

DECLARATION OF GEORGE E. SCHMITT

I, George F. Schmitt, declare as follows:

1. I am the President and Chief Executive Officer of PCS PRIMECO, L.P. ("PRIMECO"). PRIMECO was the successful high bidder for eleven broadband MTA PCS markets, and it has filed Form 600 (long-form) applications seeking Commission grant of licensing authority for those markets. On March 20, 1995, PRIMECO submitted a down payment totalling \$166,778,769 with the Commission. When combined with PRIMECO's earlier upfront payment, PRIMECO has submitted \$221,445,200 in payments for the eleven MTA markets where it was the high bidder. Upon license grants, PRIMECO will submit an additional \$885,780,800 in payment for its winning MTA markets.
2. As part of its certifications for the Form 175 filing and the Form 600 long-form applications, PRIMECO declared, under penalty of perjury, that it had not entered into any partnerships, joint ventures, consortia or other agreements, arrangements or understandings of any kind relating to the licenses being auctioned, including any such agreements relating to the post-auction market structure.
3. As part of its Form 175 filing, PRIMECO further certified (again under penalty of perjury) that it had not entered into and would not enter into any explicit or implicit agreements, arrangements or understandings of any kind with any party regarding the amount of its bids, its bidding strategy, or the particular licenses upon which it would or would not bid.
4. By this declaration, I confirm that there were no agreements, tacit or otherwise, with any other party regarding the MTA bidding process or the post-auction PCS market structure.
5. I have reviewed the foregoing Opposition to Petition to Deny and have personal knowledge of the facts contained therein as they relate to PRIMECO. I hereby state,

under penalty of perjury, that the facts contained in the foregoing pleading are true and correct to the best of my knowledge, information and belief.

I further declare, under penalty of perjury, that the foregoing Declaration is true and correct to the best of my knowledge, information and belief.


George F. Schmitt

Dated: May 24, 1995

DECLARATION OF DR. ROBERT G. HARRIS

1. My name is Robert G. Harris. I am an Associate Professor in the Walter A. Haas School of Business, University of California, Berkeley, and a Principal in the Law and Economics Consulting Group. I earned a Doctor of Philosophy degree in Economics from the University of California, Berkeley. At Berkeley, I teach undergraduate, MBA and Ph.D. courses in Business & Public Policy; Economics for Managerial Decisions; Antitrust and Economic Regulation; and Competitive Strategies and Public Policies in Telecommunications. I have published several dozen articles and papers analyzing the effects of public policies on industry performance in telecommunications industries. I am Co-Director of the Consortium for Research in Telecommunications Policy, a collaborative program of the University of California at Berkeley, the University of Michigan and Northwestern University.
2. I have testified before committees of the U.S. Senate and the U.S. House of Representatives on antitrust, transportation and telecommunications legislation; to the Federal Communications Commission on spectrum auction rules, transfer of cellular licenses, price cap regulation, deployment of broadband networks and cable rate regulation; to the public utility commissions of fourteen states on rate design, price cap regulation and local competition policy; and to U.S. District Courts in antitrust, intellectual property and other business litigation. I have served as a consultant to the U.S. General Accounting Office, U.S. Office of Technology Assessment, U.S. Department of Justice, U.S. Department of Transportation, Interstate Commerce Commission, California Attorney General and California Department of Consumer Affairs. I have also consulted to numerous telecommunications carriers and equipment manufacturers. My curriculum vitae is attached as Exhibit 1.
3. I have followed the development of PCS spectrum allocation policies since the legislative debate in 1993. With Professor Michael Katz, I submitted testimony on behalf of

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NYNEX Corporation in Docket 93-253, in support of competitive bidding rules. While we initially favored simultaneous auctions for all PCS licenses,¹ we also recommended that, if the Commission did adopt a sequential auction process, it should simultaneously auction one or more whole blocks at a time, as the Commission has done. We noted that no auction mechanism perfectly satisfies all of the eight desirable properties of auctions. Hence, we urged that “The best the Commission can do is explicitly identify the tradeoffs it faces and then make judicious choices among the imperfect alternatives available.” In reviewing the Commission decisions and implementation of competitive bidding rules in PP Docket No. 93-253, I am impressed by the extent to which the Commission has made “judicious choices” among the alternatives it considered.

4. Having observed the outcome of the A/B MTA PCS license auction, I am convinced that the rules adopted and implemented by the Commission have generated their intended results: ensuring a fully competitive bidding process for A/B MTA PCS licenses; encouraging rapid deployment of new PCS networks and services, guaranteeing opportunities for diversity in the services and suppliers of mobile communications; promoting efficient use of spectrum; and capturing a large share of the economic value of the spectrum for the public treasury.

