Can Local Telecommunications be Self-Policing - A Proposed Discovery Procedure

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CAN LOCAL TELECOMMUNICATIONS BE SELF-POLICING — A PROPOSED DISCOVERY PROCEDURE

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Deja-Vu All Over Again

It surely would be impossible for any (at least middle-aged) student of the telecommunications industry not to be struck by the close correspondence between circumstances and events now transpiring in the local sector of the U.S. telecommunications industry and the previous unfolding of an analogous set of events in similar circumstances in the U.S. long-distance business. Indeed, for those whose horizons extend both further and farther, today's telecommunications headlines bear more than a passing (and, for some market participants, a little discomfiting) resemblance to those of an earlier era in the ground transportation industry (*i.e.*, trucks and trains).

Our own view, widely although by no means universally shared, is that these (and other) previous episodes of seismic industrial revolution and competitive evolution involved significant regulatory policy failures, probably greater in the case of the railroads than in long-distance, but important in either context. Whatever one's opinion about the efficacy of the regulatory response to competition historically, most would agree that regulation has played a big part, for good or ill, in determining both ultimate outcomes (the demise of the railroads, an effectively competitive long-distance market, a more efficient rate structure, etc.) and transition paths (provision and realization of bypass opportunities, extensive handicapping of incumbents, prolonged infancy status afforded entrants, etc.).

We can learn from the past, but usually do not. As a result, we often repeat past mistakes and fail to mimic the strategy and tactics that have sometimes produced famous victories. In this paper we attempt to mine the past for regulatory guidance about how to answer an important question: Can local telecommunications be self-policing?[1] A lot turns on the answer to that question. Perhaps most significantly, an affirmative response implies

[1] A "self-policing" market is one whose largely unfettered operation produces efficient prices and an efficient allocation of resources.

that the substantial quantity of scarce resources currently devoted to what Owen and Braeutigum have dubbed "The Regulation Game" could be productively redeployed elsewhere in the economy. The now-suppressed beer commercial that featured cowpokes lassoing tax and divorce lawyers may not be the best example, but is, nonetheless, suggestive of prospective gains from beating costly legal swords into more productive ploughshares.

Specifying an Economic Discovery Procedure

While closely related, the question we seek to address is *not* simply whether there can be competition in local telecommunications. Generally speaking, if competition is permitted (often a big "if"), competition will occur, at least as long as there are profitable opportunities for would-be competitors to exploit. Competition in this highly consequential, but nevertheless only partially germane sense obviously exists today in many local telecommunications markets.

The question we address involves a subtle distinction. We might cast that distinction as a difference between characteristics of market equilibrium and disequilibrium, although we hesitate to do so since this strikes us as too delimiting. Telecommunications is a highly dynamic field in which disequilibrium now seems more the rule than the exception. To define the relevant concept of competition as a *purely* equilibrium phenomenon may well be simply to consign one's analysis to irrelevance. Nevertheless, in terms of this dichotomy, the relevant distinction could be said to rest on the structural characteristics of equilibrium, in contrast to disequilibrium, with relevant inquiry focusing on the self-policing properties of the equilibrium industry structure. If, in equilibrium, buyers confront a monopoly, one would presumably be hard-pressed (or at least pressed) to maintain that the industry structure is authentically self-policing.

One might undertake this seemingly thankless task by making reference to conditions of entry and exit in the market and inquiring whether, in *disequilibrium*, market forces would compel a quick return to an efficient equilibrium — by, in essence, analyzing the *contest-*

ability of the market.[2] In theory at least, if a market can be contested (perfectly), it need not actually be contested at all, since the credibility of the threat is sufficient to compel efficient performance. The question of whether local telecommunications can be self-policing might thus be reformulated and operationalized as whether the threat of a competitive contest is or can be made genuinely credible.

The extent to which a market is actually contested or is, in principle, contestable are highly relevant considerations in assessing whether the market can be accurately characterized as self-policing. The problem for policymakers is that they confront a difficult dilemma in making these kinds of evaluations. First, as long as they actively intervene in the market whose self-policing capabilities they seek to assess, the market phenomena they observe must necessarily reflect effects of that intervention, potentially biasing the results and rendering their significance unclear.[3] Does a given distribution of market shares signify effective competition or simply effective cartelization? The answer depends in part on the policy environment in which those results were produced.

A policy of complete nonintervention may also produce misleading results. The economic test of whether a market is a natural monopoly is whether a single seller can remain alone in the face of competition, but this is only a necessary, not a sufficient condition. Under a policy of nonintervention, there are a variety of exclusionary strategies an incumbent might pursue which, if successfully implemented, would permit the incumbent to remain alone even though the market was not really a natural monopoly.[4] This again poses a difficulty for interpretation of actual results. And even apart from the introduction of bias in the results, the possibility of adverse consequences (*viz.,* exploitation of monopoly power in the event that monopoly is the outcome of a relatively "unfettered" experiment) makes this a problematic course for the regulator.

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[2]*See* William J. Baumol, John C. Panzar & Robert Willlig, *Contestable Markets and the Theory of Industry Structure* (Harcourt Brace Jovanovich, rev. ed. 1988).

