In railroad merger cases before the I.C.C., efficiency claims were subject to public review and comment by independent experts such as Professor Carlton and myself.

143. Second, I show that the merger savings claimed are likely to be substantial overestimates. Further, they seem not to take into account the opportunity costs of the two firms providing services to each other. Finally, these savings are not "believed" by the stock market, in that they have not been internalized in the stock prices of either MCI or WorldCom.

144. Third, efficiencies can be invoked to attenuate the anticompetitive effects of a merger only if these efficiencies are likely to be passed on to consumers in the form of lower prices. Instead, the track record of the Big Three suggests otherwise.

2. Claim of Reduced Domestic Network Costs

145. MCI-WorldCom claim that as a result of the combination they will be able to carry an increased proportion of its domestic traffic on its own local network facilities, avoiding payments for switched access charges to local exchange carriers. Additionally, MCI-WorldCom claim that the combination of traffic volumes will improve the efficiency of their access arrangements for traffic that exchanged with local carriers. This category represents approximately one-third of the projected savings..

146. Counting the first component (avoided access charges) in full is fallacious, as it does not take into account the fact that these access charges would have been earned as revenues by an independent WorldCom's local operations. The merger simply replaces a hard payment for a transfer price. Therefore, only counting the access charge savings but not the lost revenues ignores the opportunity cost to WorldCom's local operations. These savings need to be stated on the basis of the additional MCI traffic that would flow on WorldCom's local operations as a result of the merger. Even then, however, the gain in efficiency is the differential between the avoided local exchange carrier's access charge and the company's internal cost of providing access. These efficiencies should not be counted until WorldCom and MCI restate them on this basis.

147. The savings from increased efficiency are also likely overstated. The FCC's 1997 Monitoring Report shows that over 27% of interstate access charges were collected in 1996 through the carrier common line charge (CCL), which is being phased out and replaced with the presubscribed interexchange carrier charge (PICC).[76] Both the CCL and the PICC are uniform charges across interexchange carriers and are therefore independent of the efficiency of their access arrangements. An additional 67% of access charges is represented by non-CCL per minute charges, mainly end-office switching, tandem transport, and tandem switching charges. The majority of these charges, however, is accounted for by end-office switching, which is

[76] *FCC Monitoring Report*, May 1997, Prepared by the Federal and State Staff for the Federal-State Joint Board in CC Docket No. 80-286, Table 5.14, p. 618.

uniformly priced across interexchange carriers and is also independent of the efficiency of access arrangements. There may be small savings from moving some traffic from tandem switching/transport to direct trunked transport, but these savings appear to be limited; I understand that carriers such as WorldCom and MCI are already employing direct trunked transport in the majority of situations, and recent FCC reforms have substantially reduced the permissible tandem switching and tandem transport charges. Therefore, the bulk of the efficiencies claimed by MCI-WorldCom has to come from the remaining 3% of access charges, which cover entrance facilities and direct trunked transport charges. Even if the combination permitted the companies to substantially improve these access arrangements, a substantial savings on an item that represents only 3% of access charges cannot generate savings of the magnitude claimed by the merging parties.

3. Claim of Reduced International Network Costs

148. MCI-WorldCom claim that the combined company will benefit from MCI's more extensive international traffic settlement agreements and WorldCom's local network activities in Europe, resulting in lower average costs of terminating traffic abroad. This category represents approximately one-quarter of the projected merger savings.

149. First, a merger is not required to reap the benefits of better settlement agreements. The parties could simply execute a contract to terminate each other's traffic in countries where one party has a superior rate, and split the savings. Second, it is not clear that these superior agreements are in existence and are sustainable. If the domestic market of the country where the traffic terminates is not effectively open, then the FCC's international policies should ensure that all U.S. carriers have access to comparable terminating arrangements with the foreign carriers. If MCI enjoyed better rates and the foreign market were not open, MCI's preferential arrangements would appear to violate the FCC's international settlements policy. On the other hand, if the domestic market for terminating traffic is effectively open, then competition in that country should ensure that all U.S. carriers receive comparable market-based rates for termination. In this case, any advantages MCI has should be rapidly eliminated as WorldCom bargains for better terminating rates in those countries.

