State of Alaska

Telecommunications Partnering Plan

Public Interest Evaluation Of

Proposed Contract Award To

A Single Prime Vendor

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1 Executive Summary

1.1 Findings

What The Consolidated Procurement Is Likely To Do

Absent mitigation and enhancement measures, the proposed consolidation of the State of Alaska Telecommunications Partnering Plan procurement (hereinafter “SOAPP”) under the one proposed prime contractor is likely to:

1. *Improve overall pricing and accelerate the availability of IP-based telephony services* for the State of Alaska as a large enterprise customer in the early years of the contract

2. *Reduce the potential competitiveness* in the local Juneau markets for:
   a. Local metropolitan area transport (MAN), and
   b. Premium wireless antenae sites (cellular, PCS, broadband wireless)

3. *Improve the potential competitiveness* of the local broadband telecommunications market in Juneau by accelerating the infrastructure development of a DSL provider, ACS as an alternative to the cable modem services provided by GCI.

4. *Improve the potential competitiveness* of the long distance telecommunications markets throughout Alaska by accelerating infrastructure development of the #3 long distance provider, ACS

5. Result in a *loss of business for certain vendors* who have previously supplied the State with service – though the prime vendor’s approach to subcontracting might maintain the status quo, it is more likely that it will shift business between subcontractors

6. *Accelerate the availability of new IP based telephony services* in urban and rural Alaska

What It Won’t Do By Itself

The proposed consolidation of the State of Alaska Telecommunications procurement under the one proposed prime contractor is:

1. *Unlikely to guarantee competitive pricing and service* relative to ongoing procurement on the open competitive market especially in the case of a longer term (5 year or more) contract. In addition, a two prime vendor approach similar to the Federal Government FTS-2001 Procurement Program may be more likely

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1 Note that in some cases, while the business may shift between subcontractors, the subcontractors in turn may turn around and hire the same people (as employees or subcontractors) who have been working on the State system to capture their knowledge and experience.
to provide net benefits to the State under a longer term with higher demand. Please see Figure 1: SOA Telecommunications Procurement Alternatives – Present Value Cost Comparison and Figure 2: SOA Telecommunications Procurement Alternatives – Net Cost Compared to One Vendor (ACS) below.

Figure 1: SOA Telecommunications Procurement Alternatives
Present Value Cost Comparison

<table>
<thead>
<tr>
<th>Demand</th>
<th>4Y Medium</th>
<th>4Y High</th>
<th>5Y Medium</th>
<th>5Y High</th>
</tr>
</thead>
<tbody>
<tr>
<td>4Y Medium</td>
<td>$60,000,000</td>
<td>$80,000,000</td>
<td>$100,000,000</td>
<td>$120,000,000</td>
</tr>
<tr>
<td>4Y High</td>
<td>$80,000,000</td>
<td>$100,000,000</td>
<td>$120,000,000</td>
<td>$140,000,000</td>
</tr>
<tr>
<td>5Y Medium</td>
<td>$100,000,000</td>
<td>$120,000,000</td>
<td>$140,000,000</td>
<td>$160,000,000</td>
</tr>
<tr>
<td>5Y High</td>
<td>$120,000,000</td>
<td>$140,000,000</td>
<td>$160,000,000</td>
<td>$180,000,000</td>
</tr>
</tbody>
</table>

However, it should be noted that the FTS-2001 two-vendor model is not without its own set of problems, including a number of complications associated with transitioning from one contract to another. See GAO Report FTS 2001 – Transition Challenges Jeopardize Program Goals, March 2001, GAO-01-289.
2. **Unlikely to materially accelerate** the existing rate of erosion of intrastate regulatory subsidy systems – while the proposed procurement may accelerate the existing trend toward bypass of the access charge system through the use of “unregulated” IP networks, the potential impact of the procurement itself is not material compared to the uncertainty of the disposition of

(1) ongoing interstate and intrastate access charge reform proceedings which may shift subsidy collections from access charges on public switched toll traffic to collections on telecommunications services on end-user bills and

(2) whether and how the FCC and States work out what revenues for telecommunications services carried on an “IP Network” are subject to classification as a telecommunications service subject to “universal service collections.”

3. **Unlikely to materially increase** the risk that local phone companies in Rural Alaska will face a shortfall in the in-state regulatory subsidy revenue – the majority of the State traffic is concentrated in local exchange areas where local exchange access charges have been or are about to be depooled. For the balance of the traffic that will bypass the pooled access charge system, the magnitude of the impact of the SOA procurement is directly dependent upon the outcome of the intrastate access charge reform proceeding currently before the RCA (R-01-1) and related FCC/State jurisdictional issues concerning the underlying telecommunications services used to provide IP services. Under a worse case
scenario, the impact on the intrastate access charge pool may amount to roughly $270,000 or 9/10s of 1% of the annual access charge pool in 2001.3

Finally, the proposed consolidation of the State of Alaska Telecommunications procurement under the one proposed prime contractor may result in regulatory uncertainty due to the potential for Regulatory Commission of Alaska (RCA) investigations into:

1. What services or networks under the SOAPP procurement, if any, are subject to RCA regulatory jurisdiction,
2. Whether services subject to RCA rate regulation are being offered at a rate less than incremental cost.

1.2 Mitigation and Enhancement Alternatives

The SOA Department of Administration may wish to consider the following potential mitigation and enhancement measures to improve the public benefits and reduce the potential public costs associated with the proposed award of the State of Alaska Telecommunications Partnering Plan:

1. *Enhance competitiveness* of local Juneau markets by ensuring that the SOA Metropolitan Area Network & Wireless Antennae Site infrastructure is available to all competitors on a non discriminatory basis under reasonable terms and conditions

2. *Enhance the acceleration of the availability of IP based telephony services* and *the availability of local content* designed to take advantage of the IP technology through a memorandum of understanding with the proposed vendor requiring the vendor’s best efforts to expand the availability of affordable services and local content throughout the State

3. *Improve the prospects for competitive pricing and performance* throughout the life of the contract through vigilant contract management and creative use of competitive pressure, i.e., use of government and corporate customer benchmarks for annual price and performance review, use of “meet or release” clauses, continue to seek competitive bids for new services and new blocks of demand, reduce the volume and term commitments to the prime vendor and develop alternative vendor arrangements for the balance of the services.

4. *Reduce the State’s exposure to potential regulatory uncertainty* by negotiating “hold harmless” provisions with the vendor to protect the State from delay and price increases – allowing the vendor the make adjustments in services that are unregulated, i.e., Customer Premise Equipment if price changes or undue delays in obtaining favorable pricing occur.

3 See Appendix Regulatory Subsidy System Implications.
5. **Protect rural incumbent local exchange carriers against possible erosion of in-state subsidies.** In the absence of access charge reform that successfully moves the intrastate subsidy system from implicit access charges to an explicit “universal service fund” collected on end-user bills for the State’s intrastate long distance traffic, the State could require the vendor to make a “transition payment” to the intrastate access charge pool in order to reduce the minor exposure of rural Local Exchange Carriers to erosion of the existing pooled access charge subsidy systems\(^4\).

6. **Encourage the prime vendor to use local employees and local vendors** who have experience with the State system to reduce costs of transition and associated delays.

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\(^4\) Roughly analogous to the “transition payments” required of LECs who depart the interstate NECA access charge pool. The amount of the payment should most likely be considered a “pass-through” from the Carrier to the State. The calculation of the amount should be an amount negotiated in consultation with the Alaska Exchange Carriers Association, the Carrier, the RCA, and the SOA Department of Administration. Please see §8.3 Regulatory Subsidies for a more detailed discussion of regulatory subsidy mitigation alternatives.
2 Public Interest Considerations

As part of the review of the public interest considerations that arise from the proposed SOAPP single prime contractor procurement, the following questions were identified for analysis:

- Is the SOAPP likely to have a material adverse impact on existing vendors?
- Is the SOAPP likely to have a material adverse impact on price, availability or quality of service for Alaskan customers?
- How might the SOAPP expand the availability of basic and advanced services to underserved areas in Alaska?
- What impact might the SOAPP have on existing regulatory subsidy mechanisms?
- What are the risks and benefits to the State in its role as a large enterprise customer of the SOAPP?
- What mitigation and enhancement measures, if any, might improve the public benefits and reduce the potential public costs associated with the SOAPP?

In summary, the questions seek to identify the selected public interest differences between business as usual, defined as an unconsolidated multiple vendor telecommunications procurement that periodically shops the market for price and service, compared to consolidating the procurement under one prime contractor for a longer term and larger volume commitment.

