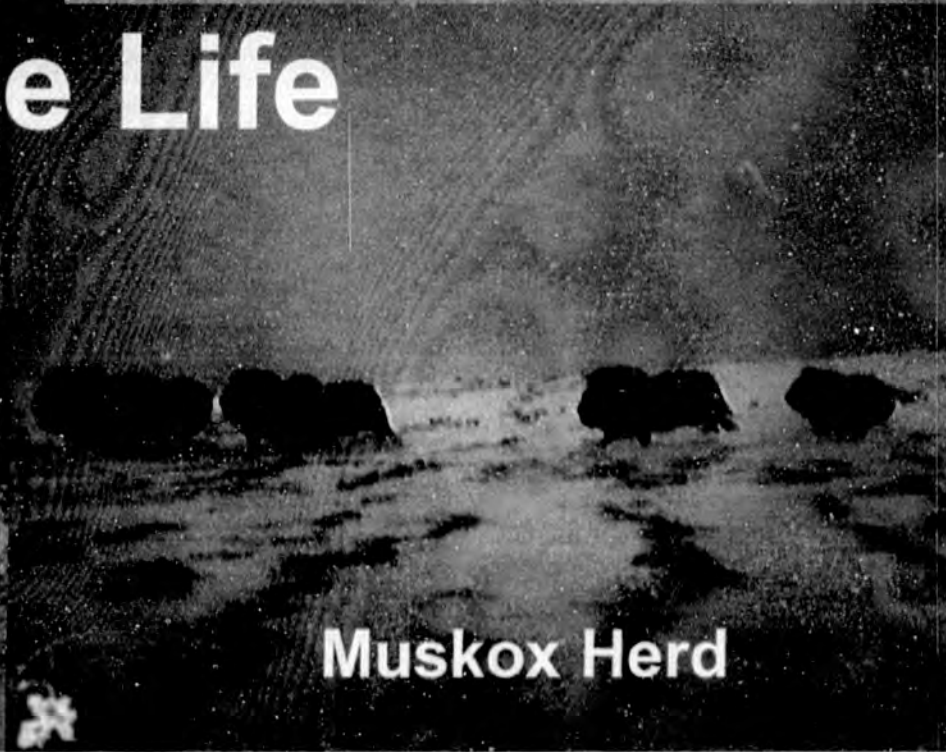


Village Cache

Village Life



Village Transportation



Muskox Herd



The Information Age

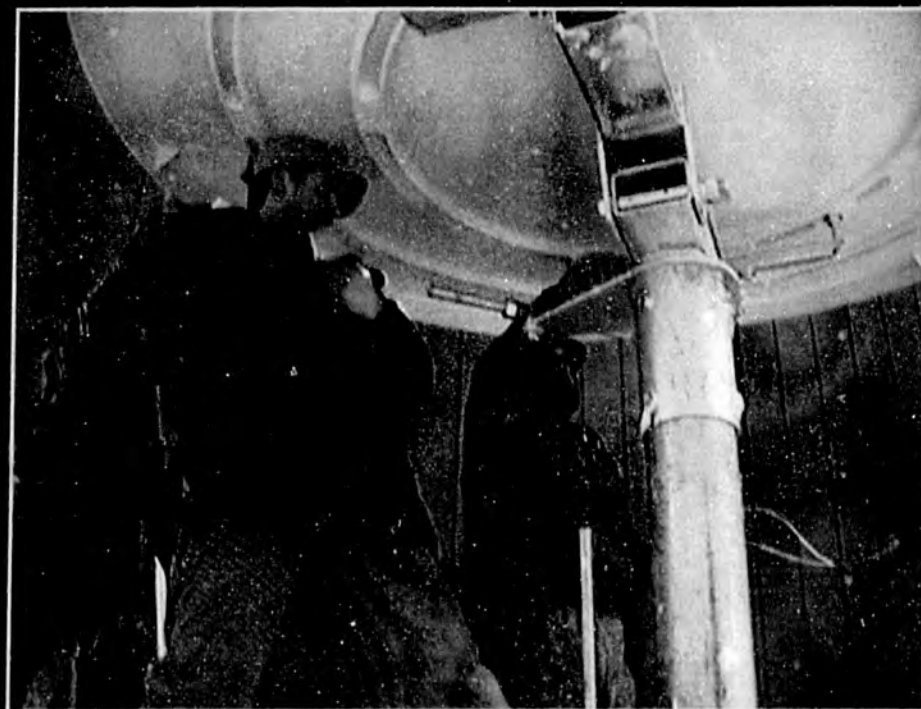


Information in family

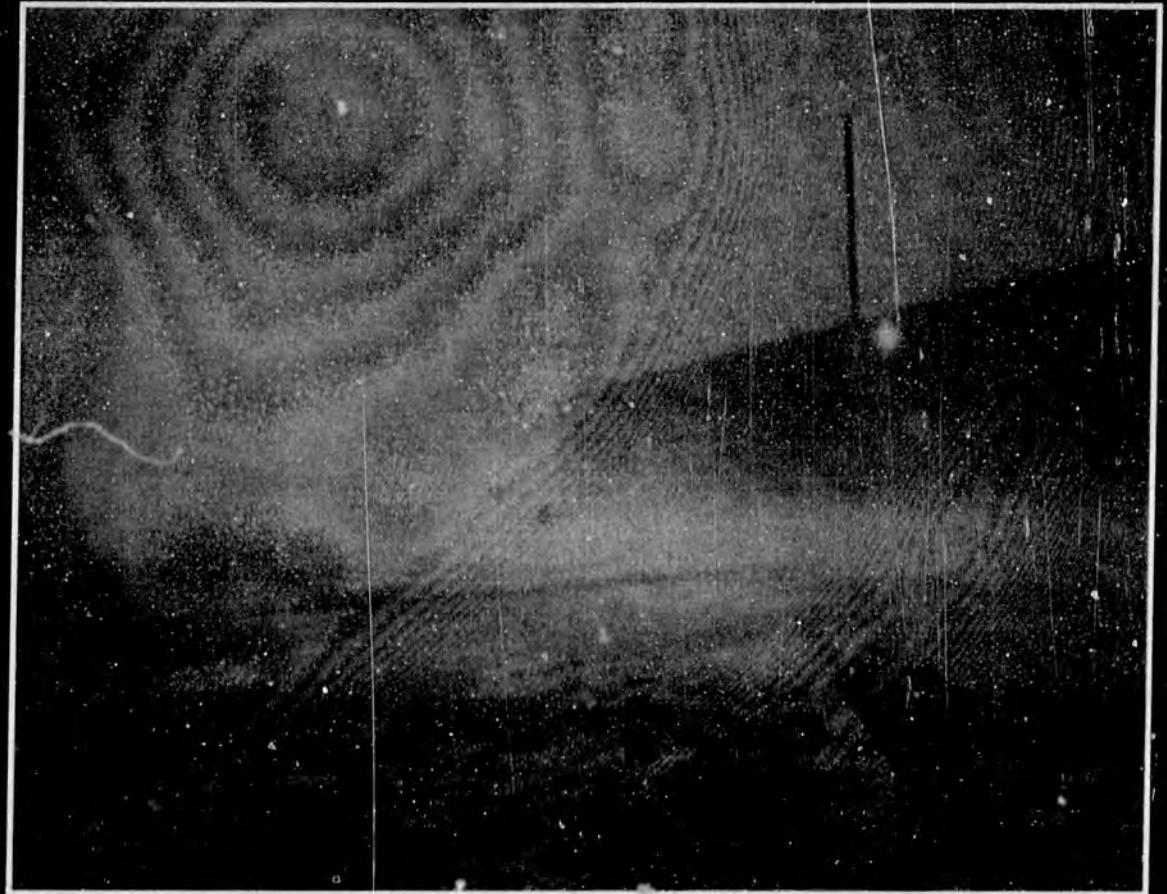


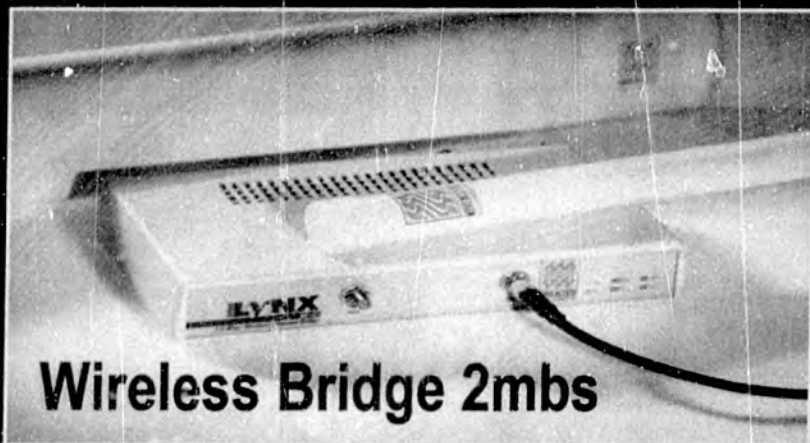
- **Get parents, students, and community leaders involved**
- **Provide education opportunities**
- **Provide economic opportunities**
- **Improve healthcare**
- **Provide new skills**
- **Enhance culture**

- **December 3, 1997**
- **Time 2 days**



- **December 5, 1997**
- **Alaska Wireless**
- **Whiteout**
- **Temperature -20 F,
winds 40 knots**
- **Students installed,
under direction of
Alaska Wireless**
- **Time 8 hours**

