OFFICE OF TELECOMMUNICATIONS POLICY
WASHINGTON

Specialized carriers

February 19, 1971

Tom:

Had several very caustic comments last night, from both friend and foe, to the tune of "When will the OTP get off its duff and state some Administration views on the issues pending before the FCC (e.g., specialized carriers, satellite/cable, etc.) -- even if this only amounts to a brief statement of interest (or lack of) or general policy objectives?" These came from industry, FCC staff, FCC Commissioner's staff, and Congressional staff.

These comments, plus my own parallel feelings, have convinced me we should reconsider our earlier decision not to intervene in the specialized carrier proceedings at this point. I believe a relatively simple, straightforward statement favoring an "open entry" policy and pointing out the complexity involved in the rules of engagement, and our continuing examination of this area, would be a very wise move at this time. If you are willing to entertain the notion, I will draft such a statement.

Walt

Walt

OTM

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF TELECOMMUNICATIONS MANAGEMENT
WASHINGTON, D.C. 20504

Date: July 10, 1970

Subject: Microwave Communications Incorporated (MCI) Proposal and Related Specialized Carrier Applications

To: Dr. Clay T. Whitehead

The MCI proposal contemplating the establishment of a specialized microwave carrier between the vicinity of St. Louis, Missouri, and Chicago, Illinois, was granted by the Commission. Appeal to the decision was taken to the courts by the established common carriers (AT&T, Western Union, General Telephone and others) represented by their affiliated companies in the area. The right to intervene has recently been requested also by the National Association of Regulatory Utilities Commissioners (NARUC).

Meanwhile, MCI has filed applications for modification of construction permits which many contend constitute, in effect, a new proposal. They then contend that the matter should be remanded to the Commission to consider this proposal before further action by the court. The court has stayed its action pending Commission determination as to whether the modifications to construction permits constitute a new proposal.

MCI has also petitioned the Commission to permit it to proceed with construction while the matter is being resolved by the court.

Bill

W. E. Plummer

NOTE: This memorandum was prepared as a result of a discussion with Steve Doyle relating to the possibility of violation of the exparte rules in relation to the MCI case in commenting on interconnection. On the broader question of Commission handling of the large number of applications for stations from some 35 or 40 organizations proposing establishment of a specialized carrier service, the Commission is planning to act to establish policy and procedures for dealing with these within the next few days. Many of us feel that the disposition of the general subject of specialized carriers is much more important than the MCI case per se.

OTP Background

October 13, 1970

Mr. Robert W. Keyser
Keyser Sound and Communication Company
1023 East Fourth Street
Dayton, Ohio

Dear Mr. Keyser:

Your letter dated September 29th apparently relates to a question of refusal of service under a public tariff. I am not sure whether the service requested would be subject to Federal Communications Commission or Ohio State regulatory responsibilities.

By copy of this letter, I am transmitting a copy of your letter to Honorable Ben F. Waple, Secretary, Federal Communications Commission, 1919 M Street, N. W., Washington, D. C. 20554. I would expect that you will hear shortly from the Commission with regard to this matter. I am confident that a fully detailed account of the relevant dates, kinds of services, and circumstances of the refusal referred to would be useful to the Commission in dealing with your request for guidance. I recommend, therefore, that you write directly to Mr. Waple at the FCC in Washington, providing such additional information as may be available for the use of the Commission.

If we may be of any further guidance to you in this matter, please let me know.

Sincerely,

cc: Mr. Whitehead
Mr. Doyle

SDoyle:jm

Stephen E. Doyle
Special Assistant to the Director

cc: Honorable Ben F. Waple
With Attachment -- Letter From Keyser Dated September 29

Keyser Sound & Communication Co.

Audio, Video and Communication Specialists

1023 E. 4TH ST.
DAYTON, OHIO
PHONE 228-2612

649 NORTH MAIN
LIMA, OHIO
PHONE 222-3786

Sept 29, 1970
Dayton, Ohio 45402

Office Of Telecommunications Policy:
Dr. Clay T. Whitehead

Dr. Whitehead;

We have been refused use of Bell Telephone lines for Municipal Security Television use.

What is our procedure from here?

Thank You

Robert W. Keyser

RWK/yt

Specialized carriers

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF TELECOMMUNICATIONS POLICY
WASHINGTON, D.C. 20504

Date: February 8, 1971

Subject: Bulk and Specialized Services Program Area

To: Distribution

Due to Charlie Joyce's accident, Mr. Whitehead has asked me to assume full responsibility for this program area (which had previously been a shared concern of Charlie and myself) for at least the next few months. The object of this memo is to identify the issues and activities which constitute the program, assign/affirm subordinate program responsibilities, and establish a program management plan including associated reporting and coordinating procedures.

This program area can be conveniently separated into several categories, reflecting various interests, time horizons, and analytic distinctions. Following is a current breakdown of these activities, including identification of principal and secondary responsibilities. This does not include such items as the convergence of computers and communications, or teleprocessing, as I understand these to be part of the New Technology and Services program area. I would urge that a similar program structure and assignment of responsibilities be developed for this area, which has many points of contact and overlap with the Bulk and Specialized Services area.