In addition, a two prime contractor scenario, roughly analogous to the Federal Government FTS-2001 Program was developed for comparison purposes.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Number of Prime Vendors</th>
<th>Frequency of Procurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Prime Vendor</td>
<td>One</td>
<td>4 or 5 years</td>
</tr>
<tr>
<td>Two Prime Vendors</td>
<td>Two</td>
<td>5 years</td>
</tr>
<tr>
<td>Multiple Vendor Market Trends</td>
<td>&gt;3</td>
<td>2-3 year staggered contracts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(some contracts out for bid every year)</td>
</tr>
</tbody>
</table>
3 Analysis

3.1 Introduction

The analysis of the proposed consolidated procurement compares three basic sets of projections:

- Likely future trends under the proposed contract award to a consolidated single prime vendor with a long term contract
- Likely future trends under a two prime vendor scenario with long term contracts
- Likely future trends under an unconsolidated multiple vendor scenario with shorter term contracts

For each scenario, demand and price projections were developed based on information provided in the state RFP process, vendor proposals, discussions with “voluntary” State participants, and industry trends.

The future projections developed herein are inherently speculative and are meant to be illustrative of general trends rather than predictions of any particular future outcome.

In addition to estimates of the demand that may be aggregated under the State procurement, rough estimates of the demand for individual communities were developed to assess community level implications in urban and rural Alaska.

Finally the implications of one versus two prime contractors are compared to enable a comparison to the Federal Government’s General Services Administration (GSA) FTS 2001 procurement approach.

3.2 Service Demand

The estimated demand for services was based on the information provided in the SOA RFP process and vendor proposals.

In addition, a “high demand” case was developed which assumed that the potential “voluntary” participants, including the University of Alaska and the Court System, would decide to join the procurement.

3.2.1 Base Case

The detailed demand projections are based on the SOA RFP and available in the Appendix Alternative Supply Scenarios.

In summary, the main services that drive cost differences between the alternative supply scenarios include:

1. Phone equipment + local access line service
2. Long distance service (direct dial)
3. Wide Area Network Bandwidth + Points of Presence
4. Internet Connectivity
5. Videoconferencing
6. Cellular Service
7. Satellite Broadcast Services

<table>
<thead>
<tr>
<th>Table 2: Demand Projections – Base Case</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local (lines)</td>
<td>22,318</td>
<td>22,804</td>
<td>23,260</td>
<td>23,725</td>
<td>23,725</td>
</tr>
<tr>
<td>Long Distance (minutes/mo)</td>
<td>1,083,680</td>
<td>1,127,027</td>
<td>1,160,838</td>
<td>1,195,663</td>
<td>1,195,663</td>
</tr>
<tr>
<td>WAN (POPs)</td>
<td>414</td>
<td>455</td>
<td>478</td>
<td>502</td>
<td>502</td>
</tr>
<tr>
<td>Internet (Mbps)</td>
<td>20</td>
<td>27</td>
<td>38</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>Videoconferencing (minutes/mo)</td>
<td>4800</td>
<td>5760</td>
<td>6912</td>
<td>8294</td>
<td>8294</td>
</tr>
<tr>
<td>Cellular (minutes/mo)</td>
<td>46,000</td>
<td>50,600</td>
<td>55,660</td>
<td>58,443</td>
<td>58,443</td>
</tr>
<tr>
<td>Satellite (Mbps)</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
</tbody>
</table>

3.2.2 Sensitivity Analysis

We tested the sensitivity of our findings to the rate of demand growth by projecting variations in demand estimates arising from:

1. Large Increments of Demand from “Voluntary” Participants
   a. University of Alaska
   b. Court System

2. Potential for the rates of demand growth to increase due to lower unit prices and increased performance under the proposed procurement.

3.2.2.1 Voluntary State Agencies

Some SOA agencies were not required to join the consolidated SOA Telecommunications Partnering Plan, but have the option of participating under the terms and conditions of the SOAPP contract. Examples include the University of Alaska and the State of Alaska Court System.
Large customers may or may not join depending upon the value proposition – including price, performance, and sense of control over future performance parameters.

The “critical mass effect” of the SOA as a large customer may be sufficient to generate a large enough discount to make pricing under the SOAPP contract attractive to “voluntary participants” especially in the early years of the procurement where the single prime vendor appears to be pricing below the prevailing market for some services.

In the end, the more successful the SOA is in negotiating good price and performance terms with the prime contractor, the more likely additional voluntary participants will find it in their interests to join the procurement.

Thus, for purposes of this analysis, it is assumed that because of the size and strategic nature of the SOA, there will be significant price incentives for other voluntary agencies to join and a sensitivity analysis is warranted. Nonetheless, it remains unclear whether this additional demand will materialize under the SOA procurement given uncertainty on the part of voluntary participants with respect to performance parameters they value and their view of the trade-offs involved in four and five year term commitments compared to alternative shorter term procurements.

### 3.2.2.1.1 University of Alaska

A portion of the UA demand is included in the RFP “Base Case.” This includes UAJ local phone service and UA local service in Fairbanks.

This sensitivity analysis includes:

Some, but not necessarily all, of the telecommunications demand generated by the University of Alaska System (including UA Statewide, UA Anchorage, UA Fairbanks, UA Southeast)

This sensitivity analysis does **not** include:

Those portions of the UA Southeast and UA Fairbanks telecommunications demand that is already included within the scope of the SOAPP. (See SOA RFP Appendix A-1-T-N for UAF; A-1-T-S & A-1-Z-S for UAS)

<p>| Table 3: Demand Projections – Sensitivity Analysis – UA Sample Demand Block |
| --- | --- | --- |
| Local (lines) | 4400 | 4% |
| Long Distance (minutes/mo) | 382,000 | 6% |
| WAN (Bandwidth) | 45Mbps | 33% |
| Internet (Mbps) | 20Mbps | 25% |</p>
<table>
<thead>
<tr>
<th>Service</th>
<th>Demand (minutes/mo)</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Videoconferencing</td>
<td>1500</td>
<td>8%</td>
</tr>
<tr>
<td>Cellular</td>
<td>25,200</td>
<td>12%</td>
</tr>
<tr>
<td>Satellite (Mbps)</td>
<td>4 Mbps</td>
<td>0%</td>
</tr>
</tbody>
</table>

### 3.2.2.1.2 Court System
To take into account the potential growth for relatively bandwidth intensive videoconferencing for the Court System, a block of 9600 minutes a month was added in year one and all videoconferencing demand was projected to increase at a rate of 8% per year.

### 3.2.2.2 Variations in Price Elasticities
Given rapidly changing telecommunications markets, technology, regulatory policy, capital markets, and suppliers, there is considerable potential for variations in price to drive demand higher or lower than expected.

In general, the growth in demand for a service is a function of price, performance, complements, and substitutes.

Thus, the “high demand” sensitivity analysis included an 8% year over year growth in the minutes of videoconferencing per month to take into account improved performance and lower unit prices.

### 3.3 Supply Alternatives
Three supply alternatives were developed:
- One Prime Contractor (ACS)
- Two Prime Contractors (ACS + GCI)
- Unconsolidated Multiple Contractors (Market Trends) – assuming more than three prime vendors and a procurement cycle where some of the 2-3 year term contracts come up for bid every year.

#### 3.3.1 One Prime Contractor
The pricing for one prime contractor under four and five year contract terms were developed based on the best and final offer (BAFO) of ACS submitted on April 30, 2001.

The RFP demand was designated “medium demand” and applied against the pricing to yield the “medium demand” cost estimates.

The “high demand” sensitivity analysis was applied against the pricing provided in the BAFO to yield a “high demand” cost estimate.
### 3.3.2 Two Prime Contractors

The price estimates for a two prime contractor scenario under four and five year contract terms were developed based on the BAFOs of ACS and GCI submitted on April 30, 2001 with the following adjustments.

It was assumed that since the SOA would be buying bundles of service “ala carte,” it would pay a 12% price premium. Since some of the demand within bundles would by necessity be split (Help Desk) and other bundles might well be split (SATS Maintenance and Repair – long distance portion to GCI, metro portion to ACS), an overall 5% price premium was added.

The net result amounts to a total first year cost estimate under the four-year term of roughly $18.4 million a year.

The resulting first year pricing was adjusted over the terms of the contract (four and five year) to match the average year over year change in price reflected by the respective prime vendor.

For example, the ACS price for local lines declined roughly 2% year over year under both the four and five year terms. This 2% decline year over year decline in price was applied to an initial price under the two prime contractor scenario that was 17.6% higher than the ACS BAFO (1.12*1.05 = 1.176).

Similarly, the GCI WAN price per POP was held flat across both the four and five year terms consistent with GCI’s pricing. The flat pricing was applied to an initial price under the two prime contractor scenario that was 17.6% higher than the GCI BAFO.

The demand for End-User Support Services and SATS Maintenance & Repair was split between ACS and GCI 50/50 and priced out at their respective initial year pricing plus 17.6% which was then held flat across both the four and five year terms.

### 3.3.3 Unconsolidated Multiple Contractors Market

The price estimates for an unconsolidated scenario under four and five year contract terms were developed based on estimates of market prices that could be obtained by a buyer shopping for best price for individual and/or bundled services with large volumes to be procured in 2001 under a mix of two and three year terms.

The net result amounts to a total first year cost estimate of roughly $20.1 million a year.