[3]For a discussion of this problem, *see* John Haring, "Implications of Asymmetric Regulation for Competition Policy Analysis," OPP Working Paper Series #14, Federal Communications Commission (FCC) (December 1984).

[4]By the same token, a genuine natural monopoly may possess no set of prices sustainable against entry.

So the problem for policymakers is how to navigate between the Scylla and Charybdis of overly or inadequately interventionist policies. How do regulators avoid the dangers of doing too much without exposing themselves to the dangers of doing too little? What specific steps should they take to insure a fair test capable of discovering whether (or the extent to which) local telecommunications markets can be self-policing? What should they do to provide the conditions for an illuminating experiment while simultaneously meeting their statutorily defined responsibilities and affording adequate protections to the consuming public? What follows in no way purports to represent an exhaustive discourse; instead we have tried to supply a provocative discussion of certain key issues that figure largely in today's policy debates and whose resolution will inevitably occur if only by indecision.

Deconstructing the Proverbial Level Playing Field

Figuratively speaking, "tax avoidance" has been a major factor driving the competitive revolution in telecommunications, initially in long distance and now at the local level. The structure of rates charged for different telecommunications services has always been highly politicized and it remains so today. As or more important than the role of regulation in controlling monopoly power in the telecommunications industry has been its affirmative mission to extend telephone service universally. An economically inefficient rate structure has provided the principal means for carrying out this mission. This rate structure was probably never *not* inefficient (although it became extremely inefficient in the years just prior to the Bell System breakup).[5] That is to say that, even taking the universal service objective as a given, this rate structure did not maximize economic welfare or achieve social objectives at least cost.

What successive waves of competition have done is render this inefficient structure increasingly unsustainable. This, however, need not have been the case. The basic historical structure of rates could have been (and, to the extent that it still exists, can still be) conditioned to render it relatively impervious to competition. What happened in long distance was

[5]When telephone service was first introduced, greater discounting of access may have been warranted to internalize networking externalities effectively.

that regulatory policy *affirmed* the restructuring of rates instigated by MCI's and other competitive carriers' entry. What these carriers initially offered was a heavily discounted service using so-called "line-side" connections as opposed to AT&T's "trunk-side" connections. MCI was able to offer a good deal to some customers not so much because it was providing a lower quality service that cost less to supply because it was lower quality and entailed the use of fewer resources,[6] but rather because it did not have to pay the implicit tax AT&T was compelled to embody in its long-distance rates.[7] In our view, this differential (figurative) tax liability and, even more so, the prospects of its perpetuation were prime reasons AT&T eventually acquiesced in an antitrust settlement that, among other things, provided for technically equal access and access pricing parity.

We hazard to guess that, if that had been the end of the story, the long-distance competition flourishing today would either not exist or be far less vibrant. That is because the thrust of government policy during the eighties was not just to equalize burdens as equal access was introduced, but to *minimize* them as well. Divestiture created tremendous pressure on the FCC to "deload" toll rates, that is, to reduce the magnitude of the implicit tax users of the service were compelled to pay. The effect of the toll deloading which was allowed to occur (less was permitted than proposed) was to stimulate an increased rate of growth in the market, thus affording new competitors room to compete and achieve economically viable scales of operation without requiring AT&T's market output to shrink in absolute terms. The long-distance carriers' stake in toll deloading motivated their advocacy efforts; these carriers, in effect, became the agents for efficient pricing reform.

During the eighties, there were extensive debates about whether discounted interconnection charges over- or under-compensated for lack of technically equal access and, as a consequence, artificially stimulated or restrained competition. Once equal access was afforded, the continuation of heavily discounted access pricing policies clearly would have

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[6]It is actually probably not the case that fewer resources were utilized. Loop connections are more expensive (per voice channel) than high-capacity trunks.

[7]In 1980, AT&T was paying something like 16 cents per minute in local access taxes on a long-distance call it was selling for about 30 cents per minute. MCI, Sprint and others were allowed to carry such calls while paying an access tax of only about 3 cents per minute (assuming a direct connection on one end and ENFIA on the other).

had the effect of biasing observed market results amongst the competing carriers. Because discounts were largely (although not completely) terminated and the access burden was itself reduced (as a result of deloading), the actual bias on this account was probably not severe. But it surely would be hard to argue that, had the substantial discounts of the seventies and the eighties been continued into the nineties well after equal access had become a reality, a significant market bias would not, as a result, have been introduced. This bias would have muddied the waters and made an accurate assessment of competitive conditions difficult under prevailing circumstances. It would not, however, have made a penetrating assessment impossible under any circumstances.

Suppose that, despite the provision of hefty discounts along with equal access, long-distance competitors had failed completely. In that case, we would have had strong evidence that competition is not viable for, notwithstanding the highly favorable regulatory environment, competitors could not survive. By the same token, the survival of competitors under highly favorable circumstances can at best provide only weak evidence of competition's viability. Certainly such evidence could not be interpreted as providing as powerful a validation as it might under neutral or unfavorable circumstances.