1. Current Policy Issues and Positions — Hinchman

   -- Entry conditions on specialized carriers (Owen)

   -- Entry conditions on domestic satellite operators (Hinchman)

   -- Evaluation of domsat applications, comparison with previous policy statement conclusions (Lasher/McCrudden)

   -- Common-carrier pricing in competitive markets (Owen)

   -- Interim rules on interconnection/attachment (Enslow)

2. Development of Information Base* — Enslow

   -- Data communications market analysis (Enslow)

   -- Technology and cost analysis (?)

   -- Interconnection criteria and consequences (Enslow/Cooke)

3. General Regulatory Principles — Owen

   -- Pricing and Rate-Making (Owen/Melody)

   -- Federal/State/local regulatory division (Owen/ ?)

4. Long-Term Policy Goals — Hinchman

   -- Definitive statements on:

      a. entry/exit conditions — all

      b. rules of competitive engagement — all

      c. interconnection and attachment — all

      d. regulatory division and authority — all

Based on last week's discussions, I propose that we hire Bill Melody and Phil Walker as consultants on pricing/rate-making and computer/communications issues respectively. I also propose that the first staff economist hired be assigned to work with Owen and Melody to develop appropriate analytic models of telecommunications markets, industry structure, regulatory divisions, and probable effects of alternative pricing and rate-making principles.

Finally, some comments on program organization and management. This area has previously been characterized by much confusion, uncoordinated activities, and frustration. Hopefully, such conditions can be avoided in the future, but only if the channels of information flow and coordination are better organized. Free discussion and exchange of ideas -- upward,

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* This includes development of work statements, and monitoring of progress, of Commerce supporting studies on interconnection and attachment, technology and cost data, and specialized market prospects.

downward, and sideways -- should continue to be encouraged; but the scheduling/reporting of significant meetings and discussions (both internal and external), proposed contract and/or consultant studies, etc. should be handled somewhat more formally. I am therefore requesting that all such matters be channeled through me (again, downward, upward, or sideways), with the assurance that I may comment on such items but will not block their transmittal. Furthermore, I recommend that the same philosophy be applied in each of the subordinate areas.

Walt

Walter R. Hinchman

Distribution
Mr. Whitehead
Dr. Mansur
Col. Ehslow
Col. Lasher
Mr. Owen
Mr. Cooke
Mr. McCrudden

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF TELECOMMUNICATIONS POLICY
WASHINGTON, D.C. 20504

Specialized Carriers

April 13, 1971

To: Tom Whitehead

From: Bruce Owen

Subject: Specialized Carriers

The Commission voted today to authorize the entry of the specialized carriers, by a vote of 6-1. The question of rate regulation and competitive response by AT&T was left to further consideration.

Bruce

cc: Walt Hinchman

Specialized Carriers

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF TELECOMMUNICATIONS POLICY
WASHINGTON, D.C. 20504

To. Walt Hinchman

From: Bruce Owen

Subject: Specialized Carriers--Rates and Entry

Here is a first look at the conceptual problems in determining rate and entry policies. After this has been polished up, we can try to obtain data and do some quantitative work. I would appreciate any comments.

Attachment.

cc:

Mr. Whitehead
Dr. Mansur
Phil Elslow
Mike McCrudden
Seb Lasher
Art Cooke

February 24, 1971

The Specialized Carriers:

A Conceptual Approach to Rates and Entry

Bruce M. Owen

Office of Telecommunications Policy

Working paper. Draft
February, 1971

Working Paper Draft

B. M. Owen

February, 1971

SPECIALIZED CARRIERS: RATES AND ENTRY

If AT&T were not a regulated monopoly with a history of average cost pricing and rate averaging, there would be no public policy issue involving the specialized carriers. The difficulty is this: that the rate policies which have been followed by the utility up to now may have generated the wrong "signals" to the potential entrants, and that a rate policy consistent with competition would in fact not attract entry. If rates were set at economically efficient levels (LRMC in the long run, with peak load pricing in the short), it is possible that there would be no attractive entry point for competitors. The same may be true of domestic satellite services. Given the putative economies of scale, the word "possible" is used instead of the word "certain" only because of the opportunity of the new entrants to offer diversity of service qualities.

If the threatened entry of the specialized and satellite carriers only results in reform of AT&T's rate structure and increased responsiveness, there will be substantial social benefits. The public policy question is, however, whether actual entry and actual investment should be undertaken when

there is a substantial chance that the investment will be economically unviable, and worse, that the unviable investments might be artificially preserved by regulatory protection. Government must decide this question becausethe government has sanctioned the "wrong" price signals which have contributed to the attractiveness of entry.

Several alternative pricing policies, and their implications are developed below, in preparation for a discussion of the social costs and benefits of alternative rate and entry policies.

