

JOURNAL PUBLICATIONS (CONTINUED):

- “Wholesale Pricing and Local Exchange Competition,” *Info*, Vol. 6(5), 2004, pp. 318-325 (with L. Wood and W. Zarakas).
- “Incentive Regulation and Telecommunications Service Quality,” *The Journal of Regulatory Economics*, Vol. 26(3), November 2004, pp. 263-285 (with C. Ai and S. Martinez).
- “On the Design of Performance Measurement Plans in the Telecommunications Industry,” *Telecommunications Policy*, Vol. 28(11), December 2004, pp. 801-820 (with L. Wood).
- “Regulating Service Quality: A Survey,” *The Journal of Regulatory Economics*, Vol. 27(2), March 2005, pp. 123-154.
- “Self Sabotage,” *The Journal of Regulatory Economics*, Vol. 27(2), March 2005, pp. 155-175 (with D. Weisman).
- “Privately-Negotiated Input Prices,” *The Journal of Regulatory Economics*, Vol. 27(3), May 2005, pp. 263-280 (with B. Unel).
- “Reviewing the Impact of Incentive Regulation on U.S. Telephone Service Quality,” *Utilities Policy*, Vol. 13(3), September 2005, pp. 201-210 (with C. Ai).
- “On the Irrelevance of Input Prices for Make-or-Buy Decisions,” *The American Economic Review*, Vol. 95(5), December 2005, pp. 1631-1638.
- “Regulation in Vertically-Related Industries: Myths, Facts, and Policy,” *Review of Industrial Organization*, forthcoming.
- “Regulation, Competition, and Liberalization,” *Journal of Economic Literature*, forthcoming (with M. Armstrong).
- “The Effects of Reinsurance in Financing Children’s Health Care,” *Inquiry*, Spring 2006, forthcoming (with S. Aydede, A. Dick, B. Vogel, and E. Shenkman).
- “On the Design of Input Prices: Can TELRIC Prices Ever be Optimal?” *Information Economics and Policy*, forthcoming.

BOOKS/MONOGRAPHS:

Designing Regulatory Policy with Limited Information. London, England: Harwood Academic Publishers, 1987 (with D. Besanko).

Designing Incentive Regulation for the Telecommunications Industry. Cambridge, MA: The MIT Press, 1996 (with D. Weisman).

BOOK CHAPTERS:

“Procurement and Quality Monitoring,” in *Incentives in Procurement Contracting*, edited by J. Leitzel and J. Tirole. Westview Press, 1993, pp. 61-70 (with T. Lewis).

“Principles of Regulatory Policy Design,” in *Infrastructure Delivery: Private Initiative and the Public Good*, edited by A. Mody. The World Bank, 1996, pp. 79-105.

“Seven Myths About Incentive Regulation,” in *Pricing and Regulatory Innovations Under Increasing Competition*, edited by M. Crew. Kluwer Academic Publishers, 1996, pp. 1-20 (with D. Weisman).

“Horizontal Vicarious Liability,” in *The Law and Economics of the Environment*, edited by A. Heyes. Edward Elgar Publishers, 2001, pp. 71-91 (with T. Lewis).

“Price Regulation,” in *The Handbook of Telecommunications Economics. Volume I: Structure, Regulation, and Competition*, edited by M. Cave, S. Majumdar, and I. Vogelsang. Elsevier Science Publishers, 2002, pp. 225-293.

“Anticompetitive Behavior by State-Owned Enterprises: Incentives and Capabilities,” in *Competing with the Government: Anticompetitive Behavior and Public Enterprises*, edited by R. Richard Geddes. Hoover Press, 2004, pp. 1-25 (with J. G. Sidak).

“Recent Developments in the Theory of Regulation,” in *The Handbook of Industrial Organization*, edited by M. Armstrong and R. Porter. Elsevier Science Publishers, 2006 (forthcoming) (with M. Armstrong).

