



1994

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Recommended Citation

Paul W. MacAvoy, *Telecommunications in Transition*, 11 *Yale J. on Reg.* (1994).

Available at: <http://digitalcommons.law.yale.edu/yjreg/vol11/iss1/5>

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Telecommunications in Transition

Introduction

Paul W. MacAvoy†

The telecommunications industry is changing so fundamentally as to eliminate structures that define firms, markets, and industries as they have existed over the last fifty years. Technology has been the source, while regulated industry practice the reactive force, that have determined the rate of elimination of boundaries between telephone and broadcasting, between local and long distance service in both these areas, and between origination and transmission of data, voice, and video signals. Regulators and regulated telecommunications firms, however, have often resisted these changes.

Twenty years ago the universal telephone network was virtually the single source of supply, providing end-to-end transmission of all material. Federal and state regulatory agencies had suppressed cable television into nonexistence, and had restricted even consumer self-provision of transmission services to private line access on a limited portion of the broadcast bandwidth. Today, the entertainment, cable, and telephone industries have come to the edge of identifying a single service to residential and business consumers in which all combinations can be provided by the access loops of either the telephone or cable television companies. Ultimately, the future of the telecommunications industry will depend on the inertial forces of resistance to this in regulatory bodies—the Federal Communications Commission, the Antitrust Divestiture Court, the congressional oversight committees, and the state regulatory agencies—each of which has control of its own designated service.

While technology and regulation collide at the industry level, system and service innovations have progressed rapidly at the individual firm level. As new enterprises are able to produce specific service components or service levels

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at lower cost—whether in the local loop, switching, or transmission—and as technology no longer dictates economies of scale and scope, they develop and push into the service package of the regulated enterprise. These fledgling rivals attempt to provide their service component or level separately from the total service currently supplied by the regulated enterprise. From competitive access providers to personal communications companies, entrants have pushed the network away from a “single, long, expensive star-like pyramid with utility cost structures towards overlapping short ring-like geodesics in which competition prevails.”¹ The established utility has had to slice off layers of its downstream service and give away these layers to competitive providers with lower cost, while continuing to provide other layers—such as access and switching—to final consumers. But regulatory agencies must determine prices for these services to competitors, and their inertial force slows and often impedes the introduction of lower-cost, higher-quality services even at the firm and individual consumer level.

The articles in *Telecommunications in Transition* make a substantial contribution to examining such regulatory barriers to innovation. The essay by William J. Baumol and J. Gregory Sidak provides a paradigm for determining whether regulatory agencies set rates too high for specialized (competitive) providers entering into the systems of the regulated (monopoly) local exchange carrier. Their efficient component-pricing rule helps develop regulatory and exchange carrier practices that do not impede the technological and innovative sources of competition in communications. While more subtle than acknowledged in the responsive comments, the rule is also more adaptable to conditions in telecommunications than suggested by the many (distracting) examples from railroads and electric power.

William B. Tye disagrees with Baumol and Sidak, and calls for other, more adaptive procedures that focus on comparing the structural relation between the established and entering firm. Requiring that competition be achieved on equal terms, he calls for regulatory contracts from the incumbent that convey neither a competitive advantage nor disadvantage to the entrant.

Alfred E. Kahn and William E. Taylor take the opposite view and find that operational practices can be developed from redefining the Baumol and Sidak requirement that an incumbent charge itself “the same interconnection charge it imposes on its rival plus its own incremental costs of those same retail operations”² Basically, the opposing reviewers disagree on the operability of a rule intended to allow efficient entry and growth in the telecommunications industry.

1. PETER W. HUBER, ET AL., GEODESIC NETWORK II: 1993 REPORT ON COMPETITION IN THE TELEPHONE INDUSTRY 2.11 (1992).

2. Alfred E. Kahn & William E. Taylor, *The Pricing of Inputs Sold to Competitors: A Comment*, 11 YALE J. ON REG. 225, 228.

Even if the rule works, it still will only establish efficient competitive entry at the level of the industry where technology induces gains from new sources of supply. The approach of any of the authors, to the extent operational, preserves competitive parity at the retail level, for example, while sustaining regulatory or operational inefficiencies at others, such as at the wholesale level. In terms provided by Kahn and Taylor, “[W]hile efficient component pricing will ensure that the retailing function subject to competition is indeed performed by the most efficient of the rivals, it will not fulfill the other important function of competition—the erosion of monopoly profits.”³ Perhaps, however, the “regulatory practice of undercharging for basic residential service and overcharging for toll and local access services to businesses, particularly in concentrated metropolitan areas[,]”⁴ and not monopoly profits have disoriented the rates for local access from those costs of providing local access service. The opportunity cost precepts of Baumol and Sidak when applied downstream from local access affirm these overcharges and undercharges by including them in opportunity costs.

The articles by Steve G. Parsons and David L. Kaserman with John W. Mayo consider how disoriented the rate and cost structure is in several arenas: access, local exchange, long distance, residential vs. business users, and in urban and rural service markets. Parsons argues that access costs are not common costs, and that, as a result, rate to cost margins can currently be calculated for local access in markets in which substantial parts of the access costs are instead charged against nonaccess services.

Kaserman and Mayo determine that “[t]he current system encourages inefficient usage of both long-distance and local service [since] [i]t dissuades consumers from making long-distance calls by increasing the price of long distance usage above marginal cost [and] fosters excessive usage of the local network by pricing local usage at zero.”⁵ These inefficiencies generate costs resulting from misusing resources in excess of those resources’ limited benefits that probably total billions of dollars annually.⁶ Even when obviously intended to favor certain consumer groups, such as local home customers, disoriented margins may not succeed.⁷ In summary, “[t]he existing cross-subsidies are not only inefficient, but they also create a pattern of subsidization that does not consistently promote universal service or equitable pricing.”⁸

3. *Id.* at 230.

4. *Id.* at 232.

5. David L. Kaserman & John W. Mayo, *Cross-Subsidies in Telecommunications: Roadblocks on the Road to More Intelligent Telephone Pricing*, 11 YALE J. ON REG. 119, 136.

6. *Id.*

7. *See id.* at 140 (raising the rate to cost margin on long-distance reduces local consumer demand more than lowering rate to cost margins on local service—and both work less effectively than increasing rate to cost margins on local access).

8. *Id.* at 143.

Kaserman and Mayo require the reader to grapple with regulatory policy for structuring rates in some markets currently void of significant competition while rates necessarily equal costs in other, competitive markets. Baumol and Sidak argue, however, that the rates set for competitors in downstream services must not deal with this issue (by including subsidies or taxes to redress disoriented rates in upstream services). Kahn and Taylor support Baumol and Sidak's position requiring that rate restructuring not be part of downstream pricing, but add that the preferable solution would of course be for "regulators to permit a rebalancing of rates for the several services to bring them to economically efficient levels."⁹

There has been little progress, however, in reforming regulated rate structures. The regulatory commissions and agencies have not evaluated the rate structure for telephone or cable services to test conformity with efficiency principles, but rather they have retarded entry in both subsidized services (by pricing below cost) and in subsidy-providing services (by protecting the incumbent that uses its high-rate cost margins to provide the subsidy). Therefore the urgency of Parson's and Kaserman and Mayo's findings may require postponing adherence to Baumol and Sidak's principles of efficient component pricing. Is that not the over-riding issue from this set of timely and challenging articles?

9. Kahn & Taylor, *supra* note 2, at 237.