Alternative Pricing Policies

Assumptions:

There are two services, neither of which is interdependent in demand or cost (say two different lang haul routes in different parts of the country.) The quantity produced of service A is Q_a. The quantity produced of service B is Q_b. Then:

Demand Price	$P_a = P_a(Q_a)$	$P_b = P_b(Q_b)$
Cost	$C_a = C_a(Q_a)$	$C_b = C_b(Q_b)$
Revenue	$R_a = R_a(Q_a)$	$R_b = R_b(Q_b)$

Derivatives are indicated by primes. Thus, C'_a is the marginal cost of A (a function of Q_a), and R'_a is marginal revenue. We assume that there are economies of scale. Thus, C''_a and C''_b are both negative, and $C/Q > C'$ for both A and B.

Case 1: Separate Monopoly Pricing:

In order to maximize total profit, the utility sets prices (or produces outputs) so that

$$\begin{cases} R_a' = C_a' \\ R_b' = C_b' \end{cases}.$$

This maximizes the sum $R_a + R_b - C_a - C_b$ for all possible values of Q_a and Q_b.

Case 2: Efficient Pricing:

Economic efficiency (in the small) requires that outputs be produced so that

$$\begin{cases} P_a = C_a' \\ P_b = C_b' \end{cases}.$$

Note that so long as $C'' < 0$, $R_a + R_b < C_a + C_b$ with this type of pricing policy. However, if for one of the services, $C'' > 0$, there may be an overall profit.

Finally, note that efficient prices are less than monopoly prices, and that monopoly pricing results in too little output.

Case 3: Profit Maximization with Rate Averaging:

Here it is required that profit be maximized subject to the constraint that $P_a = P_b$. The constraint is given extraneously.

Equilibrium price and output are given by solving the following set of simultaneous equations (plus the demand relationships):

$$\begin{cases} R'_a - C'_a - \lambda P'_a = 0 \\ R'_b - C'_b - \lambda P'_b = 0 \\ P_a - P_b = 0 \end{cases}$$

This necessarily results in lower profits than in Case 1. Profits lie inbetween those determined in Cases 1 and 2. If the cost functions are the same in each service, this will result in prices which are, relatively, too high in the high volume (demand) service.

Case 4: Average Cost Pricing with Rate Averaging:

This is probably the model which is closest to the historical rate-regulated public utility. We assume here that "rate of return" is a component of cost. Then equilibrium

prices and outputs are determined by solving

$$\begin{cases} R_a + R_b - C_a - C_b = 0 \\ P_a - P_b = 0 \end{cases}$$

plus the demand equations.

In this case, profits lie inbetween those determined in Cases 2 and 3. The price of the service with the higher demand remains relatively too high, and there is by definition "cross-subsidy," between the high volume (or low cost) service and the low volume (or high cost) service. Here cross-subsidy means simply $P_a = P_b = (C_a+C_b)/(Q_a+Q_b)$, which only by coincidence will result in $P_a = C_a/Q_a = P_b = C_b/Q_b$.

Implications for Entry

If AT&T is now behaving roughly in accordance with Case 4, the prices it is charging for high volume (or low cost) services may be false entry signals to the specialized carriers. It may be that mere abandonment of rate averaging (but continued average cost pricing) would lower prices on the high volume routes sufficiently to prevent entry (e.g., the price on the high volume route in Case 4 may be higher than in Case 3.) This effect may occur even without the radical innovation of marginal cost pricing. The difficulty is that no one is sure just how great these effects may be.

These effects aside, there are countervailing rationales for allowing entry under "some" pricing policy. One is the effect on innovation in the industry. The mere threat of entry may be (and evidently has been) sufficient to stimulate the responsiveness of the existing carriers in using new technology and serving new markets. Another rationale rests on the proposition that Bell goes too far in its cost-minimization process (or, alternatively, considers high qualfty an element of management slack) and consequently produces an excessively homogeneous quality of service in order to achieve greater economies of scale. Without competitive pressure, there is no incentive for the utility to be more responsive or to offer a wider variety of service qualities. In either of these cases, merely relaxing the regulatory impediments to entry could have beneficial effects for the public, even though entry never actually takes place.

Scale Economies vs. Quality Differentials

The trade off between economies of scale and differential service quality offerings can be illustrated conceptually as follows.

Suppose that there are two categories of service, 1 and 2. Service 1 may be high reliability service, and 2 low reliability.

Output quantities are Q_1 and Q_2 respectively. Prices are P_1 and P_2. Also, suppose that there are two categories of consumers, A and B (say, business and residential consumers). These consumers have demand schedules as follows:

The demand of group A for service 1:

$$P_1 = D_1^a(Q_1^a) \qquad (\text{e.g., } \partial D_1^a/\partial P_2 = 0)$$

The demand of group B for service 1:

$$P_1 = D_1^b(Q_1^b, Q_2^b)$$

The demand of group B for service 2:

$$P_2 = D_2^b(Q_2^b).$$

Here, Q_1^a is the quantity of service 1 consumed by group A. Group A has no demand for service 2; group B has demands for both services, and the two services are gross substitutes for group B.

For simplicity, we will assume that marginal cost is constant, but that average cost is declining. We also assume that there is average cost pricing initially, and that cost includes a return on investment which is "normal."