5. With that background and in that context, I have been asked by PCS PRIMECO, L.P. (“PRIMECO”) to review and respond to the petition to deny all of the A/B MTA license applications filed by the National Association of Black Owned Broadcasters, Inc. (“NABOB”), Percy E. Sutton, individually, and the National Association for the Advancement of Colored People (“NAACP”). Petitioners argue that “the bidding in which these entities engaged

¹ The economic rationale supporting our recommendation of a simultaneous auction of all six PCS blocks was that it would facilitate the aggregation of licenses into regional or national coverage areas, which, in our view, would promote the public interest in rapid deployment of PCS. We did not believe that simultaneity was needed to prevent earlier licensees from gaining a “headstart” advantage over later licensees, because it is evident that auction prices would capitalize any possible advantages of early starts or disadvantages of later starts.

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exhibited clear indications that there was a tacit agreement to avoid significant bidding against each other and to engage in a territorial allocation of the A and B licenses among themselves.”

(p. ii) Petitioners urge the Commission to defer issuance of the A/B MTA PCS licenses so that “an investigation of this conduct [can] be performed.” (p. ii)

6. The purpose of this declaration is to rebut petitioners’ totally flawed and unsubstantiated allegations of tacit collusion and market allocation among bidders in the A/B block PCS auction. Having followed the auction in progress and having analyzed the auction results since its conclusion, it is evident that there was vigorous competition among the bidders; there was no tacit agreement among them to restrain their bidding; there was no allocation of MTAs among the bidders; and the winning prices of the A and B licenses were established by a highly competitive bidding process. For these and other reasons, there is no public policy justification for deferral.

7. The first piece of evidence that supports the competitiveness of the bidding in the A/B auction is the total amount that will be paid by the winning bidders: more than \$7 billion. It strains credulity to imagine that the bidding entities would risk criminal prosecution for bid-rigging, yet still wind up paying more than \$7 billion for “bid-rigged” licenses. If the bidders had a tacit agreement among themselves, surely they would have paid much less for the licenses. Yet, the total amount bid for the A/B licenses lies well up in the range of estimates of the economic value of these licenses, causing one leading commentator to characterize the auction as “a costly and sometimes bloody battle,”² a perception widely shared by economists and industry observers.

8. A second outcome of the A/B auction is also completely contrary to the existence of a tacit agreement or market allocation among the bidders: the bidding was most vigorous and the

² Dan O’Shea, “PCS Auction Survivors Await Next Battle,” *Telephony*, March 20, 1995.

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winning bids highest in the very markets in which several of the leading bidders had the greatest interest. It is widely known, for example, that several companies were eager to win one of the Chicago licenses, because it is an important market (the third largest MTA, with 12 million potential subscribers or "pops"), but also because it could play an important role in providing geographic contiguity with adjacent service areas in the Midwest and Northeast. Had there been an agreement or market allocation among the bidders, they would have decided which one would "win" the Chicago MTAs, and the price per pop would not greatly exceed the national average. Yet, precisely because the bidding was so vigorous for the Chicago licenses, the price per pop was the highest in the auction, with PRIMECO winning one license at \$31.90 per pop, and AT&T Wireless PCS winning the other license at \$30.8 per pop.³ The PRIMECO Chicago bid was the highest bid in the auction -- more than double the average winning bid of \$15.29 per pop.⁴ Surely, had PRIMECO had an agreement with other bidders that it should "win" one of the Chicago licenses, there would have been no need to pay such a high price. Yet commentators characterized the bidding for the Chicago licenses as "an intense battle," with the winners paying very high prices for those highly prized licenses.⁵

9. Finally, if there were a tacit agreement and allocation of markets among the bidders, one would expect that the prices paid by the bidders would be approximately the same. If, after all, bidders x, y and z have fixed an auction, why would one pay more than the others? By "fixing" the auction, bidders can and would limit the prices they each pay so that no one pays much more than the others. Again, the auction results speak for themselves: there was a

³ "The highest per-pop bids in the top 10 markets (and the highest per-pop bids overall) came in Chicago, the third-largest PCS market in the USA with more than 12 million potential subscribers. The eventual winners of an intense battle were the Bell-based PCS Primeco alliance, which bid \$385 million (\$31.9 per pop), and AT&T Wireless PCS, which bid \$372 million (\$30.8 per pop)." *FinTech Mobile Communications*, March 23, 1995.