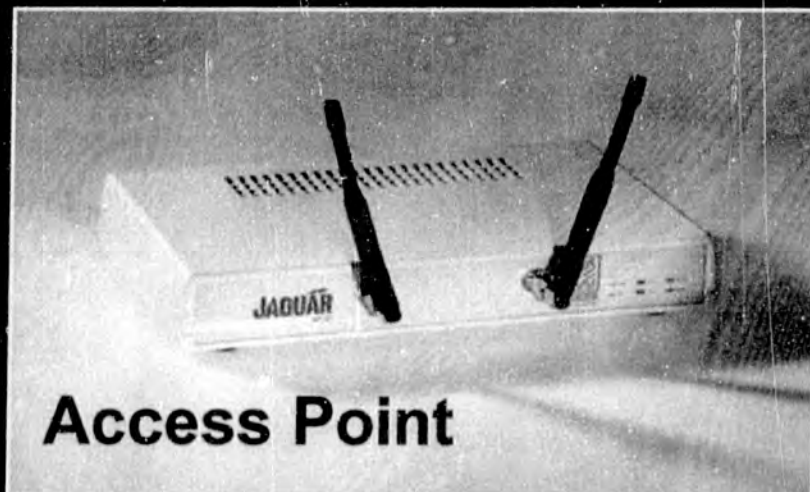




Wireless Bridge 2mbps



Point to Multipoint 2mbps

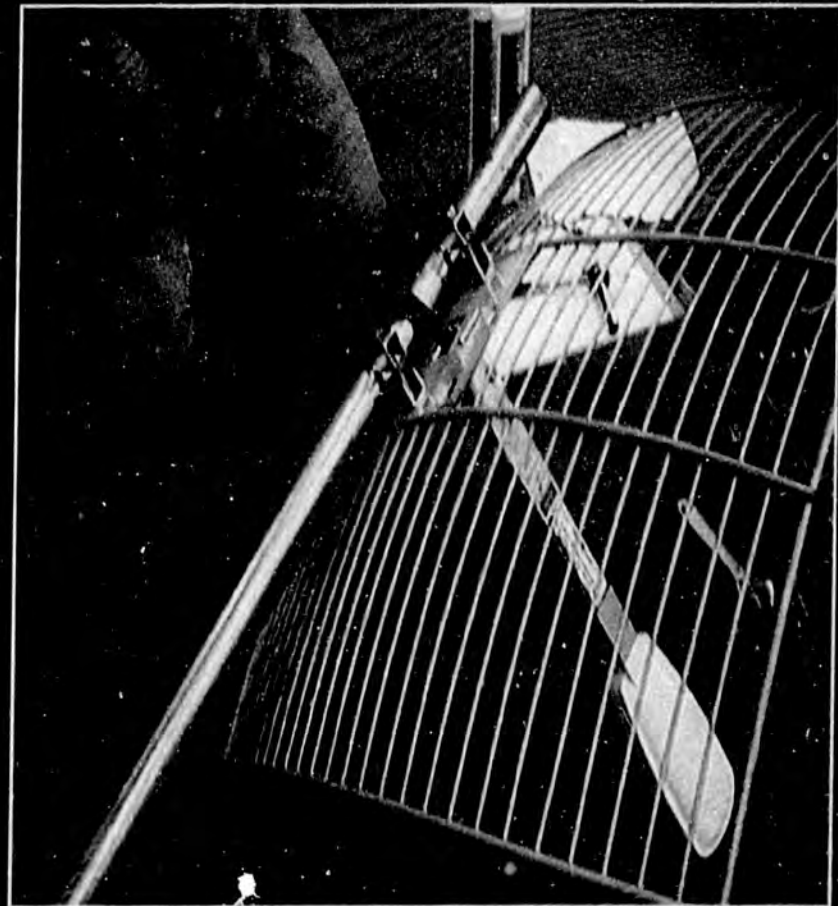


Access Point

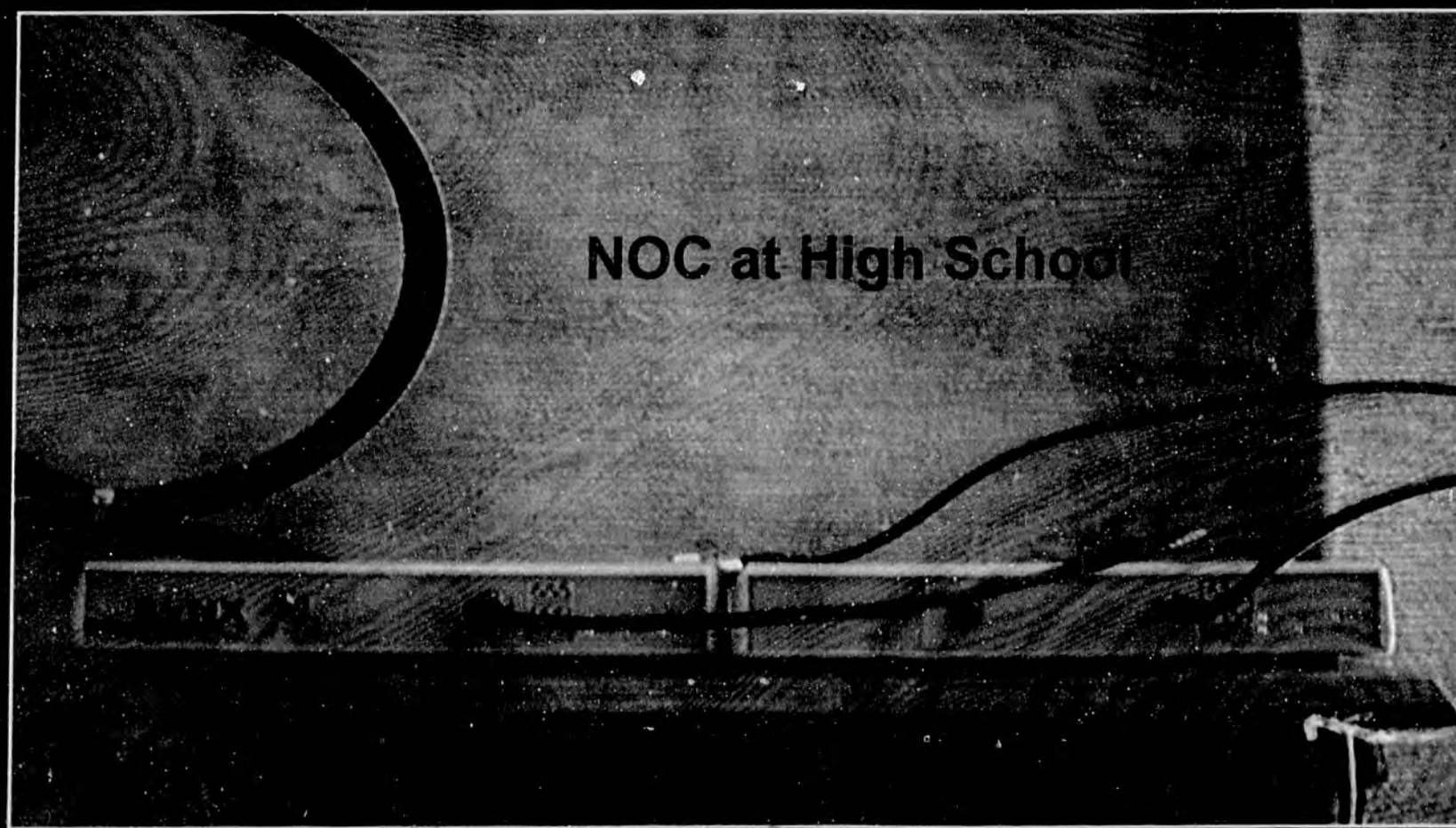


Laptop Antenna

- **Setup inside from weather**
- **About 2 hours to install**
- **Simple tools, 2-3 people get the job done**
- **Antenna mounted on High School roof-highest point in town**



