

**HB**

**271**



# Alaska State Legislature

## HOUSE OF REPRESENTATIVES

REPRESENTATIVE LOREN LEMAN  
465-2095

Official Business

*Item 3*  
*Dennis FYI to Thom file*  
P.O. Box V  
State Capitol  
Juneau, Alaska 99811

### M E M O R A N D U M

TO: All Members of the House  
FROM: Rep. Loren Leman *Loren*  
DATE: April 5, 1989  
SUBJ: Intrastate telecommunication competition

Today, I introduced legislation to allow intrastate interexchange telecommunication competition.

#### ADVANTAGES:

- 1) Competition will lead to lower costs and greater efficiency.
- 2) Universal service at reasonable rates is protected.
- 3) Provides clear policy mandate for Alaska Public Utilities Commission.

#### OBJECTIONS:

- 1) The Bush will go dark. The bill provides for regulation by the APUC that requires cost and income separation for entities participating in competitive and monopoly markets.
- 2) Bush telecommunications costs will skyrocket. According to ALASCOM's 1985 Intrastate MTS revenue data filed with the APUC, the subsidy flowing from urban to rural areas is at most 7.2% of rural costs.
- 3) ALASCOM will lose AT&T subsidy. The FCC is reviewing the subsidy regardless. Also, there is no evidence the rate integration subsidy will be endangered by competition.
- 4) Alaskan market too small to allow competition. GCI and others do not think so. We should let the market decide.
- 5) Decision should rest with APUC. The APUC has been considering competition for more than three years. The bill decides the public policy question of competition; APUC is still responsible for determining most of the "how".

SUNSET PROVISION: My bill includes a sunset provision for 1993. A future legislature will review APUC's evaluation of competition and determine if competition is worth preserving.

## ALASCOM 1985 INTRASTATE MTS REVENUE DATA

Dollars Per Year

(millions)

|   | <u>ANC-FBX<br/>JNU<br/>ROUTES</u> | <u>ANC-MAT<br/>VALLEY<br/>KENAI<br/>ROUTES</u> | <u>REST<br/>OF<br/>STATE</u> | <u>TOTAL<br/>STATE<br/>LONG<br/>DISTANCE<br/>REVENUES</u> |
|---|-----------------------------------|--|------------------------------|---|
| Alascom<br>revenues                           | 22.5                              | 10.2   | 50.2                         | 82.9  |
| Alascom<br>cost                               | (2.5)                             | (3.1)  | (25.2)                       | (30.8)  |
| Average local<br>Telephone Co.<br>Settlements | (9.2)                             | (14.3)   | (28.6)                       | (52.1)  |
| Surplus or *<br>(Subsidy)                     | 10.9                              | (7.3)  | (3.6)                        | (0.0)   |

\* A total of \$10.9 million in surplus revenue is earned on the Anchorage-Fairbanks-Juneau route. Of this amount, \$7.3 million is used to subsidize the Anchorage-Mat Valley-Kenai Routes. The remaining \$3.6 million is available to subsidize service in the remainder of Alaska. See "Analysis of GCI Scenarios 1 and 2" presented by Alascom at public hearing, APUC Docket No. R-86-2, April 8, 1987.

STATE OF ALASKA  
THE LEGISLATURE

LEGISLATIVE AFFAIRS AGENCY

Item 4  
POUCH Y STATE CAPITOL  
JUNEAU ALASKA 99811  
907 465 3800

MEMORANDUM

April 18, 1989

SUBJECT: Sectional summary of HB 271  
(Intrastate competition in telecommunications)

TO: Representative Loren Leman

FROM: Teresa B. Cramer JBC  
Legislative Counsel

You have requested a sectional summary of the above described bill.

As a preliminary matter, note that a sectional analysis or summary of a bill should not be considered an authoritative interpretation of the bill and the bill itself is the best statement of its contents.

Section 1 makes legislative findings concerning telecommunications services.

Sections 2, 4, and 6 exempt, from Alaska Public Utility Commission (APUC) regulation under AS 42.05 and from municipal regulation, utilities and services made exempt under AS 42.13, enacted by sec. 7 of the bill. Under sec. 15 of the bill, all of these provisions take effect January 1, 1990.

Sections 3, 5, and 10 repeal the exemption from APUC and municipal regulation created in secs. 2, 4, 6, and 7. Under sec. 17 of the bill, these provisions take effect July 1, 1993.

Section 7 adds provisions concerning competitive intrastate telecommunications services.

Sec. 42.13.010 exempts from APUC regulation an interexchange service provider that did not hold a certificate of public convenience and necessity from the APUC on January 1, 1989. The exemption does not apply if the entity had an affiliate that was certificated to provide intrastate service.

Sec. 42.13.020 exempts certain services provided by a public utility holding a certificate to provide intrastate telecommunications service from regulation by the APUC. A service may be exempted if the APUC finds that the entity or its affiliate does not have market power in that telecommunications service. The section also addresses costs of the regulated and unregulated services.

Sec. 42.13.030 requires the filing of a notice by public utilities exempted from APUC regulation or providing services that are exempted from APUC regulation. The notice contains the name and address of the utility, a description of the interexchange services provided and the prices of those services, and proof of the surety bond required under sec. 42.13.080.

Sec. 42.13.040 permits the APUC to reimpose regulation on a public utility that was exempted under sec. 42.13.010 or on a service exempted from regulation under sec. 42.13.020. Before it may reimpose regulation, the APUC must find that the utility or an affiliate of the utility has market power in the telecommunications market or in that telecommunications service, as appropriate.

Sec. 42.13.050 requires the APUC to establish a system of access charges to be paid by interexchange carriers for using the services of local exchange carriers. The local exchange carriers or their association are required to file a tariff showing the rates and other terms under which the access service is provided to the interexchange service providers.

Sec. 42.13.060 establishes a universal service fund. The exchange carrier association or the exchange carriers maintain the fund. Its purpose is to provide financial support to exchange carriers to ensure the provision of interexchange service at reasonable rates throughout the state. The universal service fund is supported by a surcharge on the exchange access charges established under sec. 42.13.-050.

Sec. 42.13.070 allows the APUC to authorize an exchange carrier association to help administer the system of access charges and the universal service surcharge.

Sec. 42.13.080 requires entities providing or proposing to provide interexchange service to post a surety bond. The

amount of the bond is equal to the entity's estimated exchange access charges and surcharges for 90 days. The section permits a local exchange carrier to contest the sufficiency of the surety bond.

Sec. 42.13.090 provides that an entity may not prohibit or restrict the resale of telecommunications service.

Sec. 42.13.100 requires an entity that provides an intrastate telecommunications service or interconnection to provide the service or interconnection on a nondiscriminatory basis and to permit others to connect with or use the service when the public convenience and necessity require the connection and the connection will not injure the system.

Sec. 42.13.200 directs the APUC to refer to court decisions interpreting state and federal laws concerning monopolies and restraints of trade when determining whether an entity has market power under the chapter.

Sec. 42.13.300 sets out definitions for the chapter including definitions for "interexchange service," "intrastate service," and "local exchange carrier."

Sections 8 and 9 address the exemption of certificated public utilities from the unfair trade practices laws.

Section 8 provides that the provision of interexchange telecommunications service is subject to the unfair trade practices laws. This section takes effect January 1, 1990.

Section 9 exempts all certificated public utilities from the unfair trade practices laws. This is a return to the language of the statute as it now reads. This section takes effect July 1, 1993.

Section 10 repeals the exemption from regulation by the APUC of entities and services providing intrastate interexchange telecommunications services. This section takes effect July 1, 1993.

Section 11 requires a report from the APUC on the status and effects of competition in intrastate interexchange telecommunications services. The report is due in 1993, before the repeal of the deregulation provisions of this bill take effect.

Representative Loren Leman  
Page 4  
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Section 12 requires the APUC to provide, in 1993, for the regulation of previously exempted entities.

Section 13 limits the power of the APUC to change how the money in the universal service fund is distributed during the first two years of the fund's existence.

Section 14 requires the APUC to adopt regulations necessary for the exchange access charges and universal service fund on or before January 1, 1990, to take effect January 1, 1990.

Sections 15 - 17 are effective date sections for the bill.

If I may be of further assistance, please advise.

TC:kb  
wkk4/022

Wed, March 21, 1990

1. HB 537 Property Acquisition Practices

Sponsor: Boucher

Teleconference

2. HB 271 Interexchange Telecommunications Services

Sponsor: Leman

Background: As you know, Senate State Affairs has been grinding along with Frank's bill SB 206 which is the companion bill to HB 271.

Today, in Senate State Affairs, Pourchot will be discussing the latest draft of his bill (attached).

The key provisions of that bill are:

- the APUC would be required to authorize competition in intrastate long distance by March 31, 1991.
- Universal service would be preserved through an access charge mechanism and mandatory geographically averaged rates for retail services
- competitive long distance telephone service would be allowed statewide by resellers
- the APUC would have authority to limit facility based competition to high traffic areas
- the legislation would distinguish between dominant and non-dominant carriers but all carriers would have the same flexibility to lower rates
- the legislation would remove the exemption under state anti-trust statutes for intrastate long distance carriers
- the legislation would be declared void if it is ultimately not found to be substantially similar to both the GCI and the Alascom initiatives

1 IN THE SENATE

2 SENATE BILL NO.

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 SIXTEENTH LEGISLATURE - SECOND SESSION

5 A BILL

6 For an Act entitled: "An Act relating to intrastate long distance tele-  
7 phone competition; and providing for an effective  
8 date."

9 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

10 \* Section 1. FINDINGS AND INTENT. (a) The legislature finds that

11 (1) modern, affordable, efficient, and universally available  
12 local and long distance telephone service is essential to the people of the  
13 state;

14 (2) long distance telephone service should be provided by compe-  
15 tition unless the competition is not in the best interests of the people of  
16 the state;

17 (3) technological advances, reduced costs, and increased con-  
18 sumer choices for long distance telephone service, resulting from the  
19 adoption of an appropriate competitive market structure, will enhance the  
20 state's economic development;

21 (4) the benefits of competition in long distance telephone  
22 service should be shared by consumers throughout the state;

23 (5) the commission should oversee competition in long distance  
24 telephone service to ensure that the competition is fair to consumers and  
25 competitors;

26 (6) the commission should provide for competition in a timely  
27 manner.