Along these lines, we note that Peter Huber has recently argued, mistakenly in our view, that the long-distance market is not competitive because, among other things, the equal unit cost rule favoring AT&T's competitors remains in effect.[8] While we would question the relative importance attributed to this particular factor (as well as Huber's characterizations and interpretation of other evidence), Huber's basic logic is consistent with our argument here — if governing conditions artificially favor competition, the strength of the conclusion one can draw from actually observing competition is reduced compared to a situation where governing conditions are neutral or adverse. Huber, as is often his wont, takes an extreme position — biases introduced by regulation are allegedly so severe that the market is really not competitive even though it looks like it is.

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[8] *See* Peter W. Huber, Michael K. Kellogg & John Thorne, *The Geodesic Network: 1993 Report on Competition in the Telephone Industry* (The Geodesic Co. 1992).

Contribution Charges for Interconnection

The biasing impact of handicapping regulatory policies has been a major feature of the local competition policy debate just as it was in the long distance debate. Incumbents (and their experts) have typically argued that efficient competition requires an equal apportioning of social burdens lest inefficient competitors be afforded an unwarranted competitive advantage simply by not having to bear their fair share of any burden. A sports analogy is illustrative — the winner of a race is not necessarily the fastest runner if other competitors are handicapped with extra weights. This is true as far as it goes, but it may not go far enough.

Other relevant factors the same, unequal burdens incontrovertibly bias results; the question is whether burden equalization is a sufficient basis for establishing competitive parity and good ground rules for discovering whether local telecommunications competition can be self-policing. Some notable commentators apparently think it is. Consider recent testimony on this issue offered by no less an authority than Alfred Kahn.[9] Discussing the propriety of a net contribution interconnection charge in terms of its compatibility with competitive parity, Kahn states that:

> [T]he absolute level of that charge is *irrelevant*. The ability of a Unitel [a new entrant] to compete with AGT [the incumbent telephone company] depends *solely* on the relationship or *margin* between the interconnection charge — *whether high or low, monopolistic or competitive* — and the prices at which AGT offers toll service in competition with it. . . . The question therefore of whether AGT's interconnection charge to its toll competitors may properly exceed marginal costs, and if so by how much, is therefore *essentially irrelevant to the preconditions for an efficiently competitive telecommunications industry* (emphasis added with the exception of the word "margin").

While we note that Kahn has generally favored toll deloading, both in this particular proceeding and more generally, we nevertheless would contend that these statements by Kahn

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[9] *See* "Review of Regulatory Framework: Telecom Public Notice CRTC 9278," testimony submitted on behalf of AGT Limited to the Canadian Radio and Television Commission (April 13, 1992), p. 19.

embody an extreme position which is not only invalid and but seemingly in conflict with positions Kahn subsequently advances in his testimony. The absolute level of the contribution burden affects the absolute level of the rates charged for service and, hence, the price of the service relative to other goods and thus the size of the market for the service. For illustration, consider a simple example. Suppose that, in the absence of any assigned contribution burden, the market for the service would be large enough to support two efficient-sized firms, but that there would be room for only one competitor if a sufficiently large burden were imposed. In this case, the absolute size of the burden clearly matters, with a substantial burden presumably favoring the incumbent as against the entering firm.

To suggest, as Kahn does, that equal burden sharing is what counts for competitive parity, *assuming parity in other relevant respects*, to us seems just a little too convenient. First, in the Canadian context in which Kahn's testimony was presented, equal access does not yet exist, although we would certainly agree that equality of full interconnection opportunities, generally speaking, removes a key basis for unequal burden sharing. Second and more importantly, to maintain that the absolute magnitude of the interconnection burden is "irrelevant" for an efficiently competitive telecommunications industry requires one to ignore the competitive entry-deterring impact of a what is, in essence, a tax which effectively limits the extent of the market and, thereby, the division of labor. Anyone who questions the importance of such a tax should consider the differential growth rates in the market for long-distance services in the U.S. before and after toll deloading. When the tax burden was reduced, the market grew significantly more rapidly. Arguing the irrelevance of the absolute burden's magnitude also requires that one ignore the potential entry-deterring impact of the use to which burden support has been typically directed — subsidization of inefficiently low pricing in other telecommunications markets, notably, markets for residential access and local calling.

In his Canadian testimony, Kahn (pages 21-22) subsequently argues that the fact that a contribution-collecting interconnection charge may be warranted "does not in itself justify charges at any and all levels." He argues that "the only definitive criterion" is whether the firm would earn excessive profits "*if it were operating at optimum efficiency*" (emphasis added). What does this mean? One thing it suggests is that, were the regulated firm

operating in an inefficient way, the absence of excess profit would *not* imply that interconnection charges were not being set at excessive levels. This presumably applies to cases of *both* technical *and* allocative inefficiency. The case of technical inefficiency is straightforward--technical inefficiency implies that the burden could be smaller if the firm became a more efficient producer. In this case, a normal rate of return (with no compensating offset for inefficiency) actually favors monopoly (*inefficient* monopoly at that) at the expense of competition — hardly seeming to constitute a condition of "competitive parity!"