Now first only service 1 is produced. If service 2 is not available, the two demands are:

$$D_1^a(Q_1^a) \quad \text{and} \quad D_1^b(Q_1^b, 0).$$

If $C(Q_1^a+Q_1^b)$ is total cost, then equilibrium is defined by:

$$D_1^a(Q_1^a) = D_1^b(Q_1^b, 0) = \frac{C(Q_1^a + Q_1^b)}{Q_1^a + Q_1^b},$$

or price equals marginal cost. (Throughout this discussion, we ignore the possibility of price discrimination among the classes of consumer.) Let the solution to this be $\hat{Q}_1^a$ and $\hat{Q}_1^b$, as illustrated in Figure 1.

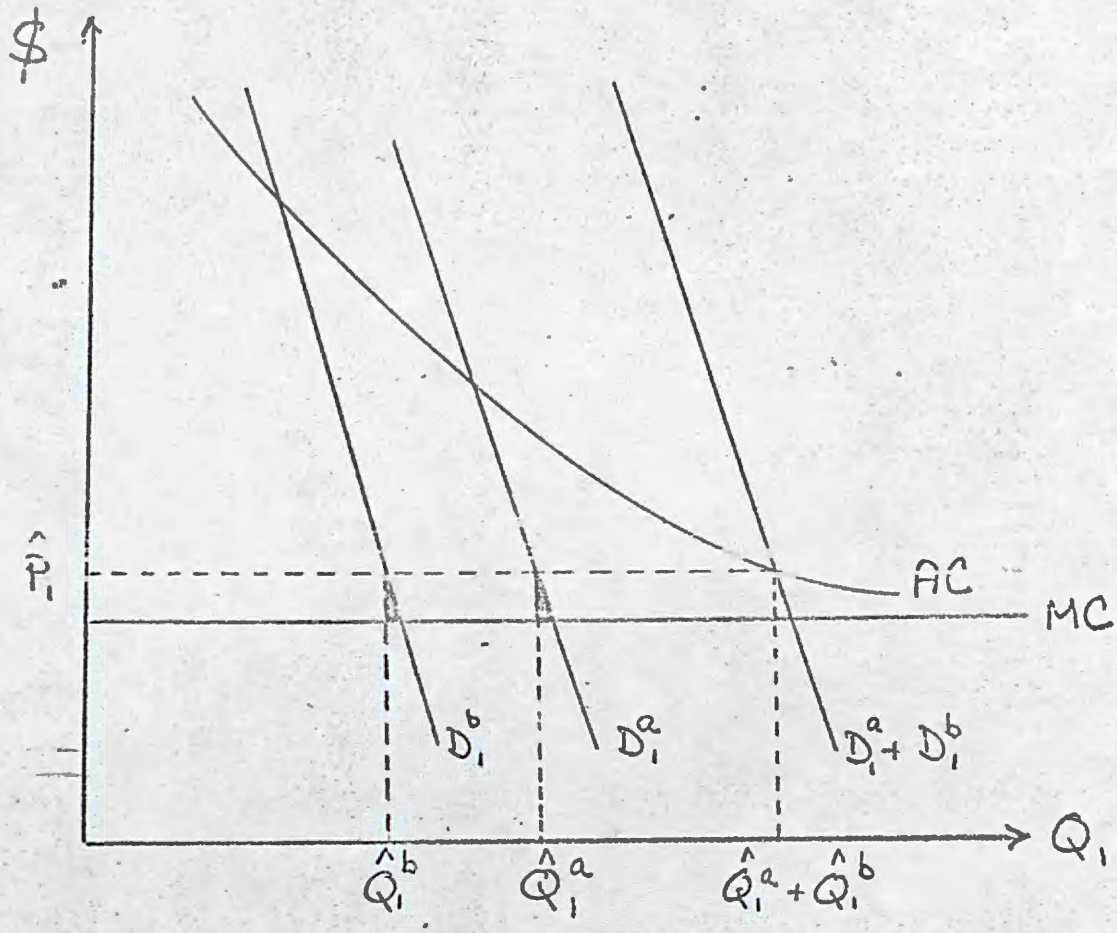
The consumer surplus resulting from this equilibrium in a partial sense is given by

$$\int_0^{\hat{Q}_1^a} D_1^a(Q_1^a)\, dQ_1^a + \int_0^{\hat{Q}_1^b} D_1^b(Q_1^b, 0)\, dQ_1^b - \hat{P}_1(\hat{Q}_1^a + \hat{Q}_1^b).$$

This expression is the difference between what is actually paid and what consumers would have been willing to pay for the equilibrium outputs. There is also a "producer's surplus" equal to area $(\hat{P}_1 - MC)(\hat{Q}_1^a + \hat{Q}_1^b)$, an excess profit which results from the inefficiencies of average cost pricing. This producer surplus is less than the additional consumer surplus that would be generated by going from average to marginal cost pricing, by the amount of the shaded areas in Figure 1.