BOOK REVIEWS:

- “Review of Berg and Tschirhart's *Natural Monopoly Regulation*,” *Managerial and Decision Economics*, Vol. 11(1), February 1990, pp. 70-71.
- “Review of Laffont and Tirole's *A Theory of Incentives in Procurement and Regulation*,” *Journal of Economic Literature*, Vol. 32(2), June 1994, pp. 720-721.
- “Review of Vogelsang and Mitchell's *Telecommunications Competition: The Last Ten Miles*,” *Information Economics and Policy*, Vol. 9(4), December 1997, pp. 354-357.
- “Review of Vogelsang and Mitchell's *Telecommunications Competition: The Last Ten Miles*,” *Review of Industrial Organization*, Vol. 12(5-6), December 1997, pp. 837-840.
- “Are Public Enterprises the Only Credible Predators?,” *The University of Chicago Law Review*, Vol. 67(1), Winter 2000, pp. 271-292 (with G. Sidak).
- “Review of Sclar's *You Don't Always Get What You Pay For: The Economics of Privatization*,” *Journal of Economic Literature*, Vol. 39(2), June 2001, pp. 601-603.
- “Review of De Bijl and Peitz's *Regulation and Entry into Telecommunications Markets*,” *Journal of Economic Literature*, Vol. 42(2), June 2004, pp. 538-539.

OTHER PUBLICATIONS:

“Consumer Shopping Behavior in The Retail Coffee Market: A Comment,” in *Proceedings of the Federal Trade Commission's Conference on Empirical Approaches to Consumer Protection Economics*, edited by P. Ippolito and D. Scheffman, 1986, pp. 445-446.

“Endogenous Commitment and Regulatory Design: A Comment on Levy and Spiller's *Regulation, Institutions, and Commitment in Telecommunications*,” in *Proceedings of the World Bank Annual Conference on Development Economics*, edited by M. Bruno and B. Pleskovic. The World Bank, 1994, pp. 253-256.

“Comment on R. Geddes' “Agency Costs and Governance in the United States Postal Service”,” in *Governing the Postal Service*, edited by J. G. Sidak. American Enterprise Institute, 1994, pp. 140-143.

“Economic Theory of Regulation,” in *The International Encyclopedia of the Social and Behavioral Sciences*, edited by N. Smelser and P. Baltes, Elsevier Science Publishers, 2001.

“Overview of the Special Issue – Marketing's Information Technology Revolution: Implications for Consumer Welfare and Economic Performance,” *Journal of Public Policy & Marketing*, Vol. 22(1), Spring 2003, p. 3 (with A. Silk).

RESEARCH GRANTS:

- 2001 - 2004 U. S. Health Resources and Services Administration:
Maternal and Child Health Bureau.
- 1998 - 2000 The World Bank.
- 1995 - 1998 Management Science Group, Department of Veterans Affairs
Medical Center at Bedford, Massachusetts.
- 1993 - 1995 National Science Foundation: Economics Division.
- 1993 Management Science Group, Department of Veterans Affairs
Medical Center at Bedford, Massachusetts.
- 1990 - 1992 National Science Foundation: Economics Division.
- 1990 University of Florida: Division of Sponsored Research.
- 1990 The Garn Institute of Finance.
- 1984 - 1986 National Science Foundation:
Economics and Information Sciences Divisions.
- 1982 - 1984 University of Pennsylvania:
Center for the Study of Organizational Innovation.
- 1982 - 1983 National Science Foundation:
Economics and Information Sciences Divisions.
- 1982 Sloan Foundation: Support through the Institute of Public Policy Studies,
University of Michigan.
- 1978 - 1980 Sloan Foundation: Support through the Department of Economics,
Princeton University.

HONORS AND AWARDS:

- 2003 Distinguished Service Award, Public Utility Research Center,
University of Florida.
- 2000 Faculty Honoree, Anderson Scholars Program, University of Florida.
- 1998 Professorial Excellence Program Award, University of Florida.
- 1997 Research Foundation Professorship, University of Florida.
- 1992 Research Achievement Award, University of Florida.
- 1976 Inducted into the Phi Beta Kappa Society.