4. Inconsistencies in Efficiency Projections

150. MCI-WorldCom's financial projections are inconsistent with their experts' claims that interexchange market is competitive. For example, as shown in Exhibit 34, the companies' synergy projections, both as absolute dollar amounts and as percentages of revenue and expenditure, can be used to determine the projected revenues and expenses of the merged company. As detailed in Exhibit 34, MCI-WorldCom's advisers project that the company's joint revenue will more than double between 1997 and 2001, that its cost savings widen as a proportion of operating expenditure from 8% to 12% in 2002, and that its profit margin would widen from 8% in 1997 to a remarkable 33% in 2002.

151. It is probable that these claimed efficiencies will not come from increasing returns on network assets. WorldCom has chosen not to consolidate the two networks of its adoptees, those of LDDS and of WilTel, primarily due to the difficulty of integrating different switching platforms. This reality, while not directly affecting WorldCom customers, makes it even less likely that WorldCom's two networks would be seamlessly integrated with that of MCI. Furthermore, many industry observers question WorldCom's ability to assimilate a company the size of MCI; its past acquisitions have been of companies much smaller. Of course, the companies could preserve the networks in their current and separate state; however, in doing so, they lose any savings they sought from merging in the first place.

152. Although the stock market collectively believes that the merger will go through, it does not believe the magnitude of the claimed efficiencies. As shown in Exhibit 35, MCI stock is currently trading at approximately \$46 per share (very close to WorldCom's offer of \$51 per share), while MCI's own advisors Salomon Smith Barney (SSB) value think MCI's low valuation is close to \$33 per share on a stand-alone basis. This indicates that stock traders believe that the merger will go through with high probability. If traders were to believe that the merger were not to go through, they would be likely to short MCI's stock and thus force it down closer to the stand-alone values predicted by MCI-WorldCom's advisers.

153. Given that traders believe that the deal will be consummated, their perception of the value of the efficiencies should be reflected in the combined stock value of the companies. According to MCI-WorldCom's advisors SSB, the present value of the synergies is \$30.9 billion, as shown in Exhibit 35. Combining this value with SSB's stand-alone <u>low</u> valuation yields a combined valuation for the company with synergies of approximately \$90 billion. As Exhibit 35 shows, however, the combined market capitalization of the two companies is only \$74 billion. Given that market traders believe that the merger will happen, it must be that they find the synergy estimates unpersuasive, as the current market capitalization should represent the market's estimate of the value of the company. If traders were to believe the synergy estimates, they would bid up the price of WorldCom's stock until these synergies were fully built into the market capitalization. Looking at the difference between the SSB valuation and the current market capitalization, it appears that the market has discounted over \$16 billion, or over 50%, of MCI-WorldCom's synergy estimates. I note that this analysis has been conservative, as I have used the low estimates of stand-alone value provided by SSB. If I had used the high estimates of stand-alone value, I would have concluded that the market is applying an even higher discount to MCI-WorldCom's estimated synergies. Therefore, one must conclude that the WorldCom and MCI's efficiency estimates are not persuasive.

5. PROBABLE FAILURE TO PASS EFFICIENCY TO CONSUMERS

154. In the light of this evidence, and of the failure of interexchange carriers to pass through access charge reductions to consumers,[77] I believe that this Commission should discount any

[77] See Letter by FCC Chairman William E. Kennard to AT&T, MCI and Sprint, *supra* note 34.

defense of this merger based on the claimed "efficiencies" that this transaction would generate. Production efficiencies can only mitigate the negative impact on consumers of an anticompetitive transaction if they are passed on to consumers. However, in the case of the interexchange industry, not even an industry-wide cost reduction that was observable by regulators (that is, a mandated reduction in access charges) was passed on to consumers. This makes it all the less likely that consumers would benefit from the efficiencies claimed by MCI and WorldCom.