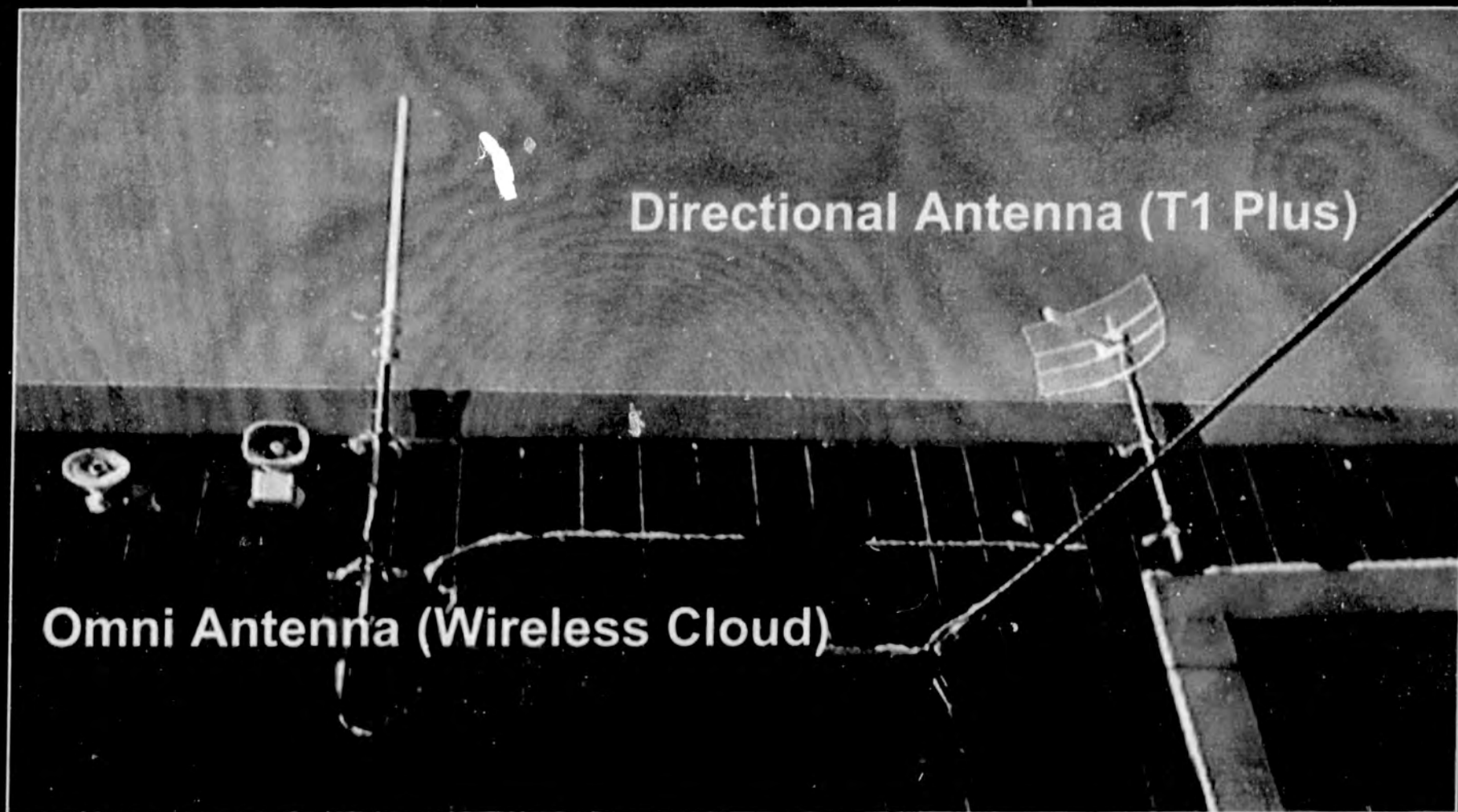
HIGH SCHOOL

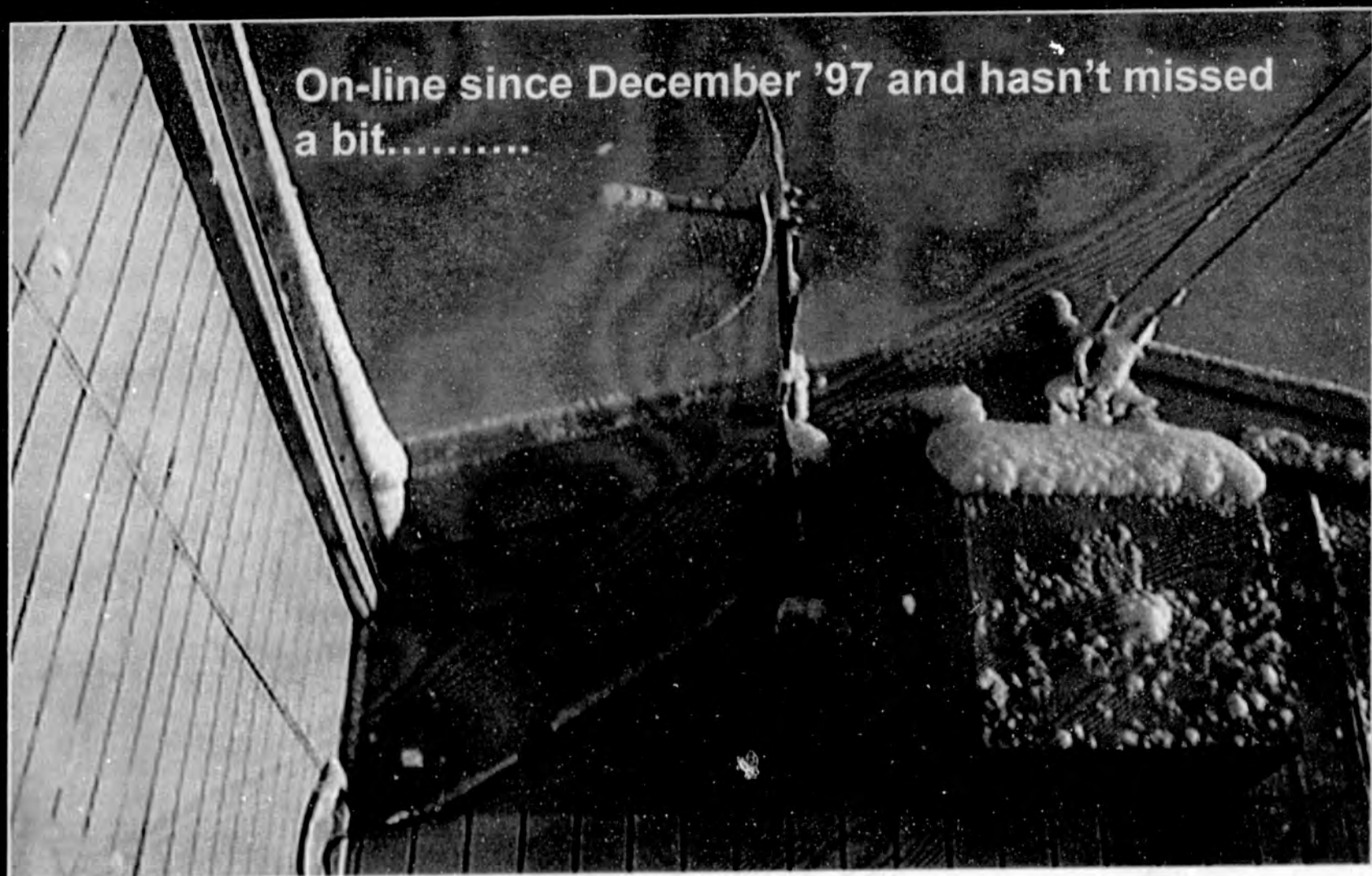


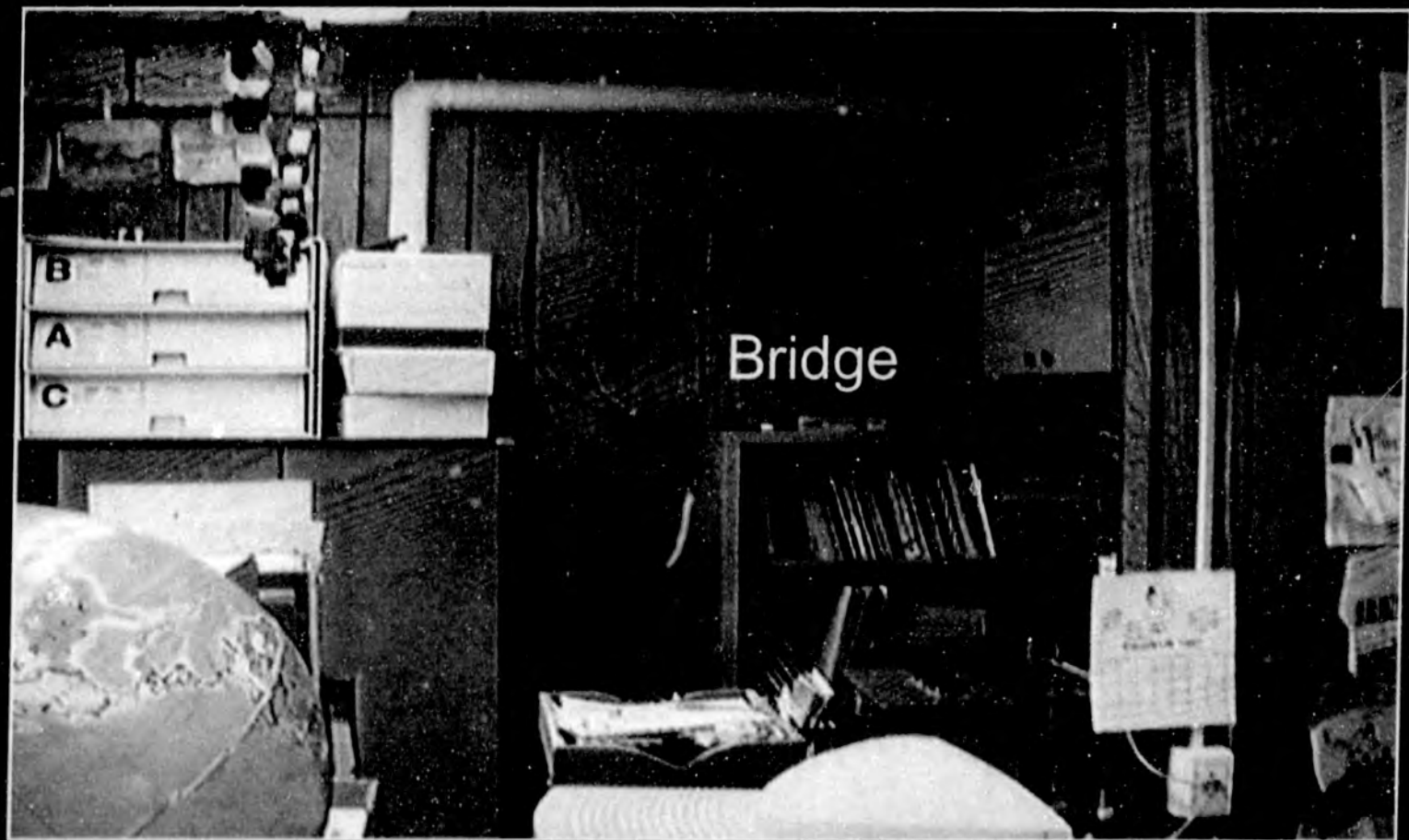
NOC at High School

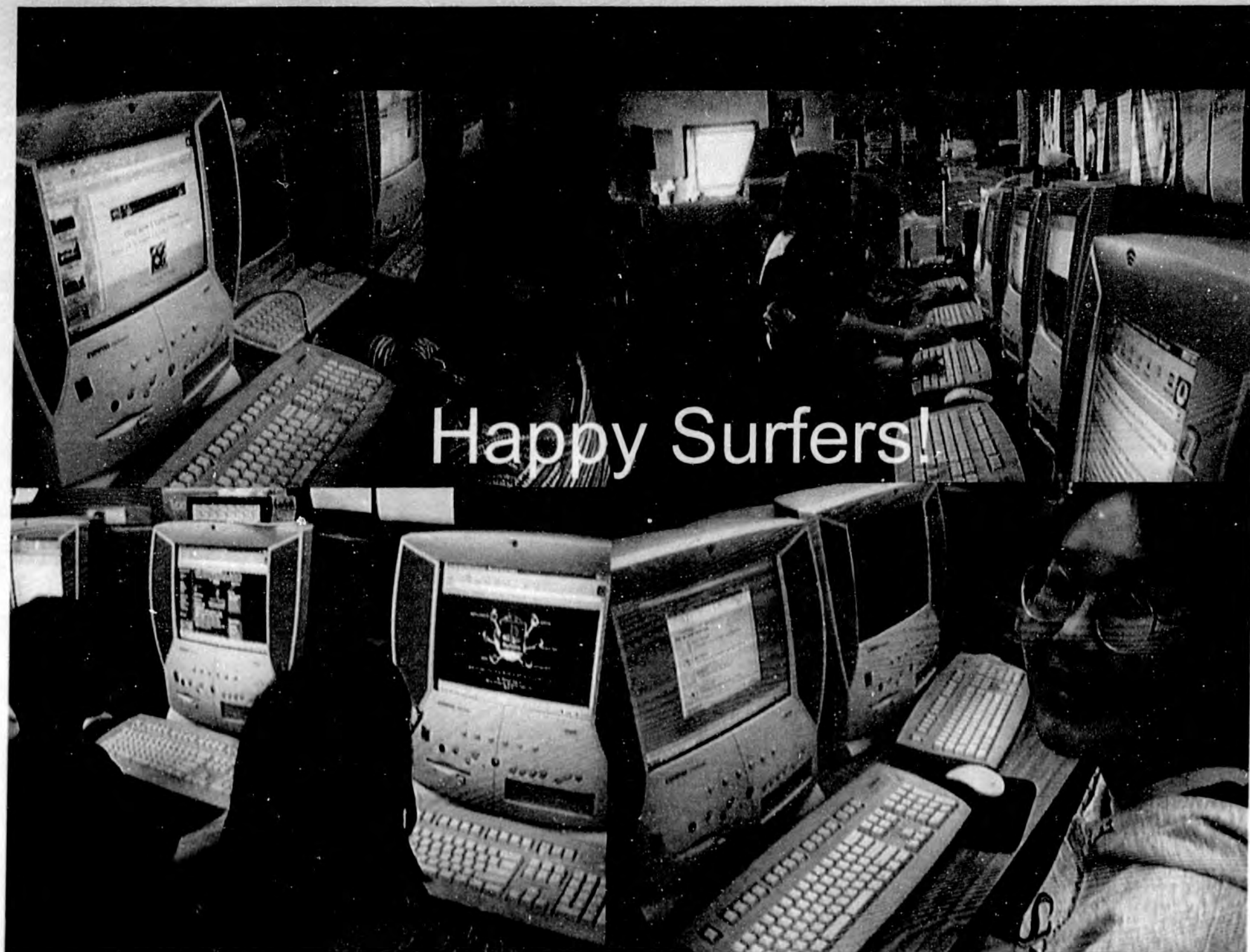
Directional Antenna (T1 Plus)

Omni Antenna (Wireless Cloud)