REFEREE/REVIEWER FOR:

Accounting Review
Addison Wesley, Publishers
American Economic Review
American Law and Economics Review
American Enterprise Institute
Bell Journal of Economics
Berkeley Electronic Press Journals in
Economic Policy and Analysis
Bulletin of Economic Research
Cambridge University Press
China Economic Review
Danish Social Science Research Council
Economic Journal
Econometrica
Economic and Social Research Council
Economic Design
Economic Inquiry
Economics Letters
Economic Theory
Energy Journal
Encyclopedia of Law and Economics
European Economic Review
European Journal of Operational Research
Games and Economic Behavior
Harcourt Brace, Publishers
Information Economics and Policy
International Journal of
Industrial Organization
International Review of
Law and Economics
Johns Hopkins University Press
John Wiley, Publishers
Journal of Accounting Research
Journal of the American Statistical
Association
Journal of Business
Journal of Corporate Finance
Journal of Economic Behavior
and Organization
Journal of Economic Dynamics and Control
Journal of Economic Theory
Journal of Economics and Business
Journal of Economics and Management
Strategy
Journal of Environmental Economics
and Management
Journal of Industrial Economics
Journal of International Economics
Journal of Law and Economics
Journal of Law, Economics and Organization
Journal of Marketing Research
Journal of Policy Analysis and Management
Journal of Political Economy
Journal of Public Economics
Journal of Public Policy and Marketing
Journal of Regulatory Economics
Management Science
Managerial and Decision Economics
Marketing Science
MIT Press
National Science Foundation:
Law and Social Sciences, Information
Sciences, and Economics Divisions
Oxford University Press
Princeton University Press
Quarterly Journal of Economics
Quarterly Review of Economics and Business
Rand Journal of Economics
Research in Labor Economics
Review of Economic Studies
Review of Economics and Statistics
Review of Industrial Organization
Review of Network Economics
Southern Economic Journal
Telecommunications Policy
Utilities Policy
World Bank Economic Review

SELECTED ADDITIONAL EXPERIENCE:

- 1997 - Present Instructor in *The International Training Program on Utility Regulation and Strategy*, sponsored by
The World Bank and Florida's Public Utility Research Center.
- 2005 Advisor on the Design of Telecommunications Competition Policy for
General Communication, Inc.
- 2005 Consultant on Competition Policy in the Postal Industry for
United Parcel Service.
- 2004 – 2005 Advisor on Competition Policy in the Telecommunications Industry for
The Antitrust Division of the United States Department of Justice.
- 2004 Advisor on the Design of Price Cap Regulation for
OSIPTEL, Peru's National Telecommunications Regulatory Agency.
- 2003 – 2004 Advisor on the Design of Performance Measurement Systems for
SBC, Inc.
- 2003 Presented Invited Testimony to the
President's Commission on the United States Postal Service.
- 2003 Advisor on the Design of Universal Service and Competition Policy for
General Communication, Inc.
- 2001 Advisor on the Design of Telecommunications Policy for
Ecuador's Central Regulatory Body, CONATEL.
- 2000 – 2001 Advisor on the Design of Incentive Regulation for Electric Utilities for
Ameren UE.
- 1998 – 2000 Consultant and Expert Witness on Postal Industry Pricing for
United Parcel Service.
- 1999 – 2000 Advisor on a Proposed Merger in the Communications Industry for
The Antitrust Division of the United States Department of Justice.
- 1998 – 2000 Advisor on Telecommunications Privatization in Africa for
The World Bank.
- 1996 Consultant and Expert Witness on the Design of Price Cap Regulation for
TELUS Communications, Inc.

SELECTED ADDITIONAL EXPERIENCE (CONTINUED):