The resulting first year pricing was adjusted over the terms of the contract (four and five year) to match the average year over year change in price reflected in existing industry trends for a competitive market. For example, the price for business phones (CPE) were assumed to $12.00 per set and decline by 8% year over year in light of general industry trends. In contrast, the ACS price for business phones (CPE) were assumed to be $5.16 and decline by over 14% year over year in the four year contract term proposal.
On the other hand, the price for Internet connectivity was assumed to be $2600 per Mbps per month and decline by 15% year over year in light of general industry trends. In contrast, the GCI price for Internet connectivity was assumed to be $1800 per Mbps per month and decline to $1700 per Mbps and stay level over the course of the four or five year term. AT&T’s price for Internet connectivity was assumed to be $2752 per Mbps per month and declines to $1063 per Mbps under the four-year term.

The assumption of competitive market pricing in Alaska is supported in the short term by the need for vendors who have capacity and are seeking to survive in a capital constrained market to price closer to incremental cost in order to generate revenue. This could lead to even more aggressive pricing than predicted in the “unconsolidated market” scenario.

On the other hand, the assumption of competitive markets over the longer term may be mitigated by trends toward industry concentration, as some vendors fail to survive the downturn in telecommunications capital markets and the reduction in the rate of growth of demand due to a weakening economy. For example, if AT&T or GCI obtained the fiber optic facilities of AFS/WCI in a consolidation of the long distance market there may be a decline in the competitiveness of the long distance markets, including WAN bandwidth market.

Thus, the unconsolidated market scenario may be attempting to stand in the middle of a road that may become either more competitive with new market entrants picking up the AFS/WCI properties or less competitive as existing dominant carriers seek to consolidate the market and help improve their margins.

The resulting pricing was applied to the medium and high demand scenarios to yield cost estimates for each case at four and five year contract terms.

### 3.4 Discount Rate

To calculate present value, we discount expected future costs by the opportunity cost of capital, generally referred to as the discount rate.

The present value of each of the estimated cost streams (One, Two, and Multiple Vendors under medium and high demand) was calculated based on a nominal discount rate of 5%.

This represents an estimate of the short term (4-5 year) opportunity cost to the State for money it could otherwise invest in relatively short term securities. Current nominal interest rate yields on three and five year treasury notes range from 4.01% to 4.53% with the 10 year treasury benchmark at 4.9%. Over the past 12 months, the 10-year treasury has ranged from 4.77% to 5.95%. Thus, the 5% estimate is above current yields but below recent levels and represents the view that going forward over 4 years, yields may

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The sensitivity of the results to a 10% discount rate were tested and did not change the net present value of the costs by more 1% for any of the scenarios under consideration.
4 State of Alaska as Large Customer

From the point of view of the State of Alaska seeking the lowest cost taking into account the opportunity cost of money, the analysis of alternatives yields the following results.

Table 4: Present Value of Alternative Supply, Demand, and Contract Lengths:

<table>
<thead>
<tr>
<th></th>
<th>PV</th>
<th>ACS Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four Year Term - Medium Demand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Prime Contractor (ACS)</td>
<td>$65,105,904</td>
<td>1.00</td>
</tr>
<tr>
<td>Two Prime Contractors</td>
<td>$65,204,789</td>
<td>1.00</td>
</tr>
<tr>
<td>Market Trends</td>
<td>$68,716,749</td>
<td>1.06</td>
</tr>
<tr>
<td>Four Year Term - High Demand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Prime Contractor (ACS)</td>
<td>$98,471,357</td>
<td>1.00</td>
</tr>
<tr>
<td>Two Prime Contractors</td>
<td>$102,842,486</td>
<td>1.04</td>
</tr>
<tr>
<td>Market Trends</td>
<td>$105,307,985</td>
<td>1.07</td>
</tr>
<tr>
<td>Five Year Term - Medium Demand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Prime Contractor (ACS)</td>
<td>$78,481,616</td>
<td>1.00</td>
</tr>
<tr>
<td>Two Prime Contractors</td>
<td>$78,760,591</td>
<td>1.00</td>
</tr>
<tr>
<td>Market Trends</td>
<td>$82,837,386</td>
<td>1.06</td>
</tr>
<tr>
<td>Five Year Term - High Demand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Prime Contractor (ACS)</td>
<td>$130,330,929</td>
<td>1.00</td>
</tr>
<tr>
<td>Two Prime Contractors</td>
<td>$126,285,748</td>
<td>0.97</td>
</tr>
<tr>
<td>Market Trends</td>
<td>$128,842,416</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Figure 1: SOA Telecommunications Procurement Alternatives
Present Value Cost Comparison
One Prime vs. Market
By consolidating its procurement under one prime contractor, the State of Alaska has been able to obtain price quotes that range from roughly 10% to 30% below current market prices in the near term.

By the fourth year, while the competitive market prices may be lower than the prices under the proposed prime contractor ACS, the value of the upfront discount relative to the market under the 4-year medium and high demand scenarios favors the proposed prime contractor ACS by 6 to 7%.

Under the five-year medium demand scenario, the difference between ACS and the Market scenario is negligible. Under the five-year high demand scenario, the market scenario appears to be 1% less costly than ACS.

One Prime vs. Two Primes
Because of the significant differences between the pricing of the ACS and GCI bids -- especially with respect to local service, WAN/Internet service, cellular service, end-user support services, and SATS maintenance and repair -- even after unbundling the two bids and applying a 17.6% multiplier, the net result for the two prime contract scenario is 1.5% less than the ACS proposal for mandatory services under the first year of the four year term.\(^7\)

However, the ACS prime contractor proposal becomes less costly in the following years under medium demand resulting in an overall break-even with the two prime contract scenario over the four year term. This is due in part due to the ACS generally declining unit costs compared to the relatively flat unit costs of the GCI side of the two-prime contract scenario.

Under the four year high demand scenario, where it should be noted the high demand is loaded toward the later years, the net present value of the ACS scenario is 4% less costly than the two-prime scenario.

Under the five-year term with medium demand, the net present value of the two-prime contract scenario is a break-even with the ACS proposal. Under high demand, the net present value of the two-prime contractor scenario is 3% less than the ACS proposal. This reversal is a reflection of a number of factors, including higher front-end loading of WAN and Internet demand under the high demand scenario (favoring GCI and the two prime vendor scenario) coupled with higher costs and shallower decline of some of the ACS unit prices under the five-year contract term compared to the four year term, i.e., Internet Connectivity.

The contrasts between Internet connectivity pricing under alternative supply scenarios are significant to the analysis. For example, under the five-year contract term, there is a

\(^7\) See Appendix - Alternative Supply Scenarios.
present value difference of *over 200%* between the low price (AT&T) and high price (ACS).⁸

![Figure 3: Internet Connectivity - SOA Telecom Proposals](image)

4.1 Mitigation/Enhancement

In order to improve the prospects for *competitive pricing and performance* throughout the life of the contract, the State should consider devoting time and energy toward ensuring vigilant contract management and creative use of competitive pressure.

For example, the State should consider the use of:

- Government and corporate customer benchmarks for annual price and performance review,
- “Meet the competition or release the SOA from volume commitments” clauses,
- Competitive bids for *new* services and *new* blocks of demand as they arise,
- Reductions in the volume and term commitments to the prime vendor and the development of alternative vendor arrangements for the balance of the services, especially in light of the potential price and performance benefits that may be available under a two prime vendor scenario.

⁸ See Appendix – Alternative Supply Scenarios.
5 Existing Vendors

As a result of the consolidation of the State of Alaska’s telecommunications demand under one prime contractor, there is a potential for several existing vendors to lose existing SOA telecommunications business.\(^9\)

In the end, the prime contractors policy toward outsourcing will ultimately determine whether and how much business will move from existing vendors to new subcontractors or to within the corporate family of the prime vendor.\(^10\)

In order to estimate the potential impacts on existing vendors, existing procurement is compared to a consolidation under one prime vendor. For the purposes of estimating a worst case, it is assumed that the prime contractor consolidates services in-house to the extent possible. However, it is quite likely that the prime contractor will be required to subcontract with other firms (local exchange carriers, fiber optic facilities providers) in order to meet the terms of the contract.

5.1 Big Three (ACS, AT&T, GCI)

For calendar year 2000, the addressable telecommunications market in Alaska is estimated to be on the order of $1.1 billion a year, composed of the following segments:\(^11\)

- Long Distance $535 Million
- Local $400 Million
- Cable $ 82 Million
- Wireless $ 67 Million
- Internet $ 20 Million

Of that, the combined revenues of ACS, AT&T and GCI represent roughly $926 million in annual revenue or roughly 84% of the market.\(^12\)

Among the big three telecommunications providers ACS, AT&T, and GCI, the State of Alaska business represents less than 2% of their overall revenues in Alaska.\(^13\)

In the case of ACS, the award of roughly $15 million in annual incremental revenue from the State contract would represent an increase of roughly 5% in overall annual revenue to the company.