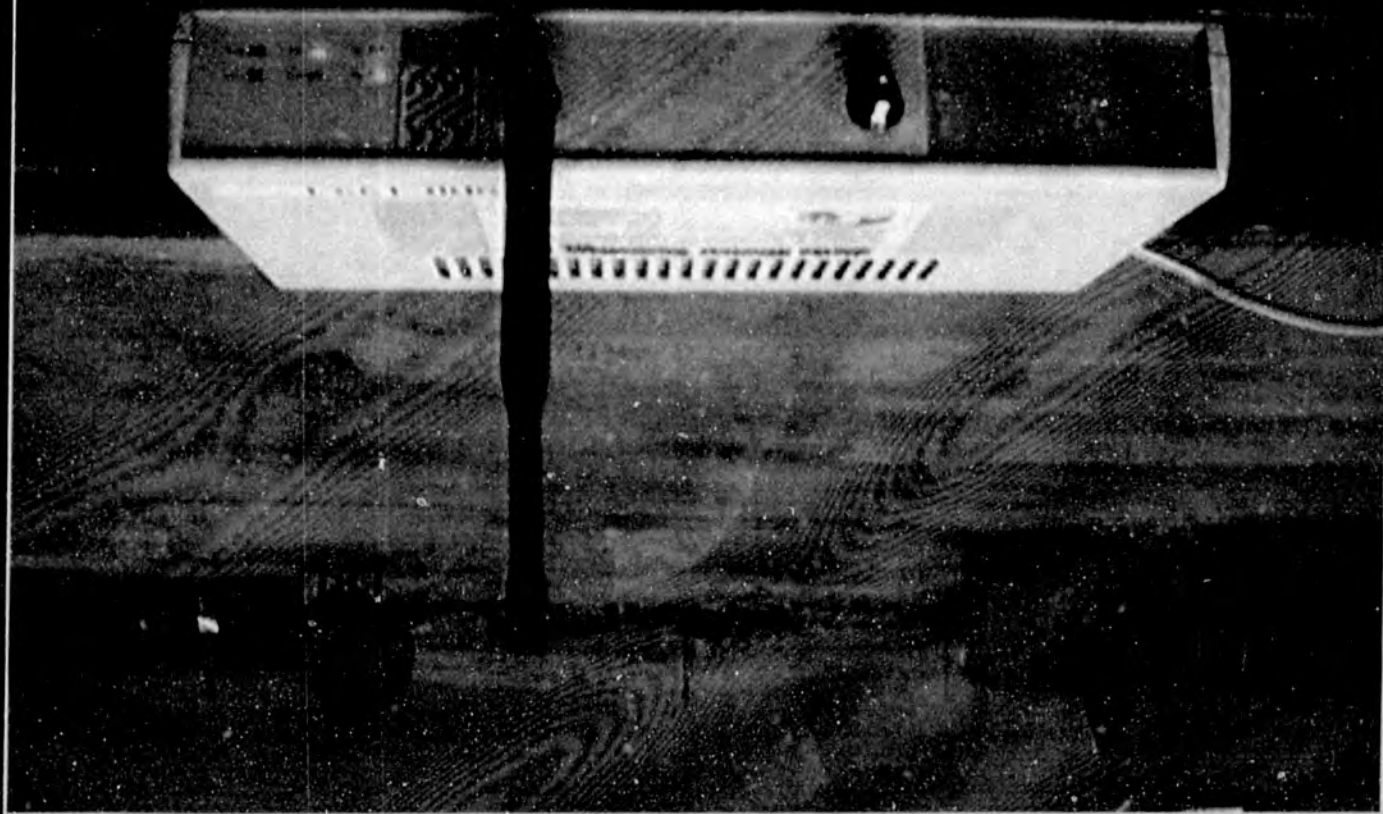


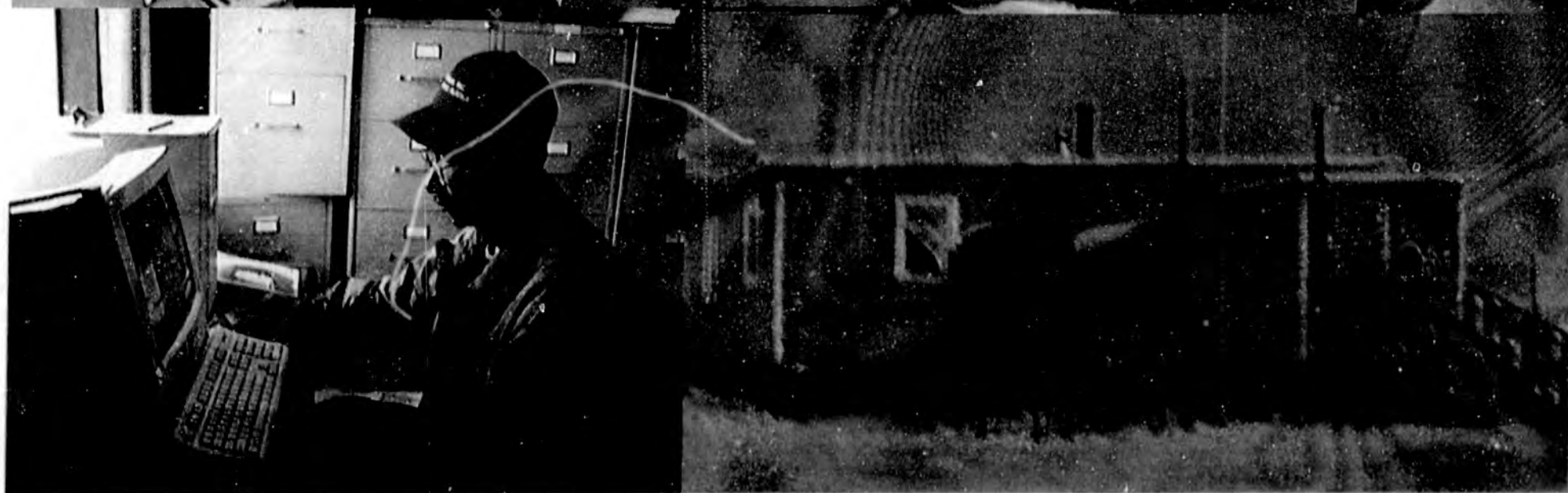




Happy Surfers!

Access Point 2mbs







**Teacher-Tech and
students at Nelson
Island High School
connected to
students in Madrid,
Spain.**

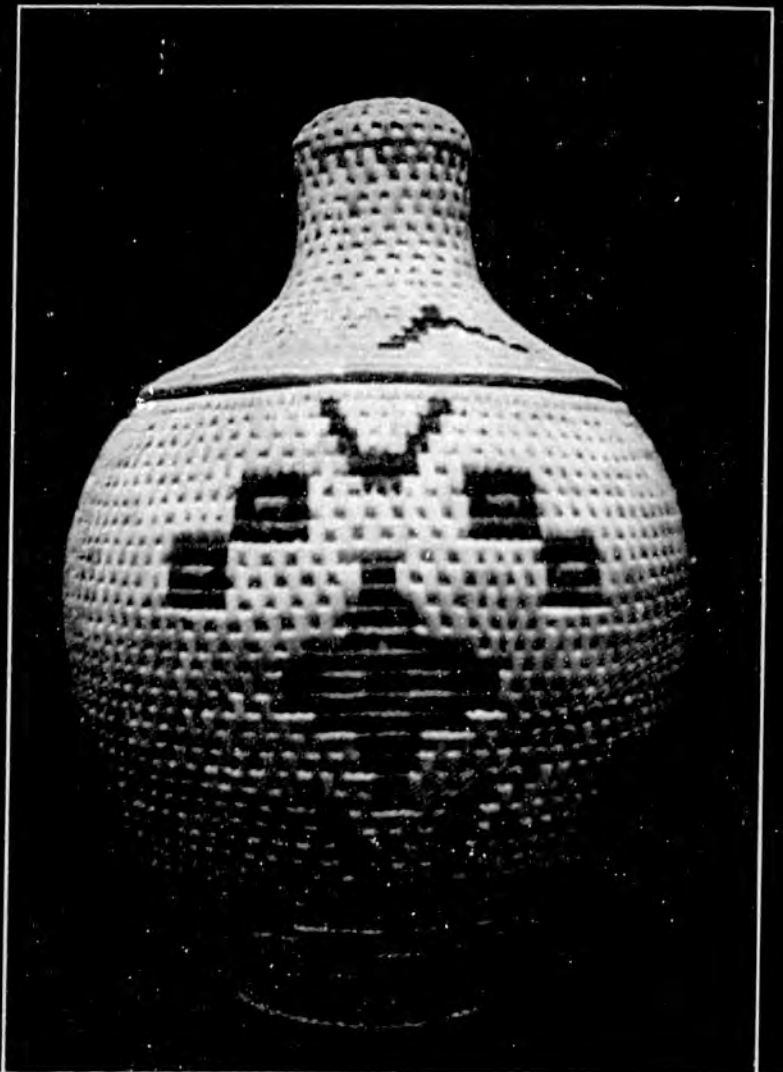


The students of Nelson School participated in the MIT Media Lab sponsored Junior Summit, which brought together students from all over the world. Using Lego/Logo kits they built powered Lego units controlled by their Hewlett Packard/Compaq computers.



Wausau Sandman and Emily Chagluak built a controllable “Intelligent House” with this Lego/Logo technic module. Using their Hewlett Packard/Compaq computers. The IH mimicked programmable houses with rotating satellite dishes, garage doors, lights and internal gadgetry.

- **Build a VAM[®]**
- **Train webmaster**
- **Train Villagers in E-Commerce and E-Conomy Skills**
- **Connect to other villages**
- **Develop Regional Rural Electronic Mall for Global E-Commerce**



BERINGA MALL

Native Crafts Emporium

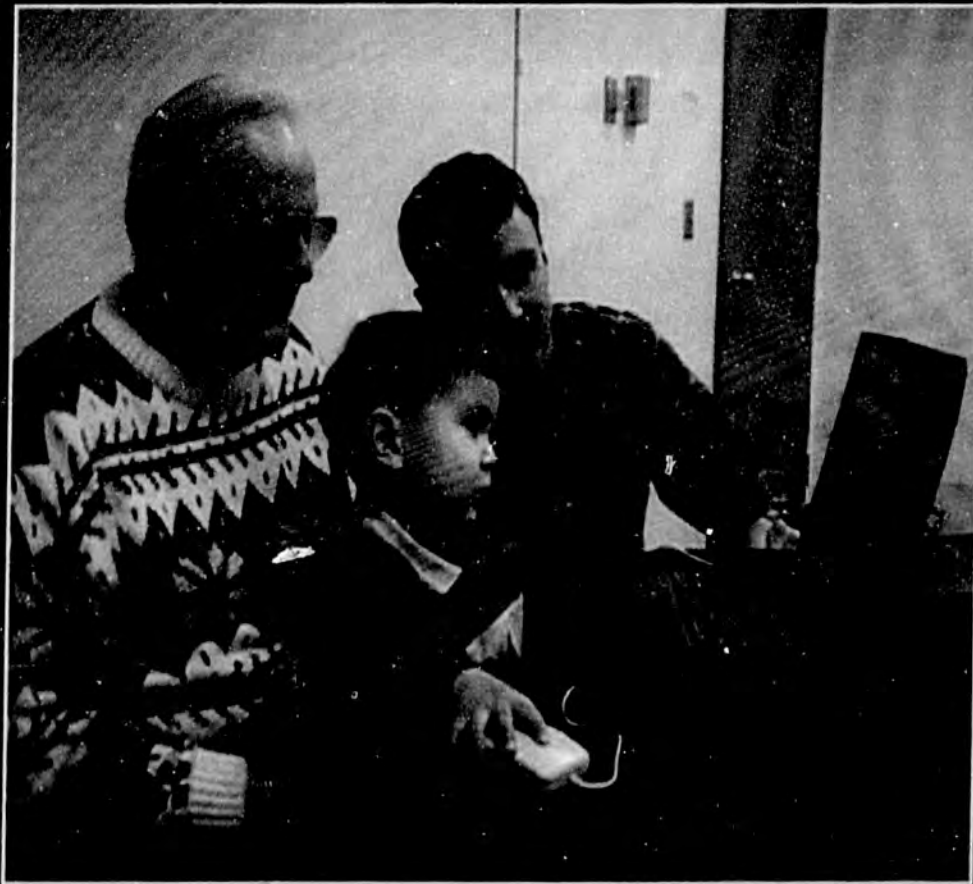
Toksook Bay, Alaska 99637



Results

- Healthcare improved
- New job skills
- Economic opportunity for entire village
- Enhanced cultural values
- Students have solid uninterrupted access to the Internet

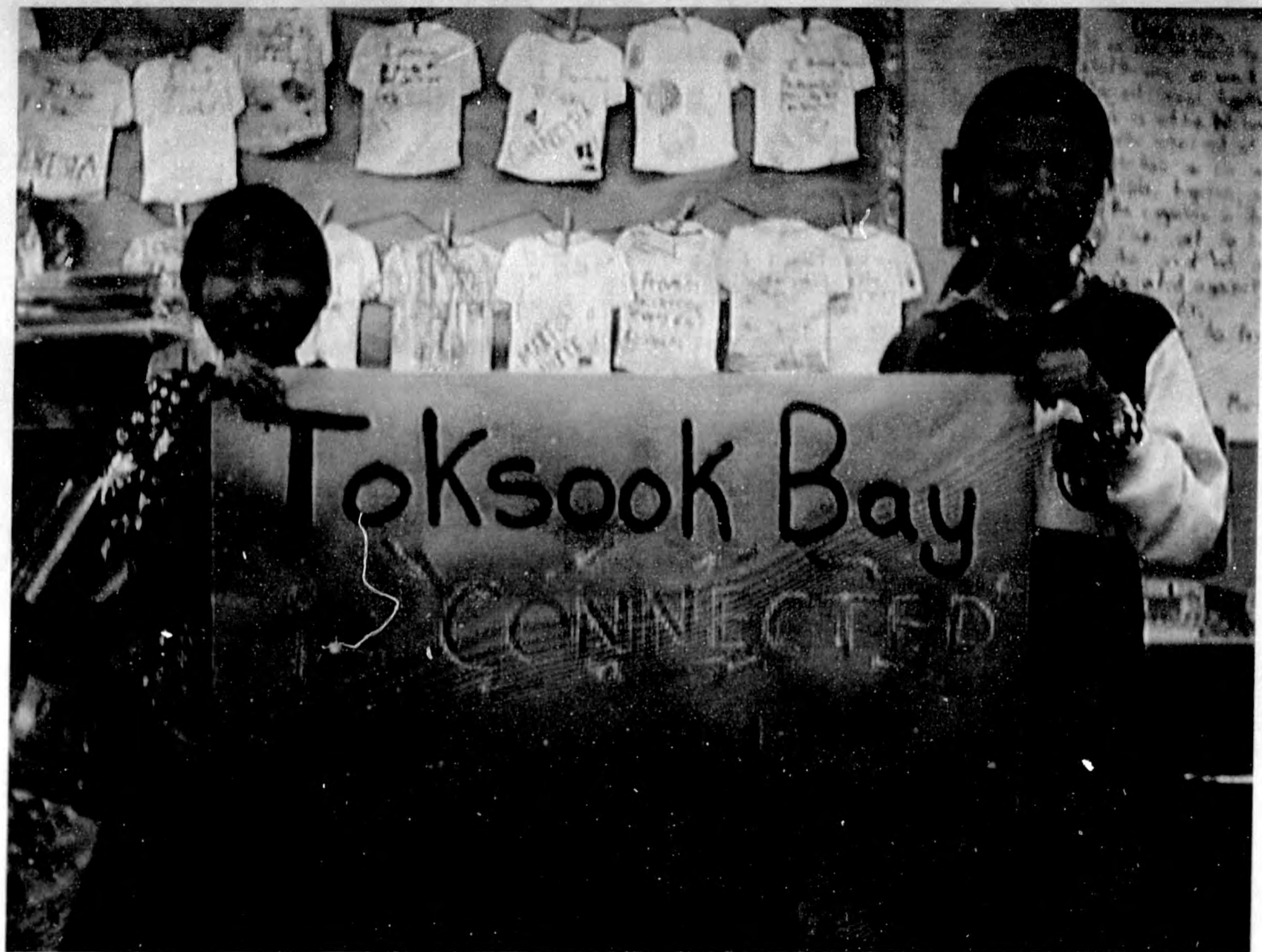




- **New Technologies**
- **New Generations of savvy users**
- **New Economic Opportunities**
- **Improved healthcare**
- **Empowered communities**



www.2b1.org/



National Press Coverage

[The Washington Post]