⁴ "Telecommunications/Cellular: Broadband PCS MTA Auctions in a Nutshell," Merrill Lynch Global Securities Research and Economics Group, March 15, 1995, p. 2.

⁵ See *supra* note 3.

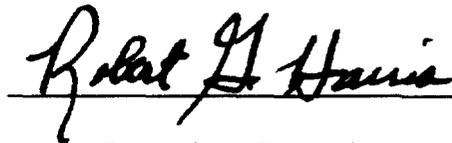
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tremendous range in average price per pop paid by the respective bidders. Whereas PRIMECO paid an average of \$19.36 per pop in its winning bids, Wireless Co paid \$14.56 per pop and AT&T Wireless PCS paid \$15.73 per pop.⁶ These differences in price per pop translate into tens of millions of dollars in the price each carrier will pay for its licenses. If there had been an agreement among them, there would be greater uniformity in the respective prices they would pay. The substantial disparities in average winning bids is also directly contrary to the existence of any agreement among the bidders.

10. The Commission's pro-competitive policies toward wireless communications are among the best examples of public policies that truly serve a multiplicity of policy goals by judiciously balancing among those objectives. Of central importance among those objectives -- indeed, the first policy objective listed in the Act -- is "the development and rapid deployment of new technologies, products and services for the public...". [(Section 309(j)(1)(a)] Deferring the licensing of the A/B auction winners would do grave harm to the development and deployment of new wireless products and services. Not only would it specifically delay the buildout and entry of the A/B winners -- though that would surely cause great harm in and of itself. More generally, deferring licenses after the A/B auction process has concluded would also send shock waves through the investment community, raising serious questions as to whether the regulatory risks of investing billions of dollars in the "information skyways" exceed the potential returns on those investments. This the Commission need not and should not do. Petitioners' allegations of collusive conduct in the A/B auction are baseless and directly contrary to the actual results of the auction. Having conducted a highly competitive auction for A/B licenses, the Commission should issue those licenses without delay, so the American people can enjoy new wireless products and services and increased competition in mobile communications.

⁶ "Telecommunications/Cellular: Broadband PCS MTA Auctions in a Nutshell," Merrill Lynch Global Securities Research and Economics Group, March 15, 1995, p. 4.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on this 23rd day of May, 1995.

A handwritten signature in cursive script that reads "Robert G. Harris". The signature is written in black ink and is positioned above a horizontal line.

Dr. Robert G. Harris

Exhibit 1

ROBERT G. HARRIS

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EDUCATION

Ph.D., M.A., UNIVERSITY OF CALIFORNIA, Economics, Berkeley, 1973-77.
Fields of Emphasis: Industrial Organization, Antitrust, Regulation, Public Finance.
M.A., B.A., MICHIGAN STATE UNIVERSITY, Social Science, 1961-65, 1972-73.

PRESENT POSITION

HAAS SCHOOL OF BUSINESS, UNIVERSITY OF CALIFORNIA, Berkeley, 1977 - present. Associate Professor, Business & Public Policy Group; and
Co-Director, Consortium for Research in Telecommunications Policy and Strategy

LAW & ECONOMICS CONSULTING GROUP, 1993-present.
Principal-in-Charge, Regulation Practice Group

ACADEMIC HONORS AND AWARDS

Industry Expert Panel, Center for Telecommunications Management, University of Southern California
Charles C. Slater Award (outstanding contribution to the Journal of Macromarketing, 1983-86).
Schwabacher Prize (outstanding University service), 1983.
Phi Beta Kappa, 1977.
Alfred P. Sloan Dissertation Fellowship, 1975-77.
Blue Key and Excalibur Honorary Fraternities, 1964-65.
President, All-University Student Government, 1964-65.

TEACHING

Graduate Courses: Business and Public Policy (MBA Core Course), Competitive Strategies & Public Policies in Telecommunications, Microeconomic Analysis for Managerial Decisions, Industry Analysis and Competitive Strategy, Doctoral Research in Business & Public Policy, Antitrust Law (School of Law, with L. Sullivan), Antitrust Economics (Department of Economics).

Undergraduate Courses: Social and Political Environment of Business (Core Course), Economics of Regulated Industries, The Corporation and the Global Economy.

Executive Education: Competitive Strategy, Telecommunications Policy and Strategy, Public Policy Strategy. Managing Business-Government Relations.