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\(^9\) See SOA RFP Appendix D for a partial list of prominent vendors.
\(^10\) Note that in some cases, while the business may shift between subcontractors, the subcontractors in turn may turn around and hire the same people (as employees or subcontractors) who have been working on the State system to capture their knowledge and experience.
\(^11\) AT&T = $320M, ACS = $313M, GCI = $293M
\(^12\) As described in AT&T, GCI, and ACS BAFOs.
In the case of AT&T, the Alaska market represents less than 1% of its U.S. market. The annual revenue of AT&T in 2000 was $65.9 billion. The loss of the State revenue appears immaterial to AT&T.

In the case of GCI, while the loss of the State business represents less than 2% of its overall revenues in Alaska, the State business does represent a significant block of incremental demand in its long distance business segment.

To illustrate, comparing GCI’s first quarter 2001 to first quarter 2000, the long distance business segment grew roughly $2.6 million. If all of the State business that GCI reported in this segment ($2.1 million) were lost to ACS and ACS did not subcontract any services back to GCI, it would appear as if GCI had year over year growth in this segment of roughly 1% ($0.5 million = $2.6M-$2.1M) rather than 6% ($2.6 million).

However, the loss of less than 2% of GCI’s overall business in areas that do not appear to be yielding significant margins is not likely to have a material impact on profitability measures.14

5.2 Incumbent Local Phone Companies (Other than ACS)

Incumbent Local Phone Companies (LECs) other than ACS represent the majority of the remainder of the market after the big three with roughly $125 million in annual revenue in 2000.

With the shift in business from GCI and AT&T to ACS, the question for local phone company revenue streams becomes whether ACS will continue to purchase tail circuits from the local phone companies or bypass the LEC facilities.

The consolidation of the procurement by the State, in and of itself does not necessarily drive a prime contractor to bypass the local tail circuits and access charges.

Under its proposal to the State, ACS can continue to purchase tail circuits from the local phone companies or it can evaluate alternative tail circuit technologies, i.e., fixed wireless solutions (which ACS can build or lease from an iLEC if the iLEC demonstrated an interest in providing a competitive bid). This lease or build decision by the toll carrier would be present whether the carrier was ACS, GCI, or AT&T and whether the underlying network technology was circuit switched or packet based.

However, the implications for access charges are more complicated and described in more detail in the Regulatory Subsidy section below.

Toll carriers, with or without the consolidated procurement of the State, have an incentive to bypass the local access charge system (an implicit tax) and have done so in the past.

14 In contrast, if the State business was concentrated in a particularly high margin business line, i.e., Directory Advertising with gross margins on the order of 65%, then the loss of 2% of revenue might rise to a level where it would be a material consideration in the evaluation of profitability.
and will continue to have an incentive to do so as long as the subsidy is collected on services which have non regulated substitutes.

However, the State procurement introduces an interesting twist. It appears that ACS chose an “IP Network” solution to meet the State’s needs.

In the course of ongoing federal and state access charge reform efforts (described in more detail in the Regulatory Subsidy Section below), services over an IP Network might be classified as an “information service” and remain wholly or substantially outside of the jurisdiction of regulatory agencies seeking to generate subsidy revenue. The net result may be a potential loss of revenue to the incumbent Local Phone Companies in rural Alaska that may occur a year or two earlier than otherwise as a result of the State procurement advancing the deployment of IP telephony in Alaska. Potential mitigation measures are described in the Regulatory Subsidy Section 8 below.

5.3 Other Local Business

If the statewide State of Alaska business for Private Branch Exchange (PBX)/Data installation and maintenance vendors is consolidated by the prime vendor, this may result in some smaller PBX vendors exiting some or all of the market. In addition, the transition to an IP based PBX system may simultaneously accelerate the exit of some old PBX vendors while accelerating the entry of new vendors with IP based skills and experience.

This effect may be most prominent in Juneau, where it appears that the State may represent as much as 1/3rd of the telecommunications market. In 1999 there were only two data and voice system vendors operating with employees in Juneau – there may only be one active in Juneau today. Statewide, the PBX market appears to be served from a mix of Anchorage, Fairbanks, and Pacific Northwest firms.

Thus while a small PBX vendor may exit the market, the vendor market appears likely to remain quite capable of providing customers with competitive choices.

5.4 Mitigation/Enhancement

To increase the likelihood that some of the SOA telecommunications business will continue to be distributed to multiple companies with operations within Alaska, the State may wish to:

- Encourage local contracting whenever possible
- Follow-up on prime vendor representations concerning redundant network topology to ensure that alternative physical paths are used (often requiring

15 See Section 6.3 for a discussion of the SOA share of the Juneau market.
purchase of capacity from other carriers) to help improve overall reliability of the network.
6 Alaskan Customers

6.1 Intro
Product Market
Geographic Markets
Competitive Implications In Juneau
Mitigation & Enhancements

6.2 Product Markets
The State, acting as a large anchor tenant with 18,000 end-users, has likely accelerated the large-scale introduction of IP Telephony systems, specifically the Cisco AVVID system, to the Alaska telecommunications enterprise market by twelve to twenty four months.

The potential advantages of the accelerated introduction of the IP telephony products and services include:

- Efficient converged voice, video and data networks that reduce unit costs
- Accelerated software based deployment of new applications and services and reduce the unit costs of moves, adds and changes
- Enhanced integration of customer care systems, i.e., constituents can get answers to questions from the internet or a call center -- and they have access to all relevant data and can either solve the constituents need on the spot or get immediately directed to someone who can (remember we said "potential advantage")
- Accelerated integration of voice and e-mail messaging across fixed and mobile phone and computer systems – a “unified messaging” system which may lead to increased productivity (or more “phone tag”)
- Enhanced integration of supply chain management (constituents get faster better service from providers who work for the State who are integrated into the communications system)
- Workforce Optimization – effective leveraging of communications and data systems requires continuous process evolution which may lead to higher workforce productivity

The potential disadvantages of the accelerated introduction of IP telephony products and services include:

- Rapid movement of communications traffic out from under regulatory subsidy systems, potentially resulting in funding shortfalls that may lead to degradation in traditional subsidized telecommunications services. This may be offset by the introduction of new non-regulated communications services. The question constituents face is which side of the field are they likely to fall on during the
“creative destruction” transition – the creative side of new and improved services or the destructive side of what become, often in hindsight, plain old services that fail to receive adequate attention and the plain old service and its customers experience a relative decline in performance.

- Cycles of frustration and low productivity that stem from rapid introduction of new products and services without adequate service trials and training to ensure the service operates at least as well as advertised

The potential advantages and disadvantages of the introduction of IP telephony are likely to be concentrated in the enterprise network (typically 100 plus employees at multiple locations, often in more than one city) due to the capital investment and sophistication required to make the transition from something you know that works to something new.

Over time, with improvements in price, performance, ease of installation and integration of the systems may lead to diffusion into the small size enterprise and mid to small business segments of the market.

Residential markets, on the other hand, may find the race to provide them with new, better, faster is between traditional telephony, mobile telephony, prepaid calling cards which use packet networks, and perhaps eventually voice over cable. While early adopters in the residential market may continue to sample voice over packet technologies from their desktop and phone, the mass market appears to be migrating more rapidly toward the convenience of mobile telephony and the low price of prepaid calling cards.

One potential residential market advantage that may arise out of the prime vendor’s accelerated deployment of an IP+ATM network is the lower unit costs that such a network should enable in the broadband access market. In short, ACS’s unit costs to haul broadband DSL traffic around its network (MAN and WAN) should be reduced, allowing DSL to compete more vigorously with cable modems in the broadband access market.

### 6.3 Geographic Markets

In the absence of detailed traffic studies to estimate communications traffic to and from individual communities, the SOA’s demand for telecommunications is assumed to generally track the number of employees. Further, it is assumed that the State of Alaska employee teledensity is roughly comparable to the overall market – each employee generates about as much demand for telecommunications (local, long distance, data, internet, cellular) as other employees in other sectors.

So, for a first order estimate of the SOA as a percentage of the overall geographic telecommunications market, the SOA as a percentage of overall community employment figures were used.
As one might expect, the State presence in Juneau is a significant percentage of local employment.\footnote{Source: Alaska Economic Trends, January 2000. State of Alaska Employment, including University of Alaska, as a percentage of total employment by community for 1999.} This was adjusted to reflect the higher teledensity of Juneau as the hub of State government – roughly 50% more than the average based on long distance traffic.

<table>
<thead>
<tr>
<th>Table 5: Average Monthly Long Distance MOU per SOA employee</th>
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</thead>
<tbody>
<tr>
<td>Anchorage</td>
</tr>
<tr>
<td>Fairbanks</td>
</tr>
<tr>
<td>Juneau</td>
</tr>
<tr>
<td>Weighted Average</td>
</tr>
</tbody>
</table>

Thus, SOA employment as a percentage of local employment (26%) was adjusted upward by 50% to (26%*1.5 = 39%). This in turn was then adjusted downward to reflect the assumption that employment drives roughly 80% of telecommunications demand and residential households drive roughly 20% of telecommunications demand in the overall telecommunications market. (39%*.8 = 31%)
Thus, it is estimated that somewhere between ¼ and 1/3rd of the telecommunications market in Juneau is driven by the State of Alaska.