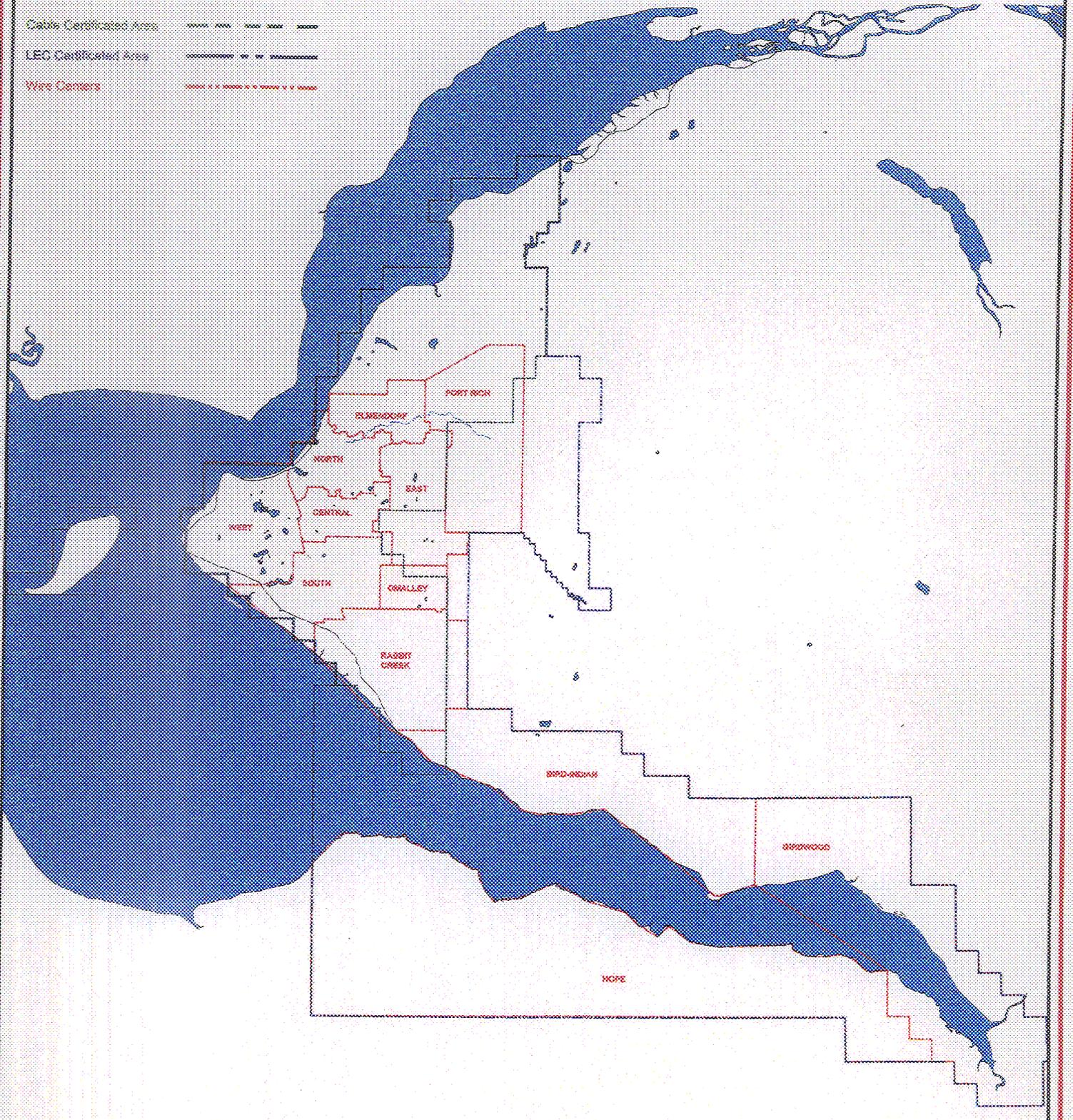
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|-------------|--|
| 1995 | Expert Witness on Incentive Regulation and Competition for GTE-California. |
| 1992 – 1994 | Consultant on the Design of Incentive Regulation for The Southern Bell Telephone Company. |
| 1992 | Advisor on Incentive Regulation in the Electric Power Industry for The New York State Public Service Commission. |