28 (b) The legislature intends this Act to be substantially similar to  
29 both initiatives that have been filed with the lieutenant governor

1 concerning competition in long distance telephone service in the state  
2 thereby removing the initiatives from the general election ballot under  
3 art. XI, sec. 4, of the Constitution of the State of Alaska. The legisla-  
4 ture intends this Act to be a comprehensive treatment of the issue of  
5 competition in intrastate long distance telephone service and to provide  
6 for competition in a responsible and timely manner.

7 \* Sec. 2. AS 42.05 is amended by adding new sections to read:

8           ARTICLE 11. COMPETITIVE INTRASTATE LONG DISTANCE  
9                           TELEPHONE SERVICE.

10           Sec. 42.05.810. COMPETITION. (a) By March 31, 1991, the commis-  
11 sion shall authorize competition in long distance telephone service.

12           (b) In providing for competition under (a) of this section, the  
13 commission shall establish a system using access charges to preserve  
14 universally affordable long distance rates. The commission may not  
15 establish a system that leads to a deterioration of universal service.

16           Sec. 42.05.820. SCOPE OF COMPETITION. (a) The commission shall  
17 permit on all routes retail competition in the provision of long  
18 distance telephone service through the resale of services from another  
19 carrier authorized to provide long distance service.

20           (b) For the first two years of competition under AS 42.05.810 -  
21 42.05.850, the commission may limit facility-based competition to  
22 routes between the following locations:

23           (1) cities and unified municipalities with a population  
24 greater than 20,000;

25           (2) locations within 25 miles of cities and unified munic-  
26 ipalities described under (a)(1) of this section; and

27           (3) locations with originating and terminating traffic  
28 sufficient to require 50 voice-equivalent intercity channels.

29           (c) After the first two years of competition under

1 AS 42.05.810 - 42.05.850, the commission may prohibit facility-based  
2 competition on a route only if the commission determines that facil-  
3 ity-based competition on that route will lead to deterioration of  
4 universal service.

5 Sec. 42.05.830. CLASSIFICATION OF CARRIERS. (a) The commission  
6 shall classify a long distance carrier as dominant or nondominant. A  
7 long distance carrier that is the sole provider of local exchange or  
8 long distance facility-based service for a location in the state is  
9 presumed to be a dominant carrier.

10 (b) The commission may classify a long distance carrier that is  
11 not presumed to be dominant under (a) of this section as a dominant  
12 carrier if the commission determines that the carrier has market  
13 power.

14 Sec. 42.05.840. DETERMINATION OF MARKET POWER. In determining  
15 whether an entity has market power under AS 42.05.830, the commission  
16 shall refer to reported court and administrative agency decisions  
17 interpreting state and federal laws concerning monopolies, restraints  
18 of trade, and the telecommunications industry.

19 Sec. 42.05.850. RATE AND TARIFF FLEXIBILITY. (a) The retail  
20 rates and changes to retail rates of a long distance carrier must be  
21 geographically averaged.

22 (b) A nondominant carrier may modify long distance retail rates  
23 without approval of the commission. However, a nondominant carrier  
24 shall maintain a current tariff on file with the commission and shall  
25 submit a filing as required by the commission by regulation at least  
26 30 days before the effective date of a tariff change.

27 (c) A dominant carrier may reduce long distance retail rates  
28 without approval of the commission. However, the dominant carrier  
29 shall publish notice of the rate reduction at least 30 days before the

1 change takes effect and shall submit a filing as required by the  
2 commission by regulation. A tariff revision by the dominant carrier  
3 to increase a rate is subject to review and approval by the commission  
4 under this chapter.

5 (d) If a long distance carrier selling a service or a local  
6 exchange carrier meters a service for minutes of use, time of day, and  
7 originating and terminating location, the long distance carrier shall  
8 offer the service for resale by other carriers.

9 (e) The commission may prohibit the resale of a long distance  
10 service that is not metered for minutes of use, time of day, and  
11 originating and terminating location.

12 (f) The wholesale rates of a dominant carrier for long distance  
13 services for resale are subject to review and approval by the commis-  
14 sion under this chapter.

15 (g) A wholesale rate for a long distance service is not required  
16 to be averaged geographically.

17 (h) A facility-based carrier shall provide wholesale long dis-  
18 tance services on a nondiscriminatory basis.

19 Sec. 42.05.890. DEFINITIONS. In AS 42.05.810 - 42.05.890,

20 (1) "geographically averaged rate" means a rate that uses  
21 the same tariff provisions and rate schedules to apply to all commu-  
22 nications of the same distance, regardless of the originating and  
23 terminating points of the communication;

24 (2) "local exchange carrier" means any carrier certificated  
25 to provide local telephone services;

26 (3) "long distance carrier" means any carrier certificated  
27 to provide long distance telephone services;

28 (4) "long distance telephone service" or "long distance  
29 service" means intrastate, interexchange telephone service provided to

1 the public.

2 \* Sec. 3. AS 45.50.572(d) is amended to read:

3 (d) AS 45.50.562 - 45.50.596 do not apply to public utilities  
4 which have been issued a certificate of public convenience and neces-  
5 sity under AS 42.05 to the extent the utility provides services other  
6 than long distance telecommunications service. The sections apply to  
7 the provision of long distance telephone service.

8 \* Sec. 4. This Act takes effect on the date 30 days after the later of

9 (1) a decision by the lieutenant governor that the initiative  
10 petitions concerning competition in telecommunications in the state that  
11 are on file with the lieutenant governor are void under art. XI, sec. 4,  
12 Constitution of the State of Alaska; or

13 (2) a final judicial disposition of the case, if the lieutenant  
14 governor's decision is appealed, declaring that the initiative petitions  
15 are void.

# STATE OF ALASKA

STEVE COWPER, GOVERNOR

ALASKA PUBLIC UTILITIES COMMISSION  
DEPARTMENT OF COMMERCE AND ECONOMIC DEVELOPMENT

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ALASKA PUBLIC UTILITIES COMMISSION

COMMENTS TO HB 271

March 21, 1990

The Commission has spent the last eighteen months restructuring the telecommunications industry and, among other things, adopted access charges and completed work on three additional issues: cost separations, subscriber line charges, and the Alascom rate design. The Commission is currently examining the competition issue and has issued an order proposing competition regulations implementing proposals set out by an independent consultant. The intent of the proposed regulations is to permit competitive entry into the intrastate long-distance market while, at the same time, preserving universal service. These proposed regulations are currently being noticed to the public, with initial comments due April 27, 1990, and reply comments due May 25, 1990. A hearing is set for June 5, 1990.

The Commission is not in a position to endorse HB 271 at this time. Should the legislature determine a policy favoring competition, the Commission requests that the statutes address the mechanism for implementing it only in generic terms. The Commission should be allowed to develop detail mechanisms that will allow it to quickly react to rapid changes occurring in both the telecommunications industry as well as in the regulatory arena.

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# **Competitiveness & Telecommunications**

**AMERICA'S ECONOMIC FUTURE:  
THE HOUSE-TO-HOUSE  
DIGITAL FIBER OPTIC NETWORK**

**G. A. Keyworth, II  
and Bruce Abell**

Hudson Institute

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**Dr. George A. Keyworth, II**, is Director of Research at Hudson Institute. From 1981 to 1985, Dr. Keyworth served as Science Advisor to President Reagan and as Director of the White House Office of Science and Technology Policy. He led the Administration's efforts to capitalize on U.S. science and technology to strengthen industrial competitiveness. Prior to his White House service, Dr. Keyworth was Director of the Physics Division at Los Alamos National Laboratory. He holds a Ph.D. in Nuclear Physics from Duke University.

**Bruce R. Abell** is a Senior Research Fellow of Hudson Institute. He was formerly Assistant Director of the White House Office of Science and Technology Policy and has worked in areas of national science and technology policy, and industrial technology strategies, for more than 15 years.

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# Competitiveness & Telecommunications

By G. A. Keyworth, II, and Bruce Abell

## Introduction

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Most people are familiar with the broad outlines of the personal computer revolution:

- The dizzying increase in computing power for less and less money, giving kids at home, spending the equivalent of paper route earnings, capabilities that only advanced research laboratories could afford a decade ago.
  - The reverberations in the traditional computer market from the sale of 40 million PCs in the United States, with giants like IBM struggling to find ways to maintain their bread and butter mainframe business and lesser giants, like Wang, hanging on for dear life as their entire industry shifts. Between now and 1995, the index of computing cost is expected to drop six times faster for PCs than for mainframes. And because PC cost was less to start with, the cost per computation could be more than a thousand times less for the PC than for the mainframe.
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- The explosive growth of impertinent new companies, especially those producing software, whose successes underscore the volatility--and opportunity--in the market.
- The frighteningly rapid "cycling" time for new generations of technology and for new entrants (domestic and foreign) into the marketplace.

However, fewer people realize that what is happening in computers is being paralleled in telecommunications. Even more important, those changes are linked and driving each other, and within a few years the two giant industries could begin to become indistinguishable. But there is one fundamental difference between the two industries: In the United States, one operates in virtually the freest market imaginable, and the other is tightly, and disastrously, hobbled by horse-and-buggy regulatory mechanisms that seem blind to the 1990s and to the growing competitive threat to American technology. That mismatch presents a grave danger to U.S. leadership in both of these fields.

## The Possibilities

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A simple view of what is happening in both industries is that "intelligence" that has traditionally been concentrated in a few central locations--whether in the form of giant mainframe computers or their virtual equivalents, giant telephone company switching centers--is steadily migrating out to the simpler, inexpensive equipment in the hands of the users themselves. It turns out to be much cheaper to provide comparable capabilities that way.

For a long time, from the end of World War II until about 1982, the computer industry developed the way

other technological industries had developed before--with the technology getting bigger, more complex, and more centralized. But computers were not power plants or steel mills, and it turned out that people who were concentrating computers in a central place were due for a surprise. That surprise was the personal computer. Interestingly, the pattern by which the personal computer has reversed trends toward centralization is evident in other industrial areas as well, suggesting that we are entering a period of major industrial restructuring. These trends are seen in areas as wide-ranging as steel (mini-mills), nuclear power (smaller modular designs), and even space technology (cheaper, more numerous satellites built around the same information-handling microprocessors that drive the personal computer expansion).