What is perhaps less clear, but no less true, is that allocative inefficiency has an identical implication. Thus, if prices are set at inefficient levels, the fact that the firm is earning a normal rate of return does not imply that interconnection charges have been set at reasonable levels *from the standpoint of economic efficiency.* If the government purposefully departs from a policy of promoting economic efficiency, it seems to us hard to maintain that economic efficiency (subject to the constraint of economic inefficiency) nevertheless supplies an appropriate criterion for establishing competitive parity. We suppose one could argue that, having chosen to produce at inefficient levels, it still makes sense to produce output at least cost, regardless of the competitive consequences. Thus, if monopoly is the efficient configuration for supplying the inefficient levels of output, a system of equal interconnection charges that results in monopoly promotes efficiency in this attenuated sense. But this amounts to saying that if efficiency does not count for much, neither does competition.

Consider the benefits of competition this policy simply writes off. A policy that permits a normal rate of return when the firm produces at inefficient levels would reduce the regulated firm's incentive and the competitive process' ability to discover an efficient structure of rates. One of the most socially valuable roles competition plays is to undermine inefficient government pricing policies and to compel the government to pursue any legitimate objectives in an efficient manner. A policy of "go along-get along" simply takes business off the hook. By way of a reverse illustration, consider the strenuous efforts AT&T undertook to force a more efficient structure of charges for local and long-distance services *after* divestiture, the implementation of equal access and the introduction of effective competition in long-distance. When its profits were put at risk, AT&T *then* become a staunch advocate of

efficient pricing. When, under monopoly organization, its profits were not at risk, it acquiesced in the inefficient toll loading policies that attracted competitive entry in the first place.

Kahn (page 23) is ultimately led to the conclusion we also draw, although he states it as if the problem were solely to avoid "inefficient competition": "The first best way of eliminating or mitigating the incentives to inefficient competition is to permit the telephone companies to rebalance their rates — particularly for toll and basic local residential service — to bring them closer to the respective marginal costs for their several services." We would prefer to say that this is part of a first best policy for determining the efficient configuration of supply and whether that market structure can be reasonably expected to be self-policing. That policy will not only avoid "inefficient competition;" it will also *not* encourage inefficient monopoly.

Kahn (page 23) insists, however, that, if a net revenue contribution is required, "competitors may properly be required to make a proportionate contribution, consistently with the principles of competitive parity." In our view, the problem with this counsel is that the so-called "principles of competitive parity," as adumbrated by Kahn, may themselves be biased against competition. Principles of competitive parity should seek to minimize losses from two types of errors: those which result from suppression of efficient competition and those which result from encouragement of inefficient competition. A policy of proportionate contribution will avoid the latter, but may not avoid the former and thus may not constitute the best "second-best" policy. This is more likely to be the case when other important necessary conditions for efficient competition remain unsatisfied (*e.g.*, equal access, fully unbundled offerings), but may perhaps remain so even when they are. It is a familiar old chestnut of second-best welfare theory that, when all conditions for optimality cannot be satisfied, achieving any one may not lead to a welfare improvement.[10] Equality of treatment

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[10]In espousing his own program for regulatory reform, William Baumol (pp. 140-141) explicitly refers to second-best considerations:

> Socially optimal regulation of local telephony is composed of a number of parts, and those parts can serve their purpose *only* if they are adopted and carried out together. Execution of only a few of the optimality rules does not guarantee even an improvement in economic efficiency because of the proposition in economics called the theorem of the second best.

(continued...)

is certainly an important policy desideratum, but so is minimization of burden. If burdens are not going to be minimized, the policy merits of equality of treatment become problematical. When the means for judging and monitoring whether imposed burdens are excessive are themselves costly and imperfect, as is the case with an excess profits test, the case for equal burdens is furthered weakened.

Our purpose in highlighting these problems is not to argue against equal burden sharing. It is to suggest the importance of pursuing a comprehensive set of policies rather than a more piecemeal approach. It is difficult to evaluate the merits of a policy without reference to the total program in which it is embedded. What seems entirely reasonable when considered along with other, complementary policies may not be reasonable if undertaken in a different context. To us, the difficulties that inhere in a second-best solution highlight the merits and importance of seeking a first-best solution. As Kahn suggests, that entails avid pursuit of rate rebalancing, but extensive rate rebalancing poses its own difficulties, to which we now turn.

Universal Service: From the Ridiculous to the Sublime

Recently, two of our colleagues, Jeffrey Rohlfs and Calvin Monson, undertook an empirical analysis of the potential rate impact of competition in local telecommunications.[11] As noted above, the current politicized rate structure for telecommunications services embodies marked departures from an economically efficient rate structure. An efficient rate structure would set individual rates using information about perceived demand elasticities, recovering total costs by marking rates for services up over their respective marginal costs in inverse proportion to the demand elasticity for the service (taking appropriate account of cross elastic effects) perceived by the firm. This implies that rates for services in competitive

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[10](...continued)

See William J. Baumol and J. Gregory Sidak, *Toward Competition in Local Telephony* (The MIT Press and The American Enterprise Institute for Public Policy Research, 1993).

[11]*See The $20 Billion Impact of Local Competition in Telecommunications,* Strategic Policy Research, Inc., July 16, 1993.

supply with higher perceived demand elasticities would embody smaller markups than rates for services in less competitive markets with lower perceived demand elasticities. This is almost precisely the reverse of the current rate structure which charges low prices for inelastically demanded, but politically sensitive residential access services and high rates for elastically demanded toll and toll access services.