PUBLICATIONS

"Competition and Public Policies in Telecommunications: A Survey of U.S. Developments," presented to Conference on Privatization and Deregulation in the US, UK and Japan, Economic Research Institute of the Economic Planning Agency of Japan, Tokyo, 1995; forthcoming in *Conference Proceedings*.

"Competition and Unbundling in Local Telecommunications: Implications for Antitrust Policy," with Gregory L. Rosston and David J. Teece, presented to Telecommunications Policy Research Conference, Solomons, Maryland, October 1994; forthcoming in *Conference Proceedings*, EAL Press.

"State Regulatory Policies and the Telecommunications/Information Infrastructure," presented to Workshop of the National Research Council, Washington D.C., October 1993; *The Changing Nature of Telecommunications/Information Infrastructure*, National Academy Press, 1995.

"Access and Competition Policy in the Deregulated Rail Freight Industry, with Comparisons to Competitive Access Issues in Telecommunications," with Curtis M. Grimm, presented to Columbia Institute for Telecommunications and Informatics, New York, November 1993; forthcoming in *Conference Proceedings*, Oxford University Press.

"R&D Expenditures by the Bell Operating Companies: A Comparative Assessment," invited paper, Twenty-Third Annual Conference, Michigan State University Institute of Public Utilities, Williamsburg, Virginia, December 9, 1991; *MSU Public Utility Conference Proceedings*, 1993.

"Strategic Uses of Regulation: The Case of Line-of-Business Restrictions in Communications," with Robert A. Blau, presented to Academy of Management, Miami, FL, August 14, 1991; *Research in Corporate Social Performance and Policy*, James E. Post (ed.), JAI Press, 1992.

"Structural Adjustment Through Industry Deregulation: The U.S. Experience in Telecommunications and Transportation," invited paper, Pacific Economic Cooperation Conference on Structural Adjustment, Kyoto, Japan, October 11, 1990; published in *PECC Conference Proceedings*, 1991.

"Gaining Competitive Advantage through Strategic Public Policies: The Case of Japanese Telecommunications," invited lecture, National Economists Club, Washington, D.C., June 1988; published in *Economics and the Public Interest*, Richard T. Gill (ed.); Mayfield Publishing: Mountain View, CA, 1991.

"The Political Economy of Regulation: Analysis of Market Failures and Regulatory Responses," with James A. Carman, *Scaling the Corporate Wall: Readings in Social Issues of the Nineties*, S. Prakash Sethi, Paul Steidlmeier and Cecilia M. Falbe (eds.); Prentice-Hall: Englewood Cliffs, 1991.

"Telecommunications Services as a Strategic Industry: Implications for United States Policy," *Competition and the Regulation of Utilities*, Michael A. Crew (ed.), Kluwer Academic Publishers: Boston, 1990.

"Telecommunications as a Strategic Industry: Is There a Threat?" *Powernomics: Economics and Strategy After the Cold War*, Clyde V. Prestowitz, Jr., Ronald Morse and Alan Tonelson (eds.), University Press of America, 11. Reprinted from *Vital Speeches of the Day* LV(12), April 1989. Invited lecture, New York University Symposium on Telecommunications and Economic Development, December 1988.

"New Plans for Joint Ventures," with David C. Mowery, *The American Enterprise*, Sept/Oct 1990.

"Strategies for Innovation: An Overview," with David C. Mowery, *California Management Review* 32(3), Spring 1990, Co-Editor of Special Issue, "Strategies for Innovation."

"The Implications of Divestiture and Regulatory Policies for Research, Development and Innovation in the U.S. Telecommunications Industry," presented to Telecommunications Policy Research Conference, September 1988; *Telecommunications Policy*, April 1990.

"Telecommunications Policies in Japan: Lessons for the U.S.," presented to Advanced Workshop in Regulation and Public Utility Economics, Monterey, CA, July 1988; presented to Telecommunications Policy Research Conference, October 1988; *California Management Review* 31(3), Spring 1989.

"California Telecommunications Policy for the Twenty-First Century," *Report to the California Economic Development Corporation*, Sacramento, June 1988.

"A Qualitative Choice Analysis of Rail Routings: Implications for Vertical Foreclosure and Competition Policy." with Curtis A. Grimm, *The Logistics & Transportation Review*, March 1988.

"Horizontal Merger Policy: Promoting Competition and American Competitiveness," with Lawrence A. Sullivan, *Antitrust Bulletin*, January 1987.

"The Political Economy of Regulation," with James M. Carman, *Business & Society*, S.P. Sethi and C. Falbe (ed.), Lexington Books: Lexington, 1987.