OUTLOOK

SUNDAY, AUGUST 9, 1998

Eskimos Warm to the Digital Age

By DOUG FINE

I had never seen a Web site materialize so fast. I was in Toksook Bay, a largely subsistence Yup'ik Eskimo village in western Alaska, 400 miles from Russia and 5,700 miles from Washington. My host, Greg Lincoln, a thirtyish Yup'ik man, was demonstrating the cutting edge of wireless digital technology.

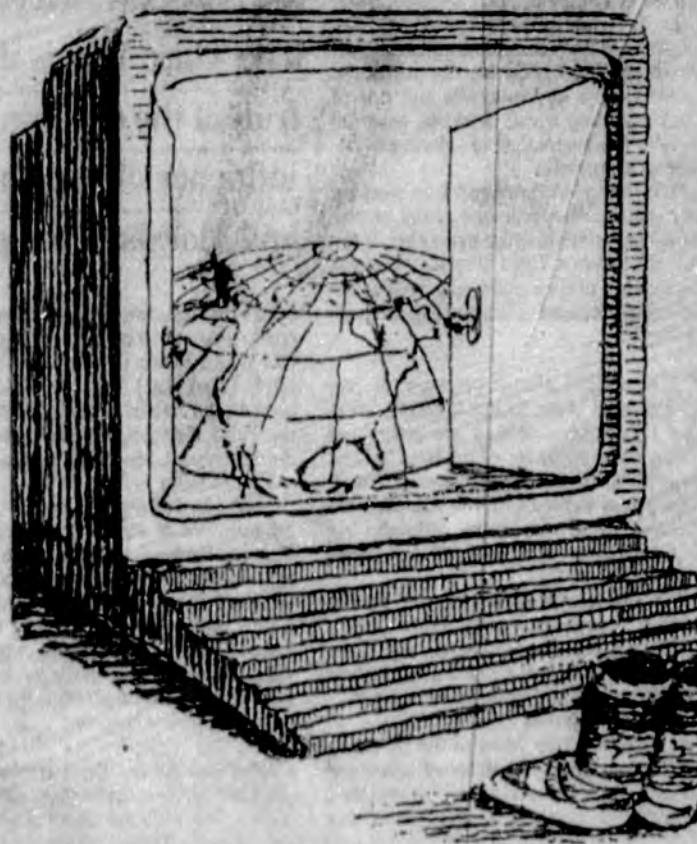
I was greeted by an immediate sound blast of Yup'ik voices accompanied by an animated image of Lincoln's daughter stomping in traditional clothing. Lincoln's Web site (members.aol.com/glincoln45/frame.html) celebrates traditional Eskimo life by displaying dancing rituals and stereophonic singing. I clicked on an icon, and was offered crafts made by his family and friends for sale in a "Village Mall." Chalk up one cluster of indigenous people who don't need to leave traditional lands in order to make a cash living.

The key to Lincoln's demonstration was a small box on the windowsill of his house which pulls down satellite-beamed transmissions powerful enough to provide him with Internet access at bandwidths something like three times faster than the current standard at American corporations and 10 times faster than in most American homes—all without a telephone line. What's more, Lincoln can keep his Internet connection all day—at no cost.

A fledgling company called Alaska Wireless is installing the boxes in Toksook Bay in the hope of show-

See CONNECTED, C5, Col. 1

Doug Fine, who has reported for The Washington Post from Burma, Laos and Rwanda, is directing a feature film in Alaska called "Migration."



BY JANISZ KAPUSTA FOR THE WASHINGTON POST

Focus: Funding Technology

convergeSM

EDUCATION • TECHNOLOGY • FAST FORWARD

daretodream

May 1999



- The students and teachers of Nelson Island School, Toksook Bay, Alaska
- Hewlett Packard/Compaq Computer Inc.
- The MIT Media Lab
- Alaska Wireless Technology

Thank You!

Thank You!

H.A. Boucher & Assoc.

redbou@alaska.net

(a H.A. Boucher & Assoc.

Preliminary Report to the Alaska State Legislature on HCR 32

**Relating to Information Infrastructure
and the
Alaska Information Infrastructure Task Force**



Alaska's Mission

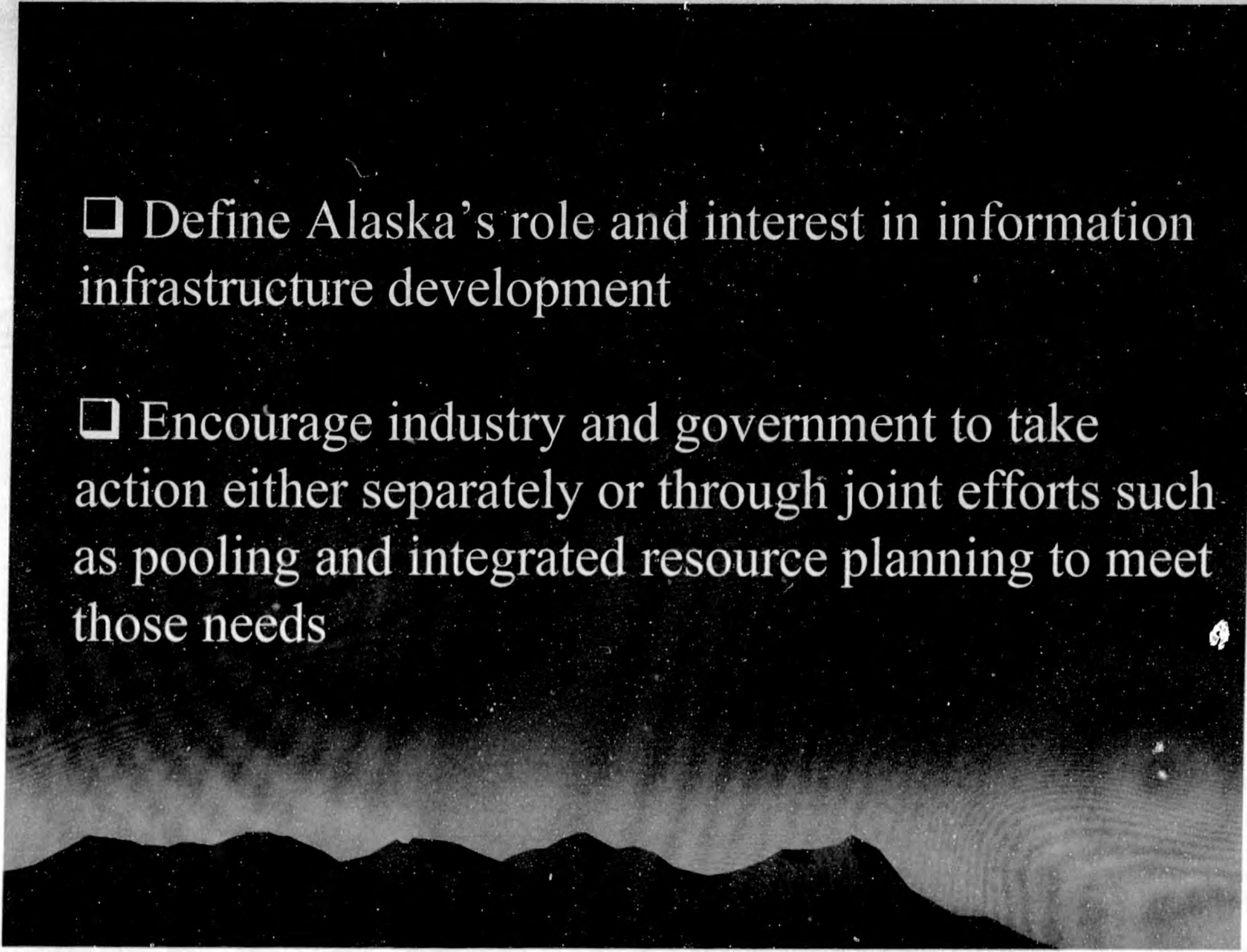
- ☐ To develop its IT potential and digital economy
- ☐ To help everyone, particularly rural Alaskans, use the Internet and digital technology to expand opportunities in employment, education, healthcare, and access to government
- ☐ To develop the leadership to make this happen



Task Force Mission

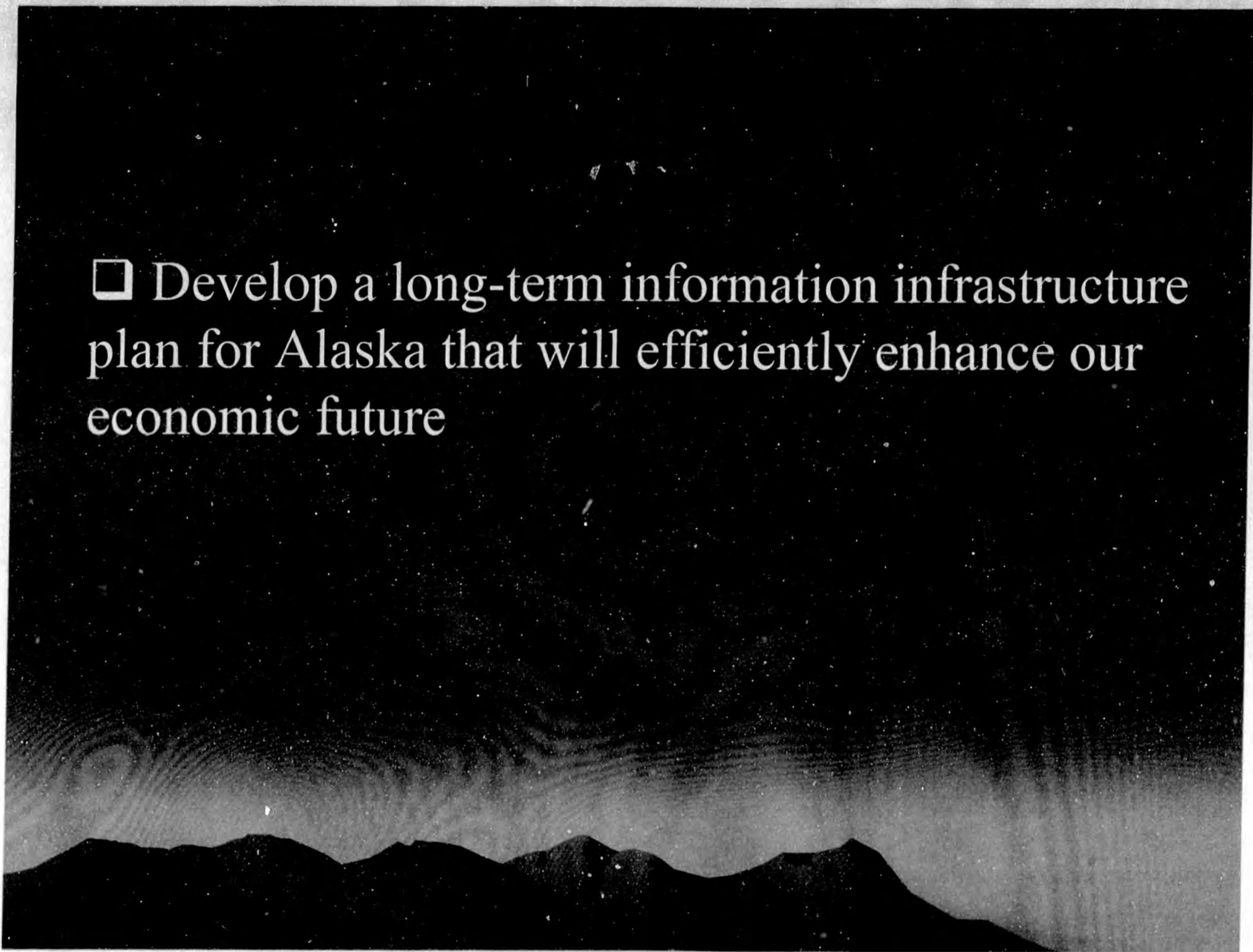
- ☐ Review and analyze Alaska's current and long-term information infrastructure needs
- ☐ Identify Alaska's existing public and private and broadband infrastructure
- ☐ Conduct a preliminary analysis of Alaska's long-term infrastructure needs





