Comment: Telephone and Cable Issues

John K. Hopley

Cable systems and telephone companies operate distinctly different businesses today with different technical facilities; cable systems have video distribution links to homes without switching capabilities, and telephone companies have local loops to homes and businesses on a switched basis but without video capability. But Walter Baer notes that the technologies supporting both enterprises are quickly converging and that it is an important question whether the cable companies and telephone companies will become rivals or partners in video distribution.

My central comment on Baer's article concerns its final conclusion that the principal factors that will influence the cable and telephone industries in the post-divestiture era are market definition, efficient technology, and the economics of efficient pricing structures. These factors will carry greater influence in creating new telecommunications services and delivery techniques than social and political factors; however, in regulated industries, social and political considerations often dominate the manner in which new markets are established and the extent to which existing markets are managed. Telephone companies are mindful of their new roles as communicators in the post-divestiture era. Greater energy and more astute planning will dominate the way they create new markets in the future.

The focus of telephone expertise will be to address three principal activities over the next five years: the need to reevaluate traditional switched and dedicated narrowband voice and data networks employing upgraded technologies of digital switching and fiber interoffice trunk plant; the need to plan new switched and dedicated wideband voice, data, and video networks; and the need to move as rapidly as possible, in the context of the social and political realities of existing regulation, to reorient the present pricing structures from those based on large cross-subsidies to those that place greater emphasis on cost-based pricing. To a large extent, the ability of the telephone companies and regulatory agencies to accomplish this last goal will determine the success of the companies to enter new markets—with or without participation by cable companies.

Existing voice and data network prices are now set well in excess of embedded, fully allocated costs, thereby generating revenues to subsidize the basic exchange loop connections to the central office. Interstate long distance prices are set at artifically high levels through the transfer of a portion of local exchange plant costs to the interstate enterprise via the separation and division of the revenue process. Similarly, intrastate long distance and local network prices are set artifically above traffic-sensitive costs through a similar but less formal process whereby state regulatory agencies have priced these network services above cost largely on a judgment basis in order to hold local exchange prices to affordable levels.

To the extent that large institutional customers and residential customers with high network usage are faced with prices that exceed the costs of telephone networks and competitors' prices, they will move their voice and data requirements to lower-priced bypass systems. As greater amounts of traffic are displaced from the established networks to those employing wideband fiber transmission, a growing source of revenue will be developed by competitors, enabling them to undertake wider penetration in video markets.

Uneconomic bypass of the telephone companies' networks is harmful because it results in the misallocation of society's resources by establishing wasteful and duplicative networks which require large amounts of capital that could be used more productively elsewhere in society. Uneconomic bypass can also lead to the stranding of existing costly telephone company plant which has not been fully depreciated and which requires a continuing stream of revenue to provide for capital recovery.

The contribution from network rates, which were designed historically to keep local telephone rates at affordable levels, would also be lost to the bypass systems. Competitive bypass systems and cable companies recognize no obligation to provide a contribution to hold basic exchange rates of telephone customers at affordable levels, although many state regulatory agencies and legislative bodies around the country are reviewing this situation.

The presence of uneconomic bypass thus stifles healthy competition, and telephone companies ought to be allowed to establish fair, cost-based, and where appropriate, market-driven prices so that they may compete on equal terms with other suppliers of telecommunications services. The deployment of the newest technology to create lower operational costs is also inhibited because, under the present pricing scheme, the telephone companies are severely hampered in recovering the capital investment in new technology when faced with competition from uneconomic bypass. The established telephone companies must continuously modernize their plant. When their hands are in a sense tied, they are precluded from taking reasonable and responsive pricing actions to compete fairly in the new environment.

Greater overall economic benefits would result from a system where fair and equal competition is permitted. When the telephone companies are not constrained from making technological and operational improvements in the design and marketing of their services, their rates reflect true economic value. Telephone companies must offer subscribers new options, including a wide array of wideband value-added services, at rates which are consistent with costs. If permitted by regulators, fair and equal competition by all parties in the marketplace will drive the prices of telecommunications to their proper levels.

The president of New York Telephone Company, William C. Ferguson, recently raised these issues with the New York State Public Service Commission, and outlined two approaches for the commission's consideration: It could decide not to allow bypass of the established telephone network, or it could establish a course of action that would permit the orderly restructuring of existing network prices and access charges applicable to other carriers to permit fair competition among all carriers.

The New York Telephone Company does not believe that maintaining monopoly control is either manageable over the long run or desirable in light of the speed with which new technologies of ever decreasing costs are being developed for the transport of information. The very nature of the rapidly expanding market for telecommunications—with service provided by the established telephone companies, by companies employing their own bypass systems, and by cable companies emerging into the fields of data and video transmission—will bring high-volume transmission systems employing new technology at lower costs within the reach of many business customers.