Rohlfs and Monson sensibly reason that, to recover their costs, telephone companies will have to rebalance their rates in the face of competition. If they do not, their rates will be rebalanced for them *by competition*. They estimate (and their estimate is confirmed by other reputable analysts)[12] that current rates for toll and toll access embody about $20 billion in network costs *above marginal costs*.[13] They thus conclude that the potential impact of local competition would be to lower toll and toll access rates by as much as $20 billion in aggregate and to raise local service rates by as much as $20 billion.

Given the response to Rohlfs and Monson's paper, to which we turn presently, it is worth noting that they never talk about "subsidies" at all. Arguing *as advocates of competition*, Rohlfs and Monson simply stress that the current $20 billion contribution is a lot of money and that policymakers, particularly those who favor competition, should take care to

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[12]*See* Michael J. Marcus and Thomas C. Spavins, "The Impact of Technical Change on the Structure of the Local Exchange and the Pricing of Exchange Access: An Interim Assessment," presented at The Telecommunications Policy Research Conference, Solomons Island, Maryland (September 1993). The European Commission recently estimated that 16 billion European currency units ($18 billion) a year is transferred from EC long-distance calls to cover basic phone connections, local calls and services such as emergency numbers and stated that: "Subscribers and new operators will have to help cover the costs of basic telecommunications services in the European Community as greater liberalisation leads to lower long-distance charges." *See* "Telecoms Subscribers Should Help Fund Basic Services," Reuters Information Services, Inc., 1993. The close correspondence of these U.S. and E.C. impact estimates is striking.

[13]Huber estimates avoidable costs at $34 billion, but he gets the economics wrong, committing the famous "middleman" fallacy. Discounters sometimes claim they can offer a lower price by selling "directly" and avoiding the middleman, but if the middleman serves a real economic function, the firm selling directly must still perform the function. Similarly, a bypasser only *saves* the difference between what would have alternatively been paid and the cost of performing the function. A bypasser can avoid the overcharges, not the true costs. Note well that Rohlfs and Monson purposely adopt high estimates of marginal costs to present a conservative picture. Actual savings might, therefore, turn out to be greater than the $20 billion they estimate, but are not likely to approach $34 billion which implies marginal costs of zero. *See* Peter Huber, "The Lessons of AT&T's Cellular Move," *The Wall Street Journal*, Editorial Page, September 7, 1993. We cannot resist remarking that one would have to be looking at the world through LEC-colored glasses to perceive the significance of the AT&T-McCaw merger primarily in potential bypass terms. In our view, while McCaw's properties do provide some self-supply leverage for AT&T, their primary value lies in the substantial platform they supply AT&T for rolling out new wireless innovations.

insure that the universal service support system is adequately conditioned to withstand a seismic impact of this intensity lest competition itself be given a bad name. As a veteran of the CAB and airline deregulation, their's is a warning I believe is certainly worth heeding.

The more ridiculous responses to this sound advice, including those of the FCC and Teleport, are highly reminiscent of the thief who first claims there was no robbery, then produces an alibi, then claims temporary insanity and then becomes born again before copping a plea. The FCC, assuming the dynamic leadership position for which it has become so well known in the last few years, tried to have it that, while its own actions were path-breaking and of great import, they would not affect the states, but in seeming contradiction, one Commissioner simultaneously suggested that any problems could be left the states to handle. Teleport apparently simply wants umbrella pricing that will make it possible for it "to compete" at least in a manner of speaking.

The Teleport critique is worth considering is some detail. Teleport begins by conceding up-front the single prediction Rohlfs and Monson make on the basis of their analysis: competition will cause today's artificial pricing structure to collapse. The reason is simply that, in an increasingly competitive market, today's uneconomic loading of network costs on toll and toll access services is not sustainable. Current cost loadings reflect previous political and regulatory policy decisions to keep rates low for basic telephone service to promote universal service. Teleport claims that, "Protecting the *status quo* is not a public interest goal." But protecting universal service is a public interest goal and failure to consider and plan for potential universal service impacts could well lend up giving competition an undeservedly bad name. In the case of long distance, precisely this kind of analysis was undertaken. It resulted in creation of the current pricing structure which is now becoming unsustainable in the face of new competition.

Teleport claims that Rohlfs and Monson's estimate is based on "widely variable and questionable statistical estimates," relies on Bridger Mitchell's (of the Rand Corporation) cost data from California, extrapolates "without apology or explanation" these data to the whole United States and uses a paper by FCC senior staffers Mike Marcus and Tom Spavins as its other main source. These claims all turn out to be false. Rohlfs and Monson rely on the Perl and Falk measure of marginal cost for service, which is based on official U.S. Government

data on costs for a large number of telephone companies operating in a large number of states. Perl and Falk's measure is higher than both the Mitchell and the Marcus and Spavins estimates, thus imparting a downward bias to Rohlfs and Monson's estimate of competitive impact. Why one would need to apologize for extrapolation on the basis of cost data for a state with the characteristics of California is unclear, but Rohlfs and Monson do not do so, relying on Mitchell solely for an estimate of billing costs, not likely to vary significantly by state and not materially relevant in any event. Contrary to Teleport's crazed assertion that Rohlfs and Monson "simply pluck data that suits their purposes from irrelevant sources," R&M use a conservative methodology and U.S. Government data on costs and revenues and cite highly reputable sources to provide context and a basis for comparison.