E

GCI Cable Franchise Areas and ACS Wire Centers Anchorage, AK

- Cable Certificated Area
- LEC Certificated Area
- Wire Centers



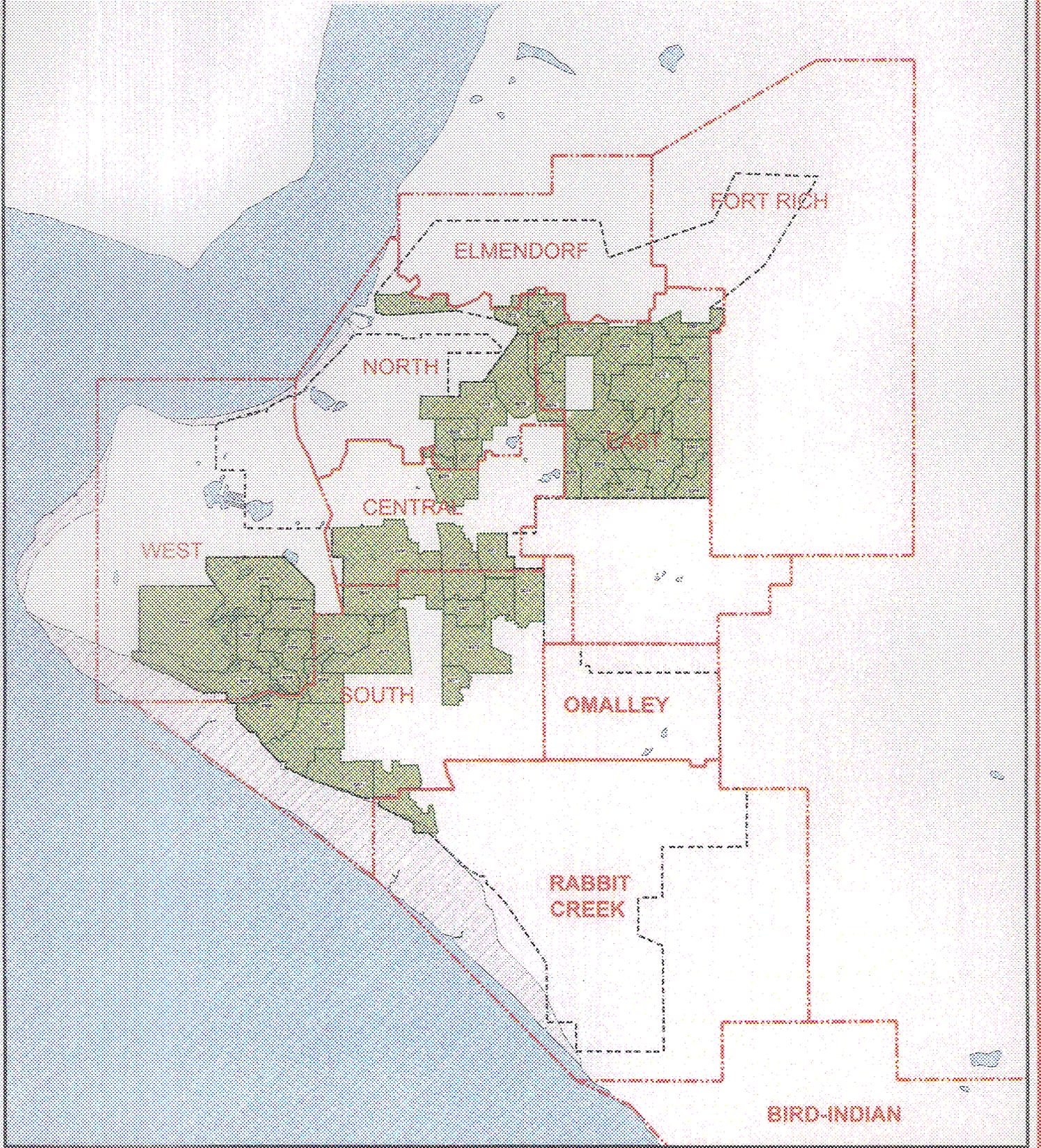


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Cable Telephony Nodes* Anchorage, Alaska

- System Boundary
- Nodes Released for Services as of 10/01/05
- Wire Center Boundaries

* Cable network does not cover all locations in shaded areas.



**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
Petition of ACS of Anchorage, Inc. Pursuant to)
Section 10 of the Communications Act of 1934, as) WC Docket No. 05-281
amended, for Forbearance from Sections 251(c)(3))
and 252(d)(1) in the Anchorage LEC Study Area)
)

DECLARATION OF RICHARD DOWLING

I, Richard Dowling, do hereby declare under penalty of perjury:

1. I have served as the Senior Vice President of Corporate Development at General Communication Inc. ("GCI") since early 1991. Previously, I served as Vice President of Engineering and Operations in charge of GCI's general technical and operational management, with responsibilities for system development, quality of service, system integrity, and the development of new cost saving strategies. Before joining GCI in 1981, I was the Principal Advisor on Telecommunications Policy to the Governor of Alaska and, prior to that, was the Deputy Director and Chief Engineer of the Alaska Office of Telecommunications.

2. This declaration describes GCI's efforts to provision telephone services over its own cable plant as quickly as technologically and economically feasible. GCI's cable-based telephony deployment has always been on the cutting edge of emerging technology and industry development. In my opinion, and in contrast to the claims of ACS of Anchorage, Inc. ("ACS"), GCI could not and cannot reasonably deploy cable telephony faster in the Anchorage markets without severely risking its high quality

service to consumers, making access to copper loops a continued key component of GCI's competitive local service offerings.

