SEPARATIONS PROCEDURES IN THE TELEPHONE INDUSTRY: The Historical Origins of a Public Policy

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Program on Information Resources Policy

Harvard University

Center for Information Policy Research

Cambridge, Massachusetts

A publication of the Program on Information Resources Policy.

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January 1977, Publication P-77-2

Printing 5

September 1985

PROGRAM ON INFORMATION RESOURCES POLICY

Harvard University **Center for Information Policy Research**

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Wolters Samsom Group (Holland)

ACKNOWLEDGMENTS

Special thanks are due to the following persons who reviewed the study plan, supplied data, or who commented critically on drafts of this report. These persons, the Program's affiliates and the sources of student assistantships are not, however, responsible for or necessarily in agreement with the views expressed herein, nor should they be blamed for any errors of fact or interpretation.

Robert Angliss

Joe Burke

Lawrence Darby

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1. INTRODUCTION

On January 20, 1943, the Federal Communications Commission (FCC) gave notice that as a result of its negotiations with AT&T in Docket 6468, interstate toll rates would be reduced by some $50 million. Also, as a part of these negotiations, AT&T agreed to reverse its long-standing position on the issue of separations, and to file its new interstate toll tariffs to reflect the station-to-station principle of separations.

The FCC itself never issued a formal decision in Docket 6468. Only a short press release announced the end of almost a half century of controversy and debate on the question of whether or not toll rates should cover not only direct toll costs but should also include a measure of compensation to the exchange network for the toll use of local facilities.

In subsequent years, the basic principle accepted in Docket 6468 has been continuously elaborated and refined, the principal effect of which has been to assign an ever larger proportion of local exchange plant and expenses to the interstate toll services.[1] By 1974, about 29% of the revenues derived from interstate Message Toll and Wide Area Telecommunications Services went to the support of exchange plant jointly used to provide both local and toll services. In aggregate terms, this support amounted to $2.6 billion.[2]

While the separations procedures have been the subject of continuing debate subsequent to the 1943 action, the basic principle that the toll services should contribute to the support of jointly used local exchange plant has not been seriously questioned again until recent years, largely as a consequence of FCC policies that have opened up the terminal equipment and private line service markets to competitive entry.

The basic contention of the telephone industry is that competition is undermining the economic foundation of separations, and will, in the absence of countervailing public policies, precipitate a massive shift of revenue requirements to the local exchange network, resulting in large increases in the rates for basic telephone service.[3]

As a result, separations have become a focal point in the public policy debate concerning competition in the telephone industry. In recent debates, separations have been attacked by some as nothing more than a "subsidy" to local exchange ratepayers,[4] and defended by others as an economically justifiable and equitable means of promoting the goal of universal telephone service by maintaining a minimal rate for basic local service.[5] Moreover, it is pointed out that the assignment of exchange costs to the toll services is not simply a regulatory policy, but was mandated by the Supreme Court of the United States.[6] Finally, while some criticize the industry for assigning any local costs to the toll network, others are equally critical in alleging that too little of the joint local exchange costs are assigned to the toll services.[7] In view of these conflicts over the nature and origins of separations, it is of some relevance to investigate the historical context in which modern separations were first conceived.

Separations: The Policy Issue

In a formal sense, separations procedures are simply cost allocation techniques for determining the costs for local exchange, intrastate and interstate toll services. While the separation of toll plant between intrastate and interstate toll service is itself a formidable problem, the more important and perplexing aspects of these procedures relate to the allocation of the costs of jointly used local exchange plant to the respective services provided over those facilities.

The local exchange network consists of three major components: (1) the subscriber's telephone itself, (2) the local loop that connects the subscriber to the central office, and (3) the central office itself where subscribers' calls are switched. The first two categories and part of the third represent usage insensitive plant. That is, the cost of those components of the basic local network are not influenced by the amount of time they are in use.

The question that arose early in the history of the telephone industry was how the costs of this basic, irreducible network were to be recovered through the rates for the various services offered over those facilities. Two competing theories, the "board-to-board" and "station-to-station," came to largely, but not exclusively, dominate the public policy debate on separations.

The board-to-board principle, which was the predominant method of setting toll rates prior to 1943, simply held that the entire cost of the local exchange network was to be recovered through local exchange service rates. The toll rates, in turn, were to cover only the costs of toll service between and including the originating and terminating toll switchboards.

Although the toll services certainly used the local facilities to originate and terminate toll calls, it was nevertheless argued that no compensation was due the local exchange for such use. This was rationalized in two ways. In the first place, because the local facilities were usage-insensitive, the provision of toll services, on an incremental basis, imposed no additional costs on the local network.[8] That the toll services were, at an early date, required to compensate the exchange for operating costs (operators, customer billing, etc.) attributable to toll services did not alter the argument in respect to the basic facility costs. Secondly, and more important, it was held that the local exchange rate itself incorporated a "stand-by" charge for access to the toll network. A third line of reasoning equated the usage-insensitive plant dedicated to a subscriber's use with the customer charge associated with electric and gas utilities.

The station-to-station principle, on the other hand, argued that since the toll services use the local network to originate and terminate toll calls, they should bear some portion of the costs of those local facilities. It was, correspondingly, inequitable to include in the local rate a stand-by charge for access to the toll network when a large proportion of the customers did not make any toll calls, and therefore were compelled to pay for a service they did not use.

A third principle that was espoused was the value-of-service "allocation" of local exchange plant costs between the local and toll services. This perspective was grounded in the obvious fact that because the costs of the local exchange network were, with some exceptions, usage-insensitive, it was therefore much more efficient to combine the local and toll services into a single system. The two services, were in this view, joint products; the construction of a local distribution system for local (toll) services yielded the ability to also provide toll (local) services over the same facilities at no additional cost.

Since both local and toll users benefited from this joint integration of the services, it was held unfair to require one service to bear the full costs of that irreducible local network, and to allow the other service, so to speak, "free" use of those facilities. But because of the joint cost characteristics of that plant, there was no objective method of allocating costs between the two services. In these instances, economic theory holds that the joint costs must be recovered through value-of-service pricing. The board-to-board and station-to-station principles, correspondingly, were economically irrational in that they were attempting to allocate costs that were, in fact, indivisible and unallocable. While the "value-of-service" theory provided the most coherent theoretical explanation for a toll contribution to the support of jointly used local exchange plant, public policy debates most generally focussed on the board-to-board and station-to-station theories.

The history of separations, though, is more than a history of the "choice" between these competing theories and the "political" and/or "economic" considerations that underlay that public policy decision. This is necessarily so, because, first, there is a fundamental ambiguity in the theories themselves. The question that arose at a very early date was one of administration: at which level of analysis are these ratemaking theories to be applied? And, as some state regulators perceived, the difference between the board-to-board and station-to-station theories of separations was purely a matter of administration. If the latter were applied on a line-by-line, customer-by-customer basis, the practical effect on the rates paid by each subscriber would be nil. For a customer that used no toll service, the local exchange investment and expenses attributed to that customer would be fully incorporated in the local exchange rate. On the other hand, for a customer that did use toll service, some of the local investment and expenses would be allocated, under the station-to-station theory, to the toll services, and that subscriber's local exchange rate would be correspondingly lower. But, since these costs would now be incorporated into the toll rates, the subscriber would still be paying for these local facilities through the toll charges. At this level, the difference between the two theories is simply a difference in how local exchange costs are recovered and would have no effect on the total amount collected from each subscriber.

Although an extreme example, this illustrates the problem with which state regulations struggled for over three decades: separations, as an economic policy, was defined by its administrative application. And, the station-to-station theory, in the abstract, simply provided no guidance in the matter of how, or at what level, it was to be administered, and, in fact, one state commission or another, at one time or another, considered all the reasonable possibilities of this aspect of the separations problem.

More important, though, separations has connotations that cannot, in practice, be isolated from its consideration as a ratemaking theory. This, again, was not simply a matter of "political" considerations because the application of any separations principle had economic ramifications beyond that implied by the theory itself. The most important example of this is jurisdictional separations. Under our dual regulatory system, separations are a method of distinguishing between the respective jurisdictional spheres of the state and federal regulators. Before 1934, effective national regulation of the telephone industry was lacking, and jurisdictional separations, the determination of the power of the state regulators, were largely equated with the loss of control, in both a practical and a formal sense, over the regulatory process.

Moreover, separations and especially the station-to-station theory, require close cooperation between the state regulators, the federal regulators, and the industry in the actual administration of the theory. The development of separations as a coherent, workable economic policy, within the existing legal and institutional constraints, was itself a formidable problem. Most of all, the development of separations as an integral part of national economic policy in respect to the telephone industry required a common perception of the economic and technological attributes of the telephone network and the nature of telephone service; and, in fact, the evolution of separations as an economic policy was closely bound to the economic and technological development of the telephone system itself.

2. SEPARATIONS: 1910-1930

While state regulatory commissions generally accepted the board-to-board principle of separations prior to 1930, it is somewhat misleading to ascribe any large degree of coherence to separations as a public policy during this period. Separations were considered in a wide variety of contexts as they affected and were affected by both other regulatory policies, legal requirements, and economic relationships within the industry. Indeed, the issue of separations was not a static debate over the two competing theories, but was deeply embedded in the dynamics of the development of the industry itself.

In this environment, regulatory attitudes towards separations, especially when considered collectively, were clearly tentative in nature. In some instances, regulatory agencies tried and rejected various separations procedures; in other instances, the courts intervened to frustrate regulatory policy. In retrospect, what was lacking was a clear conception of how separations procedures could become a powerful instrument of economic policy in the telephone industry. Yet, this period is important in the evolution of separations. By 1930, regulators had thoroughly probed the manifold implications of separations as they affected and were affected by the institutional, legal, and economic environment of the telephone industry, and in so doing had identified most of the crucial administrative problems that had to be resolved before separations procedures could assume their present importance to the economics of the industry.

Because of the intimate relationships between separations and the political and economic environment of the industry and its regulation, an appreciation of the evolution of separations requires a consideration of the broader context in which that issue developed.

The Development of State Regulation

While the Interstate Commerce Commission was vested with somewhat limited regulatory powers over the telephone industry in 1910, it rarely intervened in telephone matters.[9] Thus, with the exception of the brief interval of the federal government takeover of the telephone industry during the closing days of World War I, the burden of regulating the telephone industry fell entirely on the state regulatory commissions.

The state commission movement was itself new; but from its beginnings in 1907, it spread rapidly until, by 1917, thirty eight states had adopted this form of regulation.[10] Despite its apparent popularity, state regulation at its inception met determined opposition from two quarters--the federal courts and the competing "home rule" or municipal ownership movement--each of which had important effects on the development of separations in the telephone industry.

The more indirect, but perhaps most powerful, influence was that of the federal courts. While the determination of rates by a state regulatory body was a legislative function, the utilities had the right of appeal to the federal courts in order to protect their property from confiscation. The principal controversy centered on the issue of valuation of the utility's property for ratemaking purposes. The effect of the judicial process and decisions on state regulation during its formative years was, to summarize a complex situation, devastating. Appeal to a Federal District Court resulted, first, in the case being tried de novo; a complete new record was developed, and the record and conclusions of the regulatory agency disregarded. As a consequence, the ratemaking power effectively passed, in these cases, to the federal courts.[11] Not only were the federal courts zealous in their protection of private property, but the ordeal of judicial review, including the retrial of the entire case, was an inordinately lengthy process. Telephone cases--the most celebrated of which lasted over a decade--seemed to cause the greatest difficulty.[12]

Under these circumstances, there was a distinct tendency for state regulatory agencies to avoid rate cases altogether, especially telephone cases,[13] or, in the sometimes inevitable alternative, to closely hew to the Supreme Court's dictates, eschewing any innovations in ratemaking that might be challenged in court and to otherwise compromise with the utilities to avoid judicial review.[14]

A significant part of the problem was the lack of definite legislative standards, and the blame cannot be entirely laid on the courts. Yet, the result was undeniable. By 1930, a New York Commission on Revision of Public Service Commissions Law could document in great detail the failure of state regulation to control utility rates.[15]

The judicial hostility to state regulation found its parallel in political hostility within the states. The state commission movement was not cut from whole cloth, but supplanted an established and newly revitalized movement for municipal regulation or ownership. Utilities had first encountered governmental regulation at the local level, where a franchise contract--including specification of maximum rates--was the typical device of regulatory control. At a time when well-developed utility services--including public transportation, electric lighting, gas heating, and telephone service--were considered the hallmark of a progressive city, franchise contracts were typically more than favorable to the utilities. More important, there was an intimate connection between the utilities, the city government, and political corruption. The Board of Aldermen in New York City, for example, earned its sobriquet of the "Boodle Board" because of its corruption by utilities seeking favorable franchise arrangements.[16]

In the early 1900's, widespread recognition of the bribery and other machinations characteristic of local utility franchising brought a vigorous reform movement for more effective utility regulation at the local level. In 1907, a much heralded investigation by the National Civic Federation found that municipal ownership, or the constant threat of municipal ownership in which the city would have the right to purchase utility property at a fair value, was the most effective regulatory alternative available. This conclusion was endorsed by eminent economists such as John R. Commons and John H. Gray as well as some industrialists.[17]

It was this movement that was undercut by the establishment of state regulation. Absent specific legislative authority to the contrary, the control of utility rates passed to the new state commissions. This was of some importance to the utilities. Contract rates proved inadequate in a period of rising prices, and state regulation was a means of escaping those contracts. Independent telephone companies especially had a propensity to agree to unrealistically low rates in order to win franchise rights within a municipality.[18]

The battle for "home rule," the right of a municipality to regulate utilities within its boundaries was often bitter. It was widely suspected that state regulation was largely initiated by the utilities in order to escape a revitalization of democratic government in the cities and the burdensome franchise contracts,[19] although it was equally true that utilities had grown beyond the confines of city boundaries and therefore the municipality was no longer adequate as the unit of regulation.[20] And, indeed, the same reasoning would later be applied to justify more extensive federal regulation of utilities as the scope of their operations extended beyond the borders of the state. Much the same hyperbole that accompanied the shift of important regulatory powers from the states to the federal government characterized the "usurpation" of municipal powers by the states. In 1918, when the Ohio Supreme Court upheld the power of the state commission to regulate telephone rates, a dissenting judge was moved to complain that "the state commission plan is pure, practical autocracy" that was plainly an "undemocratic, un-American, unconstitutional doctrine."[21]

While attempts to compromise with the Home Rule movement by dividing regulatory authority between municipalities and state commissions largely failed--California being something of an exception,[22] city regulation was of some importance until 1920. More important, cities continued to play an advocacy rule in state regulatory proceedings, and were especially active in the matter of separations in the telephone industry.

The Development of Telephone Ratemaking

As a practical matter, the limited resources of the state commissions had to be focused on what, for the legal reasons mentioned above, was increasingly the primary issue of regulation--the valuation of the property of the utility. Nevertheless, ratemaking principles, the criteria by which the total revenue requirements of the telephone company were to be translated into a rate structure, did receive considerable attention in the regulatory process.

The basic principle of ratemaking that rapidly emerged was grounded in the nature of telephone service itself. Telephone communication was first differentiated from similar utility services such as electricity and gas by the fact that telephone service had no commodity adjunct. What the telephone company sold was a service--the ability to intercommunicate with other subscribers--not a product. As a consequence, the value of that service was a direct function of the number of subscribers to the system--the more subscribers with whom one could communicate, the more valuable that service.

Although certain costs could be attributed to the connection of each particular subscriber (the equivalent of customer costs in other utilities), such costs were, in reality, common costs incidental to providing the service of intercommunication. A connection to the central office was itself without value. Thus, the demand for telephone service incorporated the demand to access the local distribution facilities of all other subscribers. And because the connection of a subscriber to the system had a value to all other subscribers as well, there was no logical or economic reason why that subscriber should, in all instances, have to pay the full costs of that interconnection. The interdependency of demand for telephone service yielded the conclusion that telephone rates should be based primarily on value of service criteria.[23]

While this perspective, especially the view that the facilities dedicated solely to a customer's use would be regarded as a common or joint cost, was not always clearly articulated by regulatory bodies,[24] the basic principle of value of service pricing of telephone service and its corollary--the extension of telephone service to as many subscribers as possible, was widely accepted. Indeed, as early as 1905, the Merchants Association of New York City recommended this approach despite the fact that value of service pricing was typically manifested as higher charges for business than for residential telephone service.[25]

Separations and Statewide Ratemaking

The development of regulatory policies suitable to a rapidly growing, partially competitive, and highly fragmented telephone industry, all without aid of precedent or meaningful legislative guidance, was itself a formidable task. Between 1907 and 1917, the growth of the industry was literally explosive as the number of telephones in service almost doubled. And the growth was as haphazard as it was vigorous. The investment required to provide at least a crude grade of service was minimal. Individuals and cooperatives would frequently construct lines to the nearest exchange to be connected and charged a switching fee for the privilege. Facilities owned by a variety of companies and individuals were freely intermingled to establish rudimentary networks; in some instances, a company would provide only the switching service and own no lines or telephones itself.[26] In 1917, the Census Bureau could report that the number of telephone "systems and lines" had increased to 53,234, up from 22,971 a decade earlier.[27] In addition to the more profound problems of economic policy, the state commissions were inundated with such local problems as whether or not a rural exchange should have an operator on duty at an earlier hour during harvest season[28] and whether stockholders of the telephone company should be charged a different rate than other subscribers.[29]

Yet, the dominance of the Bell System was clear--and clearly growing. As a consequence, public policy took its most considered and coherent form in the regulation of the Bell System. Moreover, it was the Bell System that systematically developed the toll services, integrated both toll and exchange service into a single system, and thereby became the focal point for the issue of separations.

In the context of regulation of the operations of the Bell System, the term 'separations' had connotations far wider than the board-to-board and station-to-station principles. In addition to the ownership of both local and toll facilities and their management by a common organization, the Bell operating companies had extensive interstate relationships through their ownership by AT&T. The division of interstate toll revenues and, more importantly at this time, the license contract fee whereby Bell Companies remitted to AT&T 4 1/2% of their gross revenues for managerial assistance, telephone rentals, and other services, were important regulatory issues.

Thus, separations as a ratemaking theory was inextricably bound to separations as they defined (and limited) the jurisdiction of state regulation. As will be discussed in more detail below, state regulators were anxious to avoid any "separations" that would interfere or limit their ability to investigate and regulate the activities of the Bell System. State regulators equally eschewed separations as a ratemaking technique. Not only were separations administratively difficult, but they were, as cost allocation procedures, seemingly in conflict with the value of service pricing principles discussed above. The statewide method of ratemaking which, in effect, denied the desirability of making any separation of costs for the determination of telephone rates, therefore became the predominant method for developing intrastate rates.

Statewide ratemaking met the objectives of administrative simplicity and was quite compatible with the ratemaking principles discussed above.

Administratively, statewide ratemaking meant the commission would consider the total costs of Bell's intrastate operations, and set rates to cover those intrastate costs in their entirety. On this point, the Pennsylvania Public Service Commission found:

> "...the Commission is unable to agree, either from any reasonable interpretation or application of the law, or from its experience and that of other Commissions, that it would be possible to segregate parts of a statewide utility such as a telephone system, and value them as units for ratemaking purposes. Nothing but chaos would result. On such a theory, there would be nearly 400 valuations, and, therefore, 400 different telephone rates on the Bell System in Pennsylvania alone, based upon the number of exchanges in the state. The inevitable result would be dislocation and disruption of telephone service."[30]

The New York Commission similarly found that "...the 'local area' theory fails to get at the real facts, is unduly expensive, obviously productive of protracted litigation, impractical and inadequate."[31] Those conclusions were not entirely exaggerated. At that time, the New York Commission was confronted with a huge backlog of cases to be tried on an exchange-by-exchange basis. The various cities involved took an active interest to protect their residents. The allocation of the overhead costs of Bell's New York operations, as well as the problem of isolating the investment on an exchange basis, was an almost insuperable problem.

The active participation of the cities was of some importance. Not only did they resent the loss of their regulatory powers to the state, but they also pointed out that cities were underrepresented in the state legislature and that, as a result, state regulation did not represent their interests.[32] The practice of statewide ratemaking, in fact, exactly paralleled the urban-rural cleavage in American society.

Under this method, exchanges were grouped by number of subscribers; exchange rates, which in the aggregate covered the company's total revenue requirements, were proportional to exchange size. The result, of course, was higher rates for the larger urban exchanges than for the same class of service in smaller rural exchanges. The theory of state-wide ratemaking was, in fact, an extension of the value of service principle discussed above, and had the objective of extending telephone service to areas that might not, on a stand-alone basis, be economically self-supporting.[33]

The extension of the value of service principle to statewide operations--the assertion that subscribers in one exchange would have an economic interest in the development of telephone service in another exchange--directly reflects the growing importance of the toll network during the period when statewide ratemaking was first adopted. Between 1915 and 1920, message toll services more than doubled; between 1920 and 1925, they increased by more than 50%.[34] The Colorado Commission, in rejecting the city of Denver's bid for exchange ratemaking, expressed the viewpoint that the telephone system was, in fact, more than an aggregation of unrelated local exchanges:

> It is true of Denver that its commercial activities and industrial importance depend upon the existence of a large tributary, or supporting territory, containing smaller cities and rural, manufacturing, mining, and other industries, and the maintenance of relations permitting the development and growth of Denver depends upon the existence of rapid, direct and convenient means of transportation and communication between Denver and the rest of the state. The user of toll service is benefitted by the establishment of a state-wide telephone system, and the residents of Denver derive directly and indirectly substantial benefits from the operation of the telephone system throughout the state. It follows that the revenue from the telephone service rendered in Denver must be considered in the light of necessities of the system as a whole.[35]

Despite the continued opposition of the cities, the practice of statewide ratemaking was widely adopted by the mid-1920's.[36] But the cities continued to intervene in the regulatory process, and were especially active in the matter of separations.

The question arises as to why state commissions did not seize upon the station-to-station theory to further reduce exchange rates in conformance with their broad public policy objectives. The reasons, each of which will be discussed in more detail below, appear to be threefold. First, the ability of the toll services to bear the additional costs imposed by the station-to-station theory were doubted. Secondly, while toll rates seem generally to have been based on toll "costs" as defined by the none too accurate accounting system of the time, to have gone beyond the existing accounting system would have again raised the administrative and political problems of detailed and arbitrary cost allocations that the commissions were trying to circumvent in the first instance by the statewide ratemaking method. Thirdly, the ramifications of toll separations were bounded by neither the Bell System nor the jurisdictional limits of the state, and thereby constituted a far more complex problem than did the regulation of the relatively self-contained exchange systems.

Toll Settlements and Toll Ratemaking

Almost from the inception of telephone service, AT&T envisioned the eventual establishment of an integrated nationwide telephone system owned and operated by themselves. The following statement, made in October, 1901, by a Bell official, indicated the role that the toll services would play in AT&T policy:

> I take it that it is extremely important that we should control the whole toll line system of intercommunication throughout the country. This system is destined, in my opinion, to be very much more important in the future than it has been in the past. Such lines may be regarded as the nerves of our whole system. We need not fear the opposition in a single place, provided we control the means of communication with other places. My opinion is that as far as possible, we should control the toll lines ourselves, except as far as they are merely subsidiary feeders to our system, except in those districts where the opposition now have both exchanges and toll lines and the toll lines cannot be readily purchased, or in those districts where, on account of the extent of the country or from a lack of resources, there is no immediate prospect that we shall attempt to do the business. [37]

It is, indeed, difficult to exaggerate the importance of the toll network in the development of AT&T policy during this period. And, as Independent telephone companies came to challenge the Bell policy of "one system," it was the control of a developed toll network that proved decisive in defeating the Independents' threat to Bell hegemony of the telephone system in this country.

When Independents attempted to establish competing service in an exchange area already served by Bell, it was Bell policy to deny the competitor the right to interconnect with the Bell toll network. The crucial role of the toll services in the competitive battle led some Independents to form the National Association of Independent Telephone Exchanges in 1897, the principal objective of which was the establishment of a competing toll network. But these and subsequent efforts to break the Bell dominance of the toll system failed, primarily because of inadequate financing and AT&T's control of important patent rights.[38]

The panic of 1907 marked the beginning of the demise of the Independent segment of the telephone industry. Yet, they were to play an important role in the separations issue, particularly as they affected AT&T's policy on this question. In 1910, the Bell System controlled barely half of the telephones in service in the United States,[39] but were aggressively seeking to reassert their dominance through acquisition of both competing and non-competing Independents. Moreover, in 1909, AT&T acquired controlling interest in Western Union, which was viewed as part of its objective of a single wire communications network in this country.[40]

The denial of interconnection to the Independents, the purchase of competing Independents, and the acquisition of Western Union brought AT&T in direct conflict with antitrust law.

When the U.S. Attorney-General, acting upon numerous complaints on AT&T policies, requested that the Interstate Commerce Commission investigate these matters, AT&T responded with a letter to the Attorney-General--often cited as the Kingsbury Commitment--that announced AT&T's intention to:

1. Dispose of its holdings in Western Union,
2. Desist from purchasing competing Independents, and
3. Interconnect Independents with the Bell toll network.[41]

While viewed as an historic compromise, the Kingsbury Commitment did not prevent AT&T from acquiring non-competing Independents, and by

1920, the Bell System had extended its control of the industry to include 62% of the telephones in service.[42] Moreover, by 1921, it was recognized that competition in the provision of local exchange service was wasteful and inconvenient for subscribers. The result was the Willis-Graham Act which permitted consolidating of competing exchanges with the approval of the ICC.[43]

The Willis-Graham Act seems to have further spurred AT&T's acquisition policies, although, in fact, only 14% of the stations involved in telephone mergers between 1921 and 1929 were duplications.[44] Despite Independent attempts to circumscribe Bell acquisition policies, including efforts to secure AT&T acceptance of a "balancing purchases agreement" whereby Bell would sell to Independents an equal number of stations to offset those purchased from Independents, Bell's dominance of the industry continued apace.[45] By 1930, AT&T accounted for 77.5% of the telephones in service, and by 1940, 80%.[46]

It was in the context of AT&T's continued efforts to eliminate, to the extent possible, the Independent telephone companies that toll settlements became an issue. The interconnection of separately owned systems for the joint provision of toll services provided another perspective on the issue of separations.

Prior to the Kingsbury Commitment, AT&T had adopted a limited policy of connecting with some rural exchanges, who, in turn, were apparently willing to pay for that privilege.[47] Following AT&T's agreement to interconnect with non-competing Independents, such arrangements were eclipsed, and some Independents unsuccessfully sought to win acceptance of the station-to-station principle of separations as the basis for toll settlements.[48] On the other hand, AT&T

and its operating companies consistently adhered to the board-to-board method of separations.[49] In light of AT&T's larger objectives, the refusal to compensate their competitors and potential acquisitions on the station-to-station principle was entirely understandable.

While the obvious desire to minimize financial support, through settlements, to their rivals was an important factor in AT&T's adherence to the board-to-board principle of separations, that position was equally consistent with other considerations. First, the interstate services were, for all practical purposes, unregulated. The ICC lacked authority to require the filing of tariffs, and could act only on the basis of complaints.[50] As a result, AT&T not unexpectedly minimized the investment and expenses assigned to the unregulated services.

Secondly, the toll services were subject to some amount of competition from both the telegraph and the mail, especially the former, and while telephone toll service dominated the inter-city communications market, competition could not altogether be ignored.[51] AT&T, in fact, defended the board-to-board principle on this basis. A subscriber could use the phone to send a telegram. The cost of the phone call was included in the monthly telephone rate, and the cost of the telegram was computed as originating at the telegraph office. In the same manner, a competitive long distance telephone call should include only the costs incurred after the call reaches the telephone company's central office.[52]

These considerations, then, reinforced AT&T's adherence to the board-to-board principle for both separations and settlements purposes. Although the disputes between Bell and Independents over the issue of toll settlements were frequently bitter, the intervention of regulatory commissions in this matter was sporadic and indecisive. Bell, in turn, firmly resisted such intervention, going so far as to argue--unsuccessfully--in a federal court that such matters were private contracts, independently negotiated, and beyond the reach of regulatory authority.[53] With few exceptions, toll settlements were dictated by AT&T.

This was as true of the Associated Bell Companies as it was of the Independents. As early as 1908, some Bell operating companies had also contended for the station-to-station principle, but these efforts were rejected by AT&T.[55] In this respect and many others, the organizational structure of the Bell System was a decisive influence on the development of separations and settlements.

The development of the toll network, interstate and intrastate, was largely controlled by AT&T Long Lines. The license agreements between the Associated and Bell Companies were technical as well as economic documents. In addition to providing for intercompany toll settlements, the license agreements provided a specification of the responsibilities and obligations of the various operating companies in the provision of toll services.[56] Prior to 1926, Long Lines, in fact, reserved to itself the right to provide some purely intrastate toll business, while the multi-state Bell companies were equally allowed to provide at least some interstate toll services within their operating areas. Thus, in addition to Long Lines, each of the major operating Bell companies maintained their own, usually higher, interstate toll rate schedules. Until the mid-1940's, with the exception of a brief period in which the Postmaster General's schedule*

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*The telephone system was taken over by the federal government for a brief time as a result of the emergency created by WWI. During this time the Postmaster-General imposed a uniform nationwide toll rate structure.

was uniformly applied, there existed a multiplicity of interstate toll rate schedules.

From an early date, then, the interstate character of the management and operation of the toll network extended beyond the limited boundaries of the states' regulatory jurisdiction and, as will be seen, the attempts of the various states to penetrate the barrier of this interstate control were largely defeated.

The need for a simplified nationwide administrative technique for financially disentangling the intermingled use of Long Lines and Associated Company facilities in the rendering of toll services was met by the "commission and prorate" method. Under this concept, an originating commission would be deducted from the revenue generated by a toll message, and the remainder would be prorated between Long Lines and the Associated Company in proportion to the circuit mileage supplied by each in completing the call. (The principle, of course, was applied to broad aggregates rather than on a call by call basis).

The originating commission is of some interest. Although toll rates were based on the board-to-board principle, this did not mean, therefore, that the exchange operations did not receive any compensation whatsoever from the toll services. The commissions were designed to compensate the Associated Companies for the operating costs--such as billing, collecting, and promotion--directly related to the toll services. Prior to 1925, these commissions were determined as a percentage of toll revenue; in the early 1920's, this commission was generally to 25% of the toll revenues originated by an operating company, and therefore were not an insignificant amount.[57] After 1925, the method changed to a "cents-per-message" basis, wherein the commission was based on a sliding scale related to the average revenue per message. This revision also brought a refinement of the commission's method into a "high" and "low" schedule, the former being applied in those instances where the Associated Company did the toll operating.[58]

For a brief period after the Kingsbury Commitment, settlements between the Independents and Bell were avoided through the "this-line-other-line" basis of interconnection. Under this method, each company individually developed rates for that portion of the toll call handled over its facilities. However, this technique was manageable only for short-haul traffic, and generally thereafter, settlements between the Independents and Bell followed the methods established for settlements between AT&T and the Associated Companies, although compensation to the Independents was generally less than that to the Bell companies.[59]

Settlements were not cost-based except in the loosest sense. Nationwide schedules resulted in some Bell companies receiving compensation in excess of their direct costs, and in other companies less than their direct costs.[60] Quite obviously, the actual compensation received under the commission and prorate formulas was a function of toll revenues and rates. The telephone accounting system was not a reliable guide even to the separation of exchange and toll investment, and did not even address the distinction between intrastate and interstate toll.[61] Separation, even when toll rates were established on the board-to-board basis, was a difficult matter.

While the method of administering settlements was simple, it was tenable only when separations, or cost determinations were eschewed altogether. The state commissions were confronted with settlements, as the obverse of separations, in two contexts: that of the equitability of the division of toll revenues between AT&T Long Lines and the associated Bell companies, and that of settlements between Bell and the Independents.

In the former case, the issue of settlements was closely bound to the regulatory problem of controlling the performance of a system that was increasingly interstate in nature. Although the complete integration of the intrastate and interstate toll facilities had not yet been accomplished, the economic and technical management of the toll network was, through the license contracts, largely controlled and dominated by AT&T itself. A simple separation of the toll facilities owned by the associated Bell companies was hardly an adequate method of regulatory control, since that ownership was in the first instance dictated by management policies of AT&T. What was required was a regulatory evaluation of those management policies and a determination of how they affected intrastate as well as interstate toll "costs" as reflected in the accounting records of the various companies. By 1921, the North Carolina Corporation Commission could assert that the division of toll revenues between AT&T and the associated Bell companies was a matter of more importance than the hotly disputed 4 1/2 percent license fee.[62] And, indeed this question did become the primary separations issue of the 1920's, as various state commissions, rather than making a separation between the intrastate and interstate services, sought instead to extend their regulatory powers to include consideration of matters interstate in nature--an extension they felt necessary to the effective exercise of their intrastate authority.

As a practical matter, separations were not critical to intrastate ratemaking itself. AT&T Long Lines' settlements were on a company by company basis, and in those states that adopted statewide ratemaking, there was no need to apportion toll revenues--either intrastate or interstate--to the individual exchanges. In the states where exchange ratemaking was practiced, such an apportionment was attempted, and the lack of correlation between the division of revenues on the one hand, and actual costs incurred by individual exchanges on the other, caused some difficulties, with the cities once again playing a contentious role.[63] Typically, however, interstate revenues were simply treated as a reduction in intrastate revenue requirements, and the resulting deficiency (or excess, as the case may be) in settlements incorporated into the intrastate rates.

Nor were separations critical to the determination of the structure of toll rates. On those few occasions when state commissions expressed themselves on that question, they upheld the desirability of a uniform toll rate structure.[64] In many states, it appears that toll rates in the aggregate were not even set on the basis of toll costs. And in those states that did base toll rates on toll costs, the importance of settlements was, because of rate averaging, only to establish the total intrastate toll revenue requirements.

The policies of statewide rate averaging and extending state regulatory scrutiny to the interstate operations of AT&T therefore inclined state commissions to ignore separations altogether. Thus, in the matter of settlements between Bell companies and the Independents, the commissions were less than aggressive in pursuing an issue in which cost allocations could not be eschewed.

Uniform statewide settlements arrangements were rare. The Nebraska legislature established a statewide plan in 1913, apparently on the board-to-board basis of separations.[65] Oklahoma and Montana did likewise,[66] while Minnesota accepted the statewide settlements plan negotiated between the Independents and Bell.[67] Primarily, though, state commissions did not prescribe settlements as a matter of public policy, and thus the issue arose in the context of litigation. Generally, they held that the burden of proof was on the company alleging inadequacy, and were willing to accept settlements agreements that were comparable to what other companies were receiving, within the proviso that toll settlements should cover direct toll costs.[68] The most consistent regulatory policy at this time was the elimination of the "other line" charges that many exchange operations imposed on toll users.[69] "Other line" charges were a surcharge (typically a percentage mark-up) added to the stated toll rates. This practice constituted, in effect, an alternative method for effecting toll settlements. Each exchange would separately establish a toll surcharge that it felt was sufficient to compensate it for the expenses it incurred in the provision of toll service.

Considering the fragmentation of the industry, the commissions' attitudes seemed largely a product of expediency. Settlements on the board-to-board principle were difficult enough, but at least provided a fairly certain demarcation between the toll and exchange services (and the Bell and Independent companies). Administration of the station-to-station theory in instances where the local exchange was, in reality, the amalgamation of facilities owned by several companies as well as individual customers would have been impractical if not impossible.[70]

Moreover, the economic differentiation between toll and local services was less than clear. In rural areas, especially, free interexchange service was common and even regarded as vital to the attraction of new subscribers. The costs and revenue potential of these primarily short-haul toll services was minimal; the facilities often consisted only of a single circuit between communities, and that circuit was not always fully utilized even with free interexchange service. By the early 1920's, both commissions and companies had moved to abolish free interexchange service. But even here the motive was frequently to eliminate discrimination or to forestall the construction of new facilities as toll demand grew rather than to a tap a new source of revenue.[71] Flexibility to meet local exigencies and needs, then, dominated any propensity to standardize the toll and exchange services.

Finally, it is of some importance to note that although settlements can be regarded as the economic equivalent of separations, there is a legal disjunction between the two. The supposition that a local exchange could argue that since its facilities were used by the toll services, it therefore was entitled to compensation on the station-to-station basis was legally untenable. State commissions were vested with the legislative authority to require the interconnection of toll and local facilities. Thus, the requirement to interconnect was construed as the regulation of business, not as the taking of property under the power of eminent domain. The distinction is crucial; as courts and commissions alike pointed out, the compensation that would be due under the power of eminent domain is something more than the division of tolls after connection is made.[72]

Ironically, the legal requirement for interconnection so eagerly sought by the Independents had the effect of foreclosing legal recourse to compel adoption of the station-to-station principle. The toll use of local exchange plant did not, ipso facto, entitle a local exchange operation to compensation for the toll use of its property. Any such compensation required a regulatory definition of the local plant costs properly attributable to the toll services. In this sense, then, it was separations procedures that ultimately determined the toll settlements to which a local exchange was entitled to for the toll use of its facilities. Thus, separations, as adopted by regulatory agencies, controlled settlements in a legal sense, although the pressure for increased settlements was, at least informally, an important factor in the continuing development of separations.

Separations as Ratemaking: The Board-to-Board and Station-to-Station Principles

With few exceptions,[73] state regulatory commissions adopted the board-to-board principle of separations prior to 1930.[74] Discussions on this subject were in most instances cursory, and typically evidenced bewilderment rather than a firm grasp of the economics of the subject. In the context of the time, separations as ratemaking was a relatively minor problem, and the board-to-board theory best comported with both other regulatory objectives and the position of the industry.

In a broad sense, "practicality" was the primary justification for the rejection of the station-to-station theory. The opinion of the New York Public Service Commission was typical of the reaction of state regulators to the prospect of station-to-station separations:

> Developing this theory to its logical conclusion would require us to view each subscriber's line by itself, each toll line by itself, require a separate and distinct consideration of each message, each rate filed--and a determination and allocation of the property involved in each case--together with the fixing of the proper charge for the portionate (sic)use of each class of property. The complications, divisions, and subdivisions requisite to properly carry this out are infinite, and if it is correct in principle, the prospect is appalling.[75]

But practicality had wider connotations than simply inconvenience or difficulty. It equally indicated an inability to conceive not only how the station-to-station theory could be administratively workable, but how it could further any regulatory objectives. As the above quote indicates, there seemed to be no single compelling unit of application. Logically, of course, if the theory were applied to every line, as the New York Commission interpreted it, the station-to-station principle would, in its impact on customer rates, be equivalent to the board-to-board theory.

Other possibilities were discussed. In the first detailed explanation 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--the then commonly accepted criterion of separation.[76] Yet another interpretation would have excluded the lines of all customers who did not make toll calls--a considerable proportion at that time--so that only the individual lines actually "used" for toll were separated.[77] Separations on an exchange by exchange basis also found support,[78] as did statewide separations.[79]

There was also concern that under the station-to-station theory, both toll and exchange rates would constantly fluctuate as toll usage of the local exchange plant fluctuated.[80] Application of the theory to toll ratemaking, it was thought, would have required the valuation of the Independent exchanges as well as Bell's and render the already difficult task of ratemaking an impossible one,[81] although the Kansas Public Utilities Commission sought to apply it only where there was a common ownership of toll and exchange facilities.[82]

Concern for the administrative features of station-to-station separations was not confined to the state regulators. A constant theme in the evolution of separations was the fear of the industry, particularly Bell, that separations procedures adopted for one jurisdiction would not be adopted by another, with the consequence that a portion of its legitimate revenue requirements would not be recognized in any authorized rate structure. This apprehension was not simply self-serving. In a case before the Kansas Supreme Court, it was also pointed out that the ICC had not adopted the station-to-station theory (in point of fact, it had never been confronted with the separation problem), and if the theory was applied by the state but rejected by the ICC, the company would lose the return on part of its investment. An engineer for the state in that case testified that, "... he would not advise anyone to invest money in telephone properties where the station-to-station theory was adopted, because it might very well result in a failure of the owners to get a return upon a part of their property."[83]

There was also a genuine inability of the commissions to comprehend the toll and local services as being distinct and separable in any meaningful sense. Toll services grew as a by-product of exchange service and a differentiation became necessary only "... because of the difference in use and difference in expense being so great as between users."[84] The toll services required the construction of facilities, the costs of which should be borne by toll users, but toll service actually imposes no significant additional costs on the exchange operation itself.[85] Even if the toll services did not contribute financially to the support of local exchange plant, the very ability to make toll calls over local facilities greatly enhanced the value of exchange service.[86] The toll board provided a clear technological distinction between the services that strengthened the viewpoint that the board-to-board principle was a logical division. As the Nebraska State Railway Commission concluded, "... we see very little difference between the use of a subscriber's station for calling a long distance operator for the purpose of talking to some person in another city and for calling the grocer.[87]

But the expressions of the state commissioner also indicate a widespread belief that exchange costs could, at least theoretically, be allocated on some rational basis. That exchange plant could also be regarded as a joint cost to be recovered through value of service pricing was not appreciated at this time. Thus, at least some commissions felt the need to rationalize the board-to-board theory of asserting that exchange rates included a small "stand-by" or "readiness-to-serve" charge for the "cost" of connection to the toll networks.[88]

In the case before the Kansas Supreme Court cited above, the Commissioner (the equivalent of a master in a federal court), while recognizing the theoretical justice of apportioning exchange costs to toll, nevertheless rationalized, with some degree of logic, his rejection of the station-to-station theory in the following manner:

> The whole situation is met, in my opinion, by the present rate structure. Under the present rate structure, business telephones are charged from 50 to 100 percent more than resident telephones, although the investment in a business telephone, because of its proximity to the central office, is ordinarily very much smaller than in a residence telephone. This high charge to the business telephone is partly because of the use by business customers of the toll lines. In short, the toll line users now pay a higher rate because of their use of the toll service than they would if it were not for the toll service, which burden is taken off of the residence subscribers and meets the objective of the Commission in the presentation of this theory.[89]

This point is of some interest. If one adheres to the joint cost perspective of the telephone local exchange, the analysis does not logically have to be confined to the toll and local use of those facilities. In fact, the first comprehensive discussion of the joint cost characteristics of telephone service was confined to the consideration of only local use:

"The telephone utility is not engaged in merely providing connections to the central office, but engages to furnish connection between customers as well. It should be obvious that this is true, for the mere connection to the central office could be of no value to anyone, unless he was thereby connected with someone to whom he wished to speak. What the telephone utility is actually selling to each subscriber is connection with everyone to whom that subscriber might wish to talk...

"Thus, the expenses of providing interconnection for one subscriber became to a considerable degree common or joint costs with many other subscribers. Although it may be impossible to give a subscriber the service he desires without providing almost the entire plant, he alone need not bear all of the costs involved. Other subscribers also wish to use part of the plant he needs, and are willing to pay for this privilege. The possibility of serving these others may be viewed as a by-product of serving him."[90]

The joint cost perspective thus relates to the local as well as the toll services. And, indeed, local exchange service was priced on a value of service basis. The toll contribution under this theory also must be based on value of service considerations--and in extreme instances, this contribution could be zero if the value of the toll services was sufficiently low. Thus, the translation of the joint cost theory into a rate structure is a function of the relative economic importance of the local and toll services. And the Commissioner's comments quoted above are an important illustration of the common perception of the relative economic values of the local and toll services before 1930. Since toll users are also exchange users, the board-to-board theory did not mean that exchange subscribers were unduly burdened by that theory; it meant only that the value of service consideration was extracted through the rates for the more important service exchange service--and not through the toll rates.

And while commissioners were ambiguous in their consideration of separations on a theoretical level, they did have some comprehension of the economic characteristics of the toll and local services, and, in effect, value-of-service considerations weighed heavily in the final determination. Telephony magazine summarized the relative position of the two services in 1922 as follows:

> Local or exchange telephone service has come to be recognized as a business, social, and domestic necessity. So much has the community learned to depend on the telephone that it is now considered just as essential as the gas the family uses in cooking its meals, or as the street cars employed to go to and from work. Toll or long distance service comes near being a business necessity, but as a feature of social life it might be classed as a luxury.[91]

Thus, the ability of the toll services, already subject to some competition, to bear the additional costs that would be imposed on it by the station-to-station theory was doubted. The question posed by the New York Commission--"If these toll rates are increased, may not the effect be the killing of the toll business?"[92]--echoed the concern of state regulators elsewhere.[93]

Others, however, found that the adoption of the station-to-station theory would have little practical impact on rates. The common supposition was that usage was the relevant criterion for allocation of local exchange costs; despite the rapid growth of toll usage during this period, local usage was also growing. Both Missouri and Michigan found that toll usage was only around 2 percent of total usage, and therefore rejected detailed allocations that involved such an insignificant proportion of exchange costs.[94] The comprehension that the station-to-station theory could become a powerful vehicle for effecting significant reductions in local exchange rates, was in many instances lacking during this period; and when the theory was considered in that light, it was recognized that the toll services could not economically absorb any large portion of the local exchange costs.

While the reasoning of the state regulators was not always a model of cogency, it is fair to point out that they received no guidance in this matter from their legislative mandates, the courts, or even the academic community. Indeed, the nature of telephone costs and telephone rate-making received little attention from an academic community absorbed with the electric and transportation industries. A coherent analysis of the joint cost characteristics of local exchange plant did not appear until 1928--and that did not address the board-to-board and station-to-station issue [95]

Intermingled with the ad hoc rationalizations and the practical considerations that in effect controlled public policy decisions was, then, a genuine sense of confusion. The Missouri Public Service Commission, in attempting to weigh the two competing theories, noted that "Courts and Commissions in a general way have said that toll companies should pay to the local exchanges at least the cost incurred by the local exchanges rendered in handling the toll messages. In most cases, however, they do not say where this service begins and ends."[96] After discussing the pros and cons of each theory, and citing contrary decisions by other commissions, they decided to postpone any final determination of the issue pending a more detailed study, concluding, almost wistfully, that "In the meantime, the Court decisions may throw light on the subject."[97]

In only one instance, however, did a court pass directly on the question of whether the board-to-board or station-to-station theory was the proper method of separation. In 1918, the Kansas Public Utilities Commission allocated exchange expenses (not plant) on the station-to-station basis.[98] The issue was litigated before the Kansas Supreme Court in 1924.

The argument by the state in support of the station-to-station theory was based on the fact that the law requires such a separation. In this, it could rely on the prescription of the U.S. Supreme Court in the Minnesota rate cases. The court there held that:

> When rates are in controversy, it would seem to be necessary to find a basis for a division of the total value of the property independently of revenue, and this must be found in the use that is made of the property. That is, there should be assigned to each business that proportion of the total value of the property which will correspond to the extent of its employment in that business.[99]

The Kansas Supreme Court, while agreeing that a separation was probably a requirement of law, nevertheless rejected the station-to-station principle, reasoning that:

> The difficulty lies not in saying what should be done, but in declaring a rule by which it must be done.
>
> Where shall the line be drawn between local expense and long-distance expense covering any definite period of time? There is no law declaring what rule shall be followed. The Court is unable to see wherein the methods followed by the Commissioner were wrong.
>
> This [the Minnesota rate case] does not show how the value of the property shall be divided as between local and long distance service. That decision does not materially aid in the solution of this problem.[100]

The reasoning of the court is not particularly compelling when one considers that the Minnesota Rate Cases concerned railroads, and could hardly have been expected to solve the separation problem for the telephone industry. Moreover, the Kansas Public Utilities Commission had actually developed and applied the station-to-station theory.

The U.S. Supreme Court, in the same Minnesota rate cases, had also stated that "The rate-making power is a legislative power and necessarily implies a range of legislative discretion. We do not sit as a board of revision to substitute our judgment for that of the legislature, or of the Commission lawfully constituted by it, as to matters within the province of either."[101] Yet, the Kansas Supreme Court explicitly rejected the ratemaking theory formulated and adopted by the Kansas Commission in the exercise of its legislative function. This decision is not important for what it contributed to the legal or economic theory of separations, but it stands as a dramatic illustration of the low esteem in which state regulation was held by the courts at that time, and how the courts, by retrying a case de novo, could effectively stifle any inclination for innovation by a state commission. The court ruled that the rates prescribed by the commission (on the station-to-station basis of separations) were too low and therefore confiscatory (as judged on the board-to-board basis of separations). The decision also belied the allegation that only the federal courts were strangling state regulation.[102]

Thus, in the only instance before 1930 where a state commission actually applied the station-to-station theory of separations, the decision was overturned by the courts. Although the federal courts never directly considered the board-to-board versus the station-to-station controversy, the issue of separations arose indirectly as a jurisdictional question.

Jurisdictional Separations and the Control of AT&T

In 1924, the president of AT&T could tell its stockholders that although the Bell System consisted of a complex multitude of legally distinct corporate entities and operations, "In effect you might consider it as one institution and one company."[103]

That AT&T effectively controlled and managed the telephone network was a fact already recognized by the state regulators, and by the early 1920's the attempt to go beyond the corporate fiction of the Bell System, to extend regulatory scrutiny to the operation of AT&T itself, had become a major issue in state regulation. The controversy centered on the license contracts between AT&T and the Associated Bell companies, particularly the 4 1/2 percent license fee and the division of toll revenues. Obviously, a contract between two corporate entities, when one of the corporations was owned and controlled by the other, could not be taken as prima facie evidence of reasonableness. But to investigate AT&T directly enmeshed state regulators in matters of interstate commerce, and their legal authority to consider operations interstate in character, even in the exercise of their state regulatory powers, was in doubt.

Separations, then and now, have two related but distinct connotations; they are both a ratemaking theory and a division of regulatory authority between the state and federal jurisdictions. This duality was recognized in the Minnesota Rate Cases, which remained the leading authority for separations issues in the telephone industry prior to 1930. First, the Supreme Court found it necessary to make a separation in order to rule upon the company's contention that the prescribed intrastate rates were confiscatory. Such a determination required that the property, expenses, and revenues attributable to the intrastate services, and hence subject to the jurisdiction of the state commission, be separated from the property, expenses, and revenues attributable to the interstate services, which were subject to the jurisdiction of the Interstate Commerce Commission. This was necessary, secondly, to prevent the state commission from simply alleging that the deficiency in earnings was due to inadequate interstate rates. The issue could not be divorced from ratemaking. If the state refused to recognize all intrastate costs in prescribing rates, then those rates would be too low and therefore discriminatory against interstate commerce. Conversely, if interstate rates did not include their proper share of the costs, they would unduly burden intrastate commerce.

Presumably, then, the state commission could simply allocate all interstate costs to the interstate jurisdiction. Such an allocation was, seemingly, mandatory; and, in 1923, the contention of a Bell company that the prescribed intrastate rates were confiscatory was rejected in a federal district court because no separation of interstate and intrastate properties had been made by the company.[104] In practice, though, many state commissions adopted the expediency of considering the property of the company as a whole, and deducting interstate revenues in determining the intrastate revenue requirements. The Michigan Public Utilities Commission found this procedure compatible with the Minnesota Rate Cases; by accepting the reasonableness of interstate rates and the reasonableness of the division thereof, it avoided the jurisdictional conflicts with which the Supreme Court was primarily concerned.[105]

But the simple allocation of the interstate costs of the Associated Bell company to the interstate jurisdiction required that a state commission ignore the institutional and economic realities of the telephone industry.

In the Minnesota rate cases, the revenues, property, and expenses of the company in the state were known; the allocation that followed was an allocation of the entirety of the company's costs between the intrastate and interstate services. On this basis, there was a reasonable supposition that an allocation that was developed from a consideration of the company as a whole was itself reasonable.

But no such supposition could be made in relation to the Bell System. The revenues, plant and expenses of the operating subsidiary were known--although even this determination was difficult in the case of companies with multi-state operations. But the property owned in a state did not constitute the whole of the investment of AT&T in the state. AT&T Long Lines also owned facilities within the state. By 1926, Long Lines had turned over all of its intrastate toll service to the Associated Bell companies, partly to rationalize the division of the toll business and partly to escape state regulation of AT&T. Theoretically, at least, it would appear that since Long Lines facilities were devoted exclusively to interstate toll services, they were beyond the jurisdiction of the state commissions and entirely irrelevant to the allocation of the property of the Associated Bell company to the interstate toll services.

That, however, was not the case, and the reason lay in the license contracts between AT&T and the Associated Bell companies. These contracts, in addition to providing for the division of toll revenues, gave to AT&T almost unlimited discretion over the allocation of the toll business between Long Lines and the Associated Bell companies. The companies were required to route toll calls over the facilities of Long Lines even in instances while the operating companies had parallel facilities. Long Lines was accorded free use of the Associated companies' right-of-way, but the Associated companies paid Long Lines for the privilege of using its rights-of-way. Long Lines could develop only the profitable routes, while the operating companies were required to provide facilities for terminating interstate toll calls at more remote locations. The fixed costs of maintaining and operating these less profitable toll routes fell on the Associated companies, while Long Lines contributed to their support only as it used them. Within the operating territory of a multi-state company, the Bell subsidiaries were allowed to develop only the interstate toll routes not desired by Long Lines. In what was termed the "40-mile turnover," Long Lines completely divested itself of the relatively unprofitable interstate toll business for calls less than 40 miles. While centralized control over the planning and development of the toll network and the integration of intrastate and interstate toll facilities effected many operating economies and in that respect was fully justifiable and desirable, even the Associated Bell companies themselves were dissatisfied by the burden such arrangements sometimes placed on their operations.[106]

What made this problem more than a matter of cost allocation was the fact that, unlike the Minnesota rate cases where the entire property was consolidated under the ownership of a single corporation, the division of toll business and toll revenues was a contractual arrangement entered into by two legally distinct entities, the operations of one of which were entirely interstate in nature. Thus, the state commissions naturally turned their attention to attacking the corporate fiction of the AT&T organization. What they sought was the right to determine the reasonableness of the division of toll revenues on a factual basis, and this required the consideration of the property not only of the Associated Bell company, but also of AT&T Long Lines within the state. The North Carolina Corporation

Commission summarized the frustration felt by many state commissions in their attempt to regulate a company whose operations extended far beyond the boundaries of the state:

"Whatever the history and purpose behind the contractual relations between these companies, in the handling of toll messages, and in the much mooted contract by which the parent company receives 4 1/2 percent of all the gross revenues of the subsidiary company, the plain effect of these contracts is to deplete the revenues of this petitioner and the revenue that would be assignable to its operations in this state, if the whole property were operated by its real owner as a single unit, and explains at least in part why the subsidiary company always shows thin earnings, while the parent company has for thirty-seven years paid liberal dividends annually. . . and while this case was pending increased its regular dividend rate from 8 to 9 percent."[107]

The interstate toll business was for all practical purposes unregulated, and by all indications highly profitable.[108] That the Associated Bell companies should be requesting rate increases at the same time that the Bell System as a whole (which president Gifford pointed out was really "one company") was doing quite well only added to the indignation of the state regulators.

The license contracts, in providing for the division of toll revenues, specifically stated that interstate toll rates were based on the board-to-board principle of separations, and therefore the Associated companies would not receive any compensation for the toll use of local exchange plant. The federal courts before 1930 were not confronted directly with the board-to-board and station-to-station controversy, but they indirectly considered the matter in ruling upon the division of toll revenues. A challenge of the contractual division of revenues would, it would seem, require a determination of the costs intended to be covered through those contracts and thus would touch on the issue of separations. The problem came before the Missouri Supreme Court in 1922. In that case, Southwestern Bell had credited the local exchanges with 25% of the originating toll revenues carried over its lines, but only 15% of the originating toll revenues carried over Long Lines facilities. The latter represented the division stipulated in the license contract. But the Missouri Supreme Court was primarily concerned with the discrepancy and did no more than reject the company's division of toll revenues. It did, however, assert that, as a matter of law, it was incumbent on the company to demonstrate the reasonableness of the division of toll revenues under the license contract.[109]

The attitude of the federal courts was more lax. The first test came in the landmark case of Houston v. Southwestern Bell. Texas lacked a state regulatory commission at that time, and telephone service in the city of Houston was provided under a franchise contract. The original franchise had been granted in 1909, and had included a schedule of maximum rates. During the period of government ownership of the telephone system, the contract rates had been superseded by those imposed by the Postmaster-General; but, after control was returned to the private sector, the city of Houston attempted to reinstate the franchise rates. Southwestern Bell appealed to the Federal District Court, alleging that the franchise rates were now confiscatory. Although the city never made an independent determination of the matter, it argued that the Houston exchange was not credited with its proper share of the toll revenues. The Federal District Court sustained the allocation of 25 percent of the originating toll revenue to the exchange (the customary settlement contract at that time) as reasonable, adding that "...it is not practical to segregate the cost of handling long-distance messages as between local exchanges and long-distance lines."[110]

The decision was appealed to the U.S. Supreme Court in the case of Houston v. Southwestern Bell where the findings of the lower court were upheld in the following language:

> ...as the local lines were used to the extent of permitting a subscriber to connect from his home or office station with the long-distance lines through the long-distance station , the Company, in practice, and for the purposes of this suit, credited the local exchange with 25 percent of the long-distance toll revenues received from calls originating in Houston as compensation for the use made of the local plant in rendering long-distance service...the proportion so credited from long-distance tolls was greater than that allowed to any one of the eight independent exchanges in the state of Texas by independent long-distance toll lines with which they were connected;...the amount is larger than that paid by the Company to over 300 independent exchanges with which it has like connections; and...the allowance is one customarily approved by state commissions throughout the country. (emphasis added)[111]

Although the settlements contracts were based on the board-to-board theory, the Supreme Court apparently construed the 25 percent originating commission as compensation for toll use of local exchange plant. The practical effect of the decision, whatever the intentions of the Court may have been, was to sustain the board-to-board principle of separations. Even more, the Supreme Court gave probative value to the division of revenue as determined by the company, and placed the burden of proving its unreasonableness on the city.

It maintained the same position in respect to the 4 1/2 percent license fee (the part of the decision that drew most of the attention--and criticism--at that time). Against the contention of the city that the company did not introduce evidence showing the profits earned on the equipment, materials, and supplies provided under the license contract, the court held that it was sufficient that the company show that the charges were reasonable and lower than could otherwise be obtained from other sources. In other words, the state regulatory authority was required to accept the license fees as a valid contract between separate corporate entities absent a showing of bad faith or an abuse of managerial discretion. The Supreme Court's attenuation of the reach of the state regulatory power was widely regarded as a psychological blow to the prestige of state regulation if not a crippling of the ability to control a system that was increasingly interstate in nature.[112]

Even more perplexing was the court's ruling on the division of toll revenues. Not only did it disregard the precedent of the Minnesota rate cases requiring a separation of properties, it justified the division of toll revenues to the city of Houston by comparing that division to similar arrangements elsewhere. Since the division of toll revenues not only for Associated Bell companies but also the Independents was effectively determined by AT&T, there was a certain circularity in the court's reasoning.

The logic of the Supreme Court was carried to its extreme four years later in the case of Pacific Telephone & Telegraph Company, tried before a Federal District Court. Both Pacific Telephone and Home Telephone were AT&T subsidiaries operating in the state of Washington, and the state commission heard their petitions for rate increases together in a single docket. The City of Spokane intervened in the proceeding arguing that the division of toll revenues received by the Home Company was inadequate. The court rejected their contentions in these words:

> It is conceded that the amount received by the Home Company is substantially less than the cost of supplying the service. It is therefore contended that the arrangement is unconscionable. It is not apparent to us, however, how relief against that situation may be granted in this case. It appears, nevertheless, that contracts of the same kind--and in fact contracts less favorable to the small companies--are readily entered into all over the country by telephone companies, including independent as well as subsidiary companies. That such a division of the joint tolls, in spite of superficial appearances to the contrary, is not unwise or unconscionable would seem to be sustained by the fact that it embodies the customary and usual method of adjustment adopted by the parties, dealing in the light of practical experience in such matters (citation of Houston v. Southwestern Bell, supra). The special master found that, in view of all the pertinent considerations the contract was of great benefit to the Home Company and its patrons. We do not feel justified in disturbing that finding. (emphasis added)[113]

This, of course, was quite consistent with the Houston v. Southwestern Bell decision that value, not cost, should predominate in judging the reasonableness of the license contracts. That the District Court should have found a non-compensating contract nevertheless to be of "great benefit" is not altogether surprising. In 1926, the battle over the right of interconnection was still very much a contemporary event; the issue still arose on occasion--particularly in instances where an Independent was competing with a Bell Company for provision of local exchange service and desired interconnection with the Bell toll network.[114] In that context, where it was the exchange operations that were seeking connection with the toll network and not vice versa, it was natural to view the very ability of an exchange to provide a toll as well as a local calling ability to its subscriber as something of great value.

By the mid-1920's, it became increasingly obvious to many that the corporate organization of AT&T and, to a lesser extent, the growing importance of the interstate toll service, required effective regulation at the national level.[115] The state regulatory commissions, always jealous of their jurisdictional powers, were not yet ready to concede the obvious. Rather than clearly separating the intrastate and interstate services, they sought to consider them as an inseparable whole. The logic of technology and economics as well as the reality of the AT&T organizational structure were on the side of the state commissions. But the law was not, and that proved decisive.

The notion that considering the combined properties of the Associated Bell company and AT&T Long Lines in a state could provide a solution enjoyed some currency. North Carolina first proposed this in 1921 in the case cited above. Southern Bell contended that the commission should consider its entire property in the state as a whole (deducting interstate toll revenues, of course, from the intrastate revenue requirements) and that it was impossible to make an accurate separation of the <u>intrastate</u> property between the intrastate and interstate services. The commission responded with the rhetorical question:

> If this contention is sound with respect to the revenues and property of the American Telephone & Telegraph Company, which it has in this state through its ownership of all the stock of the Southern Bell Telephone & Telegraph Company, why not disregard the mere fiction of distinction between the revenue and properties of these companies, and let it extend to its logical boundaries and include the necessarily interrelated revenue and property within the state held directly by the American Telephone & Telegraph Company, at least for the purpose of determining if the contractual relations between these companies are upon an equitable basis and properly related to the value of the property and operating costs contributed to the service by each of the parties to the contract?[116]

Since the commission denied the petition for a rate increase, it did not act on the proposal. But the Maryland Commission did, arguing that since the telephone system was managed as a whole and that the benefits of that unification were undeniable, they therefore should be shared with all subscribers and not allowed to accrue solely to AT&T's stockholders.

Therefore, the commission prescribed rates based on the combined revenues and properties of both the Chesapeake & Potomac Telephone Company and AT&T in the state of Maryland. The case was appealed to a United States District Court, which rejected the commission's position. The reasoning of the court was that the division of revenues contracts were indistinguishable in principle from the 4 1/2 percent license fee, and that the Supreme Court in the Houston v. Southwestern Bell case had ruled that such contracts, absent a showing of bad faith, were binding on the Associated Bell companies.

But the court was fully aware of the problem with which the commission was trying to cope, and therefore felt compelled to demonstrate that although it was in sympathy with the position of the commission, the effective regulation of AT&T could only be accomplished at the national level:

> The experience of the men who built up this system of telephone service, and of those who now manage it, has convinced them that it can best be maintained by uniform arrangements, or substantially uniform arrangements, throughout the country, in the matter of license fees and the division of toll charges. Such uniformity will be impossible, if the reasonableness of the agreements for it are subject to the judgment of 48 distinct Commissions, made up of men of varying types of mind and approaching the subject from widely different points of view. Many of them are keenly alive to the desirability of reducing rates within their own jurisdiction, but they are not all of them gifted with sufficient breadth of imagination to put themselves in the place of those living in distant parts of the country. As a practical matter, the regulation of the common business of the National system must be left to the Federal government.
>
> The National Company [AT&T] may be getting an unjustifiably large return upon the real value of the property it uses in the public service... <u>A full and searching inquiry into such matters can in practice scarcely be made otherwise than under the auspices of the Federal government</u>. If, as a result of such investigation, it shall be established the National Company is putting undue and unnecessary burdens upon the telephone users of the country, it may be required to reduce its license fees or to permit the local companies to retain a larger percentage of the tolls paid for interstate service...

> Until the Federal authorities act, State Commissions and courts reviewing their actions cannot, in the absence of some substantial proof of bad faith or of manifest unfairness, go farther than to satisfy themselves that the National Company is not charging its local subsidiaries more than the service rendered by it to them is worth. They may not, so the Supreme Court has said, go into an inquiry as to how profitable the business may be to the National Company, or as to what percentage that Company earns upon its property used in the public service. (emphasis added)[117]

This did not, however, entirely foreclose the issue. In 1929, the State of Michigan brought suit in the Michigan Supreme Court to oust Michigan Bell Telephone, an AT&T subsidiary, from its franchise in the state. The suit was conceived as an attack against the 4 1/2 percent license fee, not an attempt to actually prevent Michigan Bell from providing telephone service in the state.

The case turned on the basis of a Michigan law requiring that "The stock, property and affairs of every corporation organized hereunder shall be managed by its directors." Michigan Bell was wholly owned by AT&T, and the record indicated that it was AT&T, through its ownership and control of Michigan Bell, and not Michigan Bell that was providing telephone service in the state. The court concluded that "The Michigan Company is no more engaged in conducting and carrying on a telephone business than is the ordinary station agent engaged in conducting and carrying on the railroad business of his employer,"[118] and, in a divided opinion, entered a judgment of ouster.

The relief granted was to deny the right of Michigan Bell to include the license fees in the development of its intrastate rates. The judgment was subsequently modified to allow "...the Michigan Bell Telephone Company upon its making proof thereof in accordance with the requirements of due procedure to have included in such computation of rates the reasonable value of the services rendered and the facilities furnished by the American Telephone and Telegraph Company...".[119]

The suit was a successful attack on the corporate fiction of the Bell System. The applicability of this line of reasoning elsewhere, of course, would have depended on the respective state statutes. Moreover, it was not entirely clear what the Michigan Supreme Court meant by the "value of the services rendered and the facilities furnished" by AT&T. AT&T continued to resist attempts by the Michigan Commission to secure factual data concerning the license fees. The issue was still in litigation in 1930[120] when the U.S. Supreme Court rendered its historic decision of Smith v. Illinois Bell which changed the whole complexion of state regulation.

The issue of separations, as it was understood before 1930, then, was inseparably bound to the issue of state regulatory authority over AT&T itself. Court-imposed restrictions aside, state regulatory power, however defined, could never have hoped to effectively control and regulate what was, in fact, one system and one company nationwide in scope. Maryland's aborted attempt to exercise control over one segment of that system was a demonstration of that futility. The Commission had considered, in aggregate, all of AT&T's interstate toll revenues collected in the state as well as its property in Maryland. Necessarily, it had to ignore the facilities located in other states that were used to carry interstate calls that originated or terminated in Maryland; nor could it consider the revenue from interstate calls terminated in Maryland, the charges for which were collected in other states. That information was not only unavailable, and difficult if not impossible to collect, but it also would have been meaningless. The interstate network was managed, economically and technically, as a whole.

The practice of rate averaging--the development of a uniform rate structure at least within each Associated Company and Long Lines itself--rendered any comparison of revenues and costs of a segment of the network meaningless. Only at the system level were revenues and costs systematically related and the profitability of the network determined.

The blame for what was generally conceded--even by some state regulators[121]--to be the ineffectual performance of state regulation--was largely laid on the role of the federal courts. While the restrictiveness of the courts was not the whole of the problem, the justness of the accusation was conceded by the courts themselves after 1926, as they came to realize how their rulings, especially in matters of valuation, but also in the matter of state regulation of interstate holding companies, had contributed to the plight of state regulation. The sympathy of the U.S. District Court for the objectives (but not the methods) of the Maryland Commission in the case cited above was obvious, despite the court's realization that the problem was one that could only be resolved by strong federal regulation.

But strong federal regulation did not exist in the 1920's, nor was the problem confined to the telephone industry. Throughout the decade, it was especially the gas and electric utilities that were the subjects of concern. The development of the holding company in these industries was only partially grounded in the economic and technical considerations that largely governed the integration and nationwide control and management of the telephone network. Rather, the holding company in the electric utility was primarily an incredibly complex pyramiding of holding and sub-holding companies, the principal objective of which was financial speculation. The Associated Gas and Electric System, for example, incorporated no less than 12 levels of pyramiding. The holding company as developed by these utilities, of course, depended on financial leverage, and in the wake of the debacle of 1929, more than 90 such systems collapsed.[122]

What aroused the public wrath even more than the role these holding companies played in the stock market crash was the fact that they had subordinated the provision of an important public service to pecuniary gain. Public control of the holding company was, by 1930, becoming a political necessity. It was to this necessity that the United States Supreme Court responded in that year.

Summary

Thus, separations before 1930 were considered in three distinct contexts: those of ratemaking, settlements, and the control of AT&T. In only one of these instances--that of settlements between Bell and the Independents--did the majority of state commissions favor any separations whatsoever, and then it was only because the issue of separations could not be avoided. Given the fragmented structure of industry between 1910 and 1920, the inclination of state regulators for the board-to-board method of settlements was understandable. Administration of the station-to-station principle would have been difficult, if not impossible. But state commissions did not so much prescribe settlements as they did ignore the problem altogether. This effectively left the issue to be determined by AT&T, and it consistently adhered to the board-to-board theory. But by the early 1920's, the Independent segment of the telephone industry was in clear decline, and Bell-Independent disputes, however bitter, diminished as an important public policy issue. The Independents, who served primarily rural areas, were hard hit by the depression of the 1930's, and in their preoccupation with survival, contributed little to the development of separations and settlements until 1943.

As a ratemaking theory, separations was much debated before 1930, and, in most instances, rejected in favor of statewide ratemaking and value-of-service pricing. To some extent, statewide ratemaking was a response to the active role played by cities in the ratemaking process; any allocation of costs was a contentious issue, and the refusal to make such allocations--a refusal generally upheld by the courts--eased the political as well as administrative burden of state regulation. But, more important, the state regulators were active promoters of the telephone industry, a boosterism that led to the convergence of public and corporate policy on the objective of universal telephone service. Statewide rate-making and value-of-service pricing contributed to this objective.

Finally, separations were bound to the issue of state regulatory control over the operations of AT&T itself, and it was this aspect that largely dominated the separations question during the 1920's. In the absence of effective national regulation of the telephone industry, the states became increasingly interested in matters of interstate commerce, and were unwilling to draw what would have been an unrealistic boundary between the intrastate and interstate operations of what was more and more a nationwide telephone system, managed and controlled to a significant extent by AT&T itself. But the attempt to extend state regulation was as unworkable a state regulatory policy as it was legally untenable. The courts, too, avoided separations, and adopted the even more unrealistic position that the contractual relationship between AT&T the associated Bell companies was to be regarded, absent a showing of bad faith, as legally binding on the state commissions.

It is somewhat erroneous, then, to characterize the separations issue before 1930 as a debate between the board-to-board and station-to-station theories of separations. Although this controversy did surface during this period, the primary conflict of public policy was between separations and no separations. The environment in which the separations issue arose in the period 1930-1943 was profoundly different from the context in which the issue was considered prior to 1930, an alteration that can be traced to three primary influences: a Supreme

Court decision in 1930, the establishment of the Federal Communications Commission in 1934, and, by the mid-1930's, a growing economic imbalance within the telephone industry itself--an imbalance that was all the more significant for separations because it paralleled the jurisdictional division of regulatory authority.

3. THE CHICAGO RATE CASE: SEPARATIONS AND THE LAW, 1930-1943

On September 13, 1921, the Illinois Commerce Commission issued a show cause order requiring Illinois Bell Telephone Company to demonstrate why its current rates should not be reduced. Hearings were conducted from November 17, 1921, until July 31, 1923. On August 16, 1923, the Commission ordered a reduction in rates for four classes of coin box service, effective October 1, 1923. Illinois Bell appealed to the federal courts to enjoin the enforcement rates it alleged to be confiscatory. So began what became known as the Chicago Rate Case, perhaps the most famous demonstration of the futility of state regulation at that time. (Some would argue that the New York Telephone case, which took over fifteen years, was an even better illustration.)

During the twelve and one-half years in which the case was litigated, it appeared in the Supreme Court of the United States three times (not including two appeals that were denied) and in lower federal courts three times. The rates originally prescribed in 1923 did not go into effect until 1934, at which time Illinois Bell was required to refund some $19,000,000 to over one million customers. The refunding itself required the efforts of more than 2,000 employees, and cost $2,575,412.84 according to the company's own estimates.[123] The case at one time or another touched on every major regulatory problem of the day: valuation, depreciation, the 4 1/2% license fee, state powers to regulate interstate holding companies, separations. The delays imposed by an overly-cautious judicial system resulted in a case that was begun in one economic era and was concluded in an entirely different economic era. The final appeal to the U.S. Supreme Court brought a further irony; the case as tried by the District Court[124] was so unsatisfactory to the parties that they both appealed the decision. The Illinois Commerce Commission appealed because the District Court found the prescribed rates confiscatory; Illinois Bell appealed because it claimed the court had under-valued its property. The Supreme Court rejected Illinois Bell's appeal on the grounds that it could not appeal a decision that was already in its favor.[125]

Smith v Illinois Bell

The case came before the Supreme Court for the second time in 1930 as Smith v Illinois Bell Telephone Company, which became the landmark decision regarding separations in the telephone industry. The U.S. District Court,[126] in making its findings, had considered the company's property as a whole. Illinois Bell had, in fact, submitted separations on the board-to-board basis, but the court found it more convenient (and somewhat less favorable to the company) to pass on the combined property, revenues, and expenses of the company in the state of Illinois. The appellants, however, protested that the division of toll revenues was not equitable. The Supreme Court, in requiring that a separation be made, also commented as follows:

> In the method used by the Illinois Company in separating its interstate and intrastate business, for the purpose of the computations which were submitted to the court, what is called exchange property, that is, the property used at the subscriber's station and from that station to the toll switchboard, or to the toll trunk lines, was attributed entirely to the intrastate service. This method was adopted as a matter of convenience, in view of the practical difficulty of dividing the property between the interstate and intrastate services. The appellants insist that this method is erroneous, and they point to the indisputable fact that the subscriber's station, and the other facilities of the Illinois Company which are used in connecting with the long distance toll board, are employed in the interstate transmission and reception of messages.[3] While the difficulty in making an exact apportionment of the property is apparent, and extreme nicety is not required, only reasonable measures being essential [citations omitted] it is quite another...matter to ignore altogether the actual uses to which the property is put. It is obvious that, unless an apportionment is made, the intrastate service to which the exchange property is allocated will bear an undue burden--to what extent is a matter of controversy.[4] 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.[127]

That passage is the basis of the contention that the U. S. Supreme Court, in1930, mandated the station-to-station theory of separations. On its face, it is difficult to conclude otherwise. But was the Supreme Court, in fact, prescribing a ratemaking formula?

Ratemaking is a legislative function, and judicial review customarily accorded the legislature or its delegated authority a range of discretion in this matter. The Supreme Court recognized this tradition in the above quote. However, there is also a line of cases in which the Supreme Court has directly ruled on the ratemaking process. In Northern P. R. Co. v North Dakota ex. rel. McCue, the court ruled unconstitutional a state statute that set a rate for the transportation of coal that was, in and of itself, inadequate to yield a fair return on the carrier's property used to provide the service.[128] The distinction is that a fair return is due each class of traffic, but that that requirement does not extend to detailed classifications of services.[129] The Supreme Court, in the Smith case, gave no indication that it was attempting to establish toll as a separate class of traffic, the return on which is to be separately established and considered. It neither cited nor in any way relied upon the North Dakota and similar cases.

Rather, the Smith decision was grounded solely on the necessity for a jurisdictional separation, reviving the often ignored precedent of the Minnesota Rate Cases:

> 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 (citation of Minnesota Rate Cases).[130]

The case must be read in its entirety, and the clear intent of the Supreme Court was to demarcate the jurisdictional boundaries of state regulation. The City of Chicago had intervened in this case, contending that AT&T, not Illinois Bell, was the real defendent. This again raised the question of how far state regulators in the exercise of their powers over intrastate commerce, could extend their investigation into matters of interstate commerce. The Supreme Court denied this contention. The regulation of interstate toll rates was vested in the Interstate Commerce Commission, and beyond the authority of the state commission:

In disregarding the distrinction between the interstate and intrastate business of the company, the court found it necessary to pass upon the fairness of the division of interstate tolls between the American and Illinois companies... But the interstate tolls are the rates applicable to interstate commerce, and <u>neither these interstate rates nor the division of the revenue arising from interstate rates was a matter for the determination either of the Illinois Commission or the court</u> in dealing with the order of that commission. The commission would have no authority to impose intrastate rates, if as such they would be confiscatory, on the theory that the interstate revenue of the company was too small and should be increased to make good the loss. [emphasis added][131]

Contrary to the then existing judicial precedents, the commission was not bound to accept the reasonableness of the division of toll revenues prescribed by the license contracts; nor did it have the burden of proof in establishing the reasonableness of those contracts. Rather, it could simply ignore them. The whole problem would be circumvented if the intrastate and interstate properties were separated. Neither jurisdiction could claim to be burdened by the other if the costs of rendering the interstate and intrastate services were properly allocated to the respective jurisdictions. The same principle was applied to the 4 1/2% license fees. It was not enough for the company to cite the contractual fee. Rather, the court held:

> ...we see no reason to doubt that valuable services were rendered by the American Company, but there should be specific findings by the statutory court with regard to the cost of these services to the American Company and the reasonable amount which should be allocated in this respect to the operating expenses of the intrastate business of the Illinois Company...[132]

The Smith decision was widely held to be a significant strengthening of state regulatory powers: "...that it shows a clear inclination on the part of the Court...to sustain state power over what are in point of law and fact and tradition essentially local problems can hardly be doubted."[133] The separation of the property used in intrastate service, and the separation and allocation of Western Electric earnings and the cost of AT&T's managerial services to the intrastate jurisdiction were regarded together as a clear demarcation of the authority of the state regulatory commissions.

The issue before the Supreme Court in Smith v Illinois Bell was confiscation. The court could make no determination on that issue until the costs attributable to the jurisdiction that prescribed the contested rates were established. To establish those costs, it was necessary to separate the property, revenue, and expense of the company between the intrastate and interstate jurisdictions. There is nothing to indicate that the Supreme Court intended to rule on the ratemaking controversy of the board-to-board and station-to-station theories of separations, but the language of the court seemed to require separations on the basis of the latter theory.

The distinction between ratemaking and jurisdictional separations necessary to test a contention of confiscation is often a difficult one. Although the Supreme Court was concerned only with the latter question, jurisdictional separations in fact, if not intention, are a ratemaking theory to the extent that they define the total revenue requirements of the interstate toll services. And the question of toll compensation to local exchange joint costs is purely a ratemaking matter. As was discussed above, the "allocation" of no local exchange costs to the toll services can be defended if the value of the latter is sufficiently low. The joint cost characteristics of local exchange plant was not widely appreciated in 1930, even by economists.[134] Nevertheless, the Supreme Court clearly crossed that fine line between jurisdictional separation and ratemaking.

It should be noted that most controversies of this sort occurred in relation to the railroad industry, where the nature and extent of joint costs was hotly debated, as evidenced especially in the famous Taussig-Pigou debate. Taussig had argued in 1913, that the prevalence of joint costs in the railroad industry explained (and necessitated) the widespread practice of value of service pricing. Pigou on the other hand, held that joint costs were much rarer than had been supposed, that most railroad costs were in fact allocable, and that value of service pricing in that industry were simply due to monopolistic price discrimination. Pigou's viewpoint eventually prevailed,[135] but at the time of the Smith Case, neither courts nor commissions had accepted his perspective.[136]

The value-of-service criteria for recovering joint costs, however, has serious practical difficulties, especially when considered in a legal context. Under this theory, costs are "allocated" only in an ex post facto sense. The allocation vehicle itself, however, is value of service; and it cannot be otherwise because there is no objective relationship between use and cost. Joint costs cannot by definition be subdivided and assigned to specific services. They can only be recovered, in the aggregate, by the sum of the revenues generated by the individual joint products.

To a court that is interested in clearly and unequivocably dividing properties and expenses between legal jurisdictions, this approach is hardly satisfying. Moreover, the practical application of the value-of-service theory of recovering joint costs comes very close to being an allocation on the basis of revenues.

And, in the Minnesota rate cases, the Supreme Court had rejected the attempt to apportion costs on the basis of revenues; obviously, in their view, to do so was an exercise in circular reasoning, and the court held that " . . . the value of the use, as measured by return, cannot be made the criterion when the return itself is in question."[137] While this did not preclude other methods of allocating joint costs on a value of service or value of use basis, commissions found that "use" theories, couched in engineering terms, best withstood criticisms of the Courts.[138] Of course, this was no major inconvenience. "Use" can be measured in any number of ways, and although railroad rates were largely based on value of service or other policy considerations, they were rationalized by the selection of whatever "use" theory produced the desired results.[139] Moreover, it was easy for a court when faced with a detailed engineering formula allocating joint costs, to confuse "use" with cost causation. Thus, the U.S. Supreme Court was well imbued with the notion that joint costs can, in fact, be allocated.

This seems to have been the case in the Smith decision. The appellants argued that the Illinois company was not being properly reimbursed for the interstate toll use of its local exchange plant. Against this presumption of cost causation, the lower court, as its actions were interpreted by the Supreme Court, had adopted the board-to-board method of separations merely "as a matter of convenience".[140] And despite the difficulty of making a separation, the Supreme Court cited cases where such an apportionment was made. To refuse to make a separation on the grounds of inconvenience would be to place a burden on the intrastate services. Here, the Supreme Court cited, in a footnote, the Houston v Southwestern Bell decision, in which 25% of the originating toll services were assigned to the exchange, as an illustration of how much the exchange could be burdened if no apportionment were made. It is not inconceivable that the Supreme Court was misled by the language of the Houston v Southwestern Bell decision, in which the court then held that the compensation was made for the "use made of the local plant in rendering long distance service."[141] The board-to-board and station-to-station theories are concerned with the allocation of plant, and the former implies that no compensation is received from the toll services. But settlements, or the division of toll revenues, is an allocation of expenses, and definitely involves toll compensation for local exchange expenses. It was not altogether an easy matter to reconcile the apportionment of a substantial portion of toll revenues to the local exchange with the board-to-board theory of separations.[142]

Thus, the Supreme Court, in the Smith v Illinois decision, left a legacy of ambiguity in the matter of separations. There was no doubt that the Court required jurisdictional separations on a station-to-station basis, and that it was defining interstate commerce as extending from subscriber station-to-subscriber station. But the decision did not, in fact, resolve the controversy of the board-to-board versus the station-to-station theory of separations as a ratemaking theory. The industry, the regulators, and the courts still considered this controversy to be an open question even after 1930.

Lindheimer v Illinois Bell

Four years later, the Supreme Court was given an opportunity to clarify its position on separations. The case had been remanded to the lower court,[143] which attempted to separate the intrastate and interstate properties in conformance with the Smith v Illinois Bell decision. In so doing, it allocated exchange revenues as well as plant and expenses to the interstate services. Thus, the allocation of local exchange plant and expenses to the interstate jurisdiction under the station-to-station principle of separations did not lead to a reduction in local exchange rates (and an increase in interstate toll rates) because the reduction in costs assigned to the intrastate jurisdiction was offset by a corresponding reduction in the revenues assigned to that jurisdiction. In essence, this meant only that the local exchange costs allocated to the interstate services were being recovered through the charge for local exchange service and not through the interstate toll rates themselves. This change in the formal definition of jurisdictional revenues and costs in no way altered the fact that the local exchange rates had to be sufficient to generate revenues equal to the total costs of the local exchange operations--just as they had to be under the board-to-board principle of separations. The effect, of course, was to nullify the ratemaking implications of the Supreme Court's prior decision. The allocation of exchange revenues was contested. The Supreme Court disposed of the issue thusly:

> We found that separation was essential to the appropriate recognition of the competent governmental authority in each field of regulation. Accordingly, we directed that as to the value of the property employed in the intrastate business in Chicago, and as to the amounts of revenue and expenses incident to that business, separately considered, there should be specific findings... On the further hearing, that difficult task was so well performed that no question is now raised as to the allocation of property to the intrastate and interstate services, respectively, in the Chicago area, the allocation being made on the basis of use. Nor is there dispute with respect to the separation of expenses. Appellants object to the separation of revenues, insisting that certain revenues were improperly assigned to the interstate, instead of the intrastate, business.[144]

The Supreme Court's approval of the allocation of exchange revenues as well as exchange plant and expenses to the interstate jurisdiction effectively negated the ratemaking implications of the Smith v Illinois Bell decision. The Lindheimer decision made clear that the concern of the court in Smith v Illinois was solely with the jurisdictional aspects of separations. This position was reinforced a year later in Chesapeake and Potomac Telephone Company of Baltimore v West. In that case, all parties stipulated that 85% of the company's property and revenues were attributable to the intrastate services. No separation was made, but the Supreme Court, in the absence of any objections, found no reason to require a separation.[145]

Why, then, had the Supreme Court in 1930 required an expensive and time consuming separation of local exchange plant, expense and revenue, if the effect of such a separation was precisely the same as if the much simpler board-to-board theory of separation had been used? On the one hand, the Lindheimer decision could be viewed as a graceful retreat from the position of the court in Smith v Illinois Bell.

The Michigan Public Utilities Commission had intervened in the Lindheimer case, and submitted an elaborate brief that not only asserted the joint cost characteristic of local exchange plant, but also the fallacy of attempting to allocate joint costs on a "use" basis.[146] Certainly, the Supreme Court was made fully aware of the ratemaking implications of its prior decision on separations. Moreover, it was during this period that the court itself was rapidly reversing its historical posture towards state regulation, and was willing to grant more and wider administrative discretion to the commission.[147] Finally, the Lindheimer decision was rendered less than two months before the Communications Act of 1934. The ICC had not actively regulated the telephone industry. Congress was at that time actively considering the establishment of the FCC to fill that void, and the court may have wanted to leave the issue to be resolved by strengthened federal regulation.

On the other hand, the Lindheimer decision was not unexpected. In 1931, a commentator on the Smith v Illinois decision interpreted it to mean that, in making an allocation, "... there should be contained in the interstate revenues a factor attributable to the service rendered by the local exchange. Conversely, an accurate computation of the return due from local business must exclude from the rate base a fraction of the exchange property and from the charge to operating cost, expenses incurred in interstate communication."[148] This was not inconsistent with the view that many state regulators held of the local exchange rate. Not fully appreciating the joint cost characteristic of the exchange plant, they rationalized the failure to allocate exchange plant and expenses to the toll services with the theory that the exchange rate includes a charge to cover the "cost" of access to the toll board. Consequently, given this view, the strict separation of the interstate and intrastate services required that the portion of the local exchange rate which is charged for access to the interstate toll service should be allocated to the interstate jurisdiction.

Moreover, the court had simply accepted the lower court's allocation for the purposes of the suit. It did not actually pass on the question of the allocation of exchange revenue to the interstate toll service. Yet, the refusal of the Supreme Court to rule on this issue, despite the fact that the allocation of exchange revenues to the interstate services was contested, is a significant indication that the Court was carefully maintaining a distinction between jurisdictional separations and separations for ratemaking purposes. Thus, the board-to-board and station-to-station controversy, insofar as it related to ratemaking, was still an open question.

Separations Cases: 1930-1943

The problem of interpreting and applying the precepts of the Supreme Court was left to the state commissions. The single area of agreement was that the Supreme Court had required a separation study on a station-to-station basis. The decade following the Smith and Lindheimer decisions was spent not only in debating the economic, legal, and ratemaking aspects of separations, but also in developing the procedures for making such studies. Although the Court had in 1930 seemed to reject relative usage as the method of distribution "... without considering other factors of time and labor entering into relative use,"[149] it accepted relative use as the sole allocation criterion in the Lindheimer decision.[150] While there were some who pointed out that distribution of the costs of usage insensitive plant on the basis of use made little economic sense, as will be discussed below, the allocation of plant costs by a relative use formula, as approved in the Lindheimer case, was almost universally accepted by 1943.

But, as a practical matter, the Smith and Lindheimer decisions did little to resolve the ratemaking issue of the toll contribution to the support of local exchange plant, which remained entangled with the related issues of confiscation and the legal limits of the states' jurisdictional powers.

Interstate rates were based on board-to-board costs. The states had no authority to change this, and the ICC, until 1934, and the FCC after 1934, did not prescribe otherwise before 1943. The Associated Bell companies complied with the legal requirement for separations, and in so doing, consistently allocated local exchange revenues to the interstate jurisdiction in proportion to the local plant and expenses so allocated. The Supreme Court's requirement, they held, was a "petty allocation".[151] AT&T's position was entirely defensible. The Supreme Court had, in effect, approved such an allocation of exchange revenues in Lindheimer v Illinois Bell. Moreover, the Interstate Commerce Commission, which, as the Supreme Court had itself pointed out, was the only regulatory agency that had the power to prescribe interstate toll rates on the station-to-station basis, had not acted. The allocation of local exchange costs to the interstate service, when the rates for that service did not include such costs, would effectively deprive the Associated Companies of the right to recoup legitimate costs of providing telephone service.

Although some states, notably Michigan and Oklahoma, adhered to the board-to-board principle of separations pending the final determination of the matter by the FCC,[152] most states that considered the question interpreted the Supreme Court decision as mandating the station-to-station principle of ratemaking.[153] It is of some interest to note that this was not always the result of a literal interpretation of the Smith v Illinois Bell decision. The Wisconsin Commission, among others, refuted the attempt of the Bell Company to allocate exchange revenues to the interstate services because "this Commission cannot in exchange rates demand a charge which is part of interstate toll traffic. That violates the commerce clause of the Federal Constitution."[154]

Thus, the Supreme Court's edicts contained a fundamental contradiction. It had defined interstate commerce as extending from the subscriber station to subscriber station for interstate toll calls, and required jurisdictional separations on that basis. In allowing the allocation of exchange revenues to interstate toll services, it had briefly extricated itself from the ratemaking implications of its separations principles, but it could hardly mandate that state commissions, however indirectly, establish interstate rates as part of the exchange rates. And when interstate rates were based on the board-to-board principle, and exchange costs were allocated on the station-to-station principle, the contradiction could no longer be ignored.

The conflict between the separations required by the Smith decision and the ratemaking realities of the telephone industry came before the federal courts in Southwestern Bell Telephone Company v City of San Antonio in 1933. The case is especially interesting inasmuch as it demonstrates the