Teleport cites the Illinois Commerce Commission report on *Local Competition and Interconnection* and its finding that local residential service is not subsidized by other services. The irony here is that *Monson is the principal author of that report.* Consider the "extrapolatability" of Illinois' experience. First, there is no intraLATA toll issue in Illinois because there is comparatively little intraLATA toll traffic there. This is a consequence of an anomalous circumstance — the uniquely large number of LATAs in the state. Second, Illinois took steps to deload toll and access prices before allowing competition — precisely what the FCC and most states have not done. Indeed, Illinois carefully analyzed and evaluated universal service impacts before taking action, something the FCC only talked about doing. Third, Illinois is a relatively low-cost state so that impacts could be absorbed without unduly adverse consequences. Finally, the Illinois commission afforded incumbent telephone companies a degree of competitive pricing flexibility that makes the pricing flexibility grudgingly awarded by the FCC and so highly ballyhooed by Teleport look like a bad joke.

We could go on in this vein for several more pages. Rather than waste time on Teleport's obfuscations,[14] we turn from the ridiculous to the (relatively) sublime — MFS' recent FCC petition and white paper on these topics.[15] Before considering MFS' specific

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[14]Readers interested in a full response might consult Calvin S. Monson and Jeffrey H. Rohlfs, *Teleport Shoots Foot (Own)!*, Strategic Policy Research, Inc., August 23, 1993.

[15]*See* Petition of MFS Communications Company, Inc. For A Notice of Inquiry and En Banc Hearing, In the Matter of Inquiry into Policies and Programs to Assure Universal Telephone Service in a Competitive (continued...)

proposals, there is some relevant microeconomic analysis that is worth keeping in mind in thinking about the universal service issue. What we normally conceive of as telephone service really consists of a bundle of services — network access, local calling, intra- and interstate long-distance calling, etc. Whether one's telephone bill rises or falls as a result of changes in regulation and competition depends, in part, on the mix of services consumed before and after change and the magnitude of the effects of various changes on prices. Rohlfs and Monson pose the following kind of question: if the prices of some services go down by $20 billion and the prices of others go up by $20 billion, what will be the impact on universal service? The answer is by no means clear on its face. It could well be, although it would be somewhat but not wholly coincidental, that there would be no impact. It might be that telephone service penetration would rise. This is what happened when rates were initially rebalanced in the context of introducing long-distance competition and imposing subscriber line charges. Line charges went up, long-distance rates fell by even more[16] and penetration rose. This is an oversimplification; other things happened as well, but it is suggestive. It could also be that penetration would fall unless steps were taken to incent subscribers to remain on the network.

USTA has claimed the Rohlfs/Monson analysis demonstrates that local rates are currently subsidized by about $20 billion, that is to say that, were the $20 billion that is currently loaded into toll and toll access rates removed and loaded into local rates, those rates

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[15](...continued)
Market Environment, November 1, 1993; and *Local Telephone Competition And The "$20 Billion Subsidy": What It Really Means and What To Do About It,* Attachment 1 to MFS Petition.

[16]William Taylor has made the incredible claim that there is no price competition in long-distance and that subscriber line charges account for all declines in long-distance rates. To reach this conclusion, Taylor adopts an untenable criterion for judging whether competition can be said to exist, misclassifies important benefits of competition as exogenous and focuses exclusively on market segments only more recently heavily contested. Taylor's criterion for the effectiveness of competition is whether prices fall in *nominal* terms. When there is price inflation, most industries, including many competitive ones, will fail this test. Long-distance prices have actually been falling in real terms (*i.e.,* when account is taken of inflation). Taylor classifies changes in access costs as exogenous, when they are clearly a consequence of competitive reforms. According to the FCC, AT&T's prices, net of access costs, fell by 2.32 percent per year in real terms from 1984 to 1988, and (under price caps) by more than 3 percent per year in real terms after 1988. This implies that AT&T's prices are more than 25 percent lower in real terms today than at divestiture, wholly apart from access cost reductions. *See* "Effects of Competitive Entry in the U.S. Interstate Toll Markets: An Update," National Economic Research Associates, Inc., May 28, 1993. Taylor's analysis is thoroughly debunked by Robert E. Hall. *See Long Distance: Public Benefits from Increased Competition,* Applied Economic Partners, October 1993.

would be $20 billion higher. That is clearly *not* the same thing as saying that $20 billion is required to maintain universal service (nor, to our knowledge, is that what USTA has claimed).