3. GCI first provided telephone service to Alaska consumers in 1982, when it began offering interstate long distance service. In 1991, GCI also started providing intrastate long distance services. In 1995, GCI acquired the cable facilities of three different cable providers throughout Alaska, including the Anchorage cable system, intending to use those facilities for expanded services, including, in time, phone service over cable wire and broadband Internet services. Shortly thereafter, GCI began upgrading the cable plant from an all coaxial plant to a hybrid fiber coaxial ("HFC") plant. Among other things, this upgrade enabled the cable plant to carry return signals—an obvious first step to providing high speed Internet and voice service—and reduced noise created by excessive amplification that would be unacceptable for voice services. While GCI was implementing that massive undertaking, Congress passed the Telecommunications Act of 1996, thus allowing GCI to enter the Anchorage local telephone market in 1997 and provide competitive UNE-based service while working toward its own full facilities-based solution.

4. GCI completed its cable plant HFC upgrade in 1998, but the technology was not yet available to economically provide high quality voice-over-cable service to its phone customers. Cable telephony technology developed slowly. The first iteration was pure circuit-switched cable telephony, which some cable companies began using on a limited basis by 1996. But this was an immature, proprietary technology without any industry standards. As such, it was expensive to implement and a risky investment, because a cable operator using those systems to provide telephone service would be tied

to the success or failure of both the company selling the solution and the robustness and durability of the technology. GCI also believed—correctly so—that the industry was moving towards newly developing Internet Protocol (“IP”) technologies and that in developing a set of industry standards a more open equipment market would develop. Moreover, this pure circuit-switched cable telephony could not support sophisticated service features that were quickly becoming standard in the broader telephone marketplace.

5. It was not until the end of 2001 that the industry, through CableLabs, developed and issued its DOCSIS 2.0 specifications for advanced cable modems, with dynamic quality of service (“DQoS”) standards, that would truly enable reliable, carrier-quality IP voice service over cable plant.¹ In parallel, CableLabs had also developed the Packet Cable 1.0 standard, which governed the signaling used to support telephony over cable modems and to correlate those signals to the signaling needed for Public Switched Telephone Network (PSTN) operations.² Even with the DOCSIS 2.0 and PacketCable 1.0 specifications, however, necessary equipment was not immediately available for commercial deployment. It took some time for the chipset, cable modem, and Cable Modem Termination System (“CMTS”) vendors to incorporate those standards into their products. Thus, CableLabs did not certify the first DOCSIS 2.0 or PacketCable devices until December 2002.

¹ DOCSIS 1.1 specifications also included DQoS standards, but by the time CableLabs certified the first DOCSIS 1.1 modems in September 2001, it was already clear that DOCSIS 2.0 specifications would soon be released, superseding and greatly improving on the 1.1 iteration. As a result, the industry did not move to implement DOCSIS 1.1.

² PacketCable 1.0 is a group of specifications and reports that was released over time from 1999 to 2005.

6. As equipment prototypes became available, GCI began limited initial field trials of its cable-based telephony service before the end of 2002. Because standards can be interpreted differently by different manufacturers, however, GCI had to conduct interoperability testing among the different pieces of network equipment, including the CMTS, the Multimedia Terminal Adapters (“MTA”), and the voice gateways that would be used to translate from the IP packets transmitted over the DOCSIS platform into traditional telephone signals that could be processed by GCI’s Class 5 switch.³ This process of validation, of course, raised new issues that required new solutions. For instance, GCI had to develop its own echo-canceling firmware to deal with an unsatisfactory echo inherent in the new technology. Moreover, there was a time lag between certification and manufacturers’ ability to reach commercial production levels. And, in fact, some prospective vendors went out of business or stopped supporting the products they had supplied to GCI for initial consideration. GCI also had to upgrade its cable system—and particularly its cable nodes—to support the cable telephony technology.⁴ Thus, working at an aggressive pace, GCI began commercial launch of its cable-based voice services in April 2004.