☐ Define Alaska's role and interest in information infrastructure development

☐ Encourage industry and government to take action either separately or through joint efforts such as pooling and integrated resource planning to meet those needs



☐ Develop a long-term information infrastructure plan for Alaska that will efficiently enhance our economic future

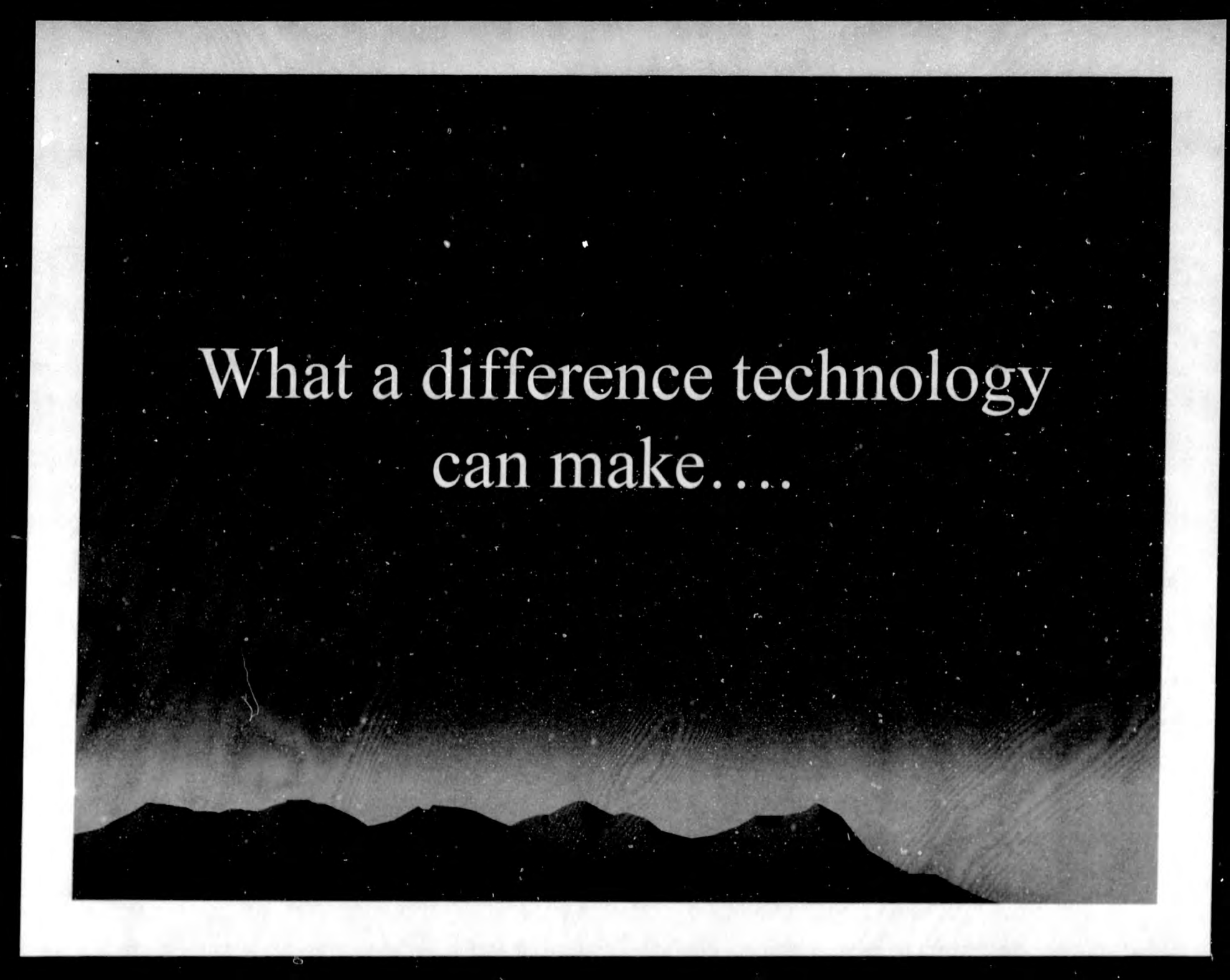
Accomplishments to Date

AIIP Task Force met three times in late November/December.

Initiated discussions centered around the services that could be provided with high-speed broadband connectivity in the areas of health care, education, homeland security, and economic opportunities.

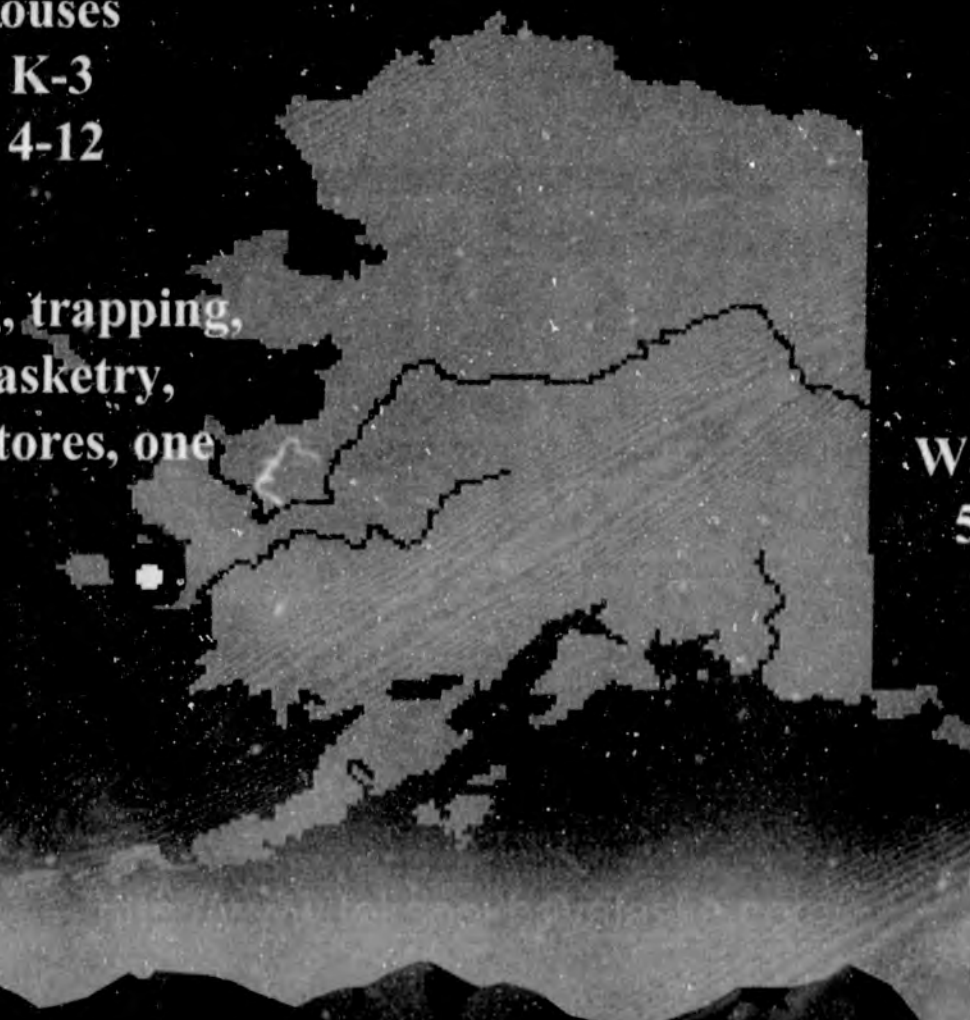
What needs to be done now:

1. Extend Task Force through the end of the next Legislative session
2. Provide staff support and funding for research allowing the Task Force to identify existing public and private fiber and broadband infrastructure in Alaska, as charged

A black and white photograph of a night sky filled with stars. In the foreground, the dark silhouette of a mountain range is visible against a lighter, hazy horizon. The text "What a difference technology can make...." is centered in the sky.

What a difference technology
can make....

Toksook Bay, Alaska



Population:

550 Residents, 55 Houses

80' Students Grades K-3

85 Students Grades 4-12

Economy:

Subsistence hunting, trapping,
and fishing; grass basketry,
ivory carving, two stores, one
airstrip

Demographics:

98% Yup'ik Eskimo

Juneau:

1000 Miles ==>

Seattle:

5700 miles ==>

Washington, D.C.:

5700 miles ==>

Russia:

<== 400 Miles

Even the nation notices....

[The Washington Post]

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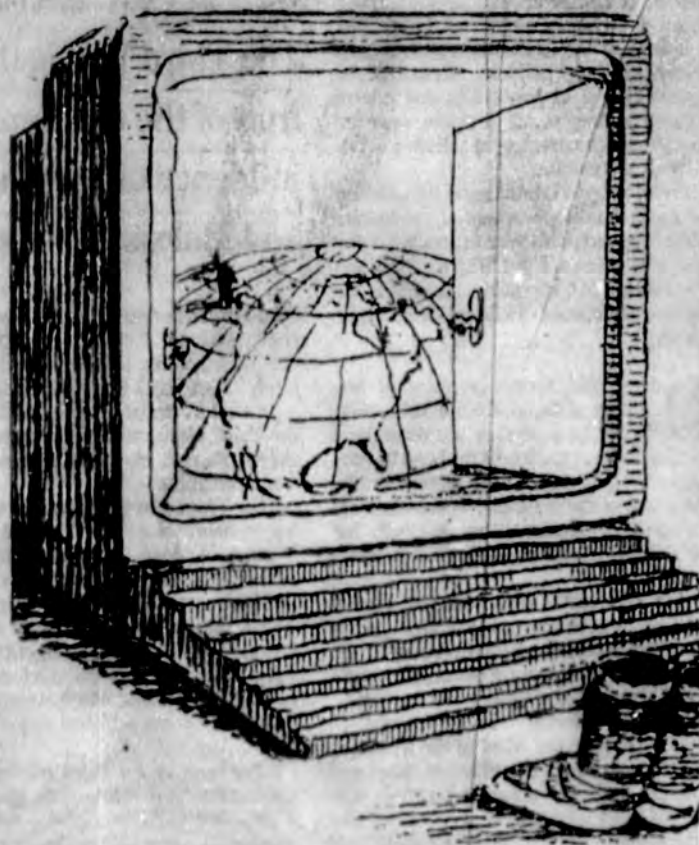
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BY JAMES KAPUSTA FOR THE WASHINGTON POST

Alaska

LOGY

Now Available for the Internet: www.alaska-technology.com



INSIDE

Focus: Funding Technology

converge

EDUCATION IN TECHNOLOGY IS FAST FORWARD

daretodream



July 1999

W H E D

Connector

Alaska's Big

get ahead based on connections. A good reputation and strong skills are a sure bet for success in the "new economy." But what if you're not a "connector" yet? It's time to get ahead by becoming one.