Earlier, a computer user had to go to the computer "temple" himself and work there, or under the most

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**The link between the computer and telephone industries is the increasing importance of a common "language" called "digitization."**

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friendly circumstances, tap into the computer using a terminal that allowed him to operate the computer remotely. A telephone user, likewise, had to rely on a central office, far down the line from him, to route his call or to perform once-complex tasks like conference calls. Now, with smart equipment, the user does his computing on his desk and lets his office phone system choose the cheapest long-distance rate for his call. What results is the beginning of an information-age version of "power to the people."

The direct spinoffs are broad, embryonic, and barely suggest the longer-term benefits and economic

importance we will experience in coming decades. Nonetheless, even now, they are impressive--such as: desktop publishing that allows the PTA or the local bicycle club to provide its members with documents at low cost and virtually overnight (not to mention managing the mailing list); office telephone systems that include such labor-enhancing features as voice mail, call forwarding, long-distance optimization, and internal conferencing; electronic mail between individuals and high-speed transfer of data between computers thousands of miles and many time zones apart; interactive video disks for one-on-one training and learning; interactive access to thousands of commercial databases, including scientific journals, newspapers, and magazines; and on and on.

The link between the computer and telephone industries is the increasing importance of a common "language." It is what is called "digitization," a computer-age version of Morse Code. Like Morse Code, it is a language that consists of only two words. Those two words, spoken with a rapidity that only computers can appreciate, are the means by which complex information is simplified so that it can be treated in the computer as nothing more than a series of ones and zeros to be added and subtracted.

But what makes digitization important far beyond the relatively mundane manipulation of words or numbers in computers is that virtually any kind of information--words, numbers, voice, music, photographs, movies--can be converted into that same stream of ones and zeros, then reassembled into their original form or some form that intertwines several different kinds of information.

That intertwining has profound implications for telecommunications.

Today we require multiple means for sending and receiving information into our homes and offices--copper telephone wires for telephone traffic, coaxial cables for television signals, terrestrial and satellite transmission for broadcast signals, mail delivery for handwritten messages, newspaper delivery for timely printed information, photos processed at the drug store for unique visual information, and even the homework that children carry in from school. But when all those things can be digitized--and computer hardware and software is rapidly becoming available to do that efficiently--we no longer need all of those separate delivery systems. In the digital world that is coming, we can use the same pieces of equipment to move information around and display it, sending it from place to place over a common route.

But--

Which route will that be?  
Who will have access to it?  
Who will be in charge?  
How long will it take?

Those will be the central policy questions for the United States as it makes the transition from the Industrial to the Information Age. They are questions that become increasingly difficult to evade, because the common language of digital information is going to integrate, amplify, and restructure the industrial world over the next several decades. And on the answers hang the fate of a vast portion of the American technology business, and our economic security.

## Industrial and Economic Ramifications

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It may help to put that previous statement in perspective to offer a view from the other side--from Japan. Some technology planners there are estimating that within 25 years something on the order of 30 percent of the Japanese GNP will be linked to that common communications route--which will be a high-capacity fiber optic network that links virtually every location now connected by telephone.

Fiber optic has the immense advantage over metal wires in that it can transmit extremely large amounts of information over a thin, flexible cable. Although invented decades ago, it is only in recent years that the cost of

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**Infrastructures, if they are wisely chosen, create economic opportunities. A digital network based on high-capacity fiber optic technology is the way enormous amounts of goods and services are going to be delivered and used and even produced in coming decades.**

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producing rugged, pure fibers has become competitive and that the "opto-electronics" for switching, reading, and sending the light-carried signals has become practical. In recognition, Japan announced it intends to invest nearly \$250 billion to upgrade their system's digital capabilities over the next twelve years--into what they have already designated their "Universal and Intelligent Communications Network." The numbers themselves, and the time scale, are less important than the message being conveyed about anticipated economic importance of digitized telecommunications in Japan. And, as Philip Campbell, Vice Chairman of Bell Atlantic, recently emphasized, the Japanese are making that investment

with the expectation that it will pay for itself through consequent technology exports, chiefly to its best customer, the United States.

What is it about this technology that makes it so important? In a way, it is the same thing that made earlier installation of other national infrastructures, which were also networks, important. The railroads literally opened up the West by giving national access to the resources there and by providing supply lines to support populations to exploit them. Rural electrification earlier in this century may have been important as a social benefit for rural America, but it was more important as the opening door to vastly increased farm productivity and rural development.

Our early lead in installing a consumer-oriented national telephone network not only introduced the efficiencies of ready communication to the U.S., but it provided an eager market for development of new technology and new products, by AT&T and its affiliates and rivals, that translated into long-term, though rapidly dwindling, telecommunications leadership and profit for America. And the interstate highway system, the most recent national infrastructure, became a critical element of our post-World War II economic growth, a part of the infrastructure whose importance can be seen in the intense concern today about its deterioration.

The point is that infrastructures, if they are wisely chosen, create economic opportunities. The communications infrastructure being advocated in this paper as a near-term national project--a digital network based on high-capacity fiber optic technology--is the way enormous amounts of goods and services are going to be delivered and used and even produced in coming decades, and it will be the backbone of the merged communications and computing worlds.

It is important to recognize the proliferation of products and services that already reflect the dramatically increased reliance on these new technologies. Computers may be the minor constituent of those applications when compared to the uses of silicon in products from automobiles to talking toys, and in services from Federal Express to McDonalds. Moreover, the process of manufacturing is shifting to an information-based system--from computer-assisted design to just-in-time inventory management--that is increasingly characterized as the flow and alteration of information, not the flow and alteration of materials.

And where is the fastest growing sector of business? In software development, which provides the management and operating tools for all that silicon. Businesses like Microsoft, with sales of nearly \$600 million with profits of more than 20 percent of sales, which have grown like beanstalks during this decade, are the visible tip of immense dedication of manpower to software development. Companies like IBM or AT&T or Hewlett Packard find their new product development paced less by technology than by the ability to provide software for it.

In short, information technologies and the new and rejuvenated businesses that they enable are already the major source of U.S. economic dynamism--and the sector where we have the best chance of fending off foreign competition. But we are rapidly approaching the point where lack of that digital network will become our competitive disadvantage.

This new kind of communications network is not just another evolution of technology--unless we would classify the telephone or the assembly line or the computer as "just" another evolution. This is a discontinuity, a new infrastructure, one that is going to be as important,

and with as much potential for generating new jobs and prosperity, as did railroads, electrification, or highways.

For the user, the prime attribute of such a network would be speed--which translates into vastly expanded access. If the network were capacious enough, the user could send or receive virtually anything that could be pushed through his end-unit to someone else's end-unit as fast as he could feed it in. That is certainly not the case now, except for telephone conversations and for those fortunate business users who have access to existing fiber optic linkages (but who still are stopped short when they have to deal with customers and suppliers through "weaker links"). Moreover, because he would be converting his "thing" into digital format for transmission, it would reappear at the other end in virtually identical form to the original--and even today's telephone conversations can not make that claim.

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**This new kind of communications network is not just another evolution of technology--unless we would classify the telephone or the assembly line or the computer as "just" another evolution.**

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The applications in business will be immense but consider just a few ways in which ordinary consumers would delight in having access to the network.

The proliferation of facsimile machines today comes up against some very real and frustrating limitations in our existing telephone system. Anyone who has waited for a long document to creep out of the machine, then tried to decipher some of the fuzz that is supposed to be legible, knows how frustrating the inherently slow transmission of twisted-pair telephone wires is for anything other than voice. But a fiber optic network would enable

us to make fax machines that provide print quality and copy speed at least as good as good Xerox copies today.

Another example. Today you can buy from Sony what looks like an ordinary 35-millimeter camera. But the camera does not use film. It records fifty pictures on a two-inch square floppy disk. Those pictures can then be displayed on your television screen--or the pictures can be sent, over a telephone line, anywhere in the world. The camera and player, at more than \$800, may be on the verge of consumer acceptance, but the transmission of pictures is not terribly practical yet, and it is expensive. It takes about five minutes of dedicated phone time to send a single picture right now, so it is neither convenient nor economical. The people who endure those limitations, and those of other technologies like it, are professional photographers who have to get photos from one place to another very quickly, people working on deadlines.

But if you were thinking about future markets, how would they look if that same picture could be transmitted in a second or less--a snap of the fingers and grandma has a picture of the new grandchild.

Any discussion of these kinds of high-speed transmissions over the network lead to an inescapable companion issue: What are those smart machines that are going to be hooked on to the ends of that digital pipe? Telephones? Computers? Or a hybrid?

None of those responses is visionary enough. The best answer offered so far has been masquerading as something else--High Definition Television (HDTV)--and our seeming failure to appreciate the downstream impacts of that development could cost us dearly a decade from now.

It would be foolish, and arrogant, to disregard the importance of HDTV as a means of delivering television entertainment to the home. That has been the hook that snagged the public's interest in the subject, and the economic importance of entertainment has consistently permitted large investments in new consumer electronics technology. But if HDTV represented no more than a better television, it would not have attracted so much attention in the first place--certainly not in the United States, with its relatively minor stake today in television hardware.

HiDTV was, instead, touted as critical to the U.S. microelectronics industry because it would become such a large market for chips that (among other issues) HDTV

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**When the device is fast enough, with enough memory, to handle the flood of digital data representing intermingled images, text, and sound, it will begin to do what has mostly just been promised so far--to make the computer approach the friendliness of a telephone or television.**

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manufacturers would have strong leverage on chip supplies and availability. That is important to U.S. national interests.

That gets closer to the point, but still stops short. HDTV needs all those chips because HDTV will become the most powerful computer yet put into the consumer marketplace. The second-generation HDTV, the truly digital image processing and display device, could have all the functions we expect to see in the hybrid smart device at the nodes of that digital network.