It appears that the State’s next largest telecommunications footprint is less than half the relative size of Juneau – Seward with less than 15% of overall employment and less intensive communications needs relative to the State Capital.

The presence of a large number of University of Alaska employees in Fairbanks helps elevate it to third on State employment density list with the SOA representing roughly 13% of overall employment. It should be noted that the University of Alaska appears to have a well-developed wide area network, including an OC-3 of capacity on AFS/WCI facilities between Anchorage, Fairbanks, and Juneau and a large community of approximately 30,000 dial-up customers. As a result, the University telecommunications footprint may be considerably deeper and wider than that of State employees in general.

Applying the same University factor to Anchorage still leaves the SOA relative impact at around 12% of the market.

The largest rural impact may be found in Bethel, where the SOA employment represents roughly 6% of the overall employment.

As a result of this preliminary screening analysis, the assessment of the implications of the proposed procurement on competitive markets was focused on the Juneau market.

### 6.4 Competitive Implications in Juneau

The proposed consolidation of the State of Alaska Telecommunications procurement under one prime contractor is likely to increase the concentration of services and local metropolitan networks and premium wireless tower sites under the direct or indirect control of the existing incumbent local exchange carrier (ACS) in Juneau. The “partnership” is similar to a merger of local networks that increases the market power of the incumbent and could raise the barrier to new competitive entry.

This increased cooperation between the two local networks is likely to reduce the level of competition in the local metropolitan area network and cellular markets in the Juneau area (currently lead by the incumbent local exchange carrier and its affiliated cellular carrier) compared to having an independent third party own and operate the State’s microwave network and towers in Juneau. The basic competitive concern is that the incumbent local exchange carrier and its cellular affiliate have an incentive to preserve and protect local markets and margins against competitive entry. As a group, incumbent local exchange carriers (iLECs) have been somewhat successful at delaying competitive entry into local markets despite the Telecommunications Act of 1996 and subsequent regulatory proceedings of the FCC and RCA to open local markets to competition.

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17 Interview with UA Statewide, Steve Smith, Bill Gregory
Service Markets in Juneau

The potential SOA telecommunications business (if the University and Court System are included) may amount to upwards of **30% of the addressable market** – effectively taking the primary telecommunications anchor tenant out of the competitive market for four to five years.

This may lead to diminished incentives for both competitive effort and entry from existing and potential vendors of service – reducing the overall level of competition in the market especially compared to multiple vendor procurement.\(^{19}\)

While similar phenomena may arise in other regional hubs where the state has a substantial presence, the size of the State’s block of demand appears less material to the overall market and the State does not control as large a metropolitan area network and the associated cellular sites as is the case in Juneau.

Local Communications Infrastructure in Juneau

The State’s private microwave and cable network in Juneau appears to have sufficient capacity to serve the existing SOA traffic and low cost additional incremental capacity to serve other commercial customers and carrier backhaul requirements. Absent competitive safeguards, the incumbent local carrier may have an incentive to protect its retail market position through undue price discrimination and withholding directly or indirectly of the increasingly “cooperative” capacity of the State of Alaska’s microwave system in Juneau from new entrants.

Given the potential for anticompetitive behavior by the incumbent local carrier with control over critical capacity, it may be prudent to examine mitigation measures to avoid unduly diminishing the benefits of competition in the Juneau market -- particularly in light of the imminent opening of the local retail and facilities market to competitive entry in 2002.

6.5 Mitigation/Enhancements

While the potential effect of the State contract award on the competitiveness of markets may be significant, the State can substantially mitigate the effect through measures that include:

*Enhance competitiveness of local Juneau markets by ensuring that the SOA Metropolitan Area Network & Wireless Antennae Site infrastructure is available to all competitors on a non discriminatory basis under reasonable terms and conditions.*\(^{20}\)

*Enhance the acceleration of the availability to constituents of IP based telephony services and the availability of local content designed to take advantage of the IP technology through a memorandum of understanding with the proposed vendor requiring the*

\(^{19}\) It is interesting to note that when telecommunications markets were opened to competition in New York, the New York Public Service Commission *expressly limited the use of term contracts for large users* to ensure that the incumbent carrier was *unable* to lock up large segments of the market before competitive carriers had a chance to compete for the business.

\(^{20}\) See Appendix §10.1.1 for an outline of alternative structures aimed at providing new competitors with non-discriminatory access to critical facilities.
vendor’s best efforts to expand the availability of affordable services and local content throughout the State.
7 Rural Alaska

7.1 Geography

The proposed procurement will require the prime vendor to deploy an IP telephony network across the State of Alaska’s wide area network (WAN). The State’s WAN currently extends to the communities of:

- Seward
- Kenai
- Soldotna
- Homer
- Kodiak
- King Salmon
- Dillingham
- Unalaska
- Bethel
- Nome
- Kotzebue
- Barrow
- Valdez
- Seward
- Cordova
- Yakutat
- Haines
- Skagway
- Petersburg
- Wrangell
- Ketchikan
- Craig
- Hollis
- Sitka
- Angoon
- Kake
- Hoonah
- Delta Junction
- Tok
- Border
- Wasilla
- Palmer
- Glennallen
- Anchorage
- Fairbanks
- Juneau
7.2 Services

The acceleration of the deployment of the IP telephony network to these communities should reduce the unit costs of telecommunications transport. The degree to which the resulting improvement in the underlying network cost structure will be shared between the vendor and ratepayers depends upon the competitiveness of the market, whether the price for services is regulated and whether rates are geographically averaged (a.k.a. postage stamp rates).

Communities were competitors are present and aggressive are likely to see earlier deployment of more competitive pricing for services such as wide area network transport, Internet access (narrow band and broadband), and unregulated IP telephony.

Rural communities where communications networks have been expanded to serve telemedicine and school Internet access may see some competitive benefit from having an efficient packet network build-out occur sooner than it may have otherwise.

Finally, the acceleration of the deployment of the IP telephony network may help rural areas find new economic development opportunities if the infrastructure deployment is coupled with training and incentives to exercise the entrepreneurial and managerial skills that are necessary to leverage the potential of the new technology. To paraphrase Eli Noam from his presentation entitled “The Three Digital Divides” at a June 11, 2001 Columbia University conference entitled “Digital Divide: Inhibitor of Growth?”

There are three digital divides.

The first two (telecommunications and computers) are relatively easy.

Enable access to telephones through direct efficient infrastructure subsidies.

Enable access to computers through direct efficient subsidies.

The third divide (e-commerce and e-content) is the most difficult. E-commerce is harder than traditional business, not easier. It requires general societal modernization along with “18-C’s” (formerly known as the 16 C’s).

Accelerated deployment of telecommunications infrastructure without addressing the development of e-commerce and e-content is likely to exacerbate the gaps between the urban and rural areas, not close them.

Thus, it may be prudent for the State to consider measures to enhance the prospects for rural areas to develop e-commerce and e-content in order to close rather than widen the gaps between rural and urban areas. Accordingly, the State may wish to consider a memorandum of understanding with the prime vendor that not only encourages the deployment of advanced IP telephony services to rural areas, but also encourages the vendor to work creatively to bring specialists in e-commerce and e-content together with rural business and rural residents to help catalyze Alaskan opportunities. After all, successful Alaskan e-content and e-commerce will require additional bandwidth.
7.3 Existing Rural Subsidy Systems

Please see §8.3 Regulatory Subsidy Systems for a more detailed discussion of existing and proposed rural telecommunications subsidy systems.

The proposed procurement has the potential to slightly accelerate the existing decline in the intrastate telecommunications access charge system that redistributes roughly $30 million a year within Alaska.

By significantly reducing unit costs for intrastate toll calling up front, the proposal provides an incentive for the “voluntary” participants, i.e., University, Court System, to migrate their traffic from existing contracts to the less expensive SOA contract. To the extent that the existing traffic is being carried over the public switched network, the migration of traffic from the public switched network to the private IP+ATM network represents an acceleration in the ongoing trend toward efficient private networks that are not subject to access charges.

Similarly, to the extent that the existing traffic of the State mandatory participants is not currently carried over the existing SOA bypass network, the migration of traffic from the public switched network to the private IP+ATM network represents an acceleration in the ongoing trend toward efficient private networks that are not subject to access charges.

Under a worst-case scenario, if all of the SOA traffic were migrated to a private network and that private IP network and its associated services were classified as “information services” (we assume that cellular voice traffic and paging would continue to be subject to Alaska USF as telecommunications services) and not subject to universal service collections – this may result in an annual loss of roughly $260,000.21

The total value of the access charge pool in the rural areas (areas outside of Anchorage, Fairbanks, Juneau) is on the order of $30 million a year. Thus, the SOA procurement may represent a potential decline on the order of 1% of the pool that occurs a few years earlier than it may have otherwise.