Alaska's Big Connector is a new program that helps people build their networks and gain the skills they need to succeed in the new economy. The program is designed to help people who are looking for a new career or want to advance in their current one. It provides a variety of services, including job training, career counseling, and networking opportunities.

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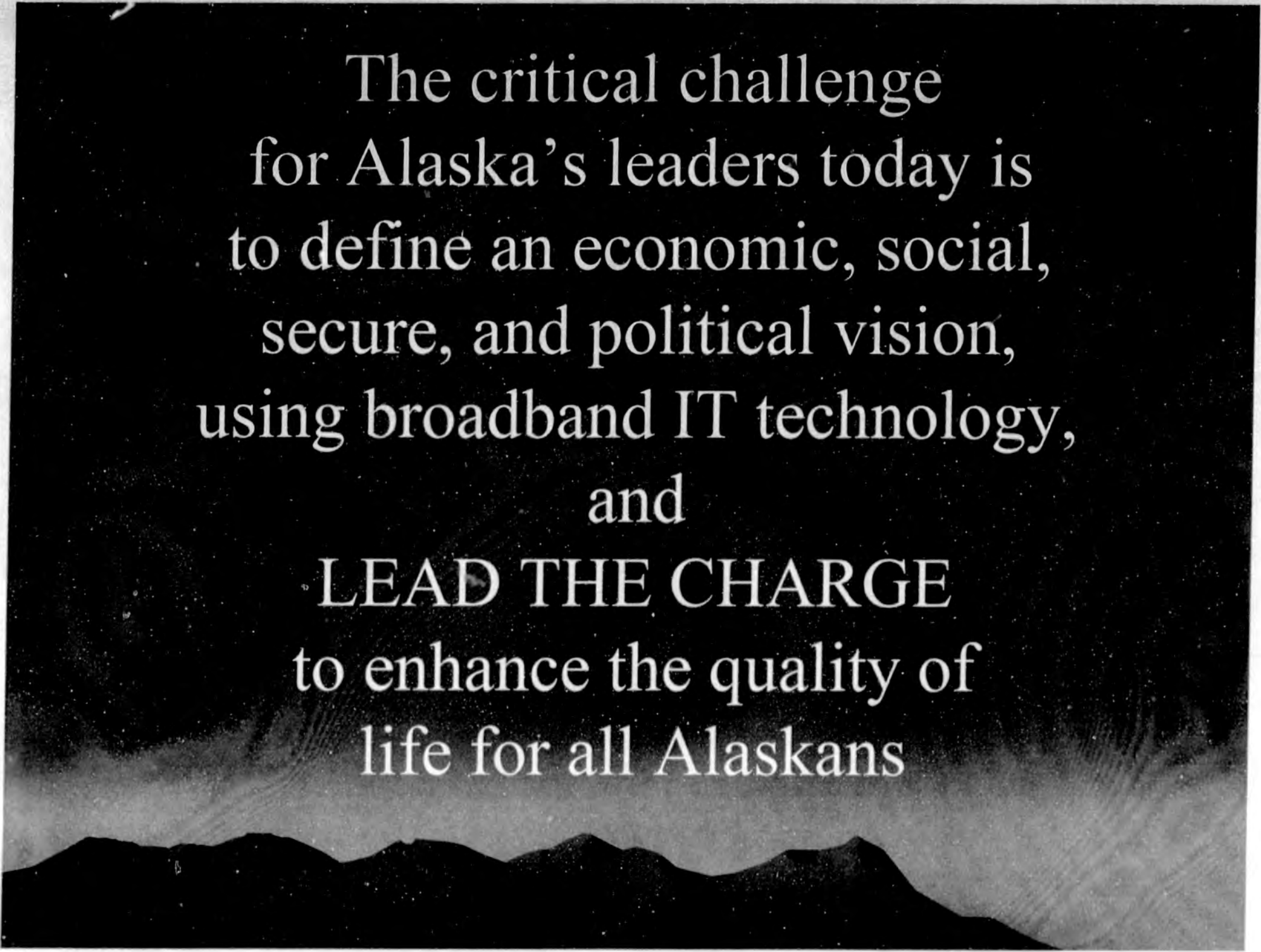
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Providing Opportunities For Rural Alaska

Community Learning Center Partnership

Joint Partnership of: The Community of Aniak, Alaska;
HP Computer Corporation; and AT&T Alascom





The critical challenge
for Alaska's leaders today is
to define an economic, social,
secure, and political vision,
using broadband IT technology,
and

LEAD THE CHARGE
to enhance the quality of
life for all Alaskans

Now more than ever before
SECURITY of Alaska's Information Systems
is paramount

People tend to think that someone else is taking
care of it

Our leaders must be responsible and accept their
role as policy makers



“The attitude that digital security is
someone else’s problem,
or is something to be addressed after
the real work gets done,
is pervasive in the business world.”

Thomas J. Parent
Harvard Business School



“The one thing we would recommend, particularly due to recent events within the state, is a comprehensive IT Security Audit/Assessment done by a reputable third party. One that covers People, Processes and Technology. Beyond just a network scan, but a good look at policies, procedures, security architecture, incident response and reporting, backup and contingency plans and procedures, patch procedures, and importantly, the ability of the people to manage, react to and get ahead of cyber threats. Their ability can be influenced by training, certification, rewards and accountability.”

**Cyber Security Research Department
National Security Division
Idaho National Laboratory**

2005 and Beyond? It's Up to Our Leaders



Respectfully Submitted

H.A. Boucher, Chairman

AIIP Task Force

redbou@alaska.net

SCOMM

136:4



-imagine the future-

"Imagination is more important than knowledge"

- Albert Einstein



"A man to carry on a successful business must have imagination. He must see things in a vision. A dream of the whole thing."

- Charles Schwab



Alaska: Bridging the Pacific



Juneau Economic
Development Council

China:

- under 18 year old pop. Is greater than US and Britain

- 18 million enter the workforce each year

- Approx. 450,000 engineers graduated in 2004 (65K in US)

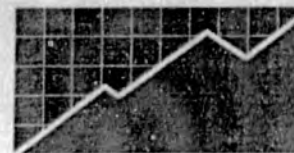
- all are learning English and china is the second largest English speaking country

Alaska - 586,000 Sq MI

- 3 billion people live in emerging Asian economies

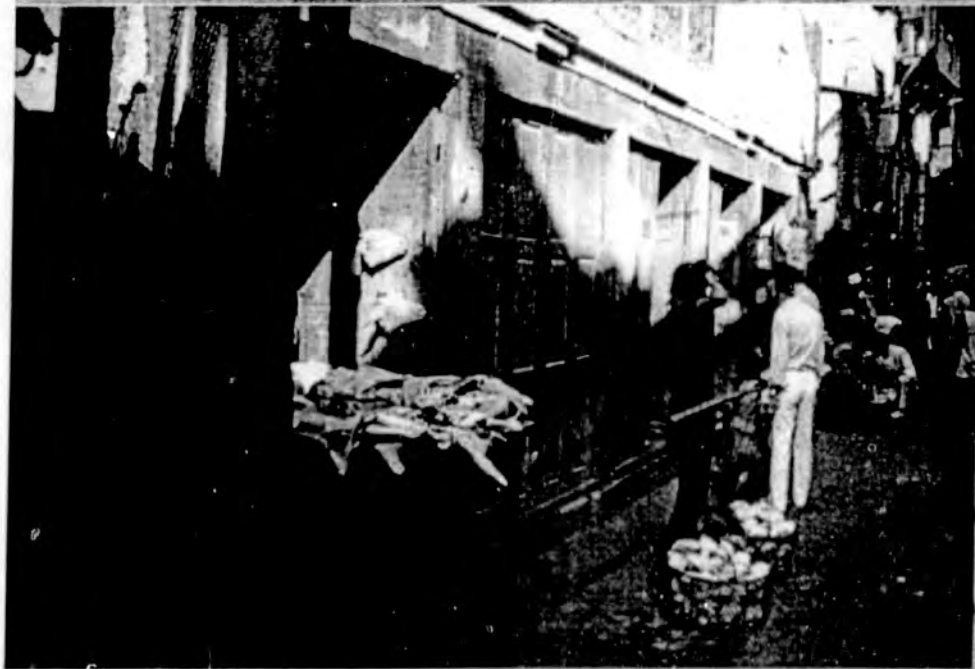
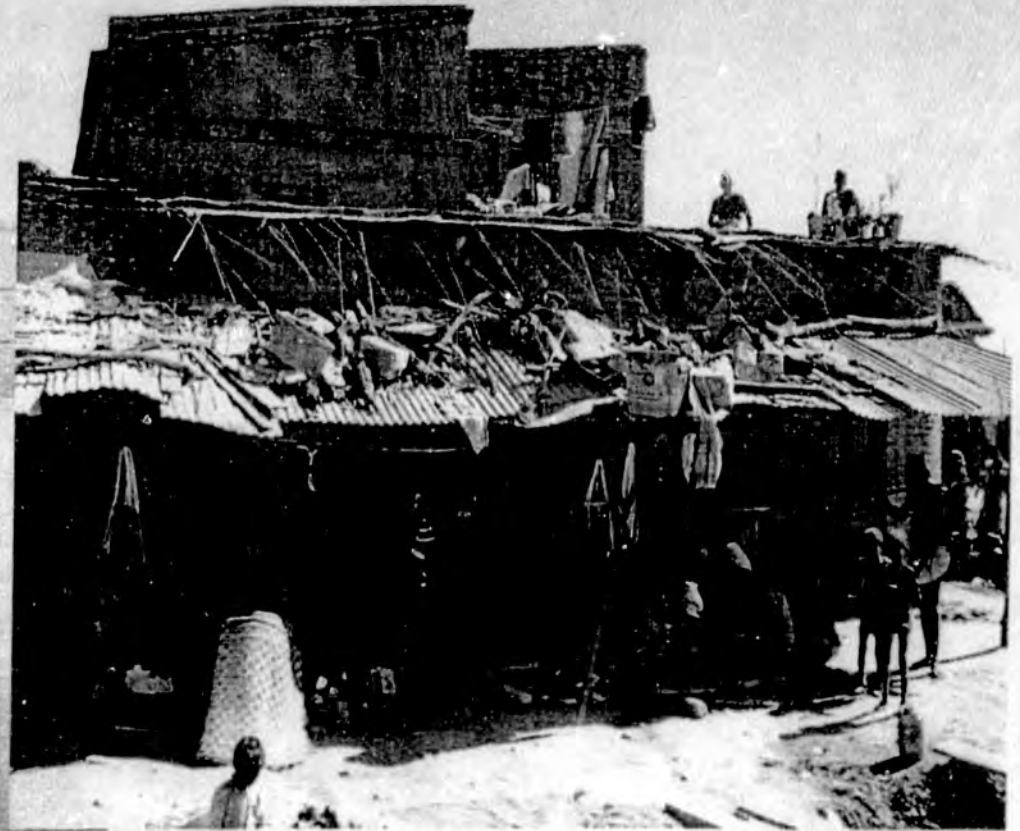
Source: www.geographic.org modified by the Juneau Economic Development Council and AMA

When doing business overseas remember.. "We don't
see things as they are, we see things as we are"
(Anais Nin)



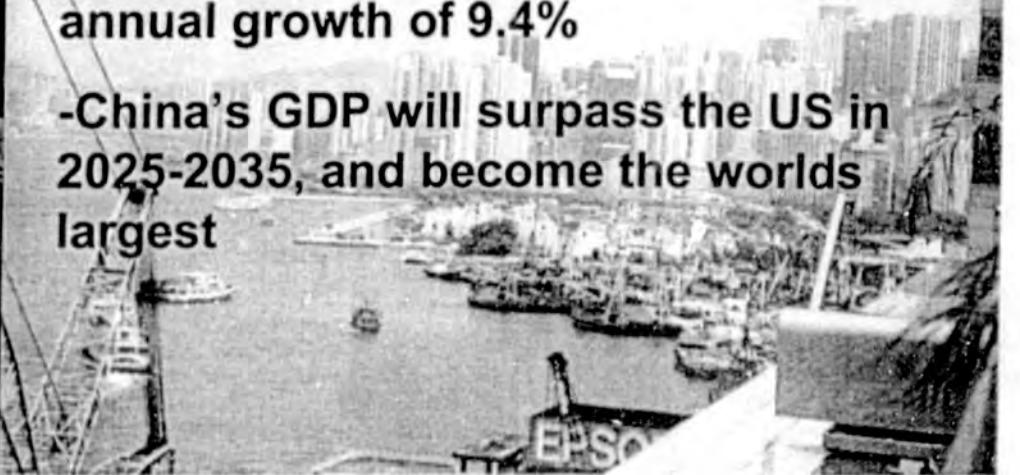
Juneau Economic
Development Council





-From 1978 to 2004 China's GDP grew from \$147B to \$1.6T with an average annual growth of 9.4%

-China's GDP will surpass the US in 2025-2035, and become the worlds largest



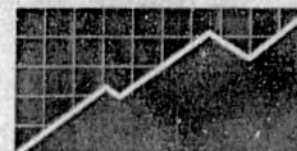
Don't overlook India!!