The massive extent of internal cross-subsidies within New York Telephone's pricing system, which distort network costs of toll and local calling, is shown in table C6.1. Although these data apply only to New York Telephone, most other telephone companies around the country have similar required subsidies. New York Telephone has recommended a five-point plan which provides the basic framework for a workable and competitive pricing structure. It allows adequate time for all parties to adopt their respective budgets and capital programs devoted to telecommunications services and precludes disruptive rate impacts on basic subscriber rates while providing a fair and equitable pricing structure to all of the carriers in the state. Most important, the plan provides for the long-term continuation of universal basic telephone service and for the benefits of programmed rate reductions in most usage rates and carrier access charges at specified intervals. The key elements of such a policy follow:

1. Maintenance of Universal Service

The longstanding policy of regulatory commissions and telephone companies has been to make access to the telephone network available to as many people as possible by keeping the price of basic access as low as possible. This objective is achieved first by offering some form of low-priced telephone service to people with modest incomes. After the recent restructuring of the telecommunications industry resulting from divestiture, the New York Telephone Company was the first telephone company in the nation to come forward with a sound and workable proposal that recognizes its responsibility for the continuance of a low-priced service option. This proposed service, known as Life Line, is targeted specifically to customers with low incomes. With highly subsidized monthly rates and low connection charges, it will ensure the continuation of universal telephone service in New York State.

Table C6.1. Required Subsidy from Existing Network Prices to Subsidize Basic Telephone Exchange Services (Millions)

Service Category		
—Local coin telephone (10¢)		$ 85
—Directory assistance calling		35
—Business connection charges		5
—Business message rate local line		225
—Residence connection charges		60
—Residence flat rate local line		545
—Residence message rate local line		720
—Residence basic budget local line		115
	Total	$1,790

SOURCE: New York Telephone, 1983.

2. Orderly Transition in Network Rates
3. Orderly Transition in Access Charge Tariffs
4. Repricing of Usage and Access Charge Contribution
5. Pricing Flexibility To Meet the Changing Marketplace Demands

The large established regional telephone companies and the smaller independent companies, while considering the possibilities of joint ventures with cable companies, are hesitant and even skeptical of such contractual arrangements in the video marketplace. Services such as pay-per-view have not proven themselves to be widely marketable. Although little capital would be required for upstream signaling requirements over telephone company local loops, the fundamental question remains as to the long-term possibility of sustaining the home video market on a switched basis. The telephone companies require more research to ascertain the desirability of entering residential markets, although hybrid telephone-cable systems require little new capital on their part.

The telephone companies are focusing their attention on significant market research oriented toward the large commercial and industrial sectors where the transport of wideband data and video is envisioned to be a vast market. It is here that telephone companies see the possibility of profitably deploying their own wideband fiber transmission systems with switchable capabilities. Undoubtedly, cable companies also sense the vast scope of the market and are conducting similar research and engineering studies pursuant to entry. Inevitably, the two industries will compete head on because neither presently has fiber links directly to the customer's premises. Large amounts of capital will be required to upgrade the local loop plant; consequently both industries will gear their market approach to well-defined services and carefully placed facilities which promise the greatest return. Initially the wide band commercial markets will develop slowly on a customer by customer basis in the large metropolitan regions and in selected high-density suburban industrial parks.

The telephone companies, operating under present regulatory ground rules, run greater risks in these new emerging markets than unregulated cable companies do. Prices for wideband services furnished by telephone companies on a fiber basis would ordinarily be established on the basis of statewide average cost factors employing fully allocated loadings for common and joint access costs. Under these ground rules, the telephone industry will be hindered economically in their pricing efforts and will have to carry the day in the open market relying on their reputation as a quality provider of service. The new entrants, however, are not known for poor service, and their pricing structures, set on direct costs without social pricing loadings, underprice established telephone tariffs by significant amounts.

This raises the issue of the "level playing field" in the new competitive era of telecommunications. Telephone companies want regulatory forebearance in order to compete equally. The cable companies want no regulatory controls beyond those necessary to obtain franchises to place cables. In this context, Baer's conclusion is correct that social and political factors will influence the outcome. Telephone companies will attempt to influence regulatory agencies and will seek changed ground rules to price according to the market. Some evidence exists that the state commissions are beginning to see the problems of traditional regulation in a competitive environment because of the growing record of bypass of the established networks.

In the main, whether by legislation or by regulatory reform, the social factors to be considered in the context of emerging competitive technologies and wideband services will be resolved by the underlying forces of the market and economic pressures. Most telephone companies will plan for the deployment of their own wideband networks, believing this to be a natural evolution of their mission in contrast to approaching the market on a partnership basis with cable companies. I predict that following a period of three to five years of regulatory revision, during which cable companies will have an advantage in the market unless blocked by legislation, they will basically continue to provide entertainment video distribution to the home market with some limited successes in business data and video conferencing. Telephone companies will become aggressive suppliers of wideband data and video on a switched basis in commercial markets. More development of new, low-cost technologies and greater market definition are required, however, before telephone companies address the residence market in the fields of interactive data. It is doubtful that the residential market will be greatly developed in the near term for interactive video services by either telephone companies or cable companies. While some telephone companies have opposed congressional adoption of cable legislation, that opposition is not expressed as intentionally barring cable companies from handling voice and data servcies. It reflects the need for fairness in the marketplace where both industries can meet the potential customer on equal pricing terms. Two sets of costing and pricing rules cannot be applied to a common marketplace, nor can one industry be held to inflexible tariffs while the other industry has greater freedom in addressing changing market conditions.

The market pie is now expanding at a rapid rate, and both telephone and cable industries will search for their independent markets.