7.4 Mitigation/Enhancements

While the potential effect of the SOA procurement may be to accelerate the provisioning of IP based telephony services in rural areas and concurrently erode existing subsidy systems, the State can enhance the statewide deployment of advanced services and mitigate the potential erosion of subsidies through:

Enhancements

Enhance the acceleration of the availability to Rural Alaska of IP based telephony services and the availability of local content designed to take advantage of the IP technology through a memorandum of understanding with the proposed vendor requiring the vendor’s best efforts to expand the availability of affordable services and local content throughout the State.

Mitigation

21 See Appendix – Regulatory Subsidy System Implications: Intrastate USF funding mechanisms. Explicit vs. Implicit Support Collections (Column G). Assuming that cellular will continue to be treated as a telecommunications service where minutes can be separated into intrastate and interstate jurisdictions.
Protect rural incumbent local exchange carriers and their rural customers against possible erosion of in-state subsidies. In the absence of access charge reform that successfully moves the intrastate subsidy system from implicit access charges to an explicit “universal service fund” collected on end-user bills for the State’s intrastate long distance traffic, the State could require the vendor to make a “transition payment” to the intrastate access charge pool in order to reduce the minor exposure of rural Local Exchange Carriers to erosion of the existing pooled access charge subsidy systems.  

22 See §8.3 Regulatory Subsidy System Discussion below.
8 Regulatory Implications

8.1 Introduction
The proposed procurement raises two primary sets of regulatory issues.

The first concerns the extent to which the services offered by the prime contractor under contract to the State are subject to economic regulation by the RCA.23

The second set of regulatory issues concerns the extent to which the proposed procurement will accelerate the on-going erosion of regulatory subsidy systems.24

8.2 Regulatory Jurisdiction
The proposed use of an “unregulated IP” network to provide IP services to the State of Alaska raises some uncertainty about whether and how the services provided to the State may be economically regulated.

First, the FCC has found that to the extent that “any of the underlying inputs [used by Internet Access and Backbone providers] constitutes interstate telecommunications, [the FCC] has authority under the 1996 Act to require that the providers of those inputs contribute to federal universal service mechanisms.”25

Second, the FCC has found that even though Internet access services involve data transport elements, the offering of those services cannot be classified as a telecommunications service because “it offers end users information service-capabilities inextricably intertwined with data transport.”26

Third, the FCC has been unable to make a definitive pronouncement on IP telephony, finding that “phone to phone” IP telephony bore many of the characteristics of “telecommunications services” and hence might be subject to universal service collections.27

Thus, by characterizing the underlying network as an “unregulated” IP network, the services provided on the network may be deemed an “information service” under definitions in the Telecommunications Act of 1996 and not subject to FCC regulation. However, the FCC appears to have left some room to classify “phone to phone” IP telephony as a “telecommunications service” and subject it to universal service collections and potential economic regulation.

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23 If services are found to be subject to regulation by the FCC, given the FCC’s basic predilections toward detariffing and deregulation, there is very little risk of economic regulation per se. However, there is the prospect that the services would be subject to FCC universal service collections.

24 For a detailed discussion of the on-going erosion of existing regulatory subsidy systems, see RCA docket R-01-1.


26 Id. at 11,539-11,540 ¶80.

27 Id. at 11,544 ¶89.
In addition, recent rulings of the FCC have classified data traffic from local phone lines to an Internet Service Provider (ISP) as interstate communications. It remains to be seen whether the FCC’s assertion of jurisdiction over these and similar services will be upheld.

One could argue that it is reasonable to proceed with the understanding that the State’s services will not be subject to RCA jurisdiction, or if the RCA has jurisdiction, it may choose not to exercise its jurisdiction. However, it is interesting to note that in response to complaints from phone carriers in 1998, the APUC/RCA staff sent letters (which were unanswered when the file was last reviewed in 2000) to ISPs (who were alleged to have commenced “free long distance service” in response to “free internet service”) inquiring as to what they were doing with the expressed intent of determining whether their “free long distance service” was subject to APUC/RCA jurisdiction.

Thus, conversely, one could argue that this is an area which is not well settled and it is possible, while State jurisdiction appears clouded at best at the present time, the State Regulatory Commissions may gain jurisdiction over some telecommunications services which run over IP networks under a favorable set of facts.\(^\text{28}\)

In short, the contract between the State and a vendor providing services over an unregulated IP network, may be the subject of a regulatory inquiry as to what services may or may not be subject to the jurisdiction of the RCA. Further if the RCA asserts jurisdiction over certain services, the RCA Public Advocacy Section may seek to investigate whether the prices for regulated services are above incremental cost.

The challenge facing the State is how to protect itself from potential contract implementation delays and potential pricing adjustments of what may or may not eventually be found to be regulated services. One approach is to require hold harmless language in the contract which requires the vendor to provide the State with price adjustments in unregulated services to offset delays and pricing adjustments in regulatory services.

### 8.3 Regulatory Subsidy Systems

The existing telecommunications regulatory system includes a number of implicit and explicit subsidies including:

- Geographically Averaged Toll Rates
- Local Phone Company Access Charges
- Higher Margins for Business Line Rates to enable Lower Margin Residential Line Rates
- High Margin Directory Advertising to enable Lower Margin Residential Line Rates

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\(^{28}\) Analogous to the Supreme Court Case *Louisiana Public Service Commission v. FCC*, 476 U.S. 355 (1986) where, despite section 220(b) of the Telecommunications Act of 1934, which expressly empowers the FCC to promulgate depreciation rules, the FCC lacks authority to preempt states’ depreciation rules different from its own.
8.3.1 Geographically Averaged Rates

The migration of pricing toward usage-based charges that are discounted for increasing amounts of bandwidth may present some erosion of the subsidy inherent under strict interpretations of geographic rate averaging. In essence, pricing is migrating toward density-based discounts (large volume customers migrate toward virtual private network arrangements where price more closely reflects unit costs which in turn diminish with higher densities associated with urban to urban traffic). In short, it may be easier to get a lower price per Mbps on an Anchorage-Juneau or Anchorage-Fairbanks route than a Tok-Border or a Craig-Hollis route – even for the same term and volume. While this represents erosion in the strict definition of geographically averaged rates, it is interesting to note that both the FCC and RCA have approved substantially similar tariff arrangements for Frame Relay and ATM based services.

In addition, when the APUC opened the intrastate long distance market to competitive entry, it allowed non-geographically averaged wholesale rates while requiring retail rates to be geographically averaged.

8.3.2 Local Access Charges

Long distance telephone carriers pay local phone companies fees for the traffic they pick up or hand off at the long distance/local border – generally referred to as access charges.

The access charges paid by the long distance companies to the local companies have been the subject of a long, contentious, and ongoing debate. Long economic studies conclude that toll access charges paid to local phone companies are priced well in excess of their incremental cost. An embedded direct cost study performed by ATU for a rate case before the APUC confirmed that the revenue from toll access greatly exceeded the direct cost of service.

Long distance carriers pay interstate access charges on traffic that crosses State borders and intrastate access charges on traffic that originates and terminates within a State.

The price difference between these two jurisdictions for essentially the same service (though arguably for different volumes of service) can be considerable and continues to grow.

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29 See for example Peter Temin, “Cross Subsidies in the Telephone Network After Divestiture,” Journal of Regulatory Economics (1990) where the abstract adroitly observes “Those who do not understand history are condemned to repeat it.”
The substantial differences between interstate and intrastate access charges may relate as much to artifacts of regulatory wars between the FCC and State Regulatory Commissions and the degree to which the access markets have been open to competition as to any underlying cost rationale.

For the purposes of this inquiry, the FCC access charge system is relevant to understand the magnitude of the revenue flows to and from the State (interstate access charge system) and the magnitude of those revenue flows compared to the revenue redistribution within the State (intrastate access charge system).

**Interstate:**

Alaskan carriers contribute roughly $5.5 million a year to the interstate high cost support programs and Alaskan local phone companies receive roughly $71.2 million a year in high cost support for a net amount of $65.7 million, or $143 per loop per year or $11.94 per loop per month.\(^{31}\)

In addition, Alaska carriers have received roughly $12.1 million to provide Internet service to schools and libraries and $4.3 million to fund rural health care telecommunications services.\(^{32}\) In addition, over the past three years, roughly $50 million in grants have been received that are aimed at building rural health care networks which are currently being integrated by the AFHCAN federal network.\(^{33}\)

\[^{33}\] Author’s estimate of direct grants from various Federal Funding agencies for rural health care networks. The largest grant has been AFHCAN with a multi year grant of roughly $40 million.
In sum, in recent years Alaska has been receiving a net influx of roughly $60-90 million a year from federal grants and subsidies to help support mostly rural telecommunications services.