HDTV is the point where the personal computer and television converge, and it will soon be academic

whether that device is perceived as a personal computer (or a home/workstation) with a superb display that shows television programs too, or a television that is so versatile that it acts as a personal computer/workstation as well. Our Hudson colleague George Gilder, in his new book *Microcosm*, quotes Nicholas Negroponte of MIT as predicting: "Your TV set will probably have 50 megabytes of random access memory and run at 40 to 50 MIPS [million instructions per second]. It will be basically a Cray [super]computer." So the home and office will have this new device, a digital processor of prodigious capabilities.

The marriage of a consumer-friendly television and an intimidating PC may seem mixed and unpromising, but those prospects are certain to improve in short order. We are on the verge of an advance in PC software and hardware that may finally (admittedly a dangerous prediction) provide the kind of user-friendliness that will be required in such a hybrid device.

Among the most important advances will be the combination of very-high-speed operations (paced by the hardware of the next several generations of micro-processors) and the introduction of graphical menus and artificial intelligence (the software embodied in the so-called "presentation managers") that speeds users through operations with minimal prior knowledge needed.

Those are then combined with new capabilities in mixing media in the computer/television as the digital integration takes hold. *Business Week* (Oct. 9, 1989) reports a market forecast for multimedia of \$11.4 billion by 1993, up from a few hundred million today. It also reports Apple's John Scully as predicting "Multimedia will change the world in the 1990's as personal computers did in the 1980's." When the device is fast enough, with

enough memory, to handle the flood of digital data representing intermingled images (still and moving), text, and sound, it will begin to do what has mostly just been promised so far--to make the computer approach the friendliness of a telephone or television. Much of that will unfold within the next few years.

If we then have this computer-television in place, it will exert a naturally irresistible pull on the traditional home and office telecommunications as well. For starters, the telephone line can be easily extended so that facsimile could be handled by this device, especially if the display, printing, and storage capabilities inherent in computers can be used to enhance the service. In fact, today's computer manufacturers have already marketed several generations of "fax boards" that plug into ordinary PCs and provide many of the fax's functions for PC users, saving money by taking advantage of the PC's printer for hard copy. Fax boards also solve the growing problem of "junk faxes" by storing the incoming faxes in computer memory where they can be easily ignored or discarded by the uninterested recipient.

But if the fax is built into this device, why not the rest of the telephone as well? The intelligence we want in our phones or faxes should be relatively easily supplied by the same computer mechanisms that drive the hybrid device. So why maintain and pay for duplicate devices?

Much of this merging can and will happen as a consequence of computer technology driving the market. But there is a parallel force at work as well, because this is a computer-television. One way or another, the television receives information at very high rates. Mere telephone connections will not do; they cannot accommodate the high flow of data. Today, television uses three means of delivering imagery: broadcast through the air from ground antennas or

satellites; coaxial cable run into the television set; or videotape. But there is a fourth route that could supplant them all. Fiber optic cables have far greater capacity, better fidelity, and one other advantage: They can serve virtually every other communication need a home or office may have, including telephone service and computer data exchanges. All in one spaghetti-thin strand, and with capacity to spare for future expansion.

The fiber optic network also takes that critical step of linking each node to every other and providing that virtually instantaneous interaction between nodes that

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**Many organizations with significant communications needs have largely abandoned the traditional concepts of both a "telephone" and a "telephone company." Unfortunately, those concepts have been given artificial extensions of life by our telecommunications regulatory system.**

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puts us all "on-line" with whatever and whomever we want. But while the computer and television industries are driving their segments of the market toward each other, the telecommunications industries--the ones to develop the fiber optic digital network to connect the devices--are badly out of kilter in the United States, but ominously less so in other countries. In the United States we have a worsening mismatch between the senders and receivers of digital information and the network they can use.

In a thoughtful recent book, *The Geodesic Network*, Peter Huber writes that, "The major telecommunications challenge in the next decade is the seamless interconnection of the intelligent nodes already in place, in home computers and in mainframes, in central power plants

and in residential electric meters and thermostats, in burglar alarms and in police stations, in medical sensors and in hospitals, in cars and in satellite-orientation systems, in the laser-optic electronics [CD players] already found in millions of homes and in the fiber networks that already cut across the country."

Huber's key word is "seamless." What we have now is anything but seamless. The biggest kink is the low-capacity copper wiring that hooks our homes, and most of our offices, into the telecommunications network. Even though there already exist some high-capacity fiber optic connections between major transmission points, most of us remain constricted by our narrowest link. In many ways, so does our potential opportunity to lead in the marketplace.

## Obstructions

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The situation with regard to distributed intelligence in computer and telecommunications networks in the United States is perplexing. The reasons are partly historical, linked to the divestiture, in 1984, of AT&T. AT&T was, by all measures, a shining star in America's industrial world. It was an unchallenged technical leader in telephone systems and networks. It provided service to users that set standards for the rest of the world. And it provided income for its stockholders, who included many, many ordinary citizens. By most measures, it was an ideal American company.

But by one measure it was not. AT&T was essentially a government-approved monopoly. It was a benevolent monopoly, but a monopoly nonetheless. It was a monopoly in terms of the services it provided, and it was a monopoly in terms of its ability to prevent competition. However, by the 1970s it was no longer a

monopoly in terms of its technological dominance. For one thing, many foreign companies, active in their own domestic markets, were becoming very good. They were doing something we now see is critical to developing new technology--taking advantage of their domestic markets to explore, develop, and improve new technology. There was also growing pressure from potential U.S. competitors who felt they could offer comparable if not better--and cheaper--services than AT&T. In particular, since AT&T's rates were deliberately structured to favor the smallest customer, and therefore subsidized in part by the business and long-distance users, competitors saw plums dangling and ready to be plucked.

By the time of the divestiture of AT&T in 1984, after a decade of legal maneuverings, the technological break-out was in full force. There was an immediate rush of new players into the traditional telephone markets. At the same time, there were already many businesses with specialized telecommunications needs that had stepped into the future in the form of private high-speed data and voice transmission systems. In effect, they met their needs by working around an increasingly irrelevant regulatory system. They gave us a glimpse of the future in the form of an active, independent telecommunications market that began to blur the distinctions between telephones, other communications, and computers. Many organizations with significant communications needs have largely abandoned the traditional concepts of both a "telephone" and a "telephone company."

Unfortunately, those concepts have been given artificial extensions of life for most consumers by our telecommunications regulatory system. And the ordinary consumer, who was supposed to benefit most from a more competitive marketplace, is benefitting far less than he could because the regulatory system has remained

narrowly coupled to old concepts of telephone service. Public policy has been so preoccupied with grandma's telephone service that it threatens to sacrifice her grandchildren's employment opportunities. And, ironically, the users of private networks are the ones with the better services that were supposed to be stimulated in the public network by divestiture of AT&T.

Among the more grating restrictions are those preventing the Regional Bell Operating Companies (RBOCs) from manufacturing telecommunications equipment and from originating any of the information products that run through their lines. In effect, as Peter Huber points out, the RBOCs are reduced to the role of a reseller of other people's equipment--hardly a charter to encourage innovation.

A growing number of people fear that those restrictions are already costing the United States its previously unchallenged leadership in the very area they were intended to stimulate. It probably made good sense to break up the telephone monopoly in this country because of the constraints it was placing on competition and introduction of new technology. But the action went only half way, in effect inviting new players to compete but reining in the old players from responding. Someone observed that we did the right thing by breaking up the telephone monopoly in this country--but then we undercut that action by substituting a czar for a monopoly to run things.

There is another complication. The regulatory morass is worsened by the fierce competition among the growing number of players in telecommunications. The current situation is as much dictated by ongoing contentiousness between telephone companies and computer and television transmitting companies as it is by regulations. All the parties are locked into a self-

destructive zero-sum game in which they appeal to the regulators for a larger piece of the pie--at a time when there should be room for most (though probably not all) of them to grow synergistically. As a consequence, those and many other would-be players in this new market are stymied--able to see opportunities for growth, but unable to know which opportunities will be permitted.

Telephone companies understand the potential for growth all too well, which only increases their frustration at the regulatory constraints they have to live with now. Television broadcasters and cablecasters also understand--and with some justification, fear--the changes that will occur as the consumers' equipment increasingly merges into integrated systems. Integration of equipment pushes the technology toward integration of communications routes--a possible loss of a unique business niche for powerful interests.

### **The Threat**

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As was noted earlier, it is the telephone companies who are most hamstrung by regulation and least able to control their own destiny. And among them, it is the RBOCs who seem the most boxed in, forbidden from manufacturing while watching foreign competitors set up shop in their own backyards, and generally prevented from adding value to what they sell. They see the technology, and they see the opportunities to exploit it, but they have a difficult time getting permission to do so. That is not the case in other countries, which have not had the "benefits" of divestiture of their national telephone systems. Ironically, American companies that manufacture telephone equipment find themselves taking their technology expertise to foreign companies for joint development--the products of which are then sold back

into our own market--because the RBOCs are forbidden to become involved in manufacturing.

The consequence of our muddle, and the diminished incentives for investment in new technology, is that our once-unquestioned technological and service leadership is eroding, and we are choking off an

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**It is vitally important for the United States to move quickly and forcefully to create a telecommunications infrastructure on which a new U.S. electronics industry can grow.**

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enormous domestic market by allowing squabbles between potential competitors to burden our ability to keep up with the rest of the world. Consider this example: France, which ten years ago had a telephone system that was the butt of international jokes, now has a home and office videotex system (Minitel) with over five million users and some 10,000 different services available to them--all over their telephone system. The most popular has been an electronic telephone directory--no more phone books. But once Minitel gained acceptance through this natural service, it became an important new avenue for at-home shopping and travel planning. Now shop signs in France routinely list their telephone numbers and their Minitel numbers for customers' convenience.

The U.S. regulatory disincentives are retarding America's rightful place in the Information Age, and they are denying opportunity to our citizens. In looking at the means for our own firms to thrive in our own marketplace, we overlook the importance of that common language--the parlance of that digital world where voice, pictures, text, everything can be intermingled.