"Public Regulation of Market Activity: Regulatory Failures," with James M. Carman, *Journal of Macromarketing*, Spring 1986.

"The Effects of Railroad Mergers on Industry Productivity and Performance," with Curtis M. Grimm, invited paper to Transportation Research Board, National Academy of Engineering, January 1986; *Transportation Research Record* 1029, 1986.

"Revitalization of the U.S. Freight Industry: An Organizational Perspective," with Curtis M. Grimm, *International Railway Economics*, K. Button & D. Pitfield (eds.); Croom Helm: London, 1985.

"The Values of Economic Theory in Management Education." *The American Economic Association Papers & Proceedings* 74(2), May 1984.

"Public Regulation of Market Activity: Regulatory Responses." with James M. Carman, *Journal of Macromarketing*, Spring 1984.

"Antitrust Market Definition: An Integrated Approach," with Thomas M. Jorde, *California Law Review* 72(1), January 1984. Reprinted in *Corporate Counsel's Annual*, Matthew Bender, 1985. Reprinted in *Antitrust Anthology*, edited by A. I. Gavil, Anderson Publishing, 1995.

"Structural Economics of the U.S. Rail Freight Industry: Concepts, Evidence and Merger Policy Implications," with Curtis M. Grimm, *Transportation Research* 17A(4), July 1983.

"Vertical Foreclosure in the Rail Freight Industry: Economic Analysis and Public Policy Prescriptions," with Curtis M. Grimm, *ICC Practitioners' Journal*, July 1983.

"Market Definition in the Merger Guidelines: Implications for Antitrust Enforcement," with Thomas M. Jorde, *California Law Review* 71(3), March 1983. Reprinted in *Antitrust Policy in Transition: The Convergence in Law and Economics*, Fox and Halverson (eds.), American Bar Association, 1984.

"Public Regulation of Market Activity: Institutional Typologies of Market Failures," with James M. Carman, *Journal of Macromarketing*, Spring 1983.

"Potential Benefits of Rail Mergers: An Econometric Analysis of Network Effects on Service Quality," with Clifford Winston, *Review of Economics and Statistics* 65(1), February 1983.

"Regulation: A Long Term Perspective," *Business Environment/Public Policy: The Field and Its Future*, Edwin M. Epstein and Lee E. Preston (eds.), St. Louis, 1982.

"The Financial Performance and Prospects of Railroads in the South and Southwest," with Curtis M. Grimm, *Texas Business Review*, November/December 1982.

"More on Passing On: A Reply to Cooter and to Viton and Winston," with Lawrence A. Sullivan, *Pennsylvania Law Review* 129:6, June 1981.

Rationalizing the Rail Freight System: Costs and Benefits of Branch Line Abandonments, U.S. Department of Transportation, Washington, D.C., 1981.

"Determinants of Railroad Profitability: An Econometric Study," with Theodore E. Keeler, *Economic Regulation: Essays in Honor of James R. Nelson*, William G. Shepherd and Kenneth D. Boyer (eds.), Michigan State University Press, 1981.

"Passing on the Monopoly Overcharge: A Response to Landes and Posner," with Lawrence A. Sullivan, *Pennsylvania Law Review* 128(5), May 1980.

"Suppliers of Last Resort: Economics of Self-Supply in Common Carrier Industries," with Robert A. Meyer, *Quarterly Review of Economics and Business* 19(4), Winter 1980.

"Economic Analysis of Light Density Rail Lines." *The Logistics and Transportation Review* 16(1), Winter 1980.

"Passing on the Monopoly Overcharge: A Comprehensive Policy Analysis," with Lawrence A. Sullivan, *Pennsylvania Law Review* 128(2), December 1979.

"Rationalizing the Physical Structure of the U.S. Rail Freight Industry," *National Railroad Policy*, Joint Economic Committee, U.S. Congress, Washington, D.C., Government Printing Office, 1979.

"Simple Analytics of Rail Costs and Disinvestment Criteria," *Transportation Research Record* 687, 1978.

"Economics of Traffic Density in the Rail Freight Industry," *Bell Journal of Economics* 8(2), Autumn 1977.

PAPERS, REPORTS, PRESENTATIONS & PROFESSIONAL PROCEEDINGS

"Telecommunications Trade and Investment Opportunities in China and India," presented to the Massachusetts Telecommunications Council, Boston, February 1995.

"The Strategic Implications of Interactive Broadband Telecommunications Networks for Competition and Public Policy," presented to the National Communications Forum, Chicago, September 1994.