Intrastate:

The intrastate regulatory subsidy system consists of access charges paid to local carriers by long distance carriers ($31.4 million a year) plus a small Alaska universal service fund on end-user bills designed to collect fees to pay for the high costs of local switching for certain rural carriers ($3 million a year). 34

Prior to the opening of the local Anchorage, Fairbanks, and Juneau markets to competition, the local exchange pool was roughly $48 million. Concurrent with the opening of those local markets to competition, the RCA has de-pooled the access charge subsidy system – in effect no longer taxing the traffic between the major metropolitan areas for potential redistribution to presumptively higher cost rural areas (with the exception of the modest Alaska USF collections on end-user bills designed to collect roughly $3 million in DEM weighting support).

Summary:

So roughly speaking, the interstate jurisdiction provides a net input to the State of between $60-90 million a year for predominantly rural telecommunications service while the intrastate jurisdiction redistributes a total of roughly $30 million a year for telecommunications within the State.

State of Alaska Private Network:

The State of Alaska, like many large enterprises in Alaska, has migrated a significant portion of its traffic from the public switched common carrier network to private telecommunications networks to take advantage of scale efficiencies and to avoid the high public switched network prices that reflect underlying regulatory subsidy systems described above.

The traffic data provided in the RFP indicates the SOA has already moved at least 65% of its in-state long distance voice traffic off the public network and onto its private SATS network. 35 In Anchorage and Fairbanks, the SOA private network traffic represents roughly 1% of the in-state toll traffic carried by the public switched network. In Juneau, this amounts to roughly 9% of the total in-state toll traffic carried by the public switched network. 36

34 RCA, Docket R-01-1. The high cost switching cost element is generally referred to as DEM (dial equipment minutes) weighting on the intrastate side. Its counterpart on the interstate side is LSS (local switching support).
35 See RFP Figure 4.5 Annual Long Distance Minutes by Location and Type.
36 See Alaska Exchange Carriers Association, Data Filings in RCA Proceeding R-01-1.
The magnitude of the private network bypass in Juneau is significant – especially compared to Anchorage and Fairbanks. While employment growth and access minutes have increased in Anchorage and Fairbanks over the time period 1993 - 1998, Juneau has experienced comparable employment growth and an absolute decline in access minutes over the same time period.

**Figure 8: In-State Access Charge Trends**

It appears that the bypass of the in-state access charge system is already well underway in the Juneau market.

**Customer Perspective**

The proposed procurement has the potential to slightly accelerate the existing decline in the intrastate telecommunications access charge system that redistributes roughly $30 million a year within Alaska.

By significantly reducing unit costs for intrastate toll calling up front, the proposal provides an incentive for the “voluntary” participants, i.e., University, Court System, to migrate their traffic from existing contracts to the less expensive SOA contract. *To the extent that the existing traffic is being carried over the public switched network*, the migration of traffic from the public switched network to the private IP+ATM network represents an acceleration in the ongoing trend toward efficient private networks that are not subject to access charges.

Similarly, to the extent that the existing traffic of the State mandatory participants is not currently carried over the existing SOA bypass network, the migration of traffic from the...
public switched network to the private IP+ATM network represents an acceleration in the ongoing trend toward efficient private networks that are not subject to access charges.

The acceleration in the movement of the telecommunications traffic from public to private networks may amount to 500,000 minutes a year moving onto the private network a few years earlier than otherwise. This represents on the order of $65,000 a year in potential access charge collections that are either foregone or reallocated back onto the remaining public traffic. With a pool of roughly $30 million a year, this represents a loss or reallocation rate increase of roughly 2/10ths of 1%. It does not appear material.

**Carrier Perspective**

Toll carriers, with or without the consolidated procurement of the State, have an incentive to bypass the local access charge system (an implicit tax) and have done so in the past and have an incentive to continue to do so. The question becomes to what extent does the consolidation of the State’s telecommunications needs under a single prime contractor provide the carrier with an incremental incentive to bypass the in-state access charge system.

By providing a large dependable block of demand, the State may have provided the prime contractor with an opportunity to build a network that has the potential to bypass both the existing access charge system and potential near term reforms to that system. The prime contractor has represented that it will use an “IP Network” solution to meet the State’s needs.

As described above (Section 8.2 Regulatory Jurisdiction), services over an IP Network might be classified as an “information service” and remain wholly or substantially outside of the jurisdiction of regulatory agencies (either FCC or RCA) seeking to generate subsidy revenue. The net result may be a potential loss of intrastate revenue to the incumbent Local Phone Companies in rural Alaska that may occur a few years earlier than otherwise as a result of the State procurement advancing the large scale deployment of IP telephony in Alaska.

Under the traffic patterns described in the RFP, toll traffic may be generating roughly $276,000 a year in access charge revenue for the rural pool.\(^{37}\)

Under a worst-case scenario, almost all of the traffic carried on the “IP network” would be classified “information services” (we assume that cellular voice traffic and paging would continue to be subject to Alaska USF as telecommunications services) and not subject to universal service collections – resulting in an annual loss of roughly $260,000.\(^ {38}\) With an overall in-state access charge pool of $30 million a year, this amounts to slightly less than 1% of the overall amount of funds that are redistributed within the State.

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\(^{38}\) See Appendix – Regulatory Subsidy System Implications: Intrastate USF funding mechanisms. Explicit vs. Implicit Support Collections (Column G). Assuming that cellular will continue to be treated as a telecommunications service where minutes can be separated into intrastate and interstate jurisdictions.
8.4 Mitigation/Enhancements

While the potential impact of the proposed procurement on regulatory subsidy systems appears to represent less than 1% of the total in-state pool of redistributed access charge funds, the State may wish to mitigate the minor effects through the following measures:

1. In the absence of access charge reform that successfully moves the intrastate subsidy system from implicit access charges to an explicit “universal service fund” collected on end-user bills for the State’s intrastate long distance traffic, the State could require the vendor to make a “transition payment” to the intrastate access charge pool in order to reduce the minor exposure of rural Local Exchange Carriers to erosion of potential revenue from the existing subsidy systems on the order of $65,000 per year for roughly three years.39

2. To the extent that the services provided over the IP+ATM network are subsequently classified as “information services” and not “telecommunications services”, the State could require the vendor to make a “transition payment” to the intrastate access charge pool in order to reduce the minor exposure of rural Local Exchange Carriers to erosion of potential revenue from the existing subsidy systems on the order of $260,000 per year for roughly three years.40

39 Roughly analogous to the “transitional payments” required of LECs who depart the interstate NECA access charge pool. The amount of the payment should most likely be considered a “pass-through” from the Carrier to the State. The calculation of the amount should be an amount negotiated in consultation with the Alaska Exchange Carriers Association, the Carrier, the RCA, and the SOA Department of Administration.

40 See footnote 39.
9 Summary of Mitigation & Enhancement Measures

The SOA Department of Administration may wish to consider the following potential mitigation and enhancement measures to improve the public benefits and reduce the potential public costs associated with the proposed award of the State of Alaska Telecommunications Partnering Plan:

1. **Enhance competitiveness** of local Juneau markets by ensuring that the SOA Metropolitan Area Network & Wireless Antennae Site infrastructure is available to all competitors on a non discriminatory basis under reasonable terms and conditions.

2. **Enhance the acceleration of the availability of IP based telephony services** and the availability of local content designed to take advantage of the IP technology through a memorandum of understanding with the proposed vendor requiring the vendor’s best efforts to expand the availability of affordable services and local content throughout the State.

3. **Improve the prospects for competitive pricing and performance** throughout the life of the contract through vigilant contract management and creative use of competitive pressure, i.e., use of government and corporate customer benchmarks for annual price and performance review, use of “meet or release” clauses, continue to seek competitive bids for new services and new blocks of demand, reduce the volume and term commitments to the prime vendor and develop alternative vendor arrangements for the balance of the services.

4. **Reduce the State’s exposure to potential regulatory uncertainty** by negotiating “hold harmless” provisions with the vendor to protect the State from delay and price increases – allowing the vendor the make adjustments in services that are unregulated, i.e., Customer Premise Equipment.

5. In the absence of access charge reform that successfully moves the intrastate subsidy system from implicit access charges to an explicit “universal service fund” collected on end-user bills for the State’s intrastate long distance traffic, the State could require the vendor to make a “transition payment” to the intrastate pool in order to reduce the minor exposure of rural Local Exchange Carriers to erosion of the existing pooled access charge subsidy systems.

6. **Encourage the prime vendor to use local employees and local vendors** who have experience with the State system to reduce costs of transition and associated delays.
10 Appendices

10.1 Mitigation/Enhancements

10.1.1 Alternative Arrangements to Provide Non-Discriminatory Access to Critical Juneau Facilities

1. Divest the SATS facilities to a non-profit “wholesale” common carrier
   
   1.1. Divest to transfer responsibility for operations, maintenance and management, including dispute resolution over who obtains access to the system and under what terms and conditions
   
   1.2. Explore divestiture to a non-profit in order to be able to utilize the existing wireless spectrum licenses from the FCC
   
   1.3. Explore divestiture to a “wholesale” provider to avoid the potential for an affiliated retail service provider to leverage their position in the wholesale market to the benefit of their retail affiliate
   
   1.4. Explore divestiture to a common carrier to ensure that access is fair, equitable and not discriminatory and is overseen by FCC and RCA – agencies with specific expertise regarding equal access to facilities.