And, of course, the problem is compounded by the encroachments of non-telecommunications industries which have long-term potential to capture elements of that market. For example, several Japanese companies, like NEC and Hitachi, will soon produce a high definition television. Even though the U.S. FCC has established standards for future American HDTV broadcasting that differ from those pursued by the Japanese, including backwards compatibility with existing sets, the Japanese system nearing production operates by satellite feed, which is weakly regulated, rather than by terrestrial broadcast channels. And Japanese companies are investing significantly in making small and affordable home satellite dishes.

NEC, for instance, could sell a dazzling new television, along with an HDTV VCR to drive it, and also offer special programming from satellites they own and operate. The efforts by Japanese companies to buy American entertainment properties, like Sony's purchase of Columbia Pictures, would be a reasonable part of a strategy of acquiring material for broadcast. Given the wide bandwidth available on direct broadcast satellites, it would be possible for the television provider to begin to offer additional communications services as well--perhaps a telephone service, or digital facsimile.

Thus, while our own business interests continue to struggle with a regulatory system that is loath to rock anyone's boat, an unregulated arm would be quietly building the basis for its own integrated telecommunications system. We already know that the next-generation HDTV can be a personal computer as well, and even if the bandwidth of direct broadcast satellites is ultimately limited compared to fiber optics on the ground, the early entrants will have many years' head start on manufacturing integrated digital products and in shaping the consumer market.

One can postulate other kinds of incursions on our domestic computer/communications/television market. They have happened in less complex areas already. But the seriousness in the case of integrated communications is greater than it has been for such isolated cases as television receivers or VCRs. The specific threat in the form of HDTV underscores a general threat, not just to our telecommunications business, but to one area of business that has resisted foreign challenges reasonably well so far--computers. It is evident that as the computer's value is increasingly dependent on multi-media capabilities and on visual displays, the Japanese companies' expertise in consumer electronics will make them increasingly strong competitors. For that reason, it is vitally important for the United States to move quickly and forcefully to create a telecommunications infrastructure on which a new U.S. electronics industry can grow.

### **Strategy**

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At some point in the future, telecommunications networks are going to consist entirely of high-capacity fiber optic cables. These digital networks will offer dazzling speed and near-perfect accuracy in transferring information from point A to point B. And those points will be virtually anywhere--home, office, classroom, library (in the broadest sense), and so on.

**The single most important thing the U.S. could do now to promote U.S. industrial interests is to speed the wiring up of this country with a fiber optic communications network--an electronic pipeline that will make it as simple and fast to exchange images and data and whatever from machine to machine as it is to call your aunt in Dubuque today.**

This suggestion often draws a puzzled response, because in the United States many people mistakenly believe we are already in the process of installing digital networks at an appropriate pace. Some people point to plans to provide what is called integrated service digital network telephone service, or ISDN.

But ISDN is proceeding slowly and does not begin to exploit the possibilities of digital communications, nor to keep pace with the technology available to the end-user in non-telephone equipment. ISDN is indeed digital, but it will be introduced initially using existing copper wires. While the users will have the opportunity to begin to enjoy some limited advantages of a digital network, ISDN falls far short of what optical fiber technology would enable. It would make possible the clarity of digital transmissions, but not the speed needed to allow high-speed or visual transmissions. The fact that there is an international body that has established standards for the introduction of ISDN, as well as timetables, is too often used as a goal for policymakers in the United States, whereas it tends to be a minimum elsewhere.

Why? Because ISDN is a creature of the telephone companies, and telephone companies, because the regulatory constraints niche them severely, have weak incentive these days to think expansively.

Nor do the kinds of specialized or private fiber optic trunk lines installed to serve business and scientific users constitute a public network. Those trunk lines are analogous to an interstate highway that carries bulk traffic from one city to another but then leaves your home or office still isolated down a dirt road--and with your new Ferrari sitting in the garage! A fiber optic network to meet national needs would give every user that same kind of end-to-end capacious and rapid service.

Nonetheless, those existing, limited networks are the technological backbone of our future, because they represent both our tradition of leadership in this area, as well as the repository of our own leading edge technology. For 20 years the industrial and research communities have been developing and using these specialized telecommunications networks. The United States pioneered technology for computer communications in that market. Many parts of the world are now crisscrossed with dedicated telecommunications networks for high-speed exchange of information--whether for airline reservation systems, financial transaction networks among banks, credit card validations, electronic mail, or any of thousands of other uses that are taken for granted. There is, in fact, an immense technical base underlying those routine operations.

What has emerged is a large number of private networks that operate according to well-established standards, but which are owned and managed by thousands of different organizations. The origin of this proliferation of what is--for all practical purposes--computers talking to computers, was in early networks developed by the Defense Department for use by scientists and engineers. Their expansion, and improvements in digital communications over two decades, created a counterpart in the computer industry of the public telephone network expertise in the telephone companies.

As we look to the elements that will comprise future telecommunications networks, we see it drawing on the strengths of four distinct, but merging, sectors:

- Personal computers and the devices associated with them;
- Television (as the force driving technologies for advanced image processing and display);

- Public telephone networks, with their technologies for handling immense numbers of separate communications simultaneously (AT&T still constitutes the world's best resource for designing and running large networks); and
- Data communications networks, with advanced technologies for handling immense amounts of information for relatively fewer users.

### **An Approach to Public Policy** \_\_\_\_\_

How can the United States forge a national policy, and national commitment, that will enable us to emerge from today's confusion as a leader of tomorrow's industry? While there are many points of agreement on how the technology will evolve, over time, there is little agreement on the issues raised earlier in this paper. Those include:

- What are the technical specifications for the network, including the interfaces between different parts of it, some of which already exist?
- Who will control access to it? Will a new regulatory means be needed?
- How long will it take to install, and in what order it will proceed?
- How will conflicting interests, and investments, be reconciled? What role will foreign business play?
- How will services be priced? By the bit? Flat rates? And will there continue to be subsidies of one class of user by others?

- How important will it be to ensure universal access to the advanced network? Will this become a rich/poor issue?

The problem is unlikely to be repaired without the participation of the federal government. It is also unlikely to be repaired without acknowledging that although there will, in the long run, be millions of winners, there are also going to be some currently established players who do not fare well. But that appears to be the case whether or not we act to change things.

The RBOCs, under current practices, face a less-than-stimulating future, but would benefit greatly from loosened restrictions. Conversely, the cable television companies would appear to be poorly positioned to compete in the technology-driven market that could accompany bundling of services on a single communications channel. Existing television broadcasters who originate programming have already seen and felt the impacts of competition from alternatives available on cable. They perceive the fiber net as yet further encroachment on their long-held dominance. Fiber, with its capacity for delivering perhaps a hundred channels to the viewer, could fragment the market into many niches, threatening the mass markets that now support the expense of production. The future role of broadcasters is not clear, but must be addressed and perhaps even assured to win their support.

Likewise, there exists a persistent opposition from the print media to some aspects of fiber networks-- particularly to the requests by the RBOCs that they be permitted to sell information of their own rather than simply provide the channel. Just as broadcasters fear loss of their large markets and revenues, newspapers (which have become increasingly monopolistic) and

magazines fear loss of their markets as customers find fiber-provided advertising and news to be a convenient alternative to what they have now.

A story, perhaps apocryphal, says that a British leader scoffed at the invention of the telephone, saying that "It may be all right for the Americans, but we have plenty of messenger boys." In truth, the physical production of the daily newspaper--complete with the labor-intensive hand delivery to each customer in the darkness of night--would seem vulnerable to a technology that made that delivery via a fiber optic cable. Television news has already forced the print media to restructure, with the closure and consolidation of many formerly competing news outlets. While the print media brandish the First Amendment at potential competition more readily than some feel appropriate, there will be serious issues that arise, and must be solved, if print media and a fully utilized fiber network are to coexist.

Yet the fact that the potential political problems are difficult--and often nasty--should not dissuade pursuit of new public policy. Adhering to the status quo threatens us twice. It threatens first to handcuff our best efforts to compete for near-term telecommunications leadership as foreign companies encroach where we are forbidden to advance. And it threatens also to stifle U.S. progress in an unfolding area of new technology, one that early indications suggest will be one of the dominant ones during the next generation. The stakes may be very large.

Actually, government's role in breaking the stalemate does not have to be that intrusive, nor is it a case where large amounts of government expenditure will be required. But government is the only party that can clear up the rules, and clear the track, so our industries can exploit the opportunities.

The early fallout of such action would be to allow American industry to begin to make long-term plans for how they will be a part of, and profit from, a national digital network. It may well be that the process of cabling the entire country could take 20 years. But what would be different would be that demand would be permitted to drive the process, instead of being stalemated as it is now. And American companies could provide goods and services to meet that demand. Right now very few of them are able to make major commitments to technology or product development because there are no standards to guide the products they might make, and certainly no timetable that would tell them when they might be able to sell something.

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**Government's role in breaking the stalemate does not have to be intrusive, but government is the only party that can clear up the rules so our industries can exploit the opportunities.**

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What is missing is a "business plan" for the transition to fiber optics, without which companies can barely start to forecast potential revenues from products designed for the network and without which they will hesitate--with good reason--to invest in the research and development that precedes the introduction of new technology. And that, in the long run, may be the biggest penalty we pay for our inability to resolve the policy issues. Because companies in other countries already have much better guidance about what their domestic markets will be like.

We have the largest telecommunications system in the world, the biggest computer market, and the biggest domestic market overall. In the scheme of worldwide

competition, our domestic strength can be a tremendous lever for our own technological leadership. But not unless we clear out the confusion and let it work. The network should be looked at as a prolific tree, and the fruit will be the new businesses that will hang on that network. Japan will not approach this new technology with a fragmented domestic market, and they will grow the profitable fruit to hang on that fiber optic tree.

As things are proceeding now, there is a strong possibility that the United States may emerge from this transition to digital communications as the world's greatest customer, not the greatest supplier. That would be tragic. As we look across the spectrum for areas of industrial technology where we can make a stand, and where we have the tools to lead and even become exporters, digital telecommunications is one of the best and biggest opportunities we are likely to see for a long time.