X. ANTICOMPETITIVE EFFECTS AND EQUITY MARKETS

155. In a conference call with stock analysts, WorldCom management opined that the merger would produce "revenue synergies," which were then built into the projected financial gains of the transaction. This "enhancement of revenue per customer" is a thinly disguised anticompetitive effect of the transaction.[78] Stock market analysts agree that this transaction would ease the pressure on the margins of the merging parties. Relative to the broader market, the stock market valuations of both the merging parties and their competitors have rocketed between the time of the announcement and the present date, as indicated in Exhibit 33. Stock prices are in part a reflection of companies' future earnings. Therefore, the market has already assimilated the increased earnings that will flow from the greater margins extracted from hybrids and resellers, and in turn, their customers. This skew reflects the expectation that the merger will be good for all carriers which own, in whole or in part, facilities-based networks. Such a development suggests that the proposed merger is highly anticompetitive.

156. MCI-WorldCom experts Hall, Carlton and Sider note that one must undertake an event study to accurately assign causality in stock market valuation changes.[79] In this instance, however, such analysis is too limiting. Using stock prices from the days immediately following the merger announcement incorrectly assumes that the market has received full information regarding the transaction. This time window is far too short, as the market cannot fully react to all aspects of the merger. It is difficult to know when the market receives information: one single event, such as the merger announcement, cannot forecast the information derived from subsequent, related events, such as the release of potential synergy savings months later. Instead, evaluating prices over a longer time allows the market to fully integrate these and other pieces of relevant information as they arise.

157. While the dramatic increase in AT&T's stock price could be explained in part by its appointment of a new CEO, at best this offers only a partial explanation. Nor does this appointment explain the run-up in stock prices of other interexchange carriers. In fact, if the proposed merger's only effect were to make the combined MCI-WorldCom a more efficient producer, the stock prices of other interexchange carriers should go down, not up. Everything else being equal, a firm's increased efficiency would lead to lower overall prices, and reduced

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[78] Transcript of Analyst Conference Call, *MCI-WorldCom Merger Announcement*, November 10, 1997.

[79] Hall *Declaration*, para. 111. Carlton and Sider, *NY PSC Affidavit*, para. 19.

profitability (and hence stock price) for competitors. Instead, the increase in competitors' stock prices reflects the market's expectation of increased profitability, a clear statement of the expected anticompetitive effect of the transaction.

XI. CONCLUDING EVALUATION

158. The proposed merger, if approved, will adversely affect the nation's consumers and businesses. There will be a marked reduction in the number of active competitors, which will have an attendant effect on prices. As I indicated earlier, even an increase of as little as a penny a minute would raise the annual interexchange costs to consumers by over $2.2 billion. The public interest would not be served by this horizontal combination of industry leaders. Any "efficiencies" or "synergies" realized would likely be offset by the loss of one viable competitor. What MCI and WorldCom euphemistically refer to as "revenue synergy" is probably just the expectation of higher prices. While GTE would be harmed directly by this merger, other fringe firms operating through resale would be similarly affected. Those providers with a larger competitive presence than GTE would be harmed to a greater extent, and many potential entrants would find themselves precluded altogether from entering an industry with such increased concentration.

159. The barriers to entry I identified, combined with the trend in horizontal integration of interexchange services onto the same facilities, make it unlikely that new entry could check the adverse effects of this merger in the medium term. The merger will harm the competitiveness of interexchange resellers and will lessen the degree of overall competition in interexchange services. Given that the interexchange industry is oligopolistic now, the merger would further forestall competition, resulting in a permanent loss of consumer welfare. I therefore conclude that the merger will reduce the welfare of consumers served by interexchange resellers, consumers in general, and of potential customers who will be denied additional choices in the marketplace. It is unfortunate that MCI and WorldCom have not taken more seriously their obligation to present evidence in support of their merger application. However, it is abundantly clear from the available evidence that this merger would be anticompetitive, which may well explain why MCI and WorldCom have failed to produce such evidence. Therefore, under the public interest standard as developed and applied by this Commission in these matters, this Commission should deny MCI's and WorldCom's merger application. At a very minimum, this Commission should conduct evidentiary proceedings and compel further production of data that only MCI and WorldCom possess. I am confident that public scrutiny of such data would substantiate my conclusion that this merger will be anticompetitive.