1.5. Potential Divestiture Process:

   1.5.1. Given the status of the existing procurement process, what next steps may be required to divest the SATS system to an independent, non-profit common carrier?

   1.5.2. SOA declines to award the SATS operations and maintenance bundle, thereby retaining ownership, operations, maintenance, and management of the system.

      1.5.2.1. Under this arrangement, the SOA could provide communications services to the prime vendor for “free” provided that the prime vendor certified that transportation services is used by the prime vendor exclusively for the SOA

      1.5.2.2. Under this arrangement, the SOA could provide “tower space” on a competitively neutral basis for free or for a “market based” fee. Alternatively, the SOA may wish to explore contracting out this “property management” function.

      1.5.2.3. SOA may offer the SATS system for sale to the highest bidder subject to requirements that communications and tower capacity will be offered on competitively neutral, non-discriminatory terms.

      1.5.2.3.1. This may require an affirmative ruling from the FCC that would enable the microwave spectrum licenses to be
transferred to a third party entity without the current restrictions that limit usage to government and non-profit entities.

1.5.2.4. SOA may offer the SATS system for sale to highest “disinterested” bidder – where to qualify as a “disinterested” bidder, the bidder has to certify that it has no affiliated interest with another certificated telecommunications carrier in the local Juneau market – effectively precluding the incumbent local exchange carrier from bidding.

1.5.2.4.1. “Disinterested” bidders may not materialize for this relatively small niche market.

1.5.3. SOA awards the SATS operations and maintenance bundle to the prime vendor, retaining ownership and management of the system in the interim and initiates a process to divest the SATS system.

1.5.3.1. This is likely to further complicate and extent the amount of time required to divest the system and is not recommended.

2. Divest the SATS facilities to a non-profit common carrier

2.6. Same as 1 above, but assume that most telecommunications providers who may have an interest in the SATS system also have a retail affiliate and that the ability for the wholesale business unit to leverage its position to the advantage of the retail business unit is mitigated, but not eliminated, by the presence of common carriage regulation.

3. Retain SOA ownership of SATS facilities and pursue arrangements to enable competitive access to the “excess capacity” of the system

3.7. Indirect – Require Resale of SOA Telecommunications Partnering Plan (SOAPP) services, and

3.7.1. Require incumbent local exchange carrier to resale the State contract services to state certificated or federally licensed communications providers in the Juneau market under the same terms and conditions that the SOA receives under its telecommunications procurement contract

3.7.2. This extends the “resale” requirements found under:

3.7.2.1. AS42.05.800 for long distance services which require resale of telecommunications service offerings

3.7.2.2. 47 U.S.C. 251(b)(1) for all local exchange carriers to resale their services

3.7.2.3. 47 U.S.C. 251(c)(4) for incumbent local exchange carriers to resale their retail services at wholesale rates

3.7.3. To require “same terms and conditions that the SOA receives”
3.8. Direct – Require resale of Juneau area telecommunications capacity on nondiscriminatory terms to communications providers in the Juneau market \(^{42}\)

3.8.1. If the SOA retains ownership of SATS under the Telecommunications Partnering Plan Procurement, the SOA will effectively share the responsibility for management of the system with the Prime Vendor who has the responsibility for managing and integrating the SOA telecommunications services over a wide variety of networks in order to take full advantage of “convergence.”

3.8.2. In order for the SOA to avoid unduly favoring its telecommunications partner over potential new market entrants with microwave transport and tower space in the Juneau geographic area, the SOA should require the incumbent local exchange partner to:

   3.8.2.1. Obtain a waiver from FCC licensing restrictions on the use of the SATS government/non-profit spectrum licensing to enable sale of capacity to new market entrants, and

   3.8.2.1.1. To provide an incentive for rapid resolution of the waiver petition, require the Prime Vendor, an incumbent local exchange carrier, to provide services to certificated or licensed communications providers under the same terms and conditions available under the SOAPP procurement

   3.8.2.1.2. If waiver petition is favorably acted upon, allow for relaxation of resale requirement over one year period, as regulation reverts to common carriage rules pursuant to FCC and RCA requirements.

   3.8.2.1.3. If waiver petition is denied, allow resale requirement to continue over the life of the contract

   3.8.2.2. Design and implement a capacity planning process that enables competitors to participate in planning and procurement of capacity on the margin in a fair and equitable process. The basic principles of the capacity planning and procurement process should include:

   3.8.2.2.1. To avoid uneconomic duplication of telecommunications facilities, it is desirable to identify and offer the open market access to the next available increment of facility capacity at a reasonable price

   3.8.2.2.2. A regularly scheduled public capacity planning process to identify what capacity is required, currently available and planned will help identify incremental capacity for the market

\(^{42}\) Consistent with the principles in the Telecommunications Act of 1996 at 47 USC 251(c)(3) requiring iLECs to make available unbundled network elements under reasonable terms and conditions.
3.8.2.2.3. Disputes may arise as to what is an appropriate amount of capacity to withhold from the market (or conversely to build for the market) to accommodate normal traffic growth, adequate reliability, and product development. The SOA, in its partnership role with an incumbent, may find itself in a difficult position to be able to independently evaluate the amount of capacity within the Juneau metropolitan area that the incumbent carrier partner may need for various purposes, including testing of new data, voice, video, unified messaging, or mobile data services. The SOA should require the incumbent to use an independent third party arbitrator to resolve any disputes that may arise in the capacity planning process.

4. Retain SOA ownership of SATS facilities and require that the system be used exclusively for SOA traffic

4.9. By requiring the existing system in Juneau to only be used for State purposes, this alternative may simply reflect the status quo and not present any material harm to competition relative to status quo – with the possible exception of advantaging the prime vendor over competitors with respect to use of SATS capacity for new product development and integration of services

4.10. Nonetheless, this approach may limit competitive activity in the Juneau market by potentially withholding economically efficient incremental capacity from the market

CONCLUSIONS – JUNEAU COMPETITIVE ENHANCEMENTS

The State should investigate divesting itself of the SATS network to avoid becoming entangled in issues regarding fair and equitable use of the system capacity in the Juneau metropolitan area where the SATS system represents a material part of the local telecommunications infrastructure – both for metropolitan area microwave transport and wireless antennae sites.

Prior to completion of a divestiture plan, the SOA should require the Prime Vendor, an incumbent local exchange carrier in Juneau, to make available to the market economically efficient incremental capacity (current or planned) for metropolitan area microwave transport and wireless antennae sites in the Juneau market to promote economic competition.

Prior to the implementation of a program to make available incremental telecommunications capacity in Juneau, the SOA should require the Prime Vendor, the incumbent local exchange carrier, to make available to certificated or licensed carriers the services available under the SOAPP Procurement to promote economic competition during the time efforts are underway to make capacity available.43

43 See also Appendix 10.1.2 for a proposed contract resolution “Promotion of Competition in Juneau.”
10.1.2 **Proposed Contract Resolution – Promotion of Competition in Juneau**

1. Whereas, the State of Alaska owns a metropolitan area telecommunications transport network and wireless antennae sites in Juneau, which constitute a portion of the SOA network commonly known as the State of Alaska Telecommunications System (SATS);

2. Whereas, the State of Alaska seeks to contract out the operations and maintenance of the SATS system to the Prime Vendor under the State of Alaska Telecommunications Partnering Plan Procurement (SOA RFP#2001-0200-2036, hereinafter “SOAPP Procurement”);

3. Whereas, the State of Alaska expects the Prime Vendor to use the SATS capacity to provide telecommunications services to the SOA under the SOAPP Procurement;

4. Whereas, the State of Alaska seeks to promote competition and avoid uneconomic duplication of telecommunications facilities by making available telecommunications services under the SOAPP Procurement and capacity (MAN transport and wireless antennae sites) to new competitors in Juneau;

5. Now, therefore, be it resolved, that:

   a. The Prime Vendor shall treat the SATS system in Juneau as part of its incumbent Local Exchange Carrier network under the Telecommunications Act of 1996\(^4\)

   b. The Prime Vendor shall make available services under the same terms and conditions and on the same schedule as the services being provided to the SOA under the SOAPP procurement, to state certificated or federally licensed communications providers in the Juneau market, and

   c. The Prime Vendor shall file a petition with the FCC seeking a waiver of the rules and regulations which may restrict the ability of the State and any of its subcontractors to resell SATS microwave capacity under its existing spectrum licenses to third parties, and

   d. The Prime Vendor shall make available current and future SATS communications capacity and wireless antennae sites under reasonable, competitively neutral terms and conditions to state certificated or federally licensed communications providers in the Juneau market.

   e. To ensure that current and future SATS capacity and wireless antennae sites are made available under reasonable, competitively neutral terms and conditions, the Prime Vendor shall adopt a clear public process for the planning and use of SATS capacity and wireless antennae sites.

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\(^4\) See especially 47 USC 251(c), requirements imposed upon incumbent local exchange carriers
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