COUNTRY ABOVE RELIGION: FOLLOW INDIRA GANDHI'S IDEALS



Looks can deceive,
-India has grown at 6% GDP (compared to the US 3.3%) and is predicted to grow 5-7% in the next 40 yrs
-50% of the population is under 25 (500 million)

International Economic Development

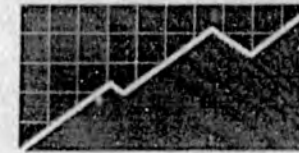


Juneau Economic
Development Council

- By 2050 India may have 1.6 billion inhabitants vs. 1.4 billion in China
- India also has the rule of law, while China is communist
- 290,000 engineers graduate annually
- 55 million cell phone users
- 33 million internet users



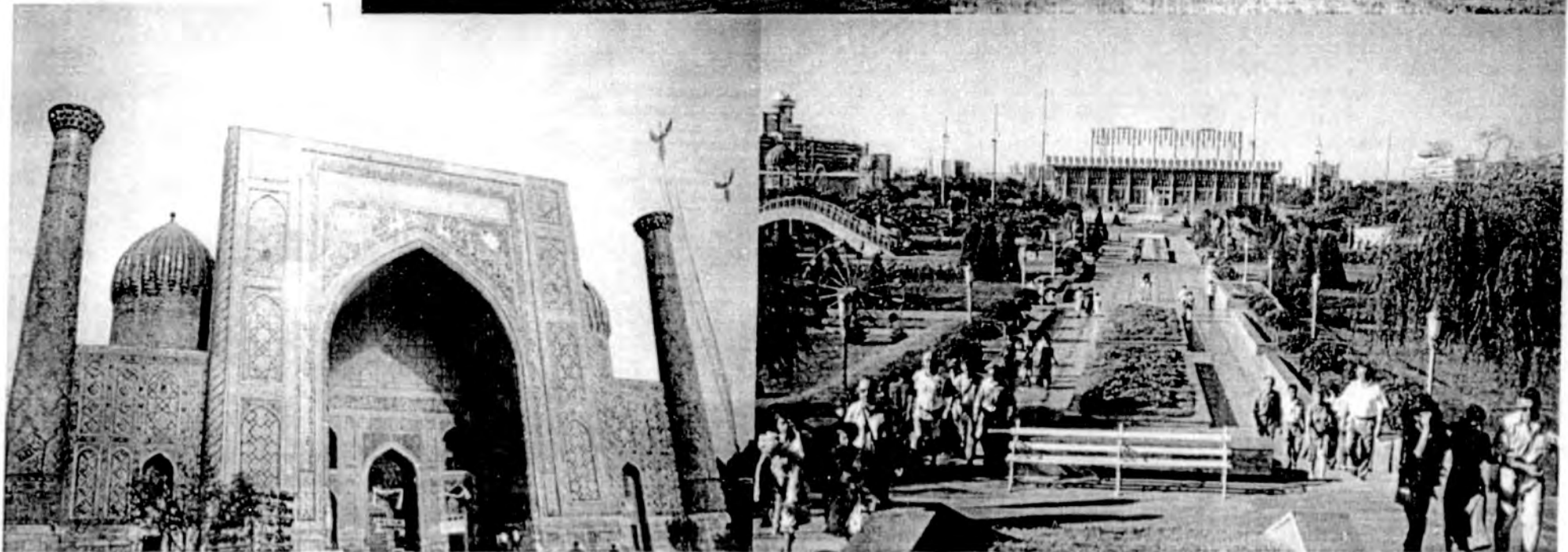
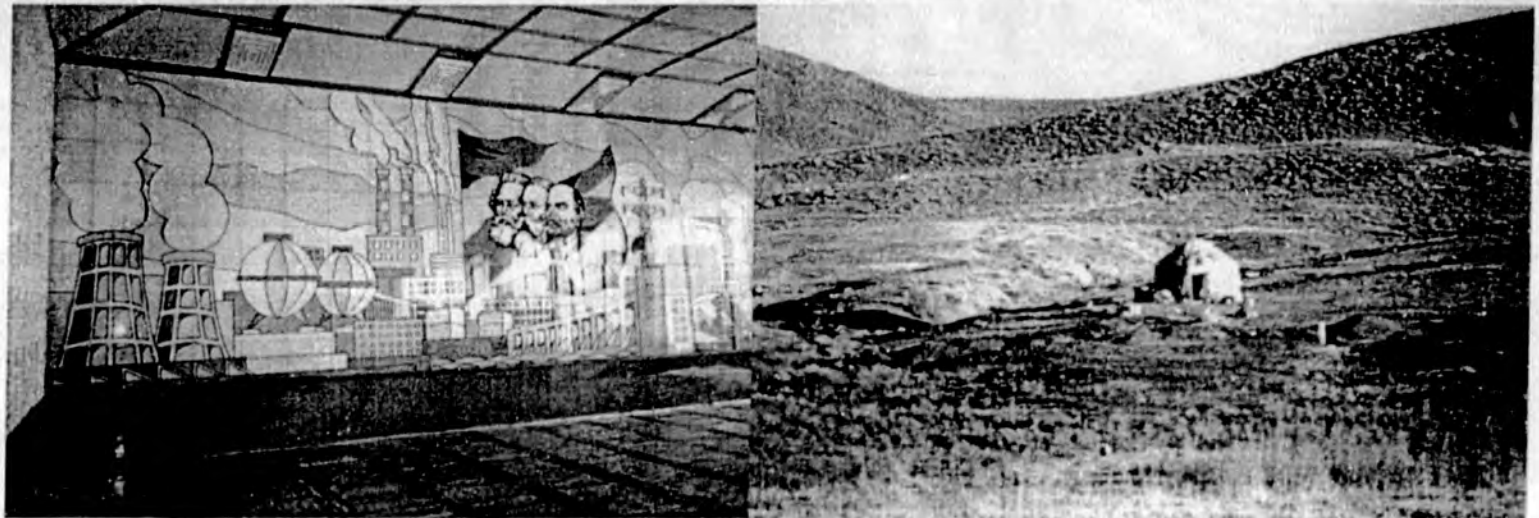
International Economic Development



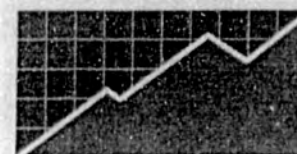
Juneau Economic
Development Council

Central Asia-

Ideology and Religion
effect the economy
too!! (e.g. 9/11)

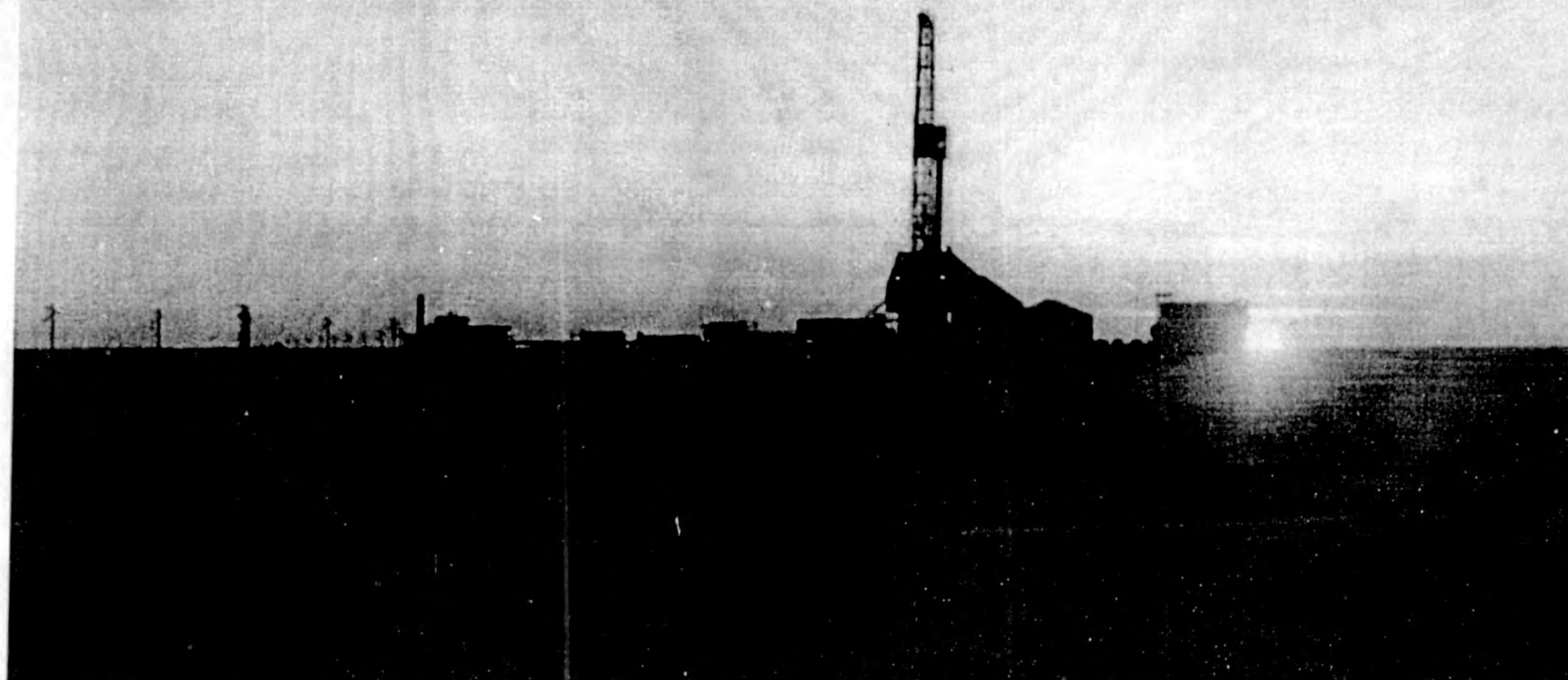


Alaska is an Oil State

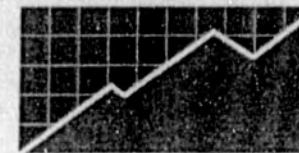


Juneau Economic
Development Council

Therefore we have the luxury to take advantage of other opportunities....



The Cost is Growth Not Development



Juneau Economic
Development Council

Per Capita Income is Falling Behind