AFFIDAVIT OF ROBERT G. HARRIS

I hereby swear, under penalty of perjury, that the foregoing is true and correct, to the best of my knowledge and belief.

Robert G. Harris

Robert G. Harris

State of California)

County of Alameda)

Subscribed and sworn to before me this 13th day of March 1998.

Jacqueline O'Neill

Notary Public

My Commission Expires

Dec. 6, 2000

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HAAS SCHOOL OF BUSINESS, UNIVERSITY OF CALIFORNIA, BERKELEY, 1977 - present
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PROFESSIONAL EXPERIENCE

INTERSTATE COMMERCE COMMISSION, Bureau of Accounts, Washington, DC, 1980-1981
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ARTRAIN, MICHIGAN COUNCIL FOR THE ARTS, Detroit, 1971-1972
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Staff Assistant

GENERAL MOTORS CORPORATION, Warren, MI, 1965
Public Relations Field Representative

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 - 1986)

Schwabacher Prize (outstanding University service), 1983.

Phi Beta Kappa, 1977.

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Blue Key and Excalibur Honorary Fraternities, 1964 - 1965.

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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

1) "The Emergence of Competition in Local Exchange Service," with Lori S. Lent, invited paper, International Engineering Consortium, *Annual Review of Communications*, 1995-96 edition.

2) "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*.

3) "ISDN in the United States: Strategies for Success: Part II - The Deployment and Adoption of ISDN," with Luis A. Enriquez, *New Telecom Quarterly*, 1995. Reprinted in *Blue Sky: New Horizons in Telecommunications*.

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8) "Access and Competition Policy in the Deregulated Rail Freight Industry,{PRIVATE } 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.

9) "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.

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11) "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; *PECC Conference Proceedings,* 1991.

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

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

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

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

3) "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.

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5) "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.

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

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

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

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

10) "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.

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

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

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

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

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

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

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

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

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

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

21) "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.

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25) "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.

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

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

28) 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.

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

30) Invited Panelist, "Industry Forum," Annual Meeting of the U.S. Telephone Association, San Francisco, October 1989.

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

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

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

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

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42) "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.

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

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

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

47) "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.

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

49) "Testimony in Support of 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 (1980-82).

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, San Francisco (1989)

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

<u>Economic Consulting to Public Agencies</u>

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).

<u>Regulatory Expert Testimony</u>

Pacific Bell (product pricing, competitive strategy, regulatory policy, broadband deployment, MFJ interLATA relief); US WEST (regulatory policy, costing and pricing principles, local competition and interconnection); 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);

AGT and Stentor Companies (Canadian interconnection and local competition policy); Iusacell (Mexican interconnection and local competition policy).

Business Litigation Expert Witness Testimony

Electrical contracting; biotechnology manufacturing equipment; corrugated steel pipe products; 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; resale of telecommunications equipment and services; after-market servicing of telecommunications equipment; on-line information and transaction services.