7. When launching its cable-based telephony products, GCI did not have the luxury (if it could be called that) of trading the novelty of new technology—such as the then nascent voice-over-Internet Protocol (“VoIP”) service that has since gained some measure of popularity—for a lower quality of service. Because GCI had amassed a sizeable customer base on UNEs before the existence of viable cable telephony, voice

³ By using its Class 5 switch, GCI avoided having to test and implement yet another piece of equipment, the softswitch.

⁴ See Declaration of Gary Haynes.

services over the cable network had to be equal to or better than the copper-provided phone service that GCI was already providing over UNE loops. For a variety of reasons, when GCI was selecting its equipment in 2002 and 2003, it chose to implement a system that provided network-based powering of customer premises equipment (“CPE”) (akin to how the circuit-switched telephone network operates) rather than customer powering of CPE.

8. For one, GCI had to meet state regulatory requirements for service quality and reliability. Among other things, this meant that any cable-based telephony product that GCI offered had to meet a state requirement for eight-hours of back-up power in the event of power failure.⁵ Network powering most economically met this standard, and did so consistent with consumer expectations of their existing service.

9. Moreover, GCI’s method for provisioning and installing cable-based service had to be all but imperceptible to existing customers. Outdoor units did not require the customer to be home for installation so that GCI could change the delivery method of phone service that customers were already receiving. In this way, GCI differed from other Multiple Systems Operators (“MSOs”) that had not previously offered phone service; customers seeking “new” phone service from an MSO could rightly expect a service call or other provisioning-related steps in order to attain that new service for the first time. This was not the case with existing customers already receiving phone service from GCI. Moreover, GCI saw significant problems with other technologies, including the home-powered MTA units designed for indoor installation that AT&T and Cox had deployed on a limited basis. For one, the equipment was not

⁵ 3 AAC § 52.270(b).

only believed to be harder and more inconvenient to deploy because the customer had to be home, but it could also be unplugged, creating outages and trouble reports for lines that were otherwise operational.

10. This network-powered, outdoor-provisioned technology was not ultimately adopted by the major MSOs, however, and all but one supplier discontinued their outdoor products. GCI was thus forced to fund the development of a reduced-cost model suitable to its needs by a single supplier, which further slowed down GCI's ability to deploy rapidly.

11. In its continuing efforts to improve deployment of cable telephony, GCI is currently considering use of a customer-powered, rather than network-powered, network design. It is not yet clear, however, whether this approach can feasibly be implemented in GCI's situation in which current customers are being converted from UNE loops to cable-based telephony, as opposed to an environment in which a cable operator initiates telephone service to customers for the first time—as is typically the case in the lower 48 states.

12. It is my firm belief that GCI could not and cannot effectuate the transition from UNE loops to its own facilities more quickly than it is already. GCI has been at the forefront of efforts to implement cable telephony and has dedicated significant resources to its efforts to do so. Cable telephony technology needed, and in some respects still needs, time to mature. Deployment any faster will unacceptably compromise the product that GCI could provide to its customers.

Respectfully submitted,

/s/

Richard Dowling
General Communication, Inc.
Senior Vice President of Corporate Development
2550 Denali Street
Anchorage, AK 99503



H

REDACTED FOR PUBLIC INSPECTION

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
Petition of ACS of Anchorage, Inc. Pursuant to)
Section 10 of the Communications Act of 1934, as) WC Docket No. 05-281
amended, for Forbearance from Sections 251(c)(3))
and 252(d)(1) in the Anchorage LEC Study Area)
)

DECLARATION OF GARY HAYNES

I, Gary Haynes, do hereby declare under penalty of perjury:

1. I am Vice President of Operations for Outside Plant Maintenance and Construction for General Communication, Inc. ("GCI"). I have held this position for eight years and have worked in the cable industry for 23 years.
2. This declaration describes the considerable steps necessary to upgrade GCI's cable network to provide Digital Local Phone Service ("DLPS"), as well as the barriers that would prevent GCI from immediately providing all of its customers with phone service over its own cable-based facilities in the absence of access to UNE loops. It also describes the types of business services that can be provided over the cable plant, and the types of business services that must generally be provided from a copper or fiber loop plant with a more traditional architecture.
3. Providing voice service over cable plant is not a matter of simply flipping a switch. Rather, it requires extensive planning and preparation, massive expenditures of time and money, installation of new equipment, and modifications to existing equipment. GCI's cable telephony plant upgrade starts at its switch location in the South Anchorage Distribution Center ("SADC"), where GCI must install a host of new equipment,