"Competitive Implications of Vertical Relations between Equipment Vendors and Telecommunications Services: Lessons from the French Experience." with Joanne Oxley, presented to European Regional Conference of the International Telecommunications Society, Stenungsbaden, Sweden, June 21, 1993.

"Obtaining Competitive Intelligence and Creating Competitive Advantage through the Public Policy Process," with Steven Harris, invited paper, Annual Conference of the Society for Competitive Intelligence Professionals, Los Angeles, April 2, 1993.

"Deployment and Adoption of Integrated Services Digital Network in the U.S.: Progress and Public Policy Obstacles," with Luis Enriquez, invited paper, Twenty-Fourth Annual Conference, Michigan State University Institute of Public Utilities, Williamsburg, Virginia, December 8, 1992.

"Market Definition and Market Power in the Sports and Entertainment Industry," invited presentation, Antitrust Section, American Bar Association Annual Proceedings, San Francisco, August 1992.

"The Design of Incentive Regulation for Telecommunications," invited presentation, Conference on Alternative Regulation, Illinois Commerce Commission, Chicago, July 1992.

"The Effects of Public Policies on ISDN Deployment and Adoption in the U.S.," presented to International Telecommunications Society, Cannes, France, June 1992.

"Removing the MFJ Restriction on InterLATA Services," invited testimony, Subcommittee on Telecommunications & Finance, U.S. House of Representatives, Washington D.C., May 1992.

"The Implications of Telecommunications Infrastructure Investment for R&D, Innovation and Competitiveness," invited testimony, Subcommittee on Communications, U.S. Senate, Washington D.C., February 1992.

"Principles of Costing and Pricing for Telecommunications Regulatory Policy," invited testimony, Colorado Public Utilities Commission En Banc Hearing, Denver, February 1992.

"Deregulation and Interstate Bank Entry in California," with Lee Burke, Research Report of the California Policy Seminar, UC Berkeley, April 1991.

"Assessing the Future of Telecommunications in the Global Economy," invited address, California Telephone Association, Monterey, CA, February 1991.

"Economic Rationale for a National Fiber Optic Infrastructure," invited address, Congressional Staff Forum on Telecommunications (sponsored by Ameritech), Washington D.C., February 1991.

"Applications of Incentive Regulation: An International Comparison," invited presentation, Conference of California Public Utilities Counsel, Long Beach, CA, October 1990.

"The Role of Telecommunications in Regional Economic Development." invited address, Rocky Mountain State Leaders Conference, Billings, Montana, October 1990.

"Telecommunications and Public Policies in the Global Market." invited address, Carnegie Council, New York, NY, October 1990.

"Why We Need a National Telecommunications Policy: A Comparative Perspective," invited address, Policy Issues Management Conference, Bell Communications Research, Murray Hill, NJ, October 1990.

"Incentive Regulation for Telephone Utilities," invited presentation, Workshop of the Colorado Public Utilities Commission, Denver, September 1990.

"The Role of Telecommunications Policy," invited lecture, Conference on Economic Development in the Pacific Northwest, Portland, Oregon, September 1990.

"The Changing Economics of Telecommunications: Implications for U.S. Policy and Competitiveness," invited briefing of U.S. Congressional staff on telecommunications (sponsored by Pacific Telesis), San Francisco, August 1990.

"Communications Competitiveness and Infrastructure Modernization Act of 1990," invited testimony, Communications Subcommittee, U. S. Senate, Washington D.C., July 1990.

"Investing in America's Future." invited essay, 1989 Annual Report of Southwestern Bell Corporation, St. Louis, 1990.

"The Public Switched Telephone Network and Rural Economic Development," invited lecture, Montana State Leaders' Conference, Helena, April 1990.

"Is Public Policy Meeting the Needs of Consumers?" invited panelist, Conference on Telecommunications Technologies and Policies, Center for Communications and Information Science & Policy, University of Pennsylvania, March 1990.

"Telecommunications as a Strategic Industry," invited address, New England Council, Boston, February 1990.

"Fiber to the Customer: A Public Policy Perspective." invited paper, Western Communications Forum, San Diego, February 1990.

Session Chair and Moderator, "State Regulatory Reform: Recent and Future Trends," Fifth Conference on State Telecommunications Regulation, University of Utah, Salt Lake City, January 1990.

Invited Panelist, "Crossroads of Information Technology," Board on Telecommunications and Computer Applications, National Academy of Engineering, Washington D.C., October 1989

Invited panelist in the "Industry Forum," Annual Meeting of the U.S. Telephone Association, San Francisco, October 1989.

