FCC Rural Health Pilot
Alaska's Network Approach

Name of RHCPP Participant(s)

Alaska Native Tribal Health Consortium (ANTHC). Primary partners include the Alaska Federal Health Care Partnership (IHS, VA, DOD, Coast Guard), the Alaska Primary Care Association, the Alaska Native Tribal Health Consortium, the Alaska State Hospital and Nursing Homes Association, the Alaska Mental Health Trust Authority, Premera Blue Cross/Blue Shield, the University of Alaska, AARP Alaska, and the State Department of Health and Social Services. Approximately 270 facilities will be connected.

Maximum support: $10,425,250. Match sought: $9,000,000 in state and private funds.

Brief description of RHCPP Project

The Alaska proposal was developed through a partnership of health care providers, federal and state health agencies, insurers, and consumer groups. The award to ANTHC will finance the design and development of a statewide broadband network (the Alaska eHealth Network, or AeHN). Comprised primarily of rural health care practitioners, the Consortium will unify and increase the capacity of disparate healthcare networks throughout Alaska in order to connect with urban health centers and access services in the lower 48 states. ANTHC has been designated by the partners to act as interim project manager until replaced by a public-private partnership which will manage the AeHN in the long-term. AeHN infrastructure development requirements are to:

- Unify separate healthcare networks throughout Alaska and supply rural health providers with connectivity to urban health centers for the purposes of telehealth and information exchange.
- Provide capability for managed video and access to health networks and services in the lower 48 states through the use of Internet2 (I2) or similar services.
- Test innovative methods of funding, investigate ways to increase network efficiencies, and develop a strategy for uninterrupted rural connectivity, including a sustainable economic model.

The AeHN will facilitate the exchange of critical health information between health providers and support telemedicine services, including the transfer of high resolution images for patient care; videoconferencing; and Voice-over-Internet applications. Additional objectives include universal access to secure, reliable, and ubiquitous connections with level cost structures to all endpoints under "net neutrality" principles (i.e., a broadband network free of restrictions on the kinds of equipment that may be attached or the modes of communication allowed, and

where communication is not unreasonably degraded by other communication streams).

Brief Description of the Challenges

Obstacles to achieving these goals are: physical geography; weather; satellite coverage; rural circuit costs; dispersed populations; aggregation demand difficulties; and long-term financial sustainability. Alaska contains almost a square mile for every inhabitant (656,425 square miles; 675,000 people). Alaska's geography is usually categorized into four main areas including two major mountain ranges, a central plateau, and the Arctic slope or coastal plain. Alaska's east-west span covers a distance of 2,000 miles, and from north to south 1,100 miles.

The State's coastline, where many villages are located, is 33,000 miles in length, 50% greater than that of the conterminous United States. There are hundreds of islands, many of which are populated, found along the northern coast of the Gulf of Alaska, the Alaska Peninsula, and the Bering Sea Coast. Permafrost is a major factor in the geography of Alaska since it still covers most of the northern third of the State, despite global warming. The highest temperature recorded in Alaska is 100°, Fahrenheit,; the lowest temperature, -80°, without taking wind chill into account.

The broadband bottleneck in Alaska is due to the lack of available and affordable bandwidth on existing satellites, which are often the only means of serving rural communities. Rural circuit costs are ten or more times greater than circuit costs in the Lower-48 (e.g., a T1 line costs $3-5,000 per month!) and are therefore unaffordable without subsidies. Together, the top ten cities and urbanized areas within Alaska contain about 606,000 people, or 89% of the state's population.

The rest of the state, which is highly rural, is widely dispersed, with an overall average of 1.1 persons per square mile, compared to the national average of about 80 persons per square mile. 297 Alaskan communities have less than 1,000 people; 244 communities have less than 500 people; 105 have less than 100; 58 less than 50; 32 less than 30; 19 less than 20; and 8 less than 10. It is this11% of the population – around 70,000 people –to whom broadband connectivity would make the greatest difference. Given the lack of a viable broadband business case in these communities, the Alaska telecommunication industry is increasingly dependent on Universal Service Fund (USF) support, with an annual inflow of funding approaching $200, million, and yet the great majority of these smaller communities are still without broadband..

Approach to Meeting these Challenges

As a state, Alaska will actively monitor and participate in Universal Service Fund reforms in order to maintain long-term sustainability. It will also work closely with industry to deploy innovative technology breakthroughs such as Intel's rural connectivity platform. AeHN will seek to integrate federal subsidy silos in rural communities, e.g.., E-Rate and RHC, in order to aggregate demand and make a

stronger business case for rural broadband. AeHN has already sought state support for and involvement in the project by requesting matching funds totaling $6.5 million from the Department of Health and Social Services to support network development costs not covered by the FCC award. AeHN is planned in two phases: *Phase I* will focus on the assessment of current network capabilities, the development of functional specifications and a comprehensive healthcare network design for Alaska; *Phase II* will consist of the installation and deployment of the newly designed telecommunications network, linking existing networks, as well as creating new connections to rural locations where no connectivity currently exists.

Submitted by

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