COST SEPARATIONS FORMULAE IN TELECOMMUNICATIONS: THE DEVELOPMENT OF THE "RELATIVE USE" STANDARD

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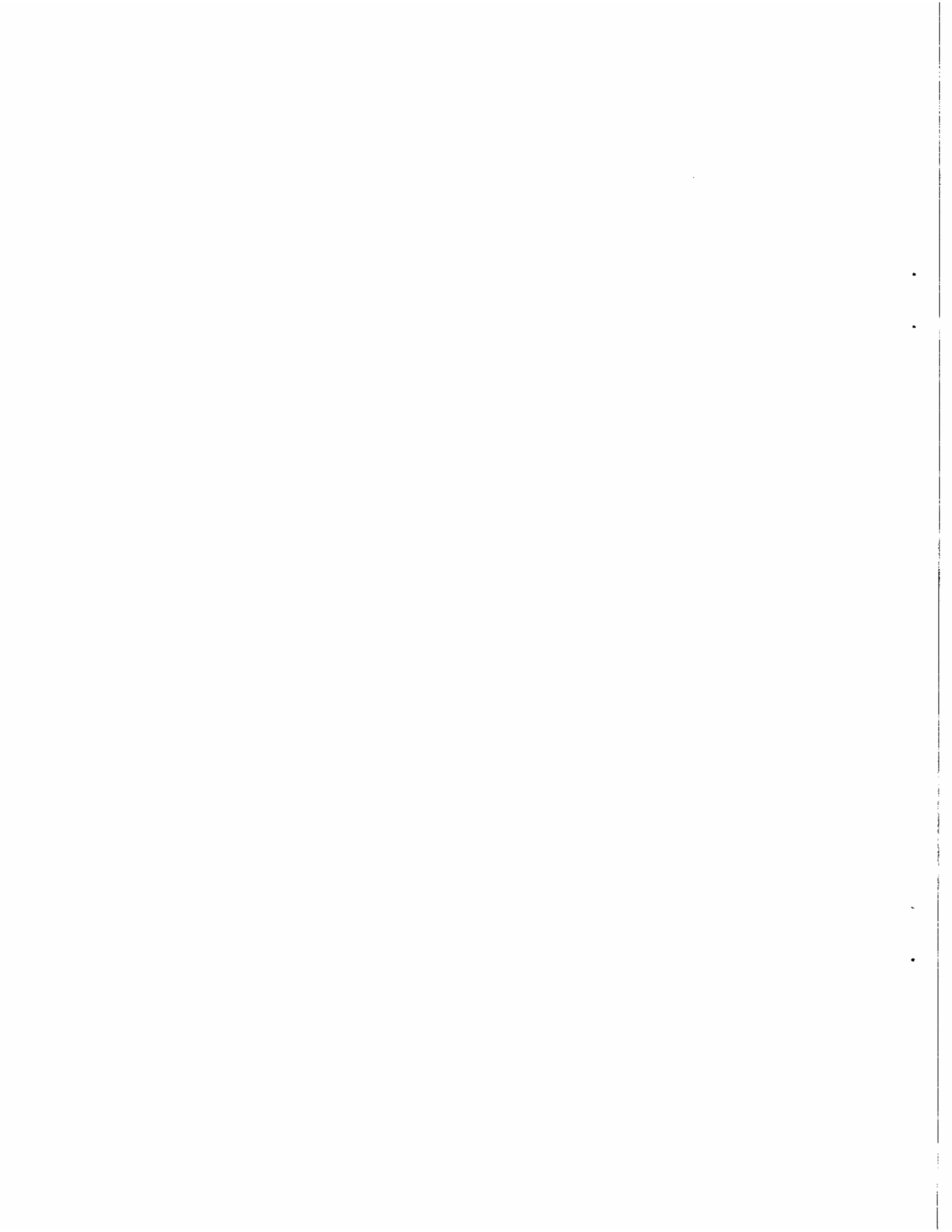


EXECUTIVE SUMMARY

-- In 1943, following the language of Smith v. Illinois Bell Telephone Co., the telecommunications industry and the F.C.C. agreed to allocate the costs of geographically local facilities between the intrastate and interstate jurisdictions according to a measurement of the "relative use" or "actual use" made of such facilities.

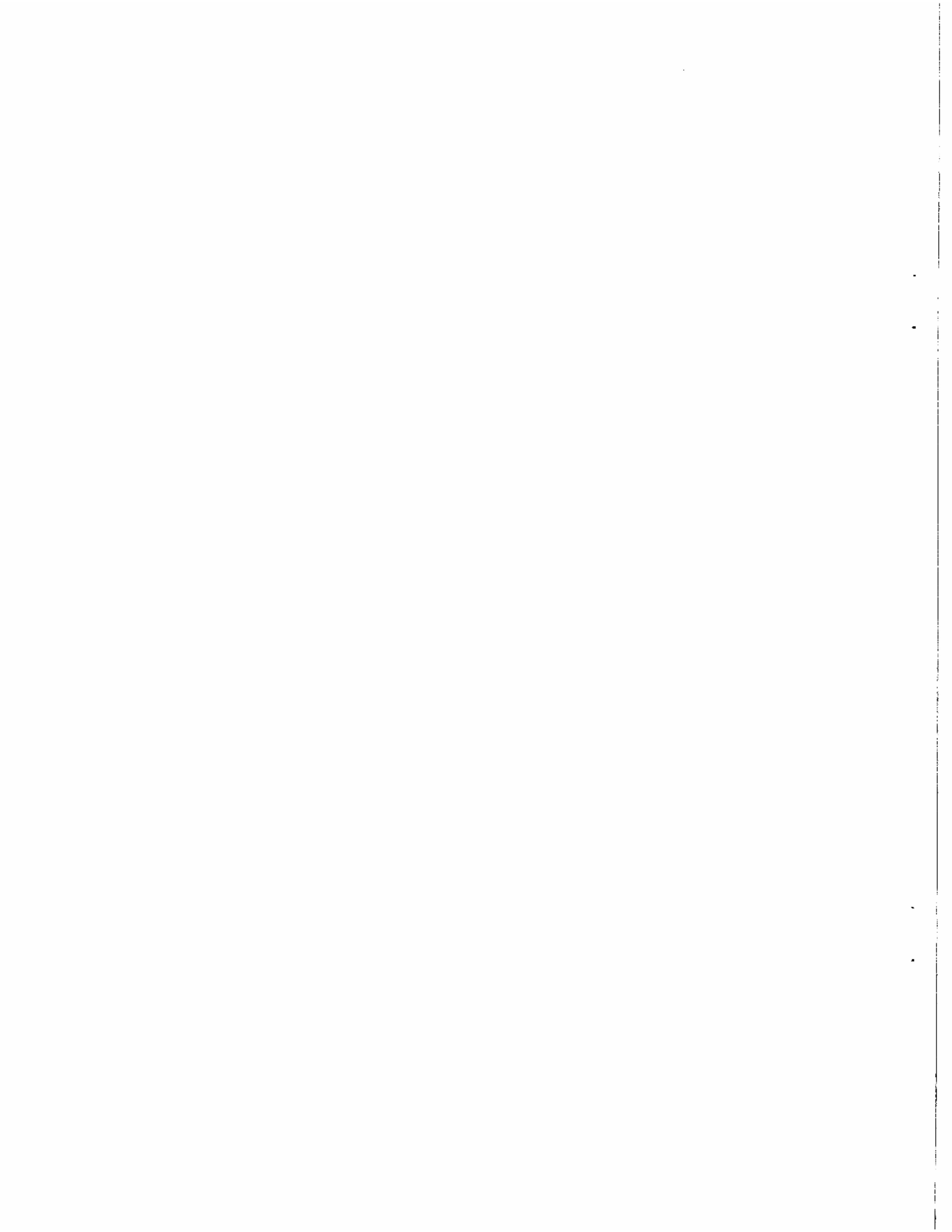
-- The relative use standard has come under attack since its inception. Recently, critics have focused on the irrelevance of the standard to the allocation of the costs of non-traffic sensitive (NTS) equipment. In addition, with the entry of competitors into the terminal equipment and transmission markets, some economists and regulators have argued that the relative use standard is contrary to the goal of economic efficiency.

-- In 1944, the Supreme Court established in Federal Power Commission v. Hope Natural Gas that administrative agencies are "not bound to the use of any single formula or combination of formulae in determining rates." At least by 1947, when the F.C.C. and NARUC published their joint report on cost allocation, regulators believed that Hope and its progeny freed federal and state commissions from applying the judicially created relative use standard.

-- Nevertheless, most state commissions continued to base telecommunications cost allocations on this standard. Several considerations informed their decision. First, they felt that the relative use standard best fulfilled the courts' remaining requirement that a cost allocation formula balance practicality and fairness. Second, the standard was administratively practical and susceptible to some measurement. Finally and most importantly, the relative use standard insured that the economically efficient and profitable interstate business would bear some proportion of the costs of the geographically local facilities; this helped keep intrastate rates down.

-- A few rebel state commissions refused to adopt the relative use standard because they felt that the interstate business should be responsible for an even greater proportion of the costs of the geographically local facilities. Finally, in 1951, the allocation formula was modified so that the measurement of exchange minutes of use was divided by two. The resulting figure represented the weighted "measurement" of the relative use of geographically local facilities by exchange services; the allocation of costs to exchanges was based on this figure. The remainder of the costs was allocated to the interstate business.

-- While the "relative use" or "actual use" basis for telecommunications cost allocations has become more nominal than real, it also has become more entrenched since the 1951 modification.



CHAPTER 1: INTRODUCTION

The technological efficiency of the telecommunications network complicates the process of setting cost-related rates for telecommunications services. The telecommunications network in the United States furnishes two types of service -- exchange (local) calls and interexchange (toll) calls. Elaborating a little further, the interexchange category includes MTS calls (traditional "long distance"), WATS calls (for example, calls to 800 numbers) and PLS calls (private line service). As illustrated in Figure 1, some of the same equipment is used over and over again to complete very different types of calls. These geographically local facilities (the telephone, the private branch exchange (PBX), inside wiring, drops and loops) may be perceived as providing access to a variety of services. As such, they present a joint and common cost allocation problem for telecommunications regulators.

As a first and most controversial step in the cost allocation process, the regulators separate the costs of the geographically local facilities along jurisdictional lines. Why? Although the telecommunications network does not follow state lines, its regulators must. To simplify, the state commissions are responsible for regulating the rates of all telecommunications services which remain initiated and completed within state limits (that is, intrastate exchange and intrastate interexchange). If the services cross state borders, (interstate

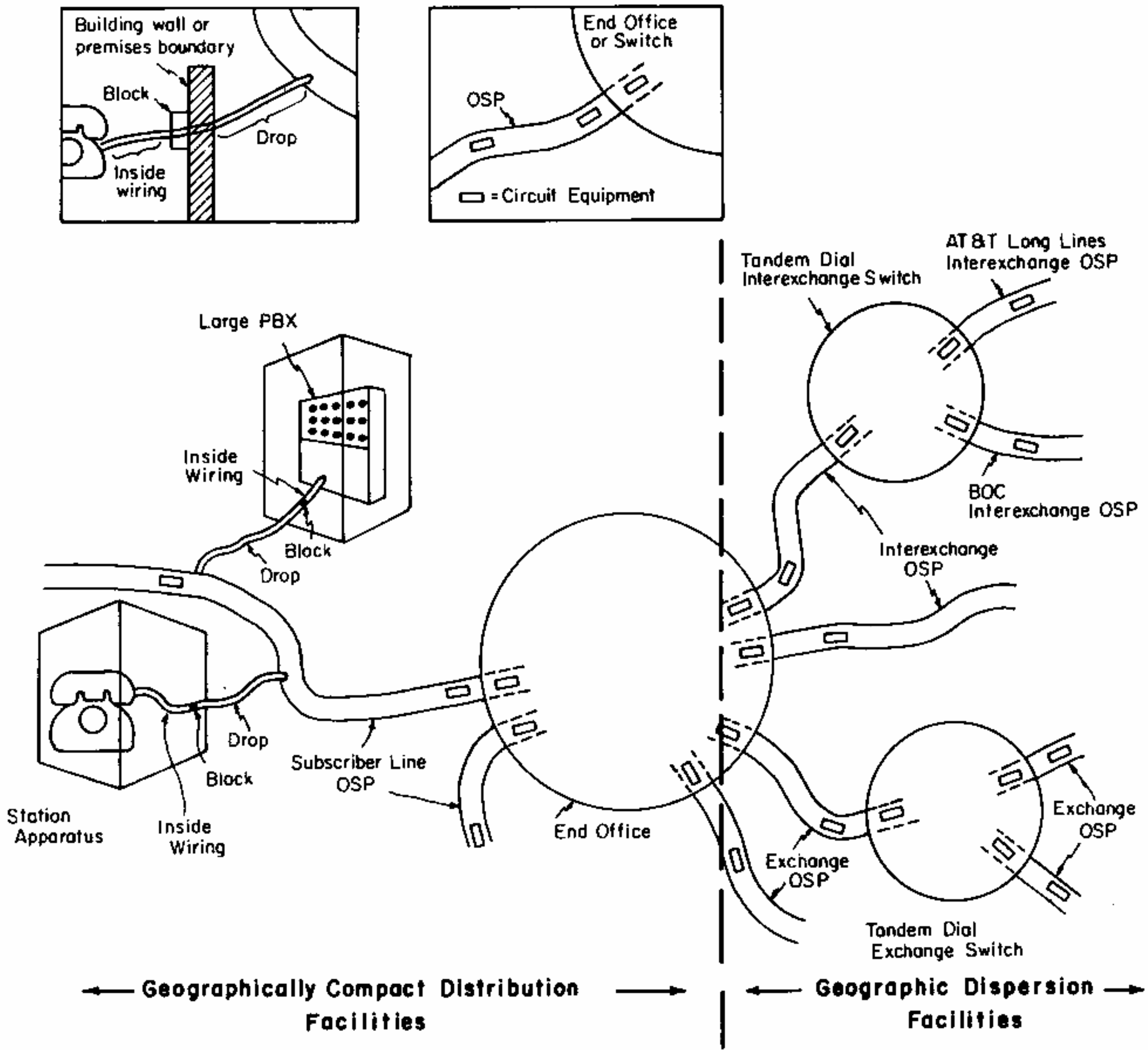


Figure 1. The Telephone Plant

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interexchange), the Federal Communications Commission regulates their rates.

In 1930, the U.S. Supreme Court required a jurisdictional separation of costs to insure that state regulators based rates for intrastate services solely on intrastate costs. In Smith v. Illinois Bell Telephone Company,[1] the Court noted:

> The separation of the intrastate and interstate property, revenues and expenses of the company is important not simply as a theoretical allocation to two branches of the business. It is essential to the appropriate recognition of the competent governmental authority in each field of regulation....The proper regulation of rates can be had only by maintaining the limits of state and federal jurisdiction and this cannot be accomplished unless there are findings of fact underlying the conclusions reached with respect to the exercise of each authority. In view of the questions presented in this case, the validity of the order of the state commission can be suitably tested only by an appropriate determination of the value of the property employed in the intrastate business and of the compensation receivable for the intrastate service under the rates prescribed.[2]

Since Smith, the state commissions, the F.C.C., the courts and AT&T have all come to accept the principle that the costs of the geographically local facilities in the telecommunications network must be allocated, in some manner, between the intrastate and interstate jurisdictions. Today, Smith is also interpreted to mandate the station-to-station method of separations which requires both the interstate and intrastate jurisdictions to assume some portion of the costs of the geographically local facilities.[3]

Nevertheless, that leaves the question of how to separate

these costs. What portion of the costs should be borne by the interstate business? What portion should be allocated to the intrastate business? What standard should serve as the basis for the cost separations formula?

The integrated nature of the geographically local facilities makes the jurisdictional separation of their costs an economically arbitrary decision.[4] Even the costs incurred to upgrade the transmission quality of equipment to meet interexchange needs cannot be automatically attributed to either intrastate or interstate service. Most clearly, the loop which connects a telephone to the nearest exchange (see Figure 1) provides access to both interstate and intrastate services; its basic cost is not caused by either. Rather, the loop is a joint and common cost.

The choice of a cost allocation standard as a foundation for the separations formula is made even more discretionary by the technological nature of the geographically local facilities. The subscriber plant equipment, subscriber lines, and the like, are non-traffic-sensitive (NTS) plant. This means that the number of these items does not change as a function of changes in the number of call attempts, messages switched, and other usages.[5] Similarly, the number of these items does not change as a function of their use for exchange or interexchange calls.

While economically arbitrary, the choice of a cost allocation standard is quite significant. Working backwards, the rate structure is "the set of prices which generates revenues equal to revenue requirements for each service, where the revenue

requirements [for overall intrastate and interstate services] reflect the principle of cost allocation being applied."[6] The operationalization of the allocation standard in a cost separations formula does not determine rates on a service-by-service basis. Nevertheless, the formula does represent the first tool for effectuating general ratemaking policies.

Additionally, the choice of a cost allocation standard to guide the separations formula is significant because the costs of geographically local facilities represent a large percentage of the total costs of the telecommunications network. In 1980, NTS plant accounted for the largest share of total investment for Bell and the Independents.[7]

Lacking a real economic basis for a cost allocation standard for their cost separations formulae, some state commissions and courts looked to the Smith decision, which included the following language:

> While the difficulty in making an exact apportionment of the property is apparent and extreme nicety is not required, only reasonable measures being essential...it is quite another matter to ignore altogether the actual uses to which the property is put.... We think that this subject requires further consideration, to the end that by some practical method the different uses of the property may be recognized and the return properly attributable to the intrastate service may be ascertained accordingly.[8]

Smith, then, mandated that some portion of the costs of the geographically local facilities should be allocated to the interstate jurisdiction—based on a "recognition" of interstate "use" of the equipment.

In 1943, the telecommunications industry and the F.C.C.

agreed to a cost separations formula developed by the National Association of Railroad and Utility Commissioners (NARUC)[9] which incorporated the language in Smith by measuring the "actual use" or "relative use" (terms used interchangeably herein) of the geographically local facilities made by intrastate and interstate services. Significantly, the percentage of interstate "actual use" of the equipment (known as Subscriber Line Use or SLU) was very small. The regulators then used this figure as the beginning point for all NTS cost separations formulae. The subscriber line usage (SLU) factor is still the first measurement made in the cost allocation process.

The "relative use" standard has often come under attack from a number of sectors. Most obviously, economists and some state regulators have agreed that such a standard is particularly unsuited to the allocation of the cost of NTS plant; a measurement of use means little when it is applied to equipment which has costs that do not fluctuate with usage.[10]

But the objections also reflect policy goals. Until 1943, AT&T refused to allocate any of the costs of geographically local facilities to its interstate business, as determined by application of the "relative use" standard. The company urged that its interstate business should only bear the additional costs directly caused to the geographically local facilities by interconnection with the Long Lines.

Meanwhile, state commissions eyed the expanding pool of telecommunications subscribers and the interstate business's technological progress, economies of scale and high rate of

return. Convinced that the exchange (and the rest of the intrastate) business should share in the benefits of this national telecommunications network, the regulators charged that the "relative use" standard did not adequately account for the "value" of the access that the geographically local facilities provided to the interexchange network.[11] Once AT&T accepted "relative use" as the basis for cost separations formulae in 1943, most state regulators attempted to modify the standard with veiled value-of-service notions.[12]

Recently, a number of competitors have been allowed by regulators to enter the terminal equipment and transmissions markets, eroding AT&T's past monopoly of telecommunications service. In light of this changed atmosphere, some economists and regulators have argued that the "relative use" standard cannot be maintained as the basis of cost separations formulae. The standard requires AT&T's interstate rates to reflect costs far beyond the "respective incremental costs that particular usages impose on the system."[13] Thus, it offends the goal of economic efficiency. Similarly, the National Telecommunications and Information Administration (NTIA) has commented that the present separations formula "distorts price signals by massively inflating allocations to large interstate users."[14] The NTIA has estimated that many of these users will seek alternatives to telephone industry facilities for origination and termination of their large-scale traffic and thereby bypass the local exchange network altogether by means of short hop microwave, digital termination systems, or two-way CATV, for example. Further, it

appears that by serving high-density markets, alternative systems would be able to carve out a profitable share of the interstate traffic at attractive prices. As a result, the NTIA has claimed that "...alternative systems are encouraged into the market which may not compare favorably on a long-run, cost-to-cost basis but are, nevertheless, attractive on a short-run, cost-to-price basis."[15]

Faced with the increasing inadequacy of the "relative use" standard, the F.C.C. need not feel bound to apply it, despite the language in Smith. The agency may exercise considerable discretion in the rulemaking process, as long as it fulfills the purposes and standards of the Administrative Procedures Act,[16] the Communications Act of 1934[17] and a series of Supreme Court decisions regarding administrative agency discretion.

The Communications Act requires the F.C.C. to further three basic goals. First, it must help establish and maintain a rapid, efficient communications network. Second, it must insure that adequate facilities are provided for the network. And, third, it must order provision of service, pursuant to tariffs offering just and reasonable rates, practices, procedures and regulations.[18]

In 1944, the U.S. Supreme Court interpreted similar "just and reasonable" rate language in the Natural Gas Act and held that "[u]nder the statutory standard of 'just and reasonable' it is the result reached not the method employed which is controlling. It is not the theory...but the impact of the rate order which counts."[19] More specifically, the Court stated that

"the Commission was not bound to the use of any single formula or combination of formulae in determining rates. Its rate-making function, moreover, involves the making of 'pragmatic adjustments.'"[20]

Based on the Court's opinion in Federal Power Commission v. Hope Natural Gas Co.,[21] it appears that the F.C.C. has considerable discretion in its choice of cost separations formulae to fulfill the jurisdictional separations requirement of Smith.

It is the purpose of the paper to examine why--given Hope Natural Gas and its progeny--the regulators of the telecommunications industry have never chosen to abandon the standard of "relative use" in the cost separations formula. This choice is particularly notable in light of the competition in the telecommunications industry today and the likely development of a system of access charges to reflect or replace the present separations and settlements procedures.[22]

CHAPTER 2: THE SIGNIFICANCE OF HOPE NATURAL GAS

Hope Natural Gas profoundly advanced the autonomy of administrative agencies. It overturned a regulatory scheme characterized by strict judicial review of every aspect of ratemaking. In order to determine whether an authorized rate unconstitutionally confiscated a firm's investment, courts had prescribed tests for calculating the fair value of the rate base and measuring the fairness of a rate of return.[23] Often, these tests disguised the courts' bias toward property owners in an era of social tension and heightened judicial protection and extension of property laws.[24] As Justice Brandeis pointed out in his 1923 dissent in Missouri Ex. Rel. Southwestern Bell Telephone Co. v. Public Service Commission,[25] "...[T]he rule not only fails to furnish any applicable standard of judgment, but directs consideration of so many elements, that almost any result may be justified."[26] As a consequence, "[w]hat if any, weight shall be given to any one [measure of value of the rate base] must practically rest in the judicial discretion of the tribunal which makes the determination."[27]

With Hope Natural Gas, the Supreme Court explicitly bypassed all its prior pronouncements regarding the appropriate measurement of the common rate base and discarded a mandatory fair value standard.[28] Instead, Justice Douglas explained:

> ...Nor is it important to determine the various permissible ways in which any rate base on which the return is computed might be arrived at. For we are of the view that the end result in this

> case cannot be condemned under the Act as unjust and unreasonable from the investor or company viewpoint....Rates which enable the company to operate successfully, to maintain its financial integrity, to attract capital and to compensate its investors for the risks assumed certainly cannot be condemned as invalid, even though they might produce only a meager return on the so-called "fair value" rate base.[29]

Thereafter, Justice Douglas applied the standard of review which he had announced. As promised, the focus was on the effect of the Commission's order, not on the cost accounting methods which the F.P.C. had chosen in its ratemaking decision:

> The Commission points out that if the rate base [reproduction cost new] were accepted, Hope's average rate of return for the four-year period from 1937-1940 would amount to 3.27%. During that period Hope earned an annual average return of about 9% on the average investment. It asked for no rate increases. Its properties were well-maintained and operated....The incongruity between the actual operations and the return computed on the basis of reproduction costs suggests that the Commission was wholly justified in rejecting the latter as the measure of the base.[30]

Since Hope Natural Gas, the Supreme Court has indicated the range of ratemaking formulae it will uphold. Federal agencies possess wide latitude in allocating costs, determining which costs are significant and adopting cost accounting methods for ratemaking.

In Colorado Interstate Gas Co. v. Federal Power Commission,[31] a pipeline from Texas to Colorado served three different uses: 1) intrastate transportation and sale in Texas; 2) interstate transportation and sale to industrial customers and 3) interstate transportation to distributing companies for resale. Not all of the rates for these uses were regulated by

the F.P.C. Nevertheless, the F.P.C. reduced the wholesale rates of natural gas companies without making a separation of the property between intrastate business and interstate business or between industrial sales and sales for resale or between property used exclusively in either intrastate business or industrial sales. The Commission declared that these separations were unnecessary: "All that can be accomplished by an allocation of physical properties can be attained by allocating costs including the return. The latter method is by far the most practical and businesslike."[32] The Supreme Court upheld the allocation of costs practiced by the F.P.C. between regulated and non-regulated business as permitted by the Natural Gas Act, and noted that a segregation of the physical property based upon use[33] was not judicially required. Rather, the Court emphasized the discretion which Congress had granted the Commission in the Natural Gas Act:

> Congress indeed prescribed no formula for determining how the interstate wholesale business, whose rates are regulated, should be segregated from the other phases of the business whose rates are not regulated. Rate-making is essentially a legislative function. Munn v. Illinois, 94 U.S. 113....A separation of properties is merely a step in the determination of costs properly available to the various classes services rendered by a utility.[34]

Although Justice Douglas attempted to distinguish <u>Smith</u>,[35] the logic in the <u>Colorado Interstate Gas</u> decision severely undercut the application of the "relative use" standard which had been suggested in the earlier case. The standard was not required where Congress had enacted an enabling statute which left the development of separations formulae to agency discretion.

In the past several decades, the Supreme Court has consistently applied Hope Natural Gas in allowing regulators to select various methods of cost calculation for the determination of just and reasonable rates. In Wisconsin v. Federal Power Commission,[36] the Court affirmed the F.P.C.'s decision to substitute area ratemaking for the individual cost-of-service method of fixing rates. Again, in the Permian Basin Area Rate Cases,[37] the Court sustained a two-tiered system of rates for natural gas producers and declared that "rate-making agencies are not bound to the service of any single regulatory formula; they are permitted, unless their statutory authority otherwise plainly indicates, 'to make the pragmatic adjustments which may be called for by particular circumstances.' Federal Power Commission v. National Gas Pipeline Co. [315 U.S.] at 586."[38] The Court recognized that one of the aims of the Natural Gas Act and one of the functions of the F.P.C. was encouraging the exploration for and development of new sources of natural gas, a purpose that clearly shaped the rate structure and implied broad discretion for the F.P.C.[39]

The F.P.C.'s power to imply a regulatory scheme nearly divorced from cost computation was even upheld--subject to findings as to the effect of the order--in Federal Power Commission v. Texaco, Inc.[40] There, the Commission had chosen indirect regulation of small producers--in the course of regulating the rates of pipelines and large-producer customers of small producers--instead of direct regulation of rates for all existing and future sales by small producers.

These cases illustrate the Supreme Court's extension of Hope Natural Gas to allow administrative freedom from judicial interference in the choice and application of the cost computation formulae that are part of the ratemaking process. But does this line of cases apply to the FCC and Smith? The Supreme Court has never interpreted the Communications Act in the telecommunications cost allocation context. Smith has never been explicitly overturned. Yet, Colorado Interstate Gas, in particular, strongly indicates that the F.C.C. has the power to select a cost separations formula, irrespective of the suggestion of a "relative use" standard in Smith.

The ambiguity of the law in this area could help explain why some parties before the F.C.C. continue to argue that a relative use measurement is the required tool for cost allocation.[41] And lower courts have confined the Hope Natural Gas holding to cases involving the determination of fair rates of return[42] or cost accounting[43] but not cost allocation. Indeed, the Nevada Supreme Court, confronting a striking disparity between interstate and intrastate toll rates under existing cost separations formulae, called it a "'rule of law that works a manifest injustice.'"[44] Poignantly, the court stated:

> We are not sure that the application of a "separations formula" is entirely independent of the establishment of a "spread of rates." ...The present record gives us no opportunity to afford any relief from this situation but we desire to make it abundantly clear that we do not foreclose further inquiry into such a situation if the matter is again brought before this court.[45]

Of course, the court was quite perceptive in sensing some relation between the cost allocation process and the ratemaking

function. The application of Hope Natural Gas and Colorado Interstate Gas may have given the court a path out of its dilemma, since the court did not find the present "spread of rates" just and reasonable in their effect. The question then becomes: Why did the Nevada Public Utilities Commission, most other state commissions and the F.C.C. choose to apply the "relative use" standard in their cost separations formulae?

CHAPTER 3: COST SEPARATIONS FORMULAE BEFORE HOPE NATURAL GAS

Cost separations formula options had been suggested, applied and discarded long before Hope Natural Gas was decided. That history significantly affected the regulators' response to the ratemaking freedom granted in this case.

As a practical matter the state commissions took sole responsibility for regulating telecommunications rates until the F.C.C. was established in 1934. These early state commissions preferred to pursue value-of-service ratemaking, usually basing cost allocations on the proportions of intrastate to interstate revenues. This paper will explore some of the reasons underlying the commissions' choice.

But in the Minnesota Rate Cases,[46] the Supreme Court struck down cost allocation under the value-of-service method as circular, explaining that "...the value of use, as measured by return, cannot be made the criterion when return itself is in question."[47] Smith again expressed the Court's distrust of value-of-service ratemaking.

Overall, the years of telecommunications regulation after these judicial decisions were marked by state regulators' slow reconciliation to the need for separations as the first step in ratemaking. Additionally, they gravitated toward "relative use" as the only standard which guaranteed that interstate services would bear some portion of the costs of geographically local facilities and which also provided an allocation scheme that was highly administrable, based on the criteria of definable

measurement practices, visibility, relatively straightforward and inexpensive implementation and judicial acceptance.

Yet, a few commissions struggled against the "relative use" standard. Desiring to share in a greater proportion of the high profits of the interstate business, they quickly labeled the standard inefficient and irrelevant when applied to NTS plant. However, throughout the early years of regulation, these commissions were unable to create any other judicially acceptable method for cost allocation that accomplished their goals. They were thus forced to adopt a cost separations formula based on the "relative use" standard.

State commissions first assumed responsibility for the regulation of the telecommunications industry late in the 1910s. These commissions were inclined, for several reasons, to ignore cost separations if they could.[48] Most importantly, the regulators faced the difficulty of "controlling the performance of a system that was increasingly interstate in nature."[49] AT&T controlled a network that was nearly national in scope. The company dominated the negotiations that determined the division of interstate interexchange revenues with the Associated Bell Companies and the Independents. It established the license contract fee which required Bell Companies to pay AT&T 4-1/2% of their gross revenues for managerial assistance, telephone rentals and other services.[50] As the AT&T network grew in the 1920s and 1930s, AT&T routed interexchange calls in the most efficient manner; this often meant that AT&T Long Lines facilities were used for intrastate calls. Additionally, the early

telecommunications network contained both a regulated portion (i.e., local exchanges and the Associated Bell Company lines used for intrastate interexchange calls) and a portion that was basically unregulated as to rates (i.e., AT&T's Long Lines). Thus, the state regulators confronted substantial cross-subsidization problems. Ultimately, they feared that the adoption of any separations formula would defeat their attempts to regulate effectively the complex Bell System.

Generally, then, the early state commissions espoused ratemaking policies that did not require separations. Within their state borders, many state commissions pursued statewide rate averaging of exchange rates, avoiding the need to apportion interexchange revenues based on the costs of individual exchanges. To make regulatory decisions even less precise, these states did not base interexchange rates on individual interexchange route costs, but merely determined the aggregate intrastate interexchange revenue requirements. In a few states, exchange ratemaking was practiced, requiring an attempt at apportionment. Resultant disparities between division of revenue and individual exchanges' actual costs[51] caused some tension between the state commissions and cities.[52] Overall, interstate interexchange revenues were merely accepted as proposed and deducted from intrastate revenue requirements. The consequent deficiency (or excess) in settlements was absorbed in intrastate rates.[53]

Clearly, the early state commisions were not concerned so much with cost allocations--automatically suspect because of

AT&T's presumed ability to control its property and jurisdiction through its management policies—but with the rates that citizens paid for various services. At that time, there was no intuitive correlation between a desired rate schedule and separations procedures.

With the Minnesota Rate Cases,[54] the state commissions began looking for theories of cost separation to support their ratemaking goals.

Interestingly, they balked at the station-to-station theory. Before 1930--the year in which Smith was decided--few states chose the theory because regulators could not discern how it would further regulatory goals. They were also concerned about its practicality; the station-to-station theory presented no obvious unit of application.[55]

Those state commissions which did choose the station-to-station separations method discussed various applications but usually considered "use" the key element. Of course, the definition of use varied. In the first thorough regulatory study of the effect of the station-to-station principle, the Wisconsin Commission applied the theory to each class of service within the exchange on the basis of relative usage. Meanwhile, the Kansas Public Utilities Commision proposed that, where there was common ownership of interexchange and exchange facilities, lines of customers who did not use the interexchange services should be excluded. This would have left only the individual lines actually used for interexchange service subject to any separations formula.[56]

But regulators feared the administrative difficulties and possible economic effects of the "relative use" standard. Some expressed the concern that fluctuating interexchange usage of geographically local plant would produce fluctuating exchange and interexchange rates.[57] Others felt that interexchange calls represented such a small percentage of total calls that separations were not worthwhile.[58] And some feared that the infant interexchange business could not survive increased cost allocation.[59]

Despite these doubts, the implemention of one of the first station-to-station separation techniques involved the "relative use" standard. In the early 1920s J.G. Wray, a consulting engineer in New York, separated the plant and expenses in the cities of Buffalo and Syracuse between exchange and interexchange with a further separation of interexchange between intrastate and interstate. The separation was made on a time-in-use basis and traffic units were used in allocating traffic expenses between the services.[60]

Within the next few years, several Associated Companies and state regulatory bodies made "actual use"-based separations as part of their rate studies. However, there was a serious disjunction between the cost separations formula and the actual ratemaking process. Despite the "actual use" measurement and allocation, very few of the rate studies required interstate interexchange services actually to cover any of the costs of the geographically local facilities. One major reason for this lies in AT&T's license contracts with the local telephone companies.

The contracts stipulated that exchange rates alone were to compensate Associated and Independent Companies for interexchange's use of the local facilities and other services.[61]

The trend toward a "relative use" standard seemed to be supported by Smith. The Court focused on the jurisdictional boundaries of state regulation, but the opinion also spoke of separations in terms of usage. The Illinois Commerce Commission had contended in Smith that AT&T used its long distance service

> without properly reimbursing the Illinois Company, the Chicago local exchange plant, and other facilities of the latter company, and that the additional net income to which the Illinois Company was properly entitled in connection with long distance service, or that suitably taking into account the value of the property used and the expenses incurred in the long distance service and not deducted from the Chicago property and expenses, would affect the result.[62]

It appears likely that the Supreme Court assumed that the use of geographically local plant by each service caused direct additional costs. The Court probably did not realize that the geographically local facilities were not traffic-sensitive. The Court evidenced its confusion by remarking as it remanded the case back to the District Court for further findings: "It is apparent that this contention cannot be dismissed simply on the basis of the number of interstate calls originated by subscribers of the Illinois Company in Chicago, without considering other factors of time and labor entering into the relative use."[63]

Several later cases indicated that the Court had not meant to require a measurement of "relative use" as the basis of separations. In Lindheimer v. Illinois Bell[64]--the final decision in the Smith case—the Supreme Court approved the lower

court's allocation of exchange revenues simply to match the allocation of plant and expenses to interstate services. This method and its affirmance effectively undermined the method of cost allocation suggested in Smith.

Partly, the "graceful retreat"[65] of Lindheimer could be attributed to the efforts of the few state regulators who were battling the "relative use" standard of cost separations formulae. The Michigan Public Utilities Commission intervened in Lindheimer and submitted a detailed brief which criticized cost allocation on a "use" basis.[66] But the Court's tone and the decision in Lindheimer were also part of a general judicial awakening to the difficulties of exact apportionment by regulatory agencies. Like the state commissions, the courts began to emphasize the coupling of equitable results with practicality. In Southwestern Bell Telephone Co. v. City of Antonio,[67] the court held that some units could be distributed by "fair" apportionment and said:

> ...If an apportionment is practicable, the method of it ought to be settled and the proof adapted to it. If none is practicable, none ought to be demanded and some mode of adjustment should be adopted similar to the toll percentage plan above mentioned....[68]

Despite these portents of reduced judicial interference in the separations process, most state commissions generally continued to apply a "relative use"-based formula. A study of the state commissions' experience reveals three primary reasons for their preference. First, use was clearly a standard the courts would accept if not require; several other basic methods for making separations had been criticized or disapproved.

Second, a relative usage requirement appeared objective but its measurement was flexible; administrative discretion was less obvious. And, finally, the standard did assure that some portion of the costs of the geographically local facilities would be allocated to the interstate business.

The commissions had experimented with other formulae with discouraging reactions from the courts. Of course, the revenue basis for telephone separations had been struck down by the Supreme Court in the Minnesota Rate Cases. Many other formulae had met a similar fate. A division of revenues made between telephone companies by contract was held to furnish a very poor guide for determining the division of the maintenance expenses for long-distance and exchange telephone service.[69] In Smith, the Supreme Court ruled that apportionments could not be based simply on the number of interstate calls originated by subscribers in an exchange area "without considering other factors of time and labor entering into the relative use."[70] Other courts held that joint expenses should not be allocated on a per-circuit basis because it could not be assumed that all circuits carried an equal maintenance expense.[71]

Specific apportionment procedures were also judicially eliminated. A division of central office expenses on a per-station basis was found an unreliable method. The courts reasoned that such expenses were largely dependent on the amount of work involved in handling calls rather than the number of subscribers served.[72] Judicial criticism was directed against the division of general supervision charges to states, districts,

individual exchanges and interchange based on direct labor charges, especially when it was applied to a small exchange because the method did not consider the actual amount of supervision necessary properly to maintain or operate the specific property.[73] One court even ignored the trend toward increased administrative discretion and nearly mandated the "relative use" standard; it held that the distribution of commercial expenses could not determine the allocation of station removal expense, particularly since the time-use basis was available.[74]

Thus, the judicial suggestion of "relative use" basis for cost separations formulae did not itself push state commissions to attack such a standard. The commissions simply lacked a better alternative to present before the courts.

And, besides, the selection of a basis for the actual measurement of "relative use" left significant room to achieve regulatory policy goals. Railroad ratemaking had demonstrated that selection of the right "use" theory produced rates which reflected value-of-service and other policy considerations.[75] Additionally, the formula, explained in engineering terms, confused courts into assuming that use of the geographically local facilities caused direct or marginal costs.

At any rate, most commissions based their cost separations on the relative use of facilities or the relative amounts of work performed by the employees for special services. Courts approved traffic studies based on peg counts showing the number of calls and their characteristics.[76] These measurements were then

evaluated according to coefficients (measures of work performed) to determine the relative amount of work involved in the handling of several classes of calls.[77] In addition, plant accounting by telephone companies for pole lines, cables, wire circuits and other "outside plant" was often based on "major use"--a standard open to numerous interpretations. Some companies considered it "predominant use"; for others, it meant originally planned use and for still others it permitted all structures carrying interexchange circuits to be classified as interexchange.[78]

However, some state regulators continued to struggle against the popular "relative use" basis. They felt that telephone rates should explicitly recognize the relative values of the various services. As part of that admission, these administrators generally championed a value-of-service standard for separations formulae. After the Smith decision but before Lindheimer, the Wisconsin Public Service Commission explored the goals and difficulties of such a formula. The Wisconsin Telephone Company had furnished a relative usage study for the purpose of allocating costs between the exchange and interexchange businesses. But the Wisconsin Commission perceived that separations could not be confined to its jurisdictional element; these regulators went on to discuss the effect of separations on interexchange ratemaking. They asserted that value of service should be a consideration in allocating joint and common costs and examined the possibility of recovering the geographically local facilities' cost allocated to interexchange through a flat-rate interexchange charge independent of

interexchange usage. This flat rate would incorporate a "readiness to serve" charge, which had been previously approved for the exchange rate.[79] Despite its discussion of the matter, the Wisconsin Commission failed to reach any conclusion or to use the formula in deciding the final separation of Wisconsin Telephone Company's costs. Subsequently, their notion for including a value-of-service factor in separations "all but disappeared from the history of separations."[80]

In 1935, the Michigan Public Utilities Commission surfaced as a strong proponent of the value-of-service formula. Expanding on the brief it had presented to the Supreme Court in the Lindheimer case, the commission strongly criticized the "relative use" basis for cost separations formulae and detailed the fundamental concepts underlying the value-of-service theory.[81] The attack on relative usage centered on the lack of correlation between cost and use, given the presence of NTS equipment in the telecommunications network. According to the commission, the measurements made possible by the "relative use" basis merely masked a value assignment in which a minute of exchange use was presumed economically equal to a minute of interexchange use.[82]

Instead, the commission eschewed any jurisdictional separations of the costs of the telecommunications monopoly. Harkening back to intrastate ratemaking before Smith and even before the Minnesota Rate Cases, the Michigan regulators wished to scrutinize the entire revenues of the telephone industry in their state—including the interstate interexchange revenues,

expenses and plant of the utility in the state--and determine intrastate rates on that basis.[83]

The explanations underlying the Michigan commission's proposal recall earlier debates regarding the adoption of separations at all. For example, the interstate service-properties had consistently earned a higher rate of return than the local and intrastate service-properties.[84] The F.C.C. had negotiated four voluntary interstate interexchange rate reductions with AT&T, so that disparity was not as extreme as it had been in previous decades. But the F.C.C.'s simple solution itself created problems. The reductions exacerbated another disparity--between interstate and intrastate interexchange rates--and put into clearer focus the contrast between the struggling Associated companies and the profitable Bell Long Lines, both part of the same telecommunications monopoly. The situation was rather ironic--state commissions had to increase intrastate exchange and interexchange rates in order to avoid charges of confiscation while the F.C.C. had to negotiate interstate rate reductions to keep the interstate business from reaping too large a profit margin. The state regulators feared the ire of existing subscribers who watched and could not understand the widening gulf between intrastate and interstate interexchange rates for calls that were similar in distance and duration. Additionally, the state commissions had reason to believe that the increased exchanges rates would keep the telecommunications network from reaching the greatest number of subscribers. In 1930, only 41% of U.S. households had

telephones,[85] and many regulators felt that exchanges rates were as high as subscribers were willing to pay for telephone service.[86] Given the situation, the Michigan regulators believed that the interstate business could, and should, contribute more to the cost of geographically local facilities than was guaranteed under the "relative use" standard.

However, the Michigan commission never acted on its theories. Smith kept it from considering interstate revenues in making its intrastate rate decisions. And the commission could not establish another definite mathematical means of interpreting value for the allocation of joint and common costs. Basically, the regulators hesitated to assume the discretion necessary to administer the value-of-service method. Sharing the sentiments of Justice Brandeis in his Southwestern Bell dissent,[87] they were uneasy with the thought of juggling the many elements that could affect value.

As mentioned earlier, the newly-created F.C.C. merely sidestepped the cost separations issue. Between 1935 and 1940, it obtained several interstate interexchange rate reductions through negotiations that dealt solely with the relationship between Long Lines' high rate of return and interstate interexchange rates. Of course, this approach to dispute settlements provided the F.C.C. with great flexibility in dealing with a growing, complex industry. It also allowed the F.C.C. to pursue single-mindedly a policy against discrimination among interstate rates; the agency's aim was reasonable interstate interexchange rate averaging across the nation. The F.C.C. did

not perceive that its priorities produced a hardship for the states. As a result, the Commission ignored principles for the allocation of costs among the local, intrastate and interstate businesses.[88]

In fact, cost-of-service ratemaking was nearly antithetical to the F.C.C.'s goals. This became obvious in 1939 when the Washington Department of Public Service filed a complaint with the F.C.C. charging that Pacific Telephone and Telegraph's interstate rates were unreasonable and discriminated against telephone users in Washington.[89] There were two interstate rate schedules involved--one for calls originated and completed within Pacific Telephone and Telegraph's territory (intra-territorial) and the other for calls originated within the territory but completed outside it (inter-territorial). Lower Long Lines' rates were charged for the latter service; Pacific Telephone and Telegraph's higher costs were reflected in the higher rates for the former service.

A principled settlement of the case required a cost comparison of the two services. Lacking cost separations guidelines from the F.C.C., the Pacific Company offered an allocation based on the board-to-board theory (i.e., none of the costs of the geographically local facilities were allocated to interstate interexchange business) to evidence that it had only earned a reasonable rate of return on its intra-territorial interexchange properties. The F.C.C. proceeded to tear the company's cost separations apart. Then, instead of developing and applying its own cost allocation standard as the deciding

factor, the F.C.C. based its final decision on a comparison that did not even take jurisdictional separations into account.

The commissioners explained that since the inter-territorial services used substantially the same facilities and personnel as the intra-territorial services, there could be no appreciable difference in costs. Thus, no rate differential could be tolerated. While intuitively appealing, this reasoning was ultimately circular; the lower Long Lines' rates were based on the nationwide averaging costs compiled by the F.C.C., not on the actual toll costs in the Pacific territory. Further, those costs depended on the choice of a standard for the cost separations formula. But, the F.C.C. claimed that the application of a cost separations formula as the first step in ratemaking—whether it was based on relative use, value-of-service computations or any other standard—was simply not its concern:

> Absolute equality, the ideal standard, may vary or surrender on occasion to other compelling considerations. But in the absence of other controlling considerations the basic rule to be observed in the determination of reasonable charges is that there shall be from each user "equal charges for equal services."[90]

AT&T's monopolistic position and its financial success--it was growing into a national network, enjoying the benefits of economies of scale and technological progress and garnering a reasonable overall rate of return--apparently led the F.C.C. to believe that it could avoid the ratemaking constraint of a cost allocation standard.

Of course, this federal focus on national rate averaging distressed state regulators. But AT&T also expressed its

dissatisfaction. Despite its profitable monopoly, the company "obviously suffered from the requirement to base interstate rates on the level established by the lowest cost unit of the toll network--Bell Long Lines. The necessity of valuing the interstate property [and establishing a standard for cost allocation to the interstate business] of the Associated Bell Companies could no longer be postponed...."[91] Further, AT&T desired a uniform separations procedure which would insure that all of its interstate costs were allocated either to intrastate or interstate jurisdictions. Without such a uniform scheme, some of AT&T's interstate costs could fall between the jurisdictional cracks.

On April 1, 1941, when the F.C.C. announced that it was seeking another interstate interexchange rate reduction, AT&T filed both an answer and a petition requesting the F.C.C. to institute an investigation on its own motion to determine rules and methods for a separation between interstate and intrastate operations and, after notice and hearing, to prescribe such rules and methods.

The F.C.C. and AT&T negotiated an agreement as to the rate matter. But the separations issue remained unsettled. NARUC members, however, met with F.C.C. representatives in June, 1941, to discuss a variety of regulatory problems. That conference marked the beginning of a process that would eventually produce the first "Separations Manual" and entrench a "relative use" measurement in the cost separations formula.

After their June meeting, the F.C.C. and NARUC officials

appointed a joint committee of staff members of the federal and state commissions to make the technical studies and prepare a report on separations methods. The Staff Committee submitted a memorandum outlining its recommendations to the joint NARUC-FCC Cooperative Committee in October, 1941.

In the meantime, a F.C.C. staff member and former Michigan Public Utilities Commission staff member, Manfred K. Toeppen, presented his views to the Staff Committee in a memorandum on the distribution of common telecommunications costs. Published in August, 1941, the memorandum primarily attacked the popular "actual use" principle and endorsed two other principles of cost allocation. The first, called the "economic savings basis" loosely attempted to allocate to each service its appropriate share of the savings that resulted from the common use of exchange facilities. The second principle was based on value-of-service and involved an allocation of costs based on revenues. Of course, the <u>Minnesota Rate Cases</u> barred this circular method for determining rates.

If the Staff Committee considered Toeppen's views, it chose to reject them. Its October memorandum drew on the opinions and experiences of most state regulators and recommended the adoption of the "actual use" standard for cost separations, with the reservation that other factors should be considered when necessary to produce equitable results. In response, the joint NARUC-FCC Cooperative Committee ordered the Staff committee to develop simplified separations formulae based on the "actual use" standard.

The Staff Committee's final separations recommendations were the product of a special subcommittee's work, as modified by suggestions from the state commissions, the F.C.C. and the Bell System companies. It was submitted to the joint NARUC-FCC Cooperative Committee in May, 1942.[92] On June 9, 1942, the F.C.C. instituted a formal order of investigation on its own motion (Docket 6328) and attached the Staff Committee's report to the order as Exhibit 2. Toeppen's memorandum was also attached. Hearings were held in Chicago in August and October, 1942. According to the testimony and briefs submittted later, some Independents "complained that the proposed separations methods were too costly and difficult to apply [but] those procedures otherwise elicited the support of participants in the docket."[93]

Before reaching a decision in Docket 6328, the F.C.C. on November 20, 1942, instituted a new rate investigation into the reasonableness of AT&T's interstate interexchange rates (Docket 6468). During this proceeding, the F.C.C. granted a postponement to the Southeastern Association of Railroad and Utilities Commissioners to determine whether the Associated Companies' share of revenues of interstate business was adequate. In 1943, while this determination was going on, AT&T agreed to accept the cost separations formula contained in Exhibit 2 as the basis for interstate interexchange rates. Of course, Exhibit 2 espoused the "use" standard for cost allocation. However, it is important to note that the F.C.C. never issued a formal decision in Docket 6468 and thus did not itself formally adopt the formulae and measurements in Exhibit 2.

AT&T advanced the *de facto* acceptance of Exhibit 2 and the "relative use" standard for cost allocation in 1944. In that year, the company adopted the Division of Revenues Contract for settlements with the Associated companies. These contracts established how many interstate revenues would be shifted to the intrastate business as compensation for costs incurred in the Associated company's handling of interstate services. The Contract required the determination of Associated companies' book costs, revenues and expenses allocable to the interstate business. With some modifications, these latter calculations were made according to the formulae provided in Exhibit 2.[94]

Thus, both the telecommunications industry and its regulators were propelled toward acceptance of the "relative use" basis for cost separations formulae. Secure in its monopoly position, AT&T could afford to embrace the standard. Its application fostered more predictable ratemaking criteria, represented a step towards uniformity in cost separations formulae and resulted in an acceptably small shift of interstate revenues to support the intrastate business. Additionally, in forcing the interstate business to bear some of the costs of the geographically local facilities, the standard helped keep exchange rates down and, as a result, aided in enlarging the pool of subscribers to the telecommunications network.

CHAPTER 4: COST SEPARATIONS FORMULAE AFTER HOPE NATURAL GAS

There were signs that the procedures outlined in Exhibit 2 and AT&T's agreement to abide by them had not solved the ratemaking problems involved in regulating the telecommunications system. In late 1946, Bell System companies filed applications for increased intrastate rates in a number of states. During World War II, government restrictions and material shortages had largely prevented the expansion of plant. After the war, the demand for telephone service skyrocketed. Anxious to meet this demand and facing increased costs for labor and materials, many Associated companies needed to increase their intrastate rates. Separations, of course, was a key issue in the proceedings before state commissions.

In February, 1947, the F.C.C. informed NARUC that it was considering yet another reduction in interstate interexchange rates.

On its own motion in 1946, the F.C.C. had broadened the scope of its investigation in the still-open docket 6328 to include a review of the method of separations as applied under the Division of Revenue Contracts. After the F.C.C.'s 1947 announcement, a subcommittee of the joint NARUC-FCC Cooperative Committee undertook this review; the group included representatives from several state commissions and the F.C.C. The subcommittee produced an extensive (172 pages) report on the separations formulae prescribed in Exhibit 2 and submitted it

later in 1947. Every state commission received a copy of it, along with the first "Separations Manual."[95]

The subcommittee concluded that, although the "actual use" or "relative use" basis for cost separations was not perfect, no better alternatives existed. In arriving at its consequent recommendation of the "relative use" standard, the subcommittee bared and discussed many of the administrative and legal biases that had led to the acceptance and entrenchment of the "relative use" standard. In addition, the formula in the report and the Separations Manual became the focal points for the continuing debate among state commissions over cost separations.

First, it is important to note that the subcommittee members were quite aware of the Hope Natural Gas and Colorado Interstate Gas decisions. They asserted that the cases freed telecommunications regulators from following judicially-defined standards for cost separations formulae. Indeed, only AT&T contended that Hope Natural Gas and its progeny left the rule of Smith wholly intact: "It believe[d] that the court in the gas cases neither modified nor criticized its earlier decisions, as applied to common carriers, but merely held that they were not controlling under the Natural Gas Act."[96] The subcommittee rejected this rigid position, commenting that although the "'actual use' basis of cost apportionment has predominated...there seems to be no foreclosure, from a legal standpoint, to consideration of bases other than usage provided they are not arbitrary."[97]

But the report also surveyed the remaining limits on

administrative discretion. Most importantly, courts required regulators to formulate a basis for cost allocation that balanced practicality and fairness. Citing Southwestern Bell Telephone Co. v. City of San Antonio[98] and Pacific Telephone and Telegraph Co. v. Thomas[99] and even Smith itself, the subcommittee declared that "separations methods and procedures need not be carried to a point of refinement not justified by the results achieved."[100] And, turning to the opinion in Colorado Interstate Gas, the report noted that the Supreme Court found that "considerations of fairness, not mere mathematics, govern the allocation of costs."[101]

In subsequent chapters, the report attempted to establish which standard for cost separations formulae best achieved the goals of practicality and fairness. First, it reviewed the procedures employed by several other utilities and agencies--the Post office, the Motor Carrier and Rail Carrier divisions of the Interstate Commerce Commission, the division of the Federal Power Commission responsible for the Mississippi River Fuel Corporation, the California Oregon Power Company and the Consolidated Edison Company of New York, Inc. The subcommittee reported that, for items that could not be associated with an "actual use" measurement, cost allocation was based on an "empirical formula [but]...there appears to be little consistency in the factors applied in the development of the formulae."[102] And, where the "actual use" standard would not foster "equitable" results, the subcommittee found that a "formula of an arbitrary nature is employed."[103] Generally, however, the subcommittee

discovered that the "actual use" basis for cost separations formulae dominated, bolstering its application in telecommunications cost separations.

Finally, the subcommittee reviewed a number of suggestions for cost allocations standards other than "actual use." The remarks in the report reflect the subcommittee's conviction that the intrastate business deserved to benefit from its role in the profitable telecommunications monopoly; only a scheme that guaranteed adequate compensation was "fair." Further, the regulators wanted to reduce the disparity between intrastate and interstate interexchange rates and promote universal service. But any cost separations scheme that fulfilled those goals also had to be administratively practical, susceptible to some measurement and judicially acceptable. Given these criteria, the subcommittee rejected the alternative cost allocation standards, one by one.

The first suggestion involved a cost allocation standard other than "actual use" during periods when the facilities were idle. It had been proposed that the cost of joint idle plant could be divided equally among the intrastate and interstate services to recognize its equal availability to each service. Alternatively, it had been suggested that separation of costs during idle periods could be based on a formula which included a weighting factor which reflected the effect of the type of rate on usage; the flat rate for exchange encouraged usage while the message unit rate for interexchange had a deterrent effect. The subcommittee leveled several criticisms against this notion: 1)

The actual use of subscriber lines was so low that apportionment for idle time would effectively control the allocation of costs; 2) dividing the cost of plant equally among the various services was a wholly arbitrary choice; 3) logically--and impractically--recognition of idle time could be extended to all telecommunications plant; 4) the suggested weighting factor was a hypothetical and arbitrary adjustment because the reduced number of calls made under a timed message rate schedule was offset by the longer holding time per call.[104]

The subcommittee also addressed a relative value method of allocation. Here, it had been submitted that weighting factors could be used to reflect the increased value per minute of use as distance increased and as the number of telephones in the communications pool increased (that is, the value of interstate interexchange would be higher because more subscribers could be reached). The report quickly dismissed this idea, noting that the subcommittee could find no judicially acceptable method for measuring value and that any such method required the cooperation of too many self-interested regulatory bodies.[105]

That left the suggestion which dealt most straightforwardly with cost allocation for plant that was jointly and commonly used and non-traffic-sensitive. It had been proposed that the cost allocation of geographically local facilities could be based on the assignment of all other costs. Basically, this required the recognition of station apparatus and installation costs as fixed

costs per customer which could not be directly allocated on a usage basis.

This suggestion was not popular with the subcommittee. It called into question the assumption that the profitable departments of a monopoly ought to subsidize some of the costs of less profitable departments in order to serve the public interest. This proposal would have required those parts of the telecommunications network which were saddled with the highest direct costs—intrastate exchange—to bear the highest proportion of the costs of the geographically local facilities. The subcommittee confronted the likely result of high exchange rates which would make the goal of universal service very hard to reach. In the face of that possibility, the subcommittee tersely commented that "an unsound separation would result,"[106] and then relied on a confused and confusing smokescreen of reasoning that spoke in terms of cost and practicality in order to reject the proposal:

> (a) There is a distinct difference between electric utility cost allocations and separations made in the telephone industry [a parallel drawn by the proposal]. In the electric field each consumer generally uses only a single class of service whereas in the telephone field individual customers use exchange, state toll and interstate toll services, necessitating an apportionment of customer costs among those services.
>
> (b) Under this proposal, it is necessary to obtain the plant base over which the station apparatus and installations is to be apportioned. Such a plant base would necessarily have to include plant other than that of the company under study, e.g. Long Lines and Connecting companies. This might be done in a number of ways but any of them would introduce so many complications as to render the proposal impractical.
>
> (c) Station apparatus investment per subscriber does vary with usage for a certain number of subscribers, e.g. those

having PBX facilities or more than one telephone where required by the degree of use.

(d) The question immediately arises as to why subscriber lines from the station to the central office and the associated central office terminations (which also do not vary with use for most subscribers) should not likewise be apportioned over the other plant. However, such station equipment, subscriber lines and central office terminations represent more than 50 per cent of the book costs involved in rendering exchange service, which illustrates the unrealistic nature of the proposal.

(e) In the Bell System, message toll revenues (including Long Lines) represent about 40 per cent of total operating revenues. It is roughly estimated that the toll minutes of use on subscriber stations represents about seven per cent of the total minutes of use. It might be considered that, since the station is instrumental in producing the toll revenue and since the toll revenue is 40 percent of total revenue, a much higher apportionment of the station apparatus to toll should be made than actually results from application of a factor based upon minutes of use made of the station. Such reasoning, however, is fallacious since the toll revenue is produced by the entire plant used on toll calls...[T]he cost of plant used in a conversation from New York to San Francisco is several hundred times as great as the cost of plant used on a local connection.[107]

The themes of this particular response are familiar—practicality and fairness. Actually, many of the subcommittee's arguments were thinly-disguised affirmative defenses of the *status quo* in the regulation of the telecommunications industry. The writers of the report were relatively happy with the cost connotations, measurement possibilities and ratemaking results of Exhibit 2. They were exercising their regulatory discretion, as granted in *Hope Natural Gas*, when they chose to recommend continued application of the "relative use" basis for the cost separations formula.

The subcommittee's report was adopted by NARUC and its recommendations incorporated into the 1947 Separations Manual. Both were sent to every state commission. Not surprisingly, the

report itself and the subcommittee members significantly shaped the debate over cost allocation formulae for the next several years.

Most state commissions followed the recommendations of the report and Manual. Some complied willingly[108] and even cited passages from the report for support.[109] Others expressed dissatisfaction with the "relative use" standard but were unable to establish any alternative.[110]

But a few state commissions actually chose to apply cost separations formulae that the subcommittee had considered and rejected in its report. These commissions were not at all happy with the ratemaking results of the Manual's separations formula; they balked at authorizing rate increases to relieve the struggling intrastate business. Instead, they felt that the F.C.C. could afford to have the interstate rates absorb some additional local costs. The shift could be accomplished without raising interstate rates because of the declining cost curves for the interexchange piece of the interstate service.

These state commissions were quite willing to give a second hearing to alternative cost separations formulae which had been proposed by a couple of dissident participants in the discussions that led to the recommendations in the subcommittee report.

J.M. Honaker, a Kentucky commission staff member, had been a member of the subcommittee. In 1948, the Kentucky Public Service Commission denied Southern Bell Telephone's request for rate increases and, in the process, attacked the procedures in the Separations Manual as "so obviously erroneous and so

diametrically opposed to the fundamental principles of ratemaking ...as to but inject confusion where clarity is needed most."[111] The commission instead advocated a cost allocation standard which would take the entire Bell System into account, recalling the suggested relative value method of allocation. The commission analogized cost separations in telecommunications to "trying to separate the value of one's legs [interstate business] and the value of the body [intrastate business]. The rest of the body would have a value, perhaps, with the legs missing, but a pair of legs without the body would be valueless."[112] Finally, the commission required recognition of the stand-by value of the geographically local facilities and recognition of its relative value, as defined by the company in figuring rates for various classes of service.

In 1949, Honaker testified before the West Virginia Public Service Commission, which was displeased with the Manual's cost separations formula. The staff of the West Virginia commission had not participated in the studies of the FCC-NARUC subcommittee. And, after listening to Honaker's objections to the Manual, the commission charged that "in view of these costs, of the stand-by value of this equipment and of the utter lack of relationship between the cost or the value of this equipment and the time it is actually used, it is difficult to see how the so-called 'use' factor is applicable for the separation of these accounts."[113] The commission went on to adopt the Honaker Plan for cost allocations.

In 1950, Honaker traveled to Indiana where the Public Service Commission also adopted a version of his method of allocation as "more reasonable and equitable"[114] than the formula contained in the Separations Manual.

Several other state commissions decided to accept the "relative use" measurement as one factor in the cost separations formula, but they also applied a weighting factor to reflect the influence of the type of rate (i.e., flat rates vs. message unit rates) on usage. This alternative had been foreshadowed in the first proposal which the subcommittee considered in its report.

The Maine state commission registered its disapproval of the Manual's procedures in 1949, complaining of the disparity between intrastate and interstate rates for calls of similar distance and duration. It noted that the "relative use" measurement totally ignored the value of telephone service as a function of the number of telephones within an exchange. But the Public Service Commission justified its alternative cost allocation method on the grounds provided by Harold Gerrish, an engineer on the commission's staff who had also been involved in the discussions of the FCC-NARUC subcommittee. He opined that the "relative use" method would result in an unfair distribution of charges due primarily to its failure to equate the flat rate for exchange service which led to "free use, unlimited use"[115] with the message unit rate for interexchange which deterred use. Additionally, Gerrish felt that AT&T's plan for "extended service areas"—broadening the territory served by local exchange and eliminating tolls between adjacent territories—would generate

even greater exchange use and cause an even higher allocation of costs to intrastate service.[116] In order to recognize the different types of rates and their effects, the commission adopted the Gerrish Plan of modifying the SLU measurement with a weighting factor of two. Although the Maine commission thus retained the "relative use" standard, its influence on the cost separations formula became much less direct under the Gerrish scheme than it was under the Separations Manual procedures.

The Chief Engineer of the Public Service Commission in Wisconsin, George P. Steinmetz, advanced a similar proposal and justification in Re Wisconsin Telephone Co.,[117] decided in 1950. There, evidence introduced by the commission staff showed that:

> ...in instances where unlimited service has been discontinued and message toll rates applied in lieu thereof a reduction in time of use of about 75% has occurred. On the other hand, where message toll rates were discontinued and unlimited service at flat rates substituted in lieu thereof, time in use increased from three to six times or more. These results point up very clearly that the SLU factor determined by use of service under diametrically opposite forms of rates is not an equitable basis for allocating property and expenses between two diverse types of service.[118]

As a result, the commission approved a weighting factor of at least two with 50% of the consequent shift of costs representing the minimum shift in allocation considered reasonable and necessary.[119]

Finally, the New Hampshire Public Service Commission had aimed a battery of arguments at the procedures in the Separations Manual as early as 1949. The state regulators argued that the SLU factor disregarded the geographically local facilities' stand-by value, the importance of a call to the user and the fact

that plant had been constructed in New Hampshire to serve the systemic needs of New England, not just the needs of the state's citizens:

> As long as the system revenues were sufficient to give the company a profit it expanded its plant without regard to whether its expansion in certain territories would be justified from a revenue standpoint, if those territories were suddenly to be asked to pay the cost of the service that they were offered. The company frankly acknowledges that for years it developed its plant in New Hampshire and was satisfied with a rate of return on New Hampshire property considered as a unit that was meager by company-wide standards. When it is now thought necessary to seek increased revenue, the company makes its appearance before us and asks to have its operations in New Hampshire considered on the basis of a separations study as a completely New Hampshire matter.[120]

Beyond that, the commission asserted that much of the telephone plant in New Hampshire had been built to accomodate peak loads during the short tourist season. As a result of the application of the SLU factor, the regulators claimed, intrastate users bore the largest share of the costs of plant which was idle most of the year--"in effect subsidiz[ing] the interstate plant."[121]

Spurred on by its objections to the results of the application of Manual cost separations formulae, the New Hampshire commission embraced the Gerrish Plan in 1952. The state commission even took the plan a couple of steps further in order to shift more interstate revenues to cover a greater portion of the costs of geographically local facilities. It adopted a weighting factor of three rather than two; its plan also required the measurements of use to be made at the height of the tourist season, in contrast to the measurement of average annual usage as determined by the New England Telephone and Telegraph Company.[122]

By 1952, however, New Hampshire was one of the last holdouts against the Separations Manual because the Manual's formula had been significantly altered at the annual NARUC meeting in Charleston in October, 1951. Bowing to the demands of unhappy state commissions and exploiting the interstate business' ability to absorb additional costs, the Charleston Plan modified the 1947 Separations Manual by dividing exchange minutes of use by two. It also rearranged the categories of geographically local facilities. Ultimately, the new Plan represented a move away from the strict application of the SLU factor in cost separations formulae. Yet, the modified scheme could still be described as based on a "relative use" standard.

As a result of the new Charleston Plan, Commission Chairman Davison could point out in his dissent to the 1952 New Hampshire decision that:

> Of the 29 states which have had telephone rate cases since November 1, 1951, 20 have accepted and used Charleston Plan procedures, 6 used the method but criticized it, 3 did not accept it and await court decision of the method actually used....There is nothing _final_ about "Charleston," it is merely a step in the right direction.[123]

Wisconsin was among the states accepting the Plan where the commission observed that the "method...achieves substantially the same results"[124] as its earlier adjustment of the SLU factor. Similarly, the Kentucky commission applied the Plan in 1951 as the best alternative available.[125]

In Maine, the Public Utilities Commission was forced to follow the Charleston Plan by the state Supreme Court which sustained the exceptions filed by New England Telephone and

Telegraph against the commission's 1952 dismissal of the company's petition for investigation and hearing as to rates. The Court was "convinced" that the commission had simply "disregarded this ["relative use"] factor which the Supreme Court and many state courts have held to be the most important element of all in applying separations."[126] The Court's ruling indicated that the Maine Public Utilities Commission should follow the procedures of the Charleston Plan:

> [Separations] must be decided broadly after giving due consideration to the rulings of the federal authorities on the same point. Otherwise, chaos will result, particularly if the Commission gives undue consideration to the result to be achieved rather than to the proper and scientific methods of arriving at such result.[127]

Despite the increasing popularity of the Charleston Plan, the New Hampshire Supreme Court upheld its state commission's weighting factor of three. The Court recognized that the state commission's refusal to adopt the Charleston Plan meant that some of the telephone company's property was part of neither the interstate rate base nor the intrastate rate base. Nonetheless, citing Hope Natural Gas and Colorado Interstate Gas, the Court held that the Public Utilities Commission was not bound to pursue a policy of regulatory uniformity since "if the argument...that the state of New Hampshire must necessarily use the same method of separation as those used by the F.C.C. is carried to its ultimate conclusion, then it runs afoul of the fundamental legal meaning of the term 'appropriate recognition of the competent governmental authority in each field of regulation.' Lindheimer

v. Illinois Bell [citations omitted"].[128] Further, the Court explained that the commission's separations scheme did not violate any state laws.[128] Finally, the Court held that the New Hampshire variation on the Gerrish Plan was justified by the evidence of peculiar local conditions.[130]

Basically, the debate had changed since 1947. In the years before the first Separations Manual, state commissions challenged the need for <u>any</u> cost-based separations. By 1952--after the 1947 subcommittee report, the 1947 Separations Manual and the modifications of the Charleston Plan--nearly every state[131] had accepted a separations formula as a necessary first step in ratemaking and employed a separations formula based on the "relative use" measurement, SLU. But, reflecting the security of a profitable telecommunications monopoly and value-of-service notions, the "relative use" basis for the formula had become much more nominal than real. In fact, the cost separations formula under the Charleston Plan evidences AT&T's acceptance of the regulatory goals of low exchange rates and universal service and the regulators' acceptance of AT&T's need for universal and measurable cost allocation guidelines.

It is worth noting that the F.C.C. did not officially accept the cost separations formulae which the telephone industry and NARUC had developed until 1968.[132] This could explain the F.C.C.'s tendency to downplay any relationship between cost separations and rates, illustrated by the agency's opinion in <u>Re AT&T</u> in 1967:

> The fact that...rate disparities [between intrastate and interstate tariffs] do exist...is, in our view, a consequence of the multiplicity of regulatory jurisdictions over message toll service....So long as there is no single jurisdiction over all toll service in the United States, there is bound to be a diversity in ratemaking and disparity in rates among jurisdictions. Accordingly, we do not regard the mitigation or elimination of disparity between State and interstate toll rates as a valid consideration in determining the propriety of separations procedures.[133]

Consistent with the F.C.C.'s refusal to consider separations formulae as part of ratemaking policy, the agency did not apply Hope Natural Gas or Colorado Interstate Gas in a cost allocation context. Through the 1960s and 1970s, the Commission confined the significance of Hope Natural Gas to cases involving rate of return,[134] distribution of unrouted traffic,[135] determinations of the "fair value" of a company's rate base,[136] and historical cost preference for pole attachments.[137]

However, in 1980, the F.C.C. took a step toward utilizing the doctrines of Hope Natural Gas and Colorado Interstate Gas in proceedings regarding cost separations formulae and cost allocation standards. Confronting a challenge to the present weighting of SLU---SPF---in the cost separations formula, the Commission cited Colorado Interstate Gas for its proposition that "allocation of costs is not a matter for the slide rule. It involves judgement on a myriad of facts. It has no claim to an exact science."[138]

Then, perhaps revealing the effect of the changing climate in the telecommunications industry, the Commission explained that it viewed Smith as:

...both required by and consistent with the generally held view that allocating the cost of non-traffic-sensitive communications plant held in common on a fully distributed costing basis is from a strictly economic view, an arbitrary process which cannot ignore policy considerations. Indeed, the Commission is required by Section 1 of the Communications Act to take into account a variety of considerations in our regulatory activities. [Emphasis added][139]

CHAPTER 5: CONCLUSION

Since the Charleston Plan was adopted in 1951, the "relative use" standard has been further weighted in order to shift an even greater proportion of the interstate revenues to the intrastate business.[140] Significantly, those value-oriented modifications were made while AT&T enjoyed a monopoly in interstate interexchange services.

With the entry of competitors, the present cost separations formula has become increasingly intolerable. Commentators have explored alternative cost allocation methods--several of which recall proposals made in earlier debates--to maximize social welfare.[141]

As its history demonstrates, the standard of "relative use" withstood attacks in the past. Despite its inadequacies as a justifiable basis for cost allocation, it possessed the key qualities of flexibility and administrability. The standard guaranteed that interstate business would bear some portion of the costs of geographically local facilities, in "recognition" of its "use" of those facilities. But, further, the standard could be modified to reflect market conditions and to achieve social and regulatory goals.

Perhaps most importantly, the "relative use" basis for cost separations formulae was relatively inexpensive and straightforward in its implementation and enforcement. The application of a cost separations formula based on "relative use" produced a high "net benefit" (i.e., total social welfare minus

the separation formula's total costs) for the telecommunications industry. Indeed, this largely explains the longevity of the "relative use" basis for cost separations formulae in the telecommunications industry.

NOTES

[1]282 U.S. 133(1930), conformed to, Illinois Bell Tel. Co. v. Gilbert, 3 F. Supp. 595 (N.D. Ill., 1933), rev. and cross appeal dismissed Lindheimer v. Illinois Bell Tel. Co., 292 U.S. 151 (1934).

[2]id. at 148-9.

[3]id. at 151-2.

[4]See 1 A. KAHN, THE ECONOMICS OF REGULATION: PRINCIPLES & INSTITUTIONS, 77-83 (1970); Cunningham, The Separation of Railroad Operating Expenses Between Freight & Passenger Services, 31 Q. J. ECON. 209 (1917).

[5]E. Greenberg & S. Chrust, Telephone Competition: A Perilous Transition, 9 (November 18, 1981) (strategic analysis for Sanford C. Bernstein & Co., member, N.Y. Stock Exchange).

[6]Fenton & Stone, Cost Allocations and Rate Structure: Concepts and Misconceptions, 106 PUB. UTIL. FORTNIGHTLY 15, 17 (July 3, 1980).

[7]E. Greenberg & S. Chrust, supra note 5, at 12.

[8]282 U.S. at 151-2.

[9]NARUC was established in 1887 to provide a forum for state and federal coordination and cooperation in regulatory matters. The organization had no legal status and neither its positions nor recommendations were binding on the member states, but it was influential in the resolution of regulatory issues. J. Sichter, Separations Procedures in the Telephone Industry: The Historical Origins of a Public Policy (Program on Information Resources Policy publication P-77-2, January, 1977).

[10]See text at note 82 infra; Kahn & Zielinski, New Rate Structures in Communications, 97 PUB. UTIL. FORTNIGHTLY 19, 20 (MARCH 25, 1976).

[11]See text at note 79-81, 112 infra.

[12]See Kahn & Zielinksi supra note 10, at 20.

[13]id. at 20 n. 2.

14National Telecommunications & Information Administration, Comments on Phase II of the Federal/State Joint Board Proceeding to Amend Part 67 of the Commission Rules 26 (August 17, 1981).

[15]id.

[16]5 U.S.C. §§ 551 _et. seq._

[17]47 U.S.C. §§ 151 _et. seq._

[18]47 U.S.C. 151, 205(a).

[19]Fed. Power Comm'n. v. Hope Natural Gas Co., 320 U.S. 591, 602 (1944).

[20]_id._

[21]320 U.S. 591 (1944).

[22]_See, e.g._, In the Matter of MTS & WATS Market Structure, FCC Docket No. 78-72; House Committee on Interstate and Foreign Commerce, Report on Telecommunications Act of 1980, H.R. 6121, 96 Cong. 2d Sess. (1980).

[23]_See, e.g._, Smyth v. Ames, 169 U.S. 466 (1898); Ohio Valley Water Co. v. Ben Avon Borough, 253 U.S. 287 (1920).

[24]_See_, A. PAUL, CONSERVATIVE CRISIS & THE RULE OF LAW (1969).

[25]262 U.S. 276 (1923).

[26]_id._ at 298.

[27]_id._ at 295.

[28]_See_, J. BAUER, UPDATING PUBLIC UTILITY REGULATION: ASSURING FAIR RATES & FAIR RETURNS 41 (1966).

[29]320 U.S. at 603, 605.

[30]_id._ at 605.

[31]324 U.S. 581 (1945) motion den. 324 U.S. 831.

[32]_id._ at 586.

[33]_id._ at 589.

[34]_id._

[35]_id._; _but see_, J. BAUER _supra_ note 28, at 47.

[36]373 U.S. 294, 309 (1963).

[37]390 U.S. 747 (1968).

[38]_id._ at 777.

[39]For similar reasoning under other statues, see, e.g., Piedmont & Northern Ry. Co. v. Comm'n., 286 U.S. 299 (1932); Phelps Dodge Corp. v. Labor Board, 313 U.S. 177 (1941); Nat'l. Broadcasting Co. v. United States, 319 U.S. 190 (1943); American Trucking Ass'n. v. United States, 344 U.S. 298 (1953).

[40]417 U.S. 380 (1974).

[41]See, In the Matter of AT&T, 84 F.C.C. 2d 384, 391-2 (1980).

[42]Southern Bell Tel. & Tel. Co. v. Louisiana Pub. Serv. Comm'n., 232 La. 446, 94 So. 2d 431 (1957).

[43]Aeronautical Radio, Inc. v. Fed. Communications Comm'n., 642 F. 2d 1221 (D.C. Circ., 1980), cert. den. General Electric Co. v. Fed. Communications Comm'n., 101 S. Ct. 2059.

[44]Bell Tel. Co. v. Pub. Serv. Comm'n., 253 P. 2d 602, 613 (1953).

[45]id.

[46]230 U.S. 352 (1913).

[47]id. at 461.

[48]See generally, J. Sichter supra note 9, at 23-60.

[49]id. at 30.

[50]id. at 47-9.

[51]See, e.g., Re Central Union Tel. co. (ind.) P.U.R. 1920B, 813; Re Michigan State Tel. Co. P.U.R. 1923A, 30.

[52]J. Sichter supra note 9, at 31.

[53]id.

[54]230 U.S. 352 (1913).

[55]See, J. Sichter supra note 9, at 35.

[56]State Ex. Rel. Hopkins v. Southwestern Bell Tel. Co., (Kan.) P.U.R. 1924D 338, 473, 223 P. 771 (Kan., 1924).

[57]Pub. Util. Comm'n. v. New England Tel. & Tel. Co. (R.I.) P.U.R. 1926C 207, 261; In Re St. Croix Tel. Co. (Wis.) P.U.R. 1916A 552, 590-1.

[58]Re Michigan State Tel. Co., P.U.R. 1923A 30, 116; Re Indiana Bell Tel. Co., P.U.R. 1922E 46, 78.

[59]J.Sichter supra note 9, at 41.

[60]Joint Subcomm. of State Comm'ns. & Fed. Communications Comm'n Reporting to NARUC-FCC Staff Com. on Tel. Regulatory Problems, Report on the Separation of Telephone Property, Revenues & Expenses 6 (April 28, 1947) (on file at Center for Information Policy Research) [hereinafter cited at 1947 Subcomm. Report].

[61]id.

[62]282 U.S. at 147-8.

[63]id. at 148.

[64]292 U.S. 151 (1934).

[65]J. Sichter supra note 9, at 74.

[66]id. at 75.

[67]75 F. 2d 880 (5th Circ., 1935).

[68]id. at 884.

[69]State Ex. Rel. Hopkins v. Southwestern Bell Tel. Co., (Kan.) P.U.R. 1924D 338, 223 P. 771 (1924); where, however, a basis for separation, even though arbitrarily devised,was agreed to by a stipulation of the parties to the proceeding, the courts accepted the results. See West v. California & P. Tel. Co., 295 U.S. 662, 665 (1935).

[70]282 U.S. at 148.

[71]Western Buse Tel. co. v. Northwestern Bell Tel. Co., 248 N.W. 220 (Minn., 1933).

[72]In Re Moweagua Tel. Co., P.U.R. 1915E 857; Re Mt. Carmel Tel. Co., P.U.R. 1915B 645.

[73]Re Northwestern Bell Tel. Co., P.U.R. 1924E 274.

[74]Pacific Tel. & Tel. Co. v. Wallace, 23 P.U.R. (N.S.) 65 (1938).

[75]See, Note, Economic Aspects of the Judicial Apportionment of Joint Costs, 29 COLUM. L. REV. 643, 650 (1929).

[76]Re Wisconsin Tel. Co., P.U.R. 1932D, 173, Western Buse Tel. Co. v. Northwestern Bell Tel. Co., 248 N.W. 220 (Minn., 1933); Re Missouri & Kansas Tel. Co., P.U.R. 1918C 55, 777.

[77]Re Portage Tel. Co., P.U.R. 1917C 647; Re Missouri & Kansas Tel. Co., P.U.R. 1918C, 55, 777.

[78]Wheat, The Regulation of Interstate Telephone Rates, 51 HARV. L. REV. 846, 867, n. 41 (1938).

[79]Re Wisconsin Tel. co., P.U.R. 1931E 101, 128-9.

[80]J. Sichter supra note 9 at 86.

[81]Re Michigan Bell Tel. Co., 10 P.U.R. (N.S.) 149 (1935); see also, Lachlin, The Literature of Railroad Rate Theory, 47 Q. J. ECON. 167 (1933).

[82]10 P.U.R. (N.S.) at 197.

[83]id. at 198.

[84]J. Sichter supra note 9, at 99, cites the following percentages for return on net book cost earned by the Associated companies and Bell Long Lines from 1913 to 1939:

Period	Associated Co.	Long Lines
1913 to 1920	6.22	17.02
1921 to 1925	7.16	19.21
1926 to 1930	7.60	13.34
1931 to 1936	6.02	6.57

[85]Brenner, Communications Regulation in the Eighties: The Vanishing Drawbridge, 33 A.B.A. AD. L. REV. 255, 261-2 (1981).

[86]NARUC Proceedings 1939, 66-69.

[87]262 U.S. 276 (1923).

[88]J. Sichter supra note 9 at 103-16.

[89]Dep't. of Pub. Serv. of Washington v. Pacific Tel. & Tel. co., 37 P.U.R. (N.S.) 129 (1939).

[90]id. at 150.

[91]J. Sichter supra note 9 at 110.

[92]1947 Subcomm. Report supra note 60 at 8.

[93]J. Sichter supra note 9 at 122.

[94]In 1944, the Contracts covered only joint Long Lines-Associated companies MTS business and Associated companies' MTS business for hauls over 40 air-miles; in 1946, the Contracts were amended to incorporate all companies' interstate MTS business except where the initial period rate was 5 cents.

[95]NARUC Annual Convention 1947, 343 (on file at Center for Information Policy Research).

[96] 1947 Subcomm. Report *supra* note 60 at 15 n. 5.

[97] *id*. at 57.

[98] 75 F. 2d 880 (5th Circ., 1935).

[99] 13 P.U.R. (N.S.) 337, 393 (1936).

[100] 1947 Subcomm. Report *supra* note 60 at 18.

[101] 324 U.S. at 591.

[102] 1947 Subcomm. Report *supra* note 60, at 46.

[103] *id*. at 47.

[104] *id*. at 50-3.

[105] *id*. at 53-4.

[106] *id*. at 55.

[107] *id*. at 56.

[108] Re Michigan Bell Tel. Co. 75 P.U.R. (N.S.) 436 (Mich., 1948); Re New England Tel. & Tel. Co., 83 P.U.R. (N.S.) 238 (Ma., 1949); Re Chesapeake & Pacific Tel. Co., 84 P.U.R. (N.S.) 175 (Md., 1950); Re New Jersey Bell Tel. Co., 91 P.U.R. (N.S.) 161 (N.J., 1951); Re Mountain States Tel. & Tel. Co., 90 P.U.R. (N.S.) 107 (Vt., 1951); Pub. Serv. Comm'n v. Pacific Tel. & Tel. Co., 93 P.U.R. (N.S.) 299 (Wa., 1951); Re Mountain States Tel. & Tel. Co., 94 P.U.R. (N.S.) 33 (Colo., 1952).

[109] City of Norfolk v. Chesapeake & Potomac Tel. Co., 64 S.E. 2d 772 (Va., 1951), 89 P.U.R. (N.S.) 33 (Va., 1951).

[110] Re New England Tel. & Tel. Co., 83 P.U.R. (N.S.) 161 (R.I., 1949); Re Mountain States Tel. & Tel. Co., 91 P.U.R. (N.S.) 497 (Id., 1951); Bell Tel. Co. v. Pub. Serv. Comm'n, 98 P.U.R. (N.S.) 273, 253 P. 2d 602 (Nev., 1953); Re New York Tel. Co., 91 P.U.R. (N.S.) 231 (N.Y., 1951); Re New England Tel. & Tel. Co., 83 P.U.R. (N.S.) 414 (Vt., 1950).

[111] Southern Bell Tel. & Tel. Co., 76 P.U.R. (N.S.) 33, 44-5 (Ky., 1948).

[112] *id*. at 45.

[113] Re Chesapeake & Pacific Tel. Co., 82 P.U.R. (N.S.) 498, 510-11 (W. Va., 1949).

[114] Re Indiana Bell Tel. Co., 85 P.U.R. (N.S.) 129, 140 (Ind., 1950).

[115]RE New England Tel. & Tel. Co., 80 P.U.R. (N.S.) 397, 411 (Me., 1949).

[116]id.

[117]Re Wisconsin Tel. Co., 86 P.U.R. (N.S.) 79 (Wis., 1950).

[118]id. at 83

[119]id. at 84.

[120]Re New England Tel. & Tel. Co., 82 P.U.R. (N.S.) 580, 583-4 (N.H., 1949).

[121]id. at 582.

[122]New England Tel. & Tel. Co., 97 P.U.R. (N.S.) 410, 417 (N.H., 1952).

[123]id. at 423.

[124]Re Wisconsin Tel. Co., 93 P.U.R. (N.S.) 490, 500 (Wis., 1952).

[125]Re Southern Bell Tel. & Tel. Co., 98 P.U.R. (N.S.) 511 (Ky., 1953).

[126]New England Tel. & Tel. Co., v. Pub. Util. Comm'n., 94 A. 2d 801, 811 (Me., 1953).

[127]id. at 812.

[128]New England Tel. & Tel. Co. v. State, 97 A. 2d 213, 219 (N.H., 1953).

[129]id.

[130]id. at 220.

[131]West Virginia consistently refused to apply Manual procedures. See Re Chesapeake & P. Tel. Co. of West Virginia, Case No. 4000, March 19, 1954.

[132]See, STAFF OF SUBCOMM. ON COMMUNICATIONS OF HOUSE COMM. ON INTERSTATE & FOREIGN COMMERCE, 95 CONG., 1st SESS., OPTIONS PAPER ON DOMESTIC COMMUNICATIONS COMMON CARRIER POLICY 373 (1977).

[133]9 F.C.C. 2d 30, 94, 70 P.U.R. 3d 129 (1967).

[134]In the Matter of AT&T, 41 F.C.C. 2d 389, 441 (1971); In the Matter of Communications Satellite Corp., 56 F.C.C. 2d 1101,

1146 (1975); In the Matter of AT&T, 57 F.C.C. 2d 960, 961 (1976); In the Matter of AT&T, 73 F.C.C. 2d 689, 690 (1979).

[135]In the Matter of International Record Carriers' Communications, 61 F.C.C. 2d 183, 187 (1976); In the Matter of International Record Carriers' Communications, 58 F.C.C. 2d 250, 261 (1976).

[136]In the Matter of American Tel. Relay, Inc., 63 F.C.C. 2d 911, 923 (1977).

[137]In the Matter of Adoption of Rules for the Regulation of CATV Pole Attachments, 72 F.C.C. 2d 59, 65 (1979).

[138]324 U.S. at 581, 585.

[139]In the Matter of AT&T, 84 F.C.C. 2d 384, 392 n. 26 (1980).

[140]See generally, B. Boritzki, Separations & Settlements in Communications, 1976 NARUC Annual Regulatory Studies Program, Appendix A (August 30, 1976) (on file at Center for Information Policy Research).

[141]See, Bowman, Blackstone, Cottrell, Fuhr & McCall, Cost Allocation Alternatives with Particular Applications to Telecommunications, National Science Foundation, Final Report under Grant No. 550-503-01, 1976; R.R. Braeutigam, An Analysis of Fully Distributed Cost Pricing, 11 BELL J. ECON. 182 (1980); National Telecommunications & Information Administration, Comments to the Second Supplemental Notice of Inquiry and Rulemaking in the Matter of MTS & WATS Market Structure, Appendix A (August 15, 1980). Three basic alternatives which are explored are the "attributable cost" method, the "gross revenues" method and the "Ramsey pricing rule." The "attributable cost" method would require that all costs that can be directly assigned to individual services would be summed and then the assignment factors would be calculated for each service by dividing its individual attributable cost by the total attributable cost. The "gross revenues" method would require each service's share of geographically local costs to equal the proportion of its revenues to total revenues. And, under the "Ramsey pricing rule," price would be raised above marginal cost in some inverse relationship to the service's price elasticity of demand and in direct relationship to the cross elasticities of demand for substitutes.