July 1997

Interexchange Carriers' Coverage
All U.S., January 1998

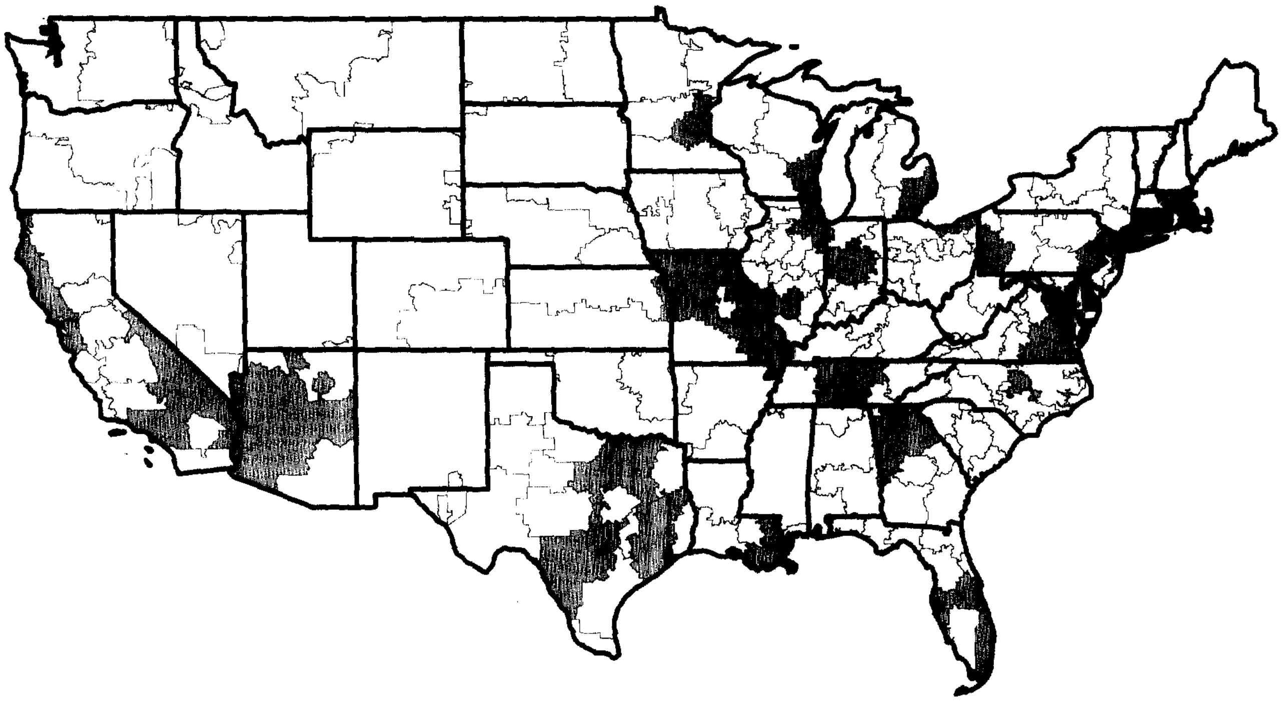
Interexchange Carrier	Points of Presence	Population Covered	Estimated On-Net to On-Net
AT&T	715	100%	100%
MCI	582	100%	100%
Sprint	399	99%	98%
WorldCom	162	82%	67%
Qwest	22 *	n/a	n/a
Frontier	90 **	70%	49%
IXC	>75 ***	65%	42%
Cable & Wireless	35	48%	23%
LCI	15	11%	1%

Source: AT&T, MCI. Sprint, WorldCom, C&W: QTEL 9000 Master Rate Center File, CCMI, released Jan. 30, 1998. WorldCom POPs only reflect LDDS/Metromedia Operations.
Others: Frontier: company marketing information.
LCI: FCC Tariff #2 (Spec. Comm. Carr.) IXC: http:\\www.ixc-comm. U.S. Census

Notes:
* Estimate of POPs on operational segments of Qwest network from company materials at http://www.qwest.com/networkframe.html, which indicate target of over 100 POPs by full network deployment.
** Points of presence listed in company marketing documents at http://frontiercorp.com
*** Points of presence listed incompany marketing documents at http://www.ixc-comm.com. A large proportion of these POPs appear not to be on the company's own network.

