

Alaska, GCI & USF Reform



Commissioner Pai July 2013



Agenda



- Alaska Destinations
- Infrastructure Challenges
- High Cost
- E-rate

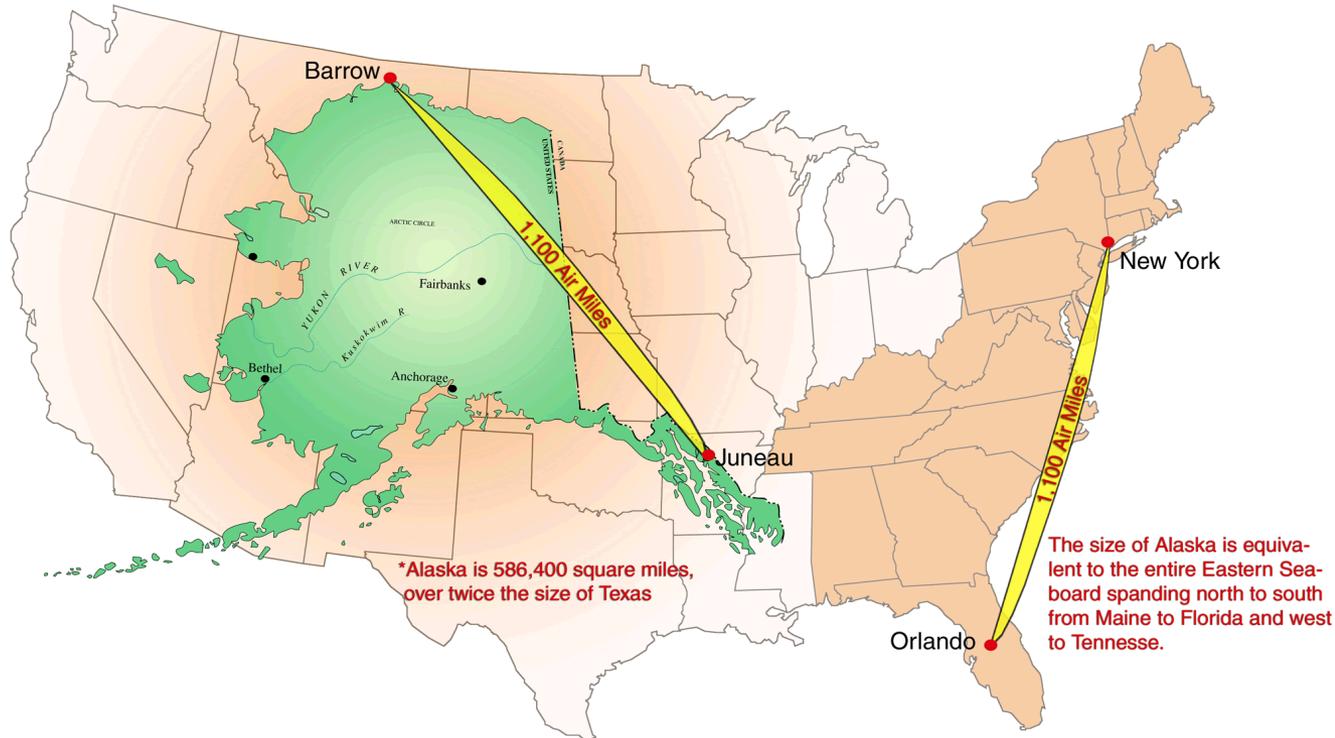
Alaska's Unique Communications Challenges: Size



By far the largest state in the U.S.