"Strategic Lessons from Deregulated Industries." paper presented to Strategic Management Society, San Francisco, October 1989.

"Deregulation in the Transportation Industries: Lessons for Telecommunications Managers," invited paper, Center for Telecommunications Management, University of Southern California, October 1989.

"Price Cap Regulation and Economic Forecasting," invited presentation to 1989 National Forecasting Conference, Bell Communications Research, San Francisco, May 1989.

"The Strategic Implications of Telecommunications Deregulation in Europe," invited presentation, Strategic Management Society, Amsterdam, October 1988.

"Telecommunications Deregulation: Implications for the California Economy," invited presentation, California Foundation for the Environment and the Economy, Carmel, June 1988.

"A Comparison of U.S. and Japanese Policies toward Information Technologies," invited presentation, International Public Economics Association, Tokyo, May 1988.

"Information Technologies, Public Policy, and Regional Economic Development," invited address, Conference on Regional Development in Japan, Hokkaido University, Sapporo, Japan, May 1988.

"The Implications of Line-of-Business Regulation for Diversification Strategy & Enterprise Structure," presented to Strategic Management Society, Boston, October 1987.

"Alternative Regulatory Frameworks for Local Exchange Carriers," invited presentation, En Banc Hearing of the California Public Utility Commission, September 1987.

"Emerging Telecommunications Policies in Europe." Briefing of California Legislative Leaders, Los Angeles, September 1987.

"Japanese Corporate Philanthropy in the United States," presented to Academy of Management, New Orleans, August 1987; Center for Research in Management Working Paper BPP-23; published in summary form in *Strategic Directions*, with Barbara Lombardo and David Vogel, April 1989.

"The Effects of Deregulation on Competition and Competition Policy in Banking: A Review of the Literature." Working Paper No. 4, National Center for Financial Services, Berkeley, August 1987.

"Competitive Strategies under Regulatory Constraint: Implications of the AT&T Divestiture on Vertical Relations in Telecommunications," with David J. Teece, paper presented to Strategic Management Society, Singapore, 1986.

"The Economic Consequences of Deregulation," invited address, Emerging Issues Program, Conference of National State Legislative Leaders, Los Angeles, September 1986.

"Public Policies toward Utility Diversification: An Overview," invited presentation, California Policy Seminar/California Senate Office of Research, Berkeley, April 1986.

"New Technologies for Local Loop Access: An Economic and Regulatory Analysis," with Gary Pisano, Office of Technology Assessment, United States Congress, June 1985.

"Corporate Community Involvement in the Greater San Francisco Bay Area," with D. Vogel and J. Logsdon, Center for Research in Management Working Paper, Berkeley, May 1985.

"The Future of Telecommunications Regulation." invited presentation, En Banc Hearing of the California Public Utilities Commission, San Francisco, November 1984.

"Testimony in Support The Taxpayer Antitrust Enforcement Act," Judiciary Committee, U.S. Senate, May 1984.

ADMINISTRATIVE POSITIONS, UNIVERSITY OF CALIFORNIA**WALTER A. HAAS SCHOOL OF BUSINESS**

Chair, Business and Public Policy Group (1983-84, 1986-93).
Policy and Planning Committee (1986-88; 1991-93); Chair (1987-88; 1992-93).
Chair, Program in Business and Social Policy (1986-90).
Business School Building Program Committee (1986-91).
Ph.D. Field Advisor, Business and Public Policy (1981-87; 1989-91).
Policy and Planning Committee (1991-3; Chair, 1992-93).
Member, Board of Directors, Washington Campus Program (1990-93).
Director, The Executive Program (1983-85).
Director, Executive Programs in Telecommunications (1989-92).
Chair, Executive Education Task Force (1991-93).
Member, Board of Directors, Berkeley Center for Executive Development

UNIVERSITY OF CALIFORNIA, BERKELEY

Executive Committee, Center for Research in Management (1989-).
Advisory Board, Lester Center for Innovation and Entrepreneurship (1992-).
Chancellor's Advisory Committee on Parking (1988-89).
Executive Committee, National Financial Services Center (1986-88).
Executive Committee, Institute of Transportation Studies (1981-83).
Director, Center for Transportation Policy Research (1980-2).

UNIVERSITY OF CALIFORNIA, SYSTEMWIDE

Working Group on Technology Transfer (1988-90).
Task Force on Telecommunications and Information Policy Research (1984-85).