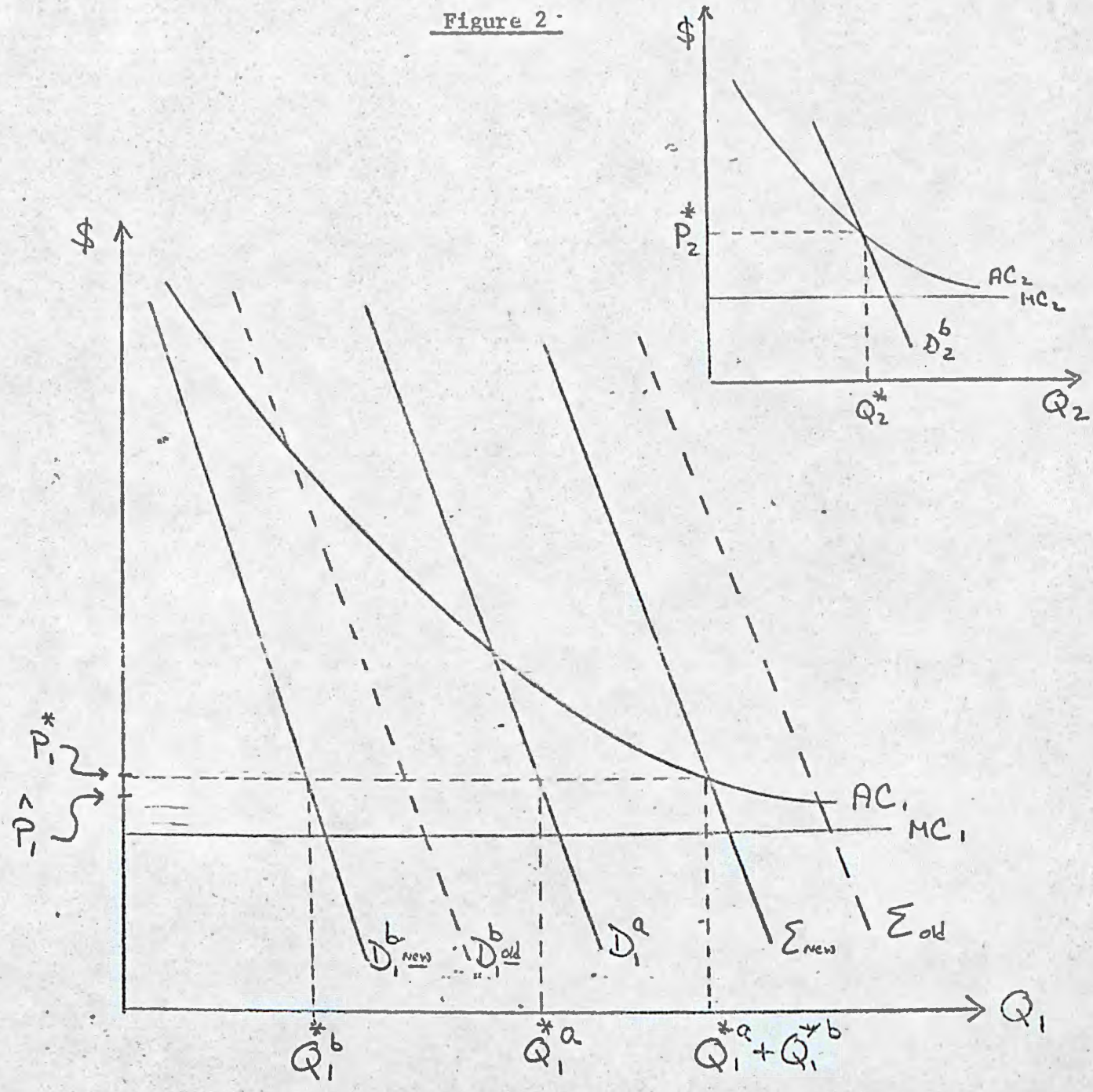
Now suppose that it is proposed that the second service be offered (either by the utility or by someone else). If the second service is offered, demand by group B for service 1 will decline. Under average cost pricing, this will increase the price charged to group A for service 1. After all the dust has settled, things will look something like Figure 2.

Figure 1



Average cost pricing on service 1 with no provision of service 2.

Figure 2



The Provision of Both Service 1 and Service 2 at Average Cost Prices

In Figure 2, the solid line D_1^b is the new demand curve for service 1 by group B, given the equilibrium price and quantity of service 2 at P_2^*, Q_2^*. The dotted line, D_1^b, is the previous demand for service 1 by group B when service 2 was not available (e.g., the same as in Figure 1.) The solid and dotted lines labelled Σ are the old and new total demands for service 1 by the two groups combined.

The new equilibrium is described by values Q_1^{*a}, Q_1^{*b}, and Q_2^{*b} which satisfy the system:

$$\begin{cases} D_1^a = D_1^b = \dfrac{C(Q_1^a + Q_1^b)}{Q_1^a + Q_1^b} \\ D_2^b = C(Q_2^b)/Q_2^b \end{cases}$$

An immediate result of this is of course that $\hat{P}_1 < P_1^*$ and $\hat{Q}_1^a + \hat{Q}_1^b > Q_1^{*a} + Q_1^{*b}$.

The new service should be provided if the net change in consumer welfare is positive. The expression which must be positive is

$$\int_0^{Q_2^{*b}} D_2^b(Q_1^{*b}, Q_2)\, dQ_2^b - P_2^* Q_2^{*b} + \int_0^{Q_1^{*b}} D_1^b(Q_1, Q_2^{*b})\, dQ_1^b + \int_0^{Q_1^{*a}} D_1^a(Q_1^a)\, dQ_1^a$$

$$- P_1^*(Q_1^{*a} + Q_1^{*b}) - \int_0^{\hat{Q}_1^b} D_1^b(Q_1^b, 0)\, dQ_1^b - \int_0^{\hat{Q}_1^a} D_1^a(Q_1^a)\, dQ_1^a + \hat{P}_1(\hat{Q}_1^a + \hat{Q}_1^b).$$

It is not inconceivable that there may be sufficient data in some cases to estimate this empirically, although it is by no

means easy.

One important point which has been brought out by the model to this point, is that economies of scale (in the sense of declining long run marginal costs) are not the source of the pressure to provide only one kind of service. The pressure is the same under average cost pricing, so long as average costs are falling. If marginal costs are indeed constant or even rising, a good deal of the service quality problem might be resolved by abandoning average cost pricing.

Competition "versus" Marginal Cost Pricing

It is possible that with marginal cost pricing instead of average cost pricing, no entry would take place, and service 2 would never be offered. This may be true even though service 2 "should" be offered, if the return to entry is insufficient to cover the cost and risk of entry, and if the provision of the new service adds less to the rate base of the utility than is lost on existing services. If marginal cost pricing on service 1 prevents entry and the provision of service 2, should society be willing to give up the benefits of marginal cost pricing in order to obtain the benefits of service 2?

The answer can be determined conceptually within the framework which has already been developed. Let C' be marginal cost (MC). The contrasting equilibria to be compared are :

$$(1) \quad \ldots \quad D_1^a = D_1^b = C'(Q_1^a+Q_1^b) = MC$$

$$(2) \quad \ldots \quad \begin{cases} D_1^a = D_1^b = C(Q_1^a+Q_1^b)/(Q_1^a+Q_1^b) = AC \\ D_2^b = C(Q_2^b)/Q_2^b = AC \end{cases}$$

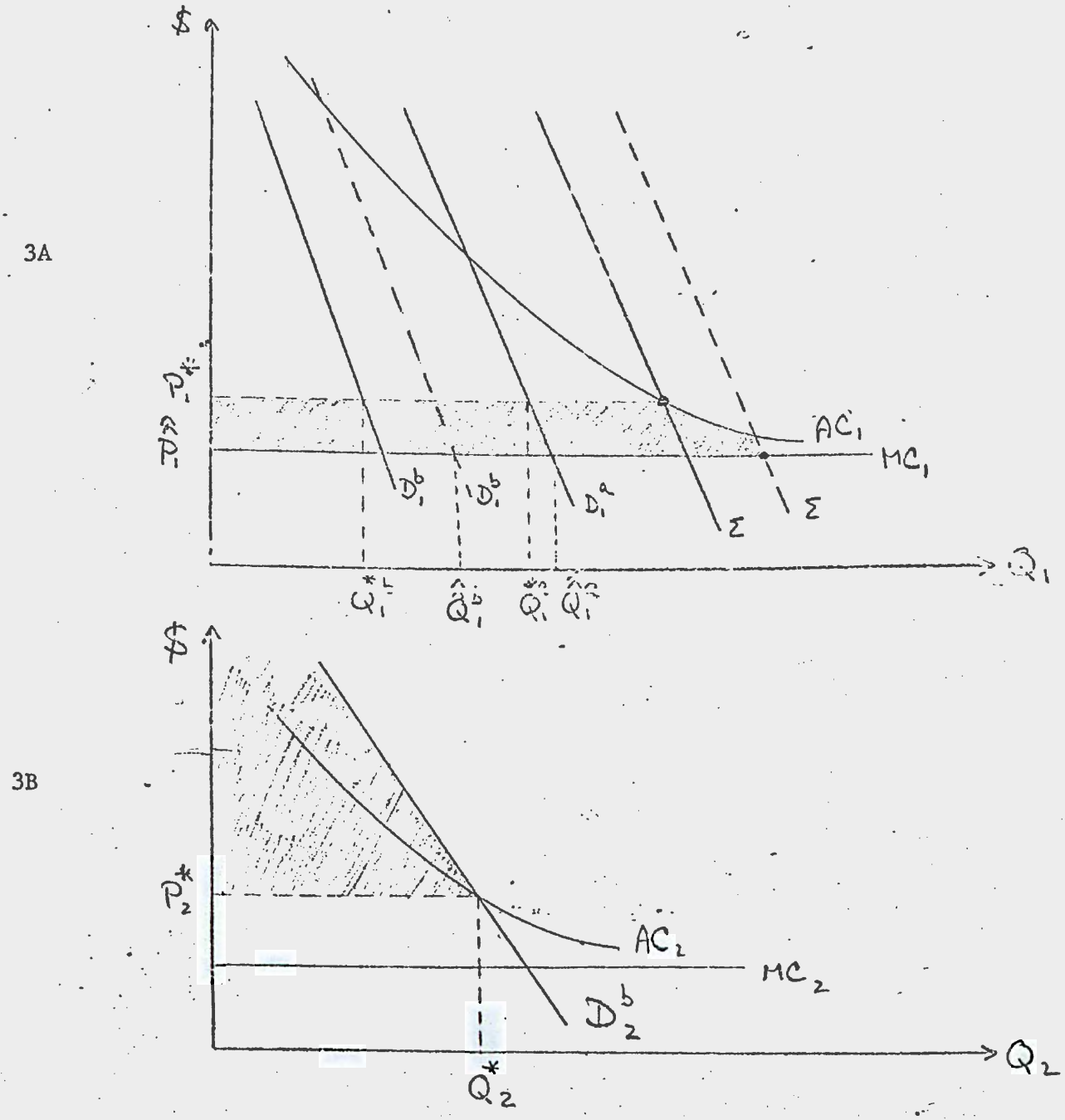
Let $\hat{\hat{Q}}_1^a$, $\hat{\hat{Q}}_1^b$, and $\hat{\hat{P}}_1$ be the results of marginal cost pricing in service 1, which prevents the provision of service 2 by forestalling entry. Then the inefficiency of AC pricing in service 1 is worthwhile, provided that the following expression is positive, and provided that there is truly an either/or choice between MC pricing and the provision of service 2:

$$\int_0^{Q_1^{*a}} D_1^a \, dQ_1^a + \int_0^{Q_1^{*b}} D_1^b(Q_1, Q_1^{*b}) \, dQ_1^b - P_1^*(Q_1^{*a} + Q_1^{*b}) + \int_0^{Q_2^{*b}} D_2^b(Q_1^{*b}, Q_2^b) \, dQ_2^b$$

$$- P_2^* Q_2^* - \int_0^{\hat{\hat{Q}}_1^a} D_1^a \, dQ_1^a - \int_0^{\hat{\hat{Q}}_1^b} D_1^b(Q_1, 0) \, dQ_1^b + \hat{\hat{P}}_1(\hat{\hat{Q}}_1^a + \hat{\hat{Q}}_1^b)$$

This trade off is illustrated graphically in Figure 3.

Figure 3



The curves here are the same as in Figure 2. The question is whether the shaded area in Figure 3B, which is the amount by which group B benefits from service 2, exceeds the area shaded in Figure 3A, which is the total loss to both groups from inefficient pricing of service 1.

Entry-preventing Behavior

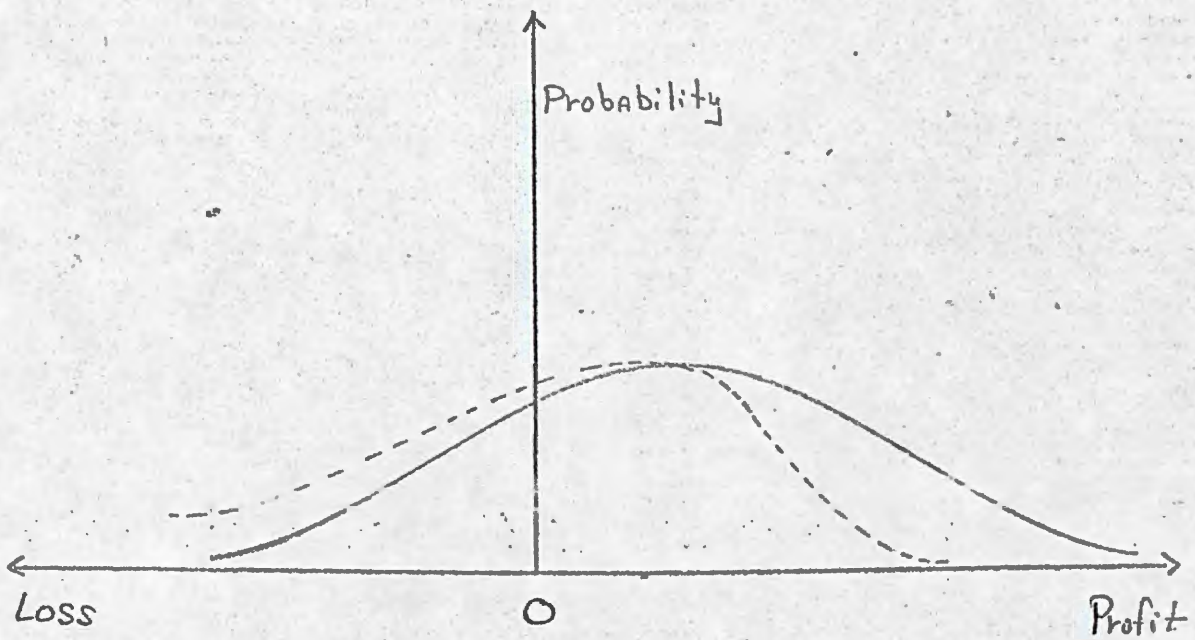
Entry for the provision of service 2 is "attractive" if $P_2^{*b}Q_2^* \geq C(Q_2^*)$, where C(Q) includes a normal return on capital. Let the difference between revenue and cost be M, the excess profit of the entrant, per time period after entry. Then entry will take place if the costs of entry are not greater than M/i, where i is the discount rate of time preference of the potential entrant. The utility in existence can affect entry in two ways:

it can make the potential profit of the entrant risky by soaring up to provide service 2 itself, and it can use the regulatory process to delay entry. The second effect obviously increases the possibility of the first, in addition to pushing the potential profits of service 2 further into the future time stream of the entrant. By increasing the riskiness of attempted entry, and particularly by skewing the the probability distribution of M toward the down side, the utility effectively raises the minimum present value of expected M which will attract entry. Without obstruction by the utility, entry will take place provided that

$$EPV(M(t,i,\sigma)) \geq T,$$

where T is the cost of entry and EPV is expected present value of the stream of profits M over time, t, at discount rate i, with riskiness measured by σ. The EPV is derived from a risk distribution of the sort illustrated in Figure 4.

Figure 4



The Result of Regulatory Delay: The distribution of Returns (solid line) is shifted negatively (dotted line) by administrative delay.

If the utility is able to delay entry through regulatory action (or inaction), the risk curve becomes skewed or shifted negatively because the utility has more time to react to the threat of entry by price and service adjustments. In addition, the stream of profits derived from any probability distribution is pushed further into the future, reducing its present value. The market in risk capital is fairly well developed, and it is generally true that if investments can be described by two parameters, return, r, and risk, σ, then investors require that r_i in investment i exceed r_j in investment j if $\sigma_i > \sigma_j$. Also, investors in high-risk projects have (for the same reason) a higher personal rate of time preference. All of these factors tend to reduce the chance that $EPV(M(r,1,\sigma)) \geq T$, and thus reduce the chance that that entry will take place. If it is unlikely that entry would take place, the utility need not be responsive. Thus, merely removing the source of regulatory barriers to entry may have substantial effects on the responsiveness of the utility.

The Realistic Choices

In the case of the specialized carriers, the public policy choice as it involves rate-setting includes these alternatives:

A. The present situation: Average cost pricing without service 2.

B. AT&T's proposal: Average cost pricing on service 1 with service 1 subsidizing marginal cost prices on service 2, and, by implication, no entry.

C. The Justice Department proposal: Average cost pricing on both services with entry.

D. Marginal cost pricing of both services with, by implication, no entry.

Alternative D we will dismiss out of hand as impractical, since it probably requires the Government to subsidize AT&T.

Alternative B is described by the equilibrium system:

$$\begin{cases} D_1^a = D_1^b = \dfrac{C(Q_1^a+Q_1^b)}{Q_1^a+Q_1^b} + \dfrac{C(Q_2^b) - Q_2^b D_2^b}{Q_1^a+Q_1^b} \\ D_2^b = C'(Q_2^b). \end{cases}$$

Here, service 1 is priced at its own average cost plus the difference between cost and revenue on service 2, spread over all units of service 1.

It is possible in principle to quantify the comparative differentials in welfare within this conceptual framework, and thus to decide whether a movement from alternative A to any of the others results in an increase in social benefit. There is some suspicion, however, that "no entry" in alternative B in fact implies reversion to alternative A in time. There is at least historical evidence to support this proposition. It was this suspicion which led the Justice Department to propose alternative C as the realistic alternative to A.

One danger of the average cost pricing with entry proposal is that minimum rate regulation will lead the FCC to act like a cartel policeman and the carriers to compete in service because they can not in price, leading to overcapacity in the industry. This can be prevented simply by having each carrier charge its own average cost prices, rather than setting standard prices for the industry as a whole, based on the average costs of only some of the firms. Individual firms then have an incentive which is lacking when the regulators set a uniform cartel price.

Conclusion

There are two related issues to which quantitative public policy analysis should be applied. The first is whether the removal of entry barriers would alone be sufficient to increase the responsiveness of AT&T (e.g., induce it to provide service 2, when appropriate). The second is whether this responsiveness can be achieved only at the expense of inefficiency in pricing. The second question is relatively unimportant if there is no reasonable chance of rationalizing the pricing mechanism anyway.

If marginal costs are declining everywhere, and if we add the realistic complication of shared facilities, then the best of all possible worlds is the monopoly public utility which practices marginal cost pricing and which has the responsiveness and progress orientation that threat of entry induces, but without actual entry.

While it is not inconceivable, this world is clearly a long way off. In the meantime, public policy must be chosen from second-best alternatives.

The framework provided above is susceptible to quantification, and may thus provide a basis for choice among the available alternatives. What is required, of course, is estimated parameters for each of the demand and cost curves involved in the models above. This is a formidable task. However, rough indications or order of magnitude effects may well be sufficient, and the combination of quantitative techniques and sensitivity analysis which are available probably can do the job.