- 1/5 the size of the entire lower 48

SIZE AND DISTANCE COMPARISON



Alaska's Unique Challenges: Sparse Population and Limited Infrastructure



- **Just over 710,231 residents**
 - Approximately 1.2 persons per square mile, compared to 103.8 persons per square mile in the lower 48
- **Limited road and rail system**
 - Over 200 “off-road” communities accessible only by plane, boat, or snow machine
- **Limited interconnected power grid**
 - Rural communities rely primarily on diesel electric generators for power
 - Electricity is much more expensive than in the Lower 48
- **Limited terrestrial middle-mile facilities**
 - Most rural areas rely on satellite to connect to urban centers
- **Fiber is costly to deploy and difficult to repair**
 - Permitting issues complicate fiber deployment
 - Ice in cold, shallow coastal waters makes submarine fiber impractical in extreme northern latitudes

Alaska's Unique Communications Challenges: Climate, Terrain and Location



Climate

- Harsh, long winters and short construction season (May to October)
- Ice in northern latitudes makes submarine fiber optic cable costly to install and hard to repair during much of the year
- Winds and ice require hardened equipment and expensive repairs

Terrain

- Largely mountains, islands, rivers, and tundra

Location

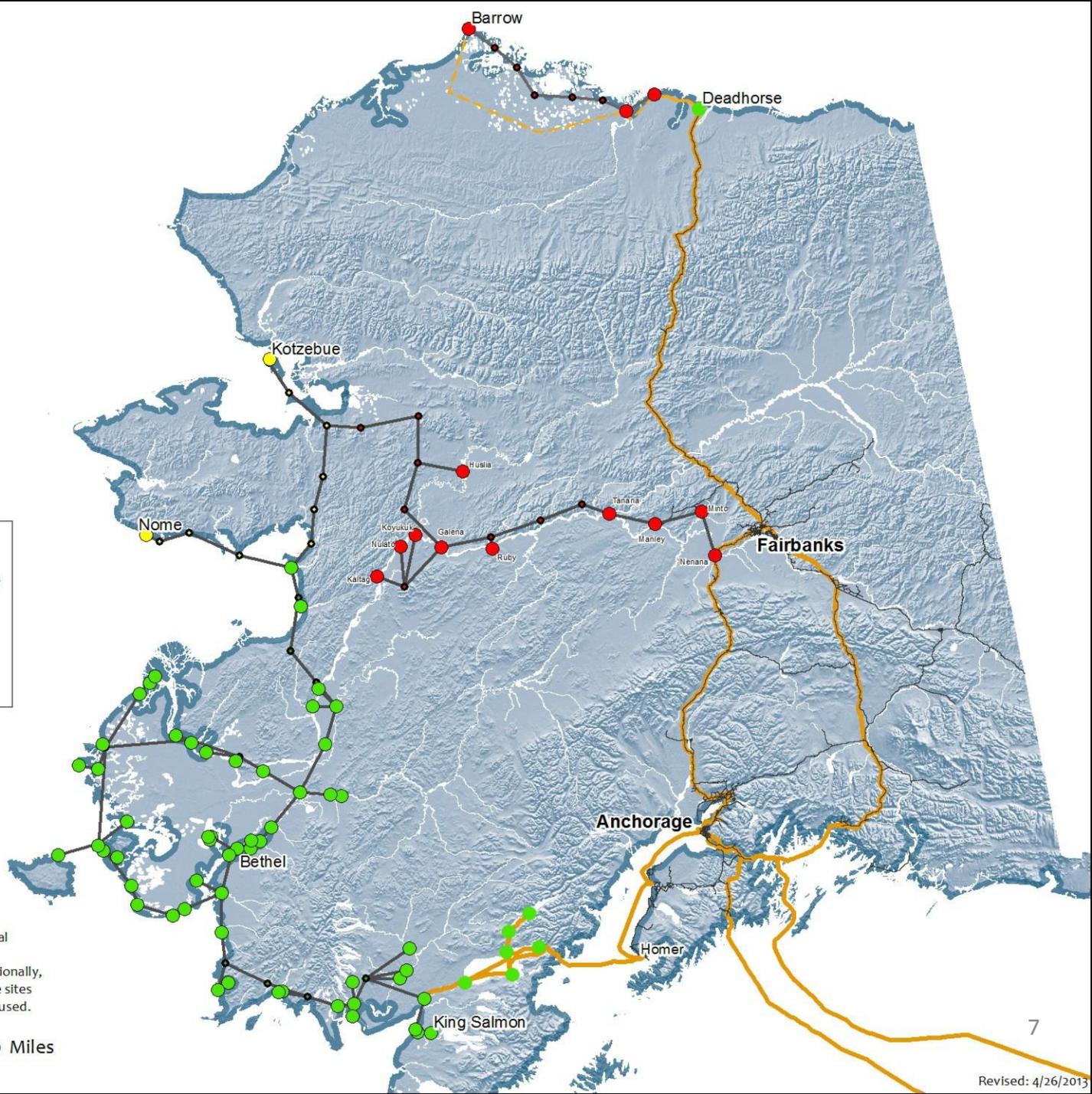
- The Earth's curvature at extreme northern latitudes reduces the availability and performance of geostationary satellites
- Almost 1500 miles from Anchorage to the nearest Tier 1 POP in Seattle