The $20 billion figure works out to about $12 per household per month on average. If residential network access rose by $12 on average or as much as, say, $20 or $25 in non-average circumstances, it is not implausible, and certainly not outside the realm of possibility, that subscribership would fall in the absence of some kind of support mechanism. Note that if telephone companies were to offer (and regulators to permit) a family of service offerings embodying a mix of inversely varying fixed access and variable usage charges, the problem of sustaining access and high penetration rates may, in fact, not be very difficult.[17] What is important in terms of the universal service network externality is access. And access is also what matters most in terms of the social concerns which motivate the universal service objective (*viz., e.g.,* the ability of care providers to reach elderly citizens). There would appear to be no compelling reasons why call plans featuring very low access fees can not be offered, particularly when embedded in a set of calling plans offering different marginal usage charges. Given this kind of flexible capability and because the prices of other services (intra- and interstate toll calling) would be falling as a result of deloading and rebalancing, it may be that only minimal support is required, but that, of course, remains to be determined.

Both MFS and Teleport have claimed that local service is not actually subsidized because it is priced above its marginal cost and have "volunteered" to support only "genuinely" subsidized service. In fact, much local service is apparently subsidized in precisely this narrow, technical sense, but whether service is subsidized in this sense is, to use Kahn's terminology, "essentially irrelevant" to the universal service question. The relevant question is simply whether, when services are priced efficiently, penetration levels remain at very high levels. If penetration declines are anticipated, subsidies to some users will presum-

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[17]For an illuminating discussion of these possibilities, *see* Gerald W. Brock, "Telephone Pricing to Promote Universal Service and Economic Freedom," OPP Working Paper Series #18, FCC (January 1986); *see* also Kenneth Gordon and John Haring, "The Effects of Higher Telephone Prices on Universal Service," OPP Working Paper Series #10, FCC (March 1984), reprinted in P. Mann and H. Trebing, *Changing Patterns in Regulation, Markets and Technology: The Effect on Public Utility Pricing*, MSU Institute of Public Utilities (December 1984).

ably be required if, for no other reason, than to keep political peace.[18] Here is where MFS has made some, at least what seem to us to be, entirely sensible suggestions: require all carriers to contribute to support; target subsidies to specific users; and take steps to minimize costs of sustaining universality consistent with effective performance.

Market Shares: Cause or Consequence

Perhaps the most frequently utilized measure of market power is market share and there are many who apparently believe that it is possible to describe a specific configuration of market shares that is consistent with self-policing competition as against others which are not. Whether these hypothesized share configurations represent necessary or sufficient conditions is generally neither clear nor specified. This is, however, a critical distinction; to serve as an efficient policy trigger, the share configuration should presumably reflect a necessary condition rather than a sufficient one.

There have, of course, been literally hundreds of attempts to correlate market shares with measures of market power. The existence and economic meaning of any such correlation remain, at least in our opinion, largely unresolved in the professional economics literature. One problem that vexes these discussions is the actual interpretative meaning of market share. Is market share a cause or a consequence of market power? It might conceivably and sometimes simultaneously be both. Can a large market share only be caused by market power? Might it not derive from some other cause? If market share is a cause of market power, why do firms with similar market shares sometimes appear to possess such power and sometimes not?

Our view is that market shares are primarily a consequence of other more basic, determinative forces, some of which limit competition and convey market power and some of which (sometimes simultaneously) imbue the firm with superior competitive capabilities and productive efficiencies and, thereby, engender superior performance. In other words, the goodness or badness of a substantial market share is, at least in part, a question of the forces

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[18]Political peace may also require maintenance of politically sensitive rates at inefficiently (hopefully not too) low levels.

which produced it. In a market environment in which entry is foreclosed by various economic and legal barriers and in which only one or a few firms compete, one might justifiably hesitate to conclude that the industry structure primarily reflects efficiency considerations. It might actually do so, but as we discussed at the outset of this paper, given these conditions *favoring* monopoly, one can only draw a weak inference about the authenticity of monopoly and its efficiency. By the same token, were the barriers to competition removed or absent, one might well conclude that the same share configuration was a genuine reflection of efficiency.

There are a variety of legal and some economic barriers which today limit the actual and potential competitiveness of the markets for many local telecommunications services. Given the existence of those barriers, it is hard to know precisely how competitive these markets can be. Perhaps not all of these barriers can (or should) be removed, but to have a fair test of the degree and extent of self-policing competition, as many of these barriers as can economically be removed, should be removed. These include, *inter alia*, legal barriers to market entry and exit in the form of restrictive franchises, arbitrary legal prohibitions of product and service offerings by particular carriers, and discriminatory access provisions for access to rights of way. Nonlegal barriers to competition include uneconomically bundled service offerings and lack of number portability.

The removal of these barriers does not automatically translate into self-policing competition; it translates into a fair opportunity for self-policing competition to evolve and a more penetrating perspective on actual marketplace outcomes. A conclusion that competition is self-policing in any particular market will ultimately reflect the existence of actual competitors competing successfully, that is, achieving significant market penetration and competitive profitability. Because competition in this sector of the economy generally requires significant investments in specialized (*i.e.*, nonsalvageable) capital assets, self-policing competition probably will require a market that is not only as contestable as is economic to arrange, but is also *actually* contested to a significant extent.[19]

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[19] If significant portions of the market are actually contested, quasi "hit-and-run" entry may suffice to constrain behavior in market segments not actually contested. When capital resources have been deployed, their plausible extension or redeployment may provide a credible competitive deterrent.