Harris Exhibit 3

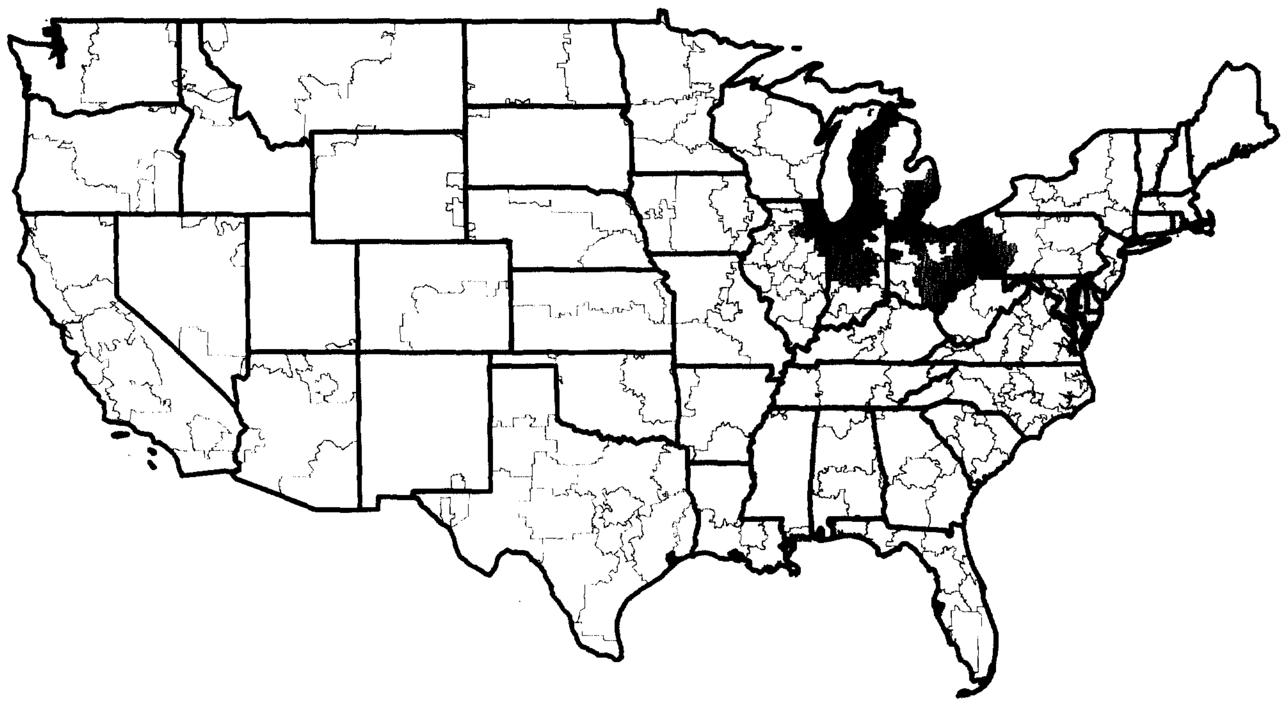
Cable & Wireless Network Coverage in the U.S.



Legend	% Population Served
LATA with POP	48%
LATA without POP	52%

Harris Exhibit 4

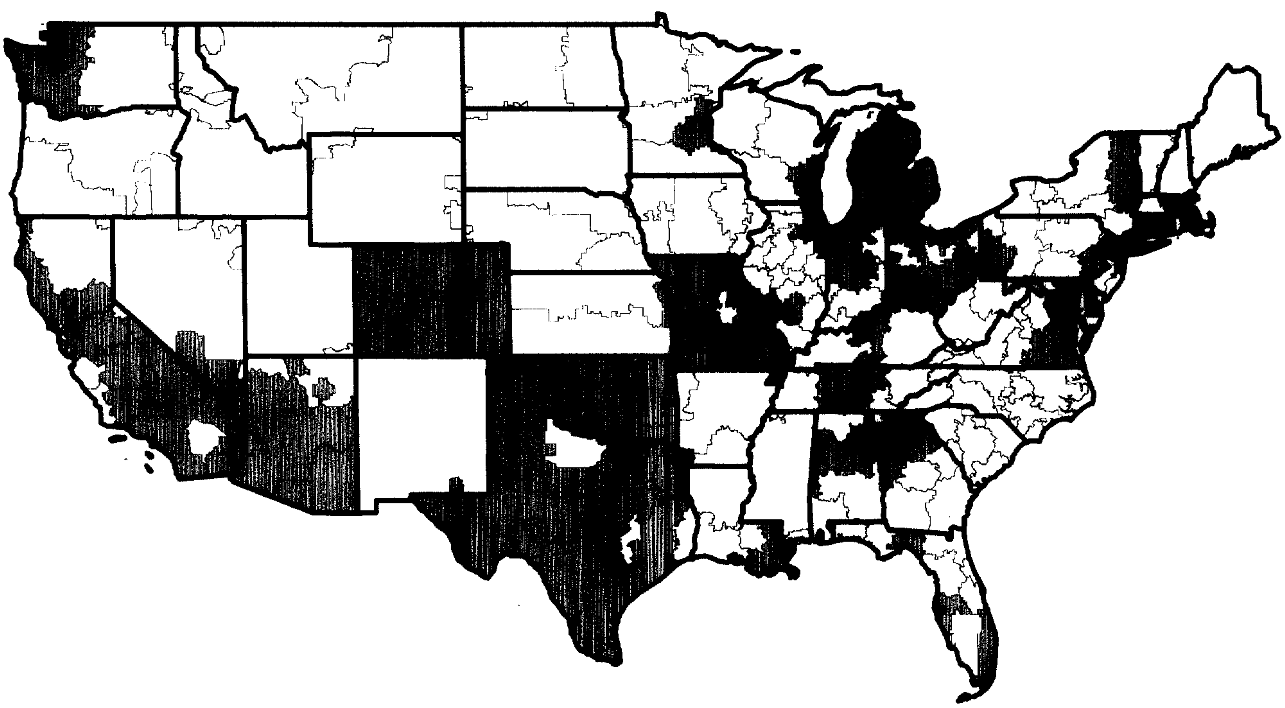
LCI International Telecom Network Coverage in the U.S.