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Item 5

**INTRASTATE LONG DISTANCE TELEPHONE COMPETITION**

**SENATE STATE AFFAIRS COMMITTEE**

**SECOND SESSION**

**16TH ALASKA STATE LEGISLATURE**

**Senator Pat Pourchot, Chairman**

**Report to the Senate**

**January 1990**

The Chairman extends special thanks to Philip Treuer for his work in the drafting of this report.

## INTRASTATE LONG DISTANCE TELEPHONE COMPETITION EXECUTIVE SUMMARY

The technological revolution which brought interstate long distance telephone competition to the lower 48 and Alaska is now bringing the same pressure to bear on Alaska's regulators to introduce intrastate long distance service. While many states have introduced competition, Alaska's unique demography, small telephone market, and the absence of subsidies which are available to interstate users but not intrastate users make the benefits of competition less clear.

Normally, the agency which would make the decision of whether or not to introduce competition is the Alaska Public Utilities Commission (APUC). The APUC has recently completed a variety of telecommunications related decisions which could set the stage for a decision on competition. However, two private long distance carriers, Alascom and GCI, have placed initiatives on the November 1990 ballot which would provide for a competitive intrastate structure. If either initiative passes, it would supersede any previously approved regulations adopted by the APUC.

Unfortunately, because Alascom and GCI are adversaries, their respective initiatives represent the extremes in terms of regulatory options. Neither initiative provides the APUC the flexibility to adopt a more moderate approach. Although voters will have a choice of regulatory options to vote on in November 1990, that choice is extremely limited and may not include the most appropriate public policy for Alaska. In addition, it is likely that objective public policy analysis of this complex issue will not be heard in the public relations blitz that will precede the November vote.

Because the implications of adopting either initiative have not been fully explored, it is very possible that either initiative could create a substantial legal, administrative and financial burden on the State and possibly adverse economic impacts on some telephone consumers. A more rational and responsible approach, at this point, appears to be to continue a decision-making process through the APUC which balances the

goals of affordable, universal service with the efficiency and pricing incentives of competition.

An initiative can be removed from the ballot only if the legislature passes legislation which in the Attorney General's opinion is substantially similar to the initiative. To retain the ability to develop other options through the APUC process, it is recommended that the Legislature consider legislation which comprehensively addresses this subject and could be found to be "substantially similar" to both the proposed initiatives, thereby removing them from the ballot.

## INTRASTATE LONG DISTANCE TELEPHONE COMPETITION

The State of Alaska is rapidly approaching a decision on whether to allow competition in the provision of intrastate long distance telephone service. The process of deciding this issue has been initiated in three different forums: the Alaska Public Utilities Commission (APUC), the State Legislature, and the public ballot (through the initiative process). However, which public body will make the final decision is unclear. A decision in one forum could well be nullified by a subsequent decision in different forum. The process is complicated by the likelihood that a final decision reached in any one of these forums will be challenged in the courts.

### BACKGROUND

#### National Trends

At the national level, the telephone industry is currently in the midst of a rapid market structure transition. Once considered a natural monopoly, the telephone industry is now being transformed into a competitive market structure. New technology, federal regulatory policies and the divestiture of AT&T have all contributed to the growth of competition, particularly in the interstate long distance market.

1) Technology -- New technologies, such as digital switching, satellite and microwave transmission and fiber optic cable, have significantly lowered the cost of providing service. This has lowered economies of scale and made it possible for firms much smaller than AT&T to enter the market.

2) Federal Policies -- In the late 1960's and early 1970's, the Federal Communications Commission (FCC) and the courts reversed long standing policies against entry into telecommunications markets. In addition to finding that competition was in the public interest, the FCC also promoted

competition by ensuring through regulation that AT&T did not use its market dominance to stifle competition.

3) Divestiture -- In 1984, AT&T was divested of its 22 local operating companies as the result of the negotiated settlement of a Justice Department antitrust suit. The terms of the settlement required that the newly independent Bell operating companies (BOCs) provide access to all interstate long distance companies on an equal basis. Not only did divestiture remove AT&T's superior access to the local exchange, it removed a portion of its operation that could have been used to subsidize its long distance service.

### The Alaska Market -- Interstate

Interstate long distance service in Alaska is provided by Alascom and, since 1982, by GCI. Alascom serves the entire state. GCI serves Anchorage, Fairbanks, Juneau, Matanuska Valley, Kenai, Ketchikan and Adak. GCI carries approximately 50% of the southbound interstate long distance traffic originating in the areas that it serves.

Interstate long distance service in Alaska is characterized by fewer competitors than in the lower 48. Two factors are largely responsible for this: 1) Alaska's small market size; and 2) financial support from AT&T to Alaska's interstate long distance companies, Alascom and GCI, which is not available to other would-be interstate long distance carriers.

1) Small Size of Market -- The Alaska market is extremely small in comparison to the rest of the U.S. Alaska's local subscribers account for only 250,000 (0.2%) of the nation's 120 million access lines. Interstate long distance calls originating within Alaska account for only 0.015% of total interstate calling.

2) Financial Support -- Alascom provides interstate service through a joint service agreement with AT&T in which AT&T terminates Alascom's southbound traffic and Alascom terminates AT&T's northbound traffic. The joint service agreement is the result of an FCC policy, adopted in the early

1970's, to integrate the rates available in the lower 48 with Alaska, i.e. to use the same nationwide average rates in Alaska as elsewhere. Under the agreement, all costs, including Alascom's return on investment, are paid for by AT&T. In return AT&T keeps all revenues. AT&T estimates that in 1989 costs will exceed revenues by \$85 million. AT&T also argues that \$30 million of Alascom's costs should be allocated to intrastate services rather than interstate services. Alascom disputes this charge and maintains that AT&T's costs are inflated. A joint federal and state advisory board, to the FCC, is currently examining what, if any, market structure changes are necessary to reconcile the FCC's rate integration and pro-competition policies for Alaska as well as what changes in either cost separations or support may be necessary to effect that market structure.

GCI also receives financial support from AT&T, in the form of discounted rates on a limited number of leased lines, as a result of an antitrust suit. GCI's carrier lease agreement provides significantly less support in total dollars than Alascom's joint service agreement with AT&T. GCI estimates Alascom's financial support at approximately 12 cents per minute or greater compared to the approximately 2 cents per minute GCI receives for lines leased from AT&T. AT&T affirms that Alascom's support is at least five times greater than GCI's but also maintains that, for a variety of reasons, the figures are not really comparable. These reasons include the fact that: Alascom serves the entire state, GCI serves only urban routes; Alascom's profit is guaranteed, GCI's is not; and GCI's support is limited to only a portion of its southbound traffic not its entire operation, as is the case with Alascom. GCI's carrier lease agreement expires in 1992.

#### The Alaska Market -- Intrastate

Alascom is the sole provider of intrastate long distance service in Alaska. In 1988 its total intrastate long distance minutes of traffic were 229.6 million, compared to total originating interstate minutes of traffic of 283.4 million. Alascom intrastate long distance revenues in 1988 were approximately \$85 million. By comparison Alascom will

receive approximately \$117 million from AT&T in 1989 in compensation for use of its interstate facilities.

An important aspect of Alascom's intrastate operation is that it offers statewide average rates. Under this policy, two calls on different routes of equal distance are charged the same rate, even though the cost of providing service on the two routes might be very different. As a result, rates for low traffic rural routes tend to be below cost, and rates for high traffic urban routes tend to be above cost. This subsidy flow helps to support remote areas of the state that might not otherwise be able to afford long distance service.

In April 1987, Alascom presented data to the APUC which indicated that the flow of support, from Anchorage, Juneau and Fairbanks to the rest of the state, was approximately \$3.6 million. More recently, Alascom reported to the Chairman of the Senate State Affairs committee that based on an examination of its 26,000 routes, 6000 high traffic urban routes were generating a subsidy of \$27 million which was being used to support its remaining 20,000 low traffic rural routes. Calculating the actual amount of the subsidy is not possible given the information that is currently available to the public. Alascom treats its cost, revenue and traffic data on individual routes as proprietary, and the APUC has supported Alascom's requests to keep it that way.

#### Alaska Public Utilities Commission (APUC)

Regulation of long distance service in Alaska is divided into intrastate service under the authority of the APUC and interstate service under the authority of the FCC. In 1983, in conjunction with considering whether to adopt intrastate access charges, the APUC undertook the question of whether competition in the provision of intrastate long distance service was in the public interest. In late 1986, GCI filed a request to provide limited intrastate long distance service and proposed regulations to govern competition. In response to GCI's proposal, the Commission turned its attention to possible rules for competitive entry. Hearings were held on GCI's initial regulations in March and April 1987 and on GCI's modified regulations in February 1988. However, in June 1988,

the Commission issued its omnibus telecommunications order which, among other things, postponed a decision on these regulations until it had the opportunity to address a number of interrelated issues which "affect the ultimate question of whether or not there should be competition in state toll [long distance] services." The most important of these issues include:

1) Cost separations -- Historically, because long distance companies rely on local phone companies to originate and terminate long distance calls, the long distance companies have been made to share in paying for the fixed, non-traffic sensitive (NTS) costs<sup>1</sup> of providing local service. On the federal level, cost separations is the process of deciding how to divide NTS costs between interstate and intrastate use. On the state level, cost separations is the process of dividing intrastate NTS costs between local and intrastate long distance service.

Recently, the FCC decided to limit the percentage of NTS costs attributable to interstate long distance service to 25%. In Alaska, this has had the effect of increasing the cost burden on intrastate users and has required the APUC to decide how to allocate this increased cost between local and intrastate long distance companies.

In November, the APUC completed its cost separations rulemaking. According to the APUC, "cost separations must be in place before the financial implications and mechanics of competition can be analyzed and decided."

2) Access charges -- Prior to divestiture, compensating unaffiliated local companies for the use of their facilities was done through settlement agreements. These were private contracts between AT&T and each local exchange company. This system was workable when there was only one long distance carrier but as competitive long distance carriers entered the market the FCC found that they too should share

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<sup>1</sup> "NTS costs do not vary with the volume of traffic. For example, the cost to construct and maintain the wire loop from an individual's telephone to the local telephone company's central office does not depend on the type or volume of traffic that individual generates." [Correspondence with APUC, Jan. 11, 1990]

some of the costs of local facilities. The FCC replaced settlement agreements with access charges. Access charges are charges assessed on a per minute basis to long distance companies for originating or terminating an interstate long distance call to a local exchange.

In November, the APUC issued an order to replace settlements with access charges effective January 1, 1991. Although it was not necessary that a decision on access charges precede a decision on competitive regulations, it is generally agreed that access charges would be necessary in order for competition to work. Therefore, having an access charge system in place will expedite the introduction of competition should the APUC move in that direction.

3) Subscriber line charges -- Like access charges, subscriber line charges are a mechanism for recovering a portion of the NTS costs of local companies. Currently, subscriber line charges are only being used at the interstate level. Since 1985, the FCC has gradually increased subscriber line charges. For example, the subscriber line charge for residential and single-line business customers has increased from \$2.00 per month per subscriber to the current rate of \$3.50. This has allowed interstate access charges to decline. In the process, long distance rates have declined and basic local rates have gone up. What the FCC has done, through subscriber line charges, is subvert the intent of the cost separations process by shifting the portion of NTS costs allocated to the interstate jurisdiction back onto local service.

In Alaska, adoption of subscriber line charges would have shifted costs from long distance users to local users, enabling intrastate long distance companies to lower rates and, thereby, increase demand and total revenues. The trade-off, however, would be considerably higher local rates. Beneficiaries of a subscriber line charge system would be intrastate long distance companies and users that make a large number of intrastate long distance calls. Losers would be basic local rate payers, in particular, those who are infrequent

intrastate long distance users.<sup>1</sup> In November, the APUC rejected the use of intrastate subscriber line charges.

4) Alascom's rate design -- "There are two basic parts to setting any utility's rates. First, there is a calculation of the total revenues it is allowed to earn, and second, there is a determination of the rates it will charge for each type of service in order to collect its total allowed revenue requirement. The second part is called the rate design or rate structure." [Restructuring Alaska's Telecommunications Industry: Objectives, Issues, and Plan: APUC]

In November, the APUC established new rates for Alascom's intrastate long distance services. The principal change was to lower the rate for long-haul calls and raise rates for short-haul calls. According to the APUC, Alascom's rate design will "provide useful information for the ultimate resolution of the competition question." For example, the APUC's examination of Alascom's rate structure has highlighted the importance of distance sensitive average rates in maintaining universal service. However, the data the APUC received from Alascom still does not provide the APUC with the information it would need to determine the subsidy flow on individual routes.

With these issues complete the Commission held a two day hearing on November 27 and 28 to make a decision on GCI's proposed regulations for intrastate long distance telephone competition. The substance of what was discussed and decided at that hearing is contained in Order #14 of Docket R-86-2, Order Addressing Objectives: Rejecting Proposed Regulations: and Establishing Procedure. In the order, the APUC states that "preserving and promoting universal service" is its most

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<sup>1</sup> "Each \$1.00 of an intrastate SLC [subscriber line charge] would generate only \$2.9 million dollars of revenue per year. This approximates 4 percent of Alascom's revenue requirement. A \$1.00 SLC would mean that subscribers need to make intrastate toll calls of \$25.00 or more per month to avoid increased telephone bills. For every \$1.00 spent on intrastate toll calls thereafter, the subscriber would save approximately 4 cents. Although Alascom's requested SLC was \$4.00 and was intended to reduce intrastate toll rates by 15.8 percent, its relative benefits would have to be judged by weighing a consumer's intrastate toll usage against a \$4.00 per month increase in basic monthly charges." [from APUC order on subscriber line charges.]

important telecommunications policy objective. The APUC also recognizes that there would be a number of advantages to allowing competition. These include: 1) an incentive for carriers to operate efficiently; 2) lower rates; 3) new, innovative, and more diversified services; 4) faster, more effective response to customers' needs; and 5) eventual self regulation of the market.

In view of this, the Commission determined that "competition is in the public interest, if and only if, the benefits of competition can be achieved and universal service can be preserved." In evaluating GCI's proposed regulations with respect to this dual goal, the APUC further determined that the regulations were inadequate to protect universal service.

[The regulations] prepared and submitted by GCI in this proceeding proposed to protect universal service by requiring each competitive carrier to pay to Alascom a per minute 'contribution for statewide service' for each call carried by the competitive carrier. The primary issues during the hearings held on GCI's regulations were how the proposed contribution should be calculated and whether or not it would protect universal service...

Although the evidence was not conclusive, the Commission is not convinced that GCI's ... regulations resolve the problem. Tremendous controversy surrounds GCI's proposed calculation of the contribution, and it is not clear that the controversy can be resolved in a manner which protects service to high-cost areas and still allows GCI to compete in other areas.

The APUC has left open the option of allowing GCI to resubmit new regulations which would meet the Commission's new criteria. However, in the meantime, the APUC has hired a consultant to help staff develop regulations. The first draft of the Commission's regulations are expected to be completed by January 31, 1990.

## Public Ballot Initiatives

Two initiatives dealing with the question of intrastate competition have been certified for inclusion on the November 1990 ballot. One is sponsored by GCI ("An Act relating to intrastate long distance telephone competition"). The other is sponsored by Alascom ("An Act relating to the creation of competitive long distance telephone services within Alaska").

Despite similar titles there are important differences between the two initiatives:

1) GCI's mandates competition while Alascom's does not. GCI's initiative presumes that competition is in the public interest. Under the section on Findings and Purpose, it states that "long distance service should be provided by competing suppliers wherever possible." In other words, the APUC would be required to permit competition as long as there are qualified long distance companies willing and able to provide service.

Alascom's initiative would require the APUC to make a number of specific public interest findings before permitting competitive entry. Specifically, a long distance company could not be certified to provide service unless the APUC finds that issuing a certificate:

- a) will reduce rates and enhance services on the routes the applicant proposes to serve;
- b) will promote economic efficiency;
- c) will not cause rate increases that jeopardize the universal availability of affordable long distance telephone services; and
- d) will be in the long-term best interests of the state.

2) Both initiatives also differ with respect to how Alascom would be regulated.

GCI's initiative requires the APUC to distinguish between companies with market power and those without market power. The initiative does not define market power, but directs the APUC to "refer to reported court and administrative agency decisions interpreting state and federal laws concerning monopolies, restraint of trade, and telecommunications industry." Companies with market power would be subject to full regulation under AS 42.05 [Alaska Public Utilities Commission Act]; companies without market power would not.

Initially, all new intrastate long distance companies would be exempt from regulation, and only Alascom or an affiliate of Alascom would be regulated. The APUC would have the authority to regulate or re-regulate any company that gains market power in an intrastate long distance service. Upon request, the APUC would have to deregulate, on a service by service basis, any company that can show that it lacks market power for a particular service. The APUC must also ensure that the deregulated carrier does not shift costs from its deregulated service onto its remaining regulated services. In this regard, the initiative stipulates the use of fully distributed costing which is only one of several cost methodologies normally used by regulatory agencies in determining costs of service.

In contrast, under the Alascom initiative, Alascom would be automatically deregulated on any route on which two or more carriers were authorized to provide service. Deregulation would involve exemption from the sections of AS 42.05 dealing with the setting of rates and tariffs [AS 42.05.361 - 42.05.431]. Alascom could be re-regulated on any route on which, for whatever reason, it again became the sole service provider.

3. Only the GCI initiative specifically provides for a mechanism to subsidize high cost regulated routes.

While both Alascom and GCI recognize that competition would cause a disequilibrium in the subsidies flowing from

profitable to unprofitable routes, the methods they propose in their initiatives to respond to that problem are different. GCI's initiative provides that the APUC may adopt an Universal Service Fund (USF) to "provide financial support, where necessary." The USF would be funded through an access charge surcharge or "other means" not specified.

Alascom's initiative is silent on the question of subsidies to high cost areas. The initiative does not specifically prohibit a USF, however, it is unclear whether establishment of such a fund would require additional legislation. Again, Alascom's primary method for preventing an interruption of subsidy flows that would threaten universal service is to prohibit competition.

4. Alascom's initiative contains a section which would automatically repeal the GCI initiative in the event that both initiatives are approved by the voters, regardless of the respective margins of voter approval.

The relevant section of the Alascom initiative [Sec. 42.05.861 (b)] reads: "If the bill entitled "An Act relating to intrastate long distance telephone competition" that amends AS 42 by adding a new Chapter 12 is enacted, that bill is repealed."

To summarize, GCI's initiative would mandate competition and allow open entry and full deregulation for firms without market power, but limited deregulation for Alascom, affiliates of Alascom or other firms that may gain market power. In addition, the APUC would have the option of creating a fund to provide support where necessary to maintain universal service.

Alascom's initiative would require a continuation of the status quo unless the APUC decides, based upon guidelines which are stricter than existing statutes, that the public interest is served by competition. Also, if competition is permitted, Alascom would be free to set rates as it pleased on any route where two or more carriers provide service. Finally, GCI's initiative would be repealed in the event that both initiatives pass.

## The Legislature

Two bills were introduced in the Senate in the 1989 session dealing with intrastate competition. SB 206, sponsored by Senators Frank, Sturgulewski and Fischer, is, with a few minor exceptions, identical to the GCI initiative. The other bill, SB 242, sponsored by Senators Adams, Binkley and Zharoff, was introduced at the request of five rural telephone utilities.

SB 242 seeks to: 1) require continuation of settlement agreements (the current method by which the intrastate long distance carrier, Alascom, compensates local phone companies for local facilities used for both local and long distance service); and 2) prevent the APUC from issuing a certificate to a telephone utility to provide service in an area already served by an existing telephone utility unless "the existing utility is not providing adequate service and is unlikely to improve to a satisfactory level within a reasonable period of time." The practical outcome of SB 242 is that it would make it difficult, if not impossible, for the APUC to institute intrastate long distance competition. SB 242 would overturn the Commission's recent order adopting access charges which the APUC considers a necessary antecedent to competition. The bill would also effectively preclude GCI, or any other carrier, from entering the intrastate market unless the APUC finds Alascom's service inadequate and unlikely to improve.

Any bill passed by the legislature concerning competition during this session would supersede any decision on competition by the APUC. Whether the same legislation would remove from the ballot one or both of the initiatives is much less certain. Legislation which is "substantially similar" to a proposed initiative would remove the initiative from the ballot. However, whether the legislature could pass a bill which is determined to be "substantially similar" [see Appendix on substantially similar legislation] to both the GCI and the Alascom initiatives is an open question. That determination would be made, at least initially, by the Lt. Governor based upon a legal opinion from the Attorney General.

## ANALYSIS

### Universal Service and Subsidies

One issue that is central to the discussion of intrastate competition is the question of universal service. Universal service is currently maintained primarily through statewide average rates, a mechanism which creates a subsidy flow from profitable routes to unprofitable routes, and thereby maintains the viability of the entire system. Both initiatives propose to preserve universal service, but in very different ways. In its initiative, in its proposed regulations, and in SB 206, GCI has proposed a mechanism, the universal service fund, which would allegedly preserve universal service. Alascom addresses universal service by requiring the APUC to prohibit competition if it threatens "the universal availability of affordable long distance telephone service."

There are problems with both approaches. GCI's universal service fund (USF) works by replenishing any subsidy lost through competition via a fund generated through access charges. However, the workability of the USF becomes problematic as the size of the subsidy increases; the greater the subsidy, the more that access charges would have to increase.

Estimates of the subsidy range from \$3.6 million to \$27 million. Depending on the size of the actual subsidy, an USF funded through an access charge surcharge would add 2 cents per minute [ $\$3.6 \text{ million} / 229.6 \text{ million intrastate minutes}$ ] to 12 cents per minute [ $\$27 \text{ million} / 229.6 \text{ million intrastate minutes}$ ] to the price of a call. If the surcharge were limited to just calls on competitive routes, the surcharge amount would certainly increase, but by how much is unknown. Currently the rate for a intrastate long distance call after the first three minutes, ranges from 10 cents per minute to 84 cents per minute, depending on mileage band, for a daytime call. Although a 2 cent per minute surcharge on a 84 cent per minute call (2% increase) might be considered reasonable, its likely that a 12 cent per minute, or higher, surcharge on a 10 cent per minute call (120% increase) would not. It is, in part,

the confusion which surrounds the calculation of the surcharge which recently led the APUC to reject GCI's proposed regulations for competition.

Another problem with a USF established by the APUC is its questionable legality. GCI's initiative permits the establishment of a USF "to the extent [that it is] permitted under Article IX, Section 7, of the Alaska Constitution." This section of the constitution requires that "[t]he proceeds of any state tax or license shall not be dedicated to any special purpose, except provided in Section 15 of this article [Alaska Permanent Fund] or when required by the federal government for state participation in federal programs." Alascom and the Teamsters Union have already attempted, through court action, to prevent GCI's initiative from reaching the ballot, in part, for this very reason. Although GCI won the first round of court battles in December and had its initiative certified for the November 1990 ballot, this issue is still subject to challenge.

Alascom's approach to universal service is problematic in that it involves a type of "catch-22." Alascom's initiative would allow competition only if the APUC could find that it would not threaten universal service. However, the only regulatory structure permitted under the Alascom initiative is one that is almost guaranteed to threaten universal service.

For example, Alascom's total revenues would decline under competition because of lost market share and because of lower rates on competitive routes. This revenue shortfall would have to be made up in some manner. The most likely method, and perhaps the only legal method for doing so under the Alascom initiative, would be to raise rates on regulated routes. However, if the APUC determines ahead of time that the rate increases on regulated routes will likely threaten universal service the APUC would be required to prohibit competition. One can almost say, a priori, that the only way to preserve universal service under the Alascom initiative is to prohibit competition.

## Regulatory Concerns

The transition to competition will require a balancing act on the part of the APUC with respect to the regulation of Alascom. Complete deregulation of Alascom on competitive routes could give that company an unfair competitive advantage over its competitors. Compared to a company like GCI, Alascom has considerable financial resources at its disposal. These include the possibility of raising rates on its regulated routes and the guaranteed profit that it earns on its interstate services. Without regulatory oversight it is possible that Alascom could temporarily price its competitive services below the true cost of service. Because Alascom is a monopoly there is always the danger that it might attempt to subsidize its below cost competitive rates with profits earned on monopoly services. If GCI or some other competitors were forced to leave the market because of this type of predatory pricing, then customers would be deprived of the long term benefits of competition.

The opposite problem could occur if the APUC were to allow competition but instead of completely deregulating Alascom chose to over-regulate Alascom. For example, if Alascom were prohibited from decreasing rates on competitive routes unless the decrease was part of a system wide rate reduction, then Alascom would in effect be unable to compete with its "competitors." This is because the average cost of providing system wide service (which is the cost that Alascom faces) is much greater than the average cost on competitive routes (which is the cost Alascom's competitors face). This scenario would lead to a pricing structure in which Alascom's competitors would just underprice Alascom's rates and would only provide service on profitable routes. This "creamskimming" could significantly reduce the contribution currently available for subsidizing high cost routes as well as reducing Alascom's market share and return on investment.

The challenge the APUC faces in considering an appropriate regulatory structure is to find an acceptable balance between these two extremes. However, the APUC has been reviewing the issue of intrastate long distance telephone competition for the past six years. Although minimum policy

objectives were established in December 1989, there is no guarantee that regulations on competition will be adopted anytime soon.

### Problems with the Initiative Process

Although the prospect of letting the voters decide this issue may seem a politically expedient one at first glance, there are some clear problems with it. The first is that the choices available to the public are limited. The options available to the voters in November were conceived and advocated by two very interested private parties and probably represent the extremes in a range of options.

Another problem is the lack of information available to voters upon which to base a decision. Most of the information available to voters on this complex issue will be highly biased and presented in 30-second TV spots by two private companies, GCI and Alascom. Objective factual analysis of the issue will, in all likelihood, not lend itself to this type of encapsulation nor have the funding available for an effective media presentation.

A third problem with the initiatives is that both rigidly define the APUC's role in implementing competition. Neither allow the APUC much leeway to make basic changes in the competitive frameworks established by the initiatives if they prove to be flawed in some way.

A final problem is that the vote on the two initiatives is not an either/or choice between the two initiatives. It is possible that both initiatives could pass. Alascom's clause repealing GCI's petition may not be legal and will certainly be challenged in court. This could open the process to further delays and uncertainties and the possibility that the court could be the final arbiter on this issue.

The first three problems with the initiative process just discussed are not without precedence. A case in point is California's Proposition 103 which passed in November 1988 and called for a rollback of auto insurance rates.

In order to implement the initiative, as amended by a subsequent court ruling, the California Department of Insurance (DOI) will need to expand its existing staff by 263 positions. That increase plus other Proposition 103 associated expenses resulted in a FY 90 budget request of \$26 million more than the previous year's budget.

The California insurance Commissioner has described the problems brought on by Proposition 103 in the following way:

Proposition 103 was a poorly-drafted measure and parts of it were held unconstitutional by the state Supreme Court ... [T]he inherent defects in Proposition 103 create conflicts which, if the measure is literally implemented, will discourage competition, result in higher rates for many, create arbitrary rates for some, create excessive and discriminatory rates for some, and make insurance less available.

## **CONCLUSIONS AND RECOMMENDATIONS**

The APUC appears to have taken inordinate time deciding if and under what conditions intrastate telephone competition can occur in Alaska. However, the two initiatives certified on the November 1990 ballot are extreme approaches to the issue, representing the respective best interests of two corporate competitors, Alascom and GCI. Both initiatives lack proper analysis as to public policy impacts and both appear to have deficiencies which could result in significant implementation problems if adopted.

The Alaska legislature needs to ask itself whether it is headed for an administrative, financial and consumer nightmare with intrastate telephone competition through the initiative process. The legislature could let the current process play itself out and then subsequently attempt to address any problems that may develop in the future. However, a more prudent alternative would be to attempt to adopt legislation which comprehensively addresses the subject and

includes many of the concepts in both ballot initiatives, but also directs the APUC to fashion a competitive structure that is appropriate to Alaska's circumstances. This approach has some obvious advantages:

1. It could remove both the Alascom and GCI initiatives from the ballot. Neither approach would be precluded by the APUC but both would be objectively compared to other approaches.

2. The APUC could be directed to justify its decision based upon empirical analysis of Alaska's intrastate market. This would reduce the likelihood of future problems resulting from a decision made without complete information on possible consequences.

3. A legislative solution to the current regulatory debate on competition might be warranted even if there were not initiatives headed for the public ballot. The APUC has dealt with this issue for six years without a resolution. The legislature could specify a time frame for a decision. This would ensure full consideration of the competition question and prompt resolution.

4. By fashioning a competitive structure that is less extreme than either GCI's or Alascom's initiatives, this approach might reduce the possibility of a court challenge.

5. A legislative solution implemented by the APUC could allow consideration of any impact of the interstate joint board proceeding on intrastate competition.

## APPENDIX

### Substantially Similar Legislation

Article XI, Section 4. Initiative Election. An initiative petition may be filed at any time. The lieutenant governor shall prepare a ballot title and proposition summarizing the proposed law, and shall place them on the ballot for the first statewide election held more than one hundred twenty days after adjournment of the legislative session following the filling. If, before the election, substantially the same measure has been enacted, the petition is void. [Constitution of Alaska; Amendment approved August 25, 1970]

"It is clear that the legislative act need not conform to the initiative in all respects, and that the framers intended that the legislature should have some discretion in deciding how far the legislative act should differ from the provisions of the initiative. The question, of course, is how great is the permitted variance before the legislative act becomes no longer substantially the same.

"Upon reflection we have concluded that the legislature's discretion in this matter is reasonably broad. If in the main the legislative act achieves the same general purpose as the initiative, if the legislative act accomplishes that purpose by means or systems which are fairly comparable, then substantial similarity exists. It is not necessary that the two measures correspond in minor particulars, or even as to all major features, if the subject matter is necessarily complex or if it requires comprehensive treatment. The broader the reach of the subject matter, the more latitude must be allowed the legislature to vary from the particular features of the initiative." [Warren v. Boucher. Pacific Reporter, 543 P.2d 731 (1975), p. 736]