PROFESSIONAL AFFILIATIONS

American Economic Association
Academy of Management
Strategic Management Society
International Telecommunications Society
Association of Public Policy Analysis and Management

SERVICE TO PROFESSIONAL JOURNALS, SOCIETIES & PUBLIC AGENCIES

Governor's Ad Hoc Committee, Golden State Quality Awards (1991-92)
Chair, Ninth Annual International Conference of the Strategic Management Society, 1989, San Francisco
Associate Editor, California Management Review
Associate Editor, Logistics and Transportation Review
Editorial Advisory Board, Transportation Research
Session organizer, Telecommunications Policy Research Conference (1988, 1989)
Session organizer, Academy of Management (1991).
Reviewer/Referee: Bell/RAND Journal of Economics; Industrial and Corporate Change; Journal of Asian Economics; Journal of Economics and Business; Journal of Public Policy Analysis & Management; Journal of Regulatory Economics; National Science Foundation; Quarterly Review of Economics and Business; Review of Economics and Statistics; Telecommunications Policy.

CONSULTING & TESTIMONY

Economic Consulting to Public Agencies:

California Department of Consumer Affairs (industry analysis; telecommunications policy); California Office of Attorney General (antitrust analysis in tire industry, merger analysis in food retailing industry, resale price maintenance in consumer electronics, infant formula pricing); California Public Utilities Commission (teach regulatory economics & policy to Commission staff); Interstate Commerce Commission (rate regulatory policy, merger policy, costing methodology); Office of Technology Assessment (telecommunications policy); U.S. Department of Transportation (railroad industry rationalization, merger policy); U.S. General Accounting Office (transportation policy).

Economic Consulting/Regulatory Expert Testimony to Private Enterprise:

Pacific Bell (product pricing, competitive strategy, regulatory policy, broadband deployment, MFJ interLATA relief); US WEST (regulatory policy, costing and pricing principles); Ameritech (price regulation; local competition policy); General Telephone (pricing, regulatory policy); Western Coal Traffic League (railroad pricing); Consolidated Freightways (motor carrier pricing); Southern Pacific Transportation Co. (route rationalization analysis; rail merger analysis; pricing of trackage rights); American Presidents Intermodal Co. (competition policy, merger analysis); Bell Communications Research (R&D policy analysis); Bell Atlantic (price regulation, cable rate regulation; cellular telephone joint venture); Southwestern Bell (price regulation, local competition policy); BellSouth (price regulation, local competition policy); NYNEX (FCC spectrum auction rules); United States Telephone Association (FCC price regulation); MFJ Task Force (MFJ manufacturing relief).

Economic Consulting/Business Litigation Expert Witness Testimony:

Electrical contracting; biotechnology manufacturing equipment; pipe fabrication; vision care services; electronic lighting ballasts; motion picture production, distribution and exhibition; regional shopping center development, semiconductor manufacturing equipment; digital-analog converters; workmen's compensation insurance; semiconductor manufacturing; semiconductor manufacturing.

PRIOR/OTHER EMPLOYMENT

Deputy Director, Cost, Economic and Financial Analysis, Bureau of Accounts, Interstate Commerce Commission, Washington, D.C. (on leave, University of California); (1980-81).
Director, ARTRAIN (traveling art education exhibit), Michigan Council for the Arts, Detroit, (1971-72).
President, Young America Corporation (direct marketing of specialty products), St. Louis (1969-71).
Public Relations Consultant (TIME, Inc.; Rockefeller for President Committee; Young Citizens for Humphrey; Student Coalition for Congressional Action), New York and Washington D.C. (1967-69).
Vice President, National Student Marketing Corporation, Washington D.C. (1966-67).
Staff Assistant, Office of the Governor, State of Oregon, Salem (1966).
Public Relations Field Representative, General Motors Corporation, Warren, Michigan (1965).

CERTIFICATE OF SERVICE

I, Jo-Ann Grayton, do hereby certify that a copy of the foregoing "Opposition to Petition to Deny" was served this 25th day of May, 1995 by first class United States mail, postage prepaid, to the following:

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Ameritech Wireless Communications, Inc.
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BellSouth Personal Communications, Inc.
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Centennial Cellular Corp.
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Communications International Corp.
c/o Neil S. McKay
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Cox Cable Communications, Inc.
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Poka Lambro Telephone Cooperative, Inc.
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Tahoka, TX 79373

Powertel PCS Partners, L.P.
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South Seas Satellite Communications Corp.
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