Legend	% Population Served
LATA with POP	11%
LATA without POP	89%

Harris Exhibit 5

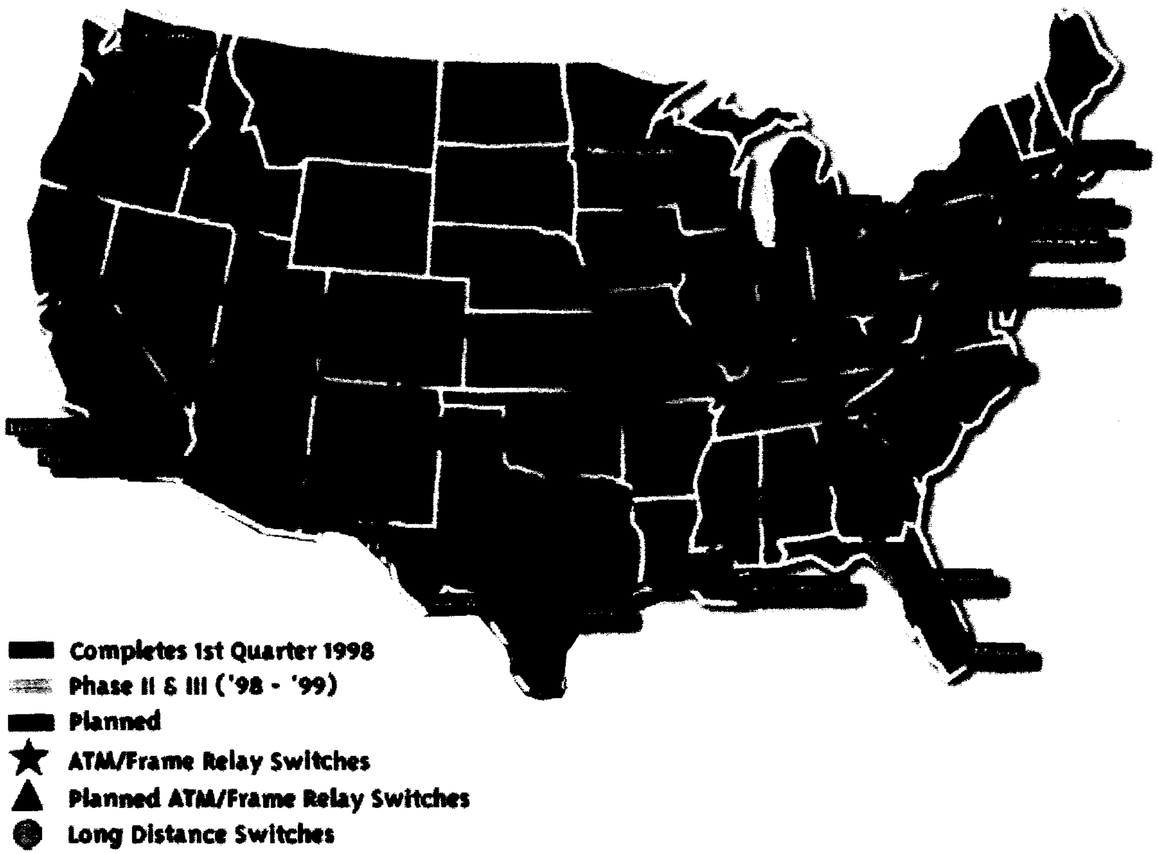
IXC Communications Network Coverage in the U.S.