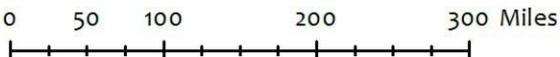
GCI Investing in Alaska



- **GCI Has Invested Over \$1 Billion in Alaska since 1979**
 - Long distance telephone facilities and satellite earth stations
 - Hybrid fiber-coaxial cable plant
 - Submarine fiber construction
- **More than \$720 Million since 2008**
 - Urban and rural wireless deployment (AWN)
 - Fiber and Microwave terrestrial middle-mile networks (TERRA)
 - Planned investment in underutilized broadcast stations (KTVA)
 - **Restricted Proceeding – Not Discussed**



Note: This map represents GCI's long term vision to bring a terrestrial telecommunications network to many areas of rural Alaska. The "proposed microwave sites" are not funded or financed and only represent a possible future network. Additionally, "proposed microwave sites" do not reflect all possible future sites in Alaska, and other technology, such as fiber optics, may be used.



High Cost Reform: Proposal to Protect and Promote Mobility in Rural Alaska



- Far more than \$78 million per year required to achieve statewide mobile broadband service.
 - Modeling estimates the incremental cost at \$596 million (capital costs and 5 year present value of operating expenses)
 - PV of 5 year stream at \$78 million is \$316 million
- National auction likely to direct funds from Remote Alaska to Lower 48
 - Mobility Fund Phase I – Of \$300 million auctioned, Alaska had winning bids for only \$3 million
 - A comparable result would reduce \$105 million in Alaska CETC high cost support to \$5 million
- The Commission adopted Alaska-specific approaches to CAF Phase II for price cap and rate-of-return carriers
- **Same solution applies to Mobility Fund Phase II for Remote Alaska Wireless Providers**

High Cost Reform: Proposal to Protect and Promote Mobility in Rural Alaska



- Reserve \$78 million of Mobility Fund/Tribal Mobility Fund II support for distribution in Remote Alaska
- Preserves current amounts where demand already exceeds available funding
- Matches the amount already budgeted to size the auctions
- Treatment of Non-Remote Alaska remains same as rest of the U.S.
- Alaska remains eligible for Remote Areas Fund support, consistent with what the Commission decides for the Remote Areas Fund

E-Rate: Positive Results



- Connects schools that are otherwise isolated
 - Without connectivity schools cannot meet national mandates
- Connectivity, particularly terrestrial connectivity, to the anchor tenants helps connect the rest of the community
 - Without school access, broadband adoption would plummet
 - Helps to sustain wireless services and vice versa
- Cost of connectivity has come down significantly over time
- Administrative process is known and relatively manageable, but audits are repetitive and performed in a wasteful manner

E-Rate Reform: Focus on Connectivity In the Most Isolated Communities



- **Continue to Focus E-Rate Support on Essential Connectivity**
 - Don't shift support for connecting schools to funding for internal connections, equipment, or ancillary services
 - School districts can more easily absorb the often one-time costs of such services and equipment than the monthly recurring costs of broadband connectivity, especially in very remote areas
- **Preserve the Available Discount to the Most Isolated Schools**
 - School districts will be forced to decrease service, rather than increase their budgets
- **A Per-student Cap Will Negatively Affect Alaskan Students**