The Metrics Issue

This brings us to the $64 question: How "contested" must the market become to be deemed self-policing? In our view, this is a question that really should not be asked in advance, because, if it is answered, players can be reasonably expected to respond to the signal that is blessed. If you say to an incumbent, you, in effect, must lose x percent of your market share, that is just what the incumbent may then set our to do, unfortunately, by *not* competing. If the object is *really* to learn whether the market can be self-policing, as opposed to simply seeing whether *the illusion* of some esteemed configuration of market shares can be synthesized (or, even worse, merely to postpone the relaxation of other barriers to competition), regulators and policymakers should not, in effect, prejudge results. *Competition is a process, not a result.*

We have suggested that in the instant industry setting competitors will need to win battles in the marketplace. Incumbent shares must fall if competition is going to be deemed a reality. But once the number of battles new competitors must win is specified in advance, their "winning" that number of battles may actually signify little because they will have not have actually won those battles — they will merely have taken what was freely given. How consumers benefit from such reciprocal altruism, as against real competition, is very hard for us to conceive. Instead of setting some magic number, we would prefer to see policymakers arrange the necessary conditions for a fair experiment and then monitor results. We think they will know genuinely self-policing competition when they see it.

One putative advantage of specifying a share trigger in advance is that it will avoid backsliding behavior by the policymaker. Again, long-distance provides a good illustration. At one time, 70 percent was deemed by many of AT&T's competitors to constitute an appropriate share trigger for deregulation of AT&T. As the elevator approached and passed through that floor, the appropriate share trigger was revised downward and has continued to fall as AT&T's share has fallen. If a genuine trigger could be specified and actually enforced, there might well be some utility in this approach. Against this potential source of utility are three, in our view, more than offsetting sources of disutility: (1) It is not obvious that a nonarbitrary benchmark can be synthesized on the basis of existing knowledge. Setting

a trigger will itself likely devolve into an arduous, contentious process with little prospect for progress; (2) If a trigger were set, there would, in the event, be pressure to disarm it despite attempts to equip the device with Doomsday Machine-like features, so the utility hypothesized for automaticity might not materialize and would be compromised at least to some extent; and (3) Market incumbents will presumably respond to the trigger rendering its meaning and utility as a gauge of competition null and void.

What Should Be Done?

In principle, the task of specifying a procedure for discovering whether markets for local telecommunications services can be self-policing is fairly straightforward. But so is the task of specifying a procedure for discovering whether the dark side of the moon is made out of green cheese or whether the federal budget deficit can be brought into balance! The real problem lies in actually arranging the necessary conditions and carrying out the experiment. Nevertheless, agreement concerning what we are actually about and what being serious about that particular subject matter actually entails are critical first steps. So we conclude with an agenda for reform.

If we want to discover whether competition in local telecommunications can be self-policing, we need to give competition a fighting chance. In the first instance, that means getting rid of uneconomic barriers to competition imposed by incumbent firms and by regulators at both the federal and state levels. Given the primacy of open entry and resource mobility as conditions for effective competition, to the extent uneconomic barriers are maintained, it will be hard, on the one hand, to sustain the argument that the market is or can be genuinely self-policing or, on the other, to buttress a claim that the market is actually a natural monopoly should competition fail or fail to materialize.

It is also important that we try to get the pricing right, or perhaps more appropriately, that we not insist on getting the pricing wrong and then adopting a crazy quilt of offsetting fixes to cope with the distortions and dislocations uneconomic pricing will provoke. Our own policy preference would be to afford incumbents considerable flexibility to rebalance rates and to price aggressively in response or in anticipation of competition. That does not

translate into a policy of "anything goes." Where competitors, to compete, must rely on utilization of input components supplied on a monopoly basis by incumbent providers, regulators need to monitor carefully to ensure that incumbents impute appropriate input costs in setting their own final output prices. Generally speaking, the closer local telecommunications markets come to approximating conditions in the larger enterprise economy, the more relevant the (antitrust) standards for legitimate competitive behavior in that sector become. Merger policy is obviously already assuming a featured role in the face of the cable/telco mega-mergers now being proposed.

Efficient unbundling of network service offerings should also be implemented on a continuing basis (*i.e.*, as new functionalities are developed and deployed). The proposal Ameritech has made to unbundle its network strikes us as the kind of unbundling, which, if implemented on a wide scale, would afford a sound basis for an illuminating test of competition's viability and scope. By the same token, a failure to undertake efficient unbundling would bias outcomes against self-policing competition and might, as discussed earlier, justify departures from the "pure" policy choices that would otherwise be economically optimal (*e.g.*, equal social burden sharing). Symmetrically, if incumbents are going to be subjected to a variety of unwarranted handicaps, there would appear to be no principled basis for opposing compensating departures from purity when it comes to otherwise optimal policies that favor competition (*e.g.*, unbundling).

Lest we personally depart from the straight and narrow path in terms of the length of this exposition, I conclude with some policy advice proffered by my mother: If you are going to do something, do it right. In the instant context, that means pursuing a first-best program of regulatory initiatives that would afford competition a fair opportunity to prove itself. Pursuit of second-best is fraught with peril and the stakes are high.