Legend	% Population Served
LATA with POP	65%
LATA without POP	35%

Harris Exhibit 6

IXC Communications: Fiber Optic Routes Planned or In Service
January 1998



Source: Company information available at http://www.ixc-comm.com

Harris Exhibit 7

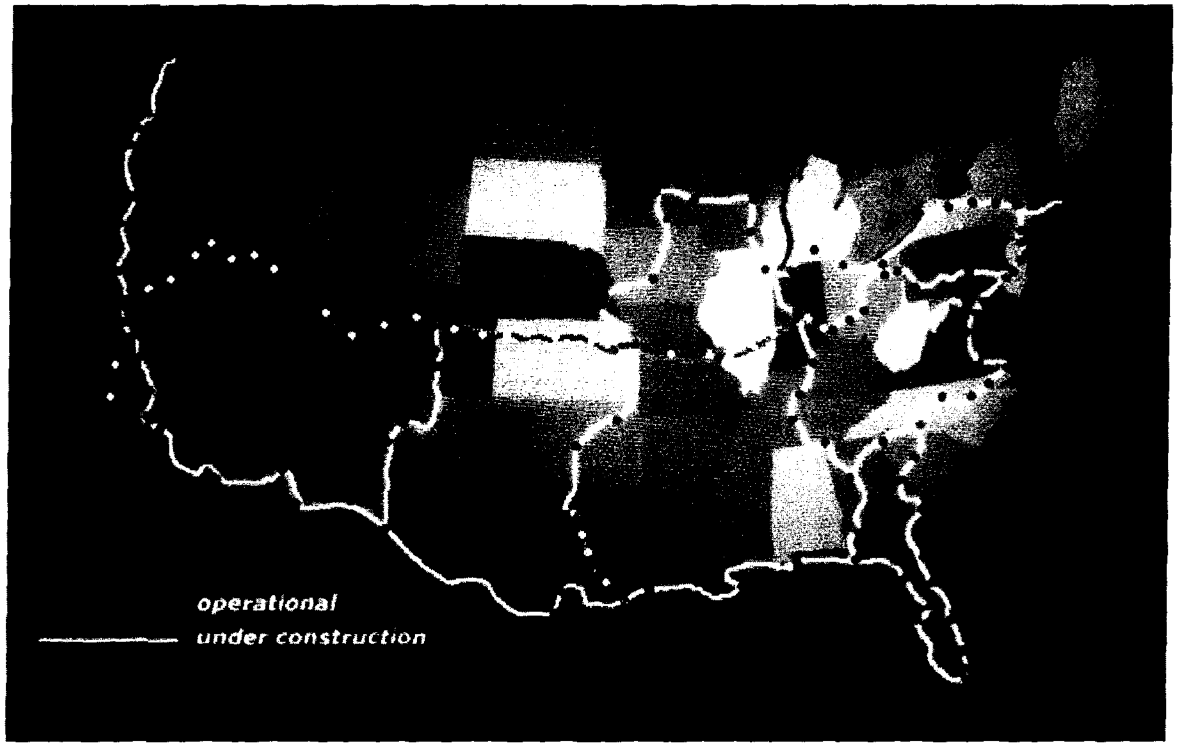
IXC Communications: Fiber Optic Routes Currently In Service

January 1998

Source: Company information available at http://www.ixc-comm.com

Harris Exhibit 8

Qwest Communications: Fiber Optic Routes Planned or In Service
January 1998



Source: Company information available at http://www.qwest.com