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including voice gateways, Cable Modem Termination Systems (“CMTS”), narrowcast lasers, wave division multiplexers, and optical splitters. A voice gateway converts time division multiplexed voice signals from GCI’s 5E switch to Internet Protocol (“IP”) packet data, which the CMTS modulates onto a Radio Frequency (“RF”) carrier. The RF carrier is then converted to optical signals through the narrowcast lasers, wave division multiplexers, and optical splitters for transport across high capacity fiber optic cable to the optical nodes in the field. As GCI expands its DLPS service areas, it must add increasingly more equipment to handle additional capacity, and thus these are not one time upgrades, but additional upgrades must be made continually for GCI to expand its cable telephony footprint.

4. From the nodes, the RF signal is transmitted over trunk amplifiers, line extenders, and taps to the multimedia terminal adapter (“MTA”) units at the customer’s premises. The MTAs convert the RF signal to voice. For a variety of reasons discussed in the Declaration of Richard Dowling, GCI has since April 2004 been provisioning DLPS through network-powered MTA units placed on the outside of customer homes (in a network-powered system akin to today’s circuit-switched telephone system). Although the network-powered MTA units—unlike customer-powered MTAs (used in a system akin to the way cable modem service operates today)—do not require customer’s presence for in-home installation, they do necessitate additional outdoor plant upgrades as discussed below. The MTA is then connected with the customer premises equipment (“CPE”) to provide phone service, either through the Network Interface Device (“NID”) or through the internal premises wiring depending on the technology being deployed.

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5. To enable the MTA units, the optical nodes, which convert the optical signal back to RF carrier for transmission to the customer, must be “right-sized” to provide voice service. That is to say, to diminish noise created by the addition of a return path and to reduce the number of voice subscribers that could be affected by a node malfunction, GCI must decrease the number of subscribers that each node supports and thus increase the number of available nodes through construction of new nodes and by splitting existing nodes. Thus, to provide only cable television and cable modem Internet service GCI needed **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** nodes to serve its Anchorage cable franchise area, but GCI now requires significantly more nodes to provide phone service. Accordingly, GCI must construct new nodes or split existing nodes.

6. Any construction project of this magnitude begins with an engineering design, for which it is standard to require the expertise of an outside design firm. The process of originating and producing these designs requires several months of production and review at the outset. Only when these are finalized is it possible to initiate the necessary permitting process, required for node placement and insertion of power points, where required.

7. Node construction requires an initial site survey for location. For network-powered technology, GCI must coordinate with the power company to run a new power supply to the increased number of power insertion points. Moreover, power supply locations need to be upgraded to provide eight hours of battery back-up capacity in the event of power failure and status monitoring of supply condition. In addition, the Municipality of Anchorage (“MOA”) or Department of Transportation (“DOT”) has to

issue an easement or right of way permit. As a matter of course, right of way agencies will not issue permits during the winter season. This is not an issue that can be resolved by additional payments—it is purely a matter of timing. Only once these preconditions are satisfied can GCI commence actual node and power supply construction for network-powered DLPS. Construction and modification of existing plant in a single node—just one of the many steps required for network-powered DLPS—has generally taken approximately six to eight weeks.

8. Customer-powered DLPS will also require node construction and splitting. Although the nodes will not require the same power upgrades necessary to power the lines in case of a power outage, nodes must still be evaluated and, in many cases, split. Moreover, additional batteries must be added to ensure that the network itself (not including the customer's CPE) will remain operable for eight hours in the event of a power outage. The node modifications necessary to support customer-powered DLPS would, I expect, take approximately two to three weeks to complete per node.

9. Once the nodes are upgraded, the final two network parts of cable telephony service provisioning are the drop assessment—coupled with any necessary outdoor drop plant work—and installation of the terminal units. A drop that is suitable for providing video programming and cable modem service is not always suitably protected for providing voice service. For network-powered drops, GCI requires the drop to be physically protected, often by burying, up to the point that it arrives at the common utility interface. This is to prevent accidental mechanical stresses on the wire that could compromise or cause power problems to the drop cable. On occasion, the existing service drops have been found to perform poorly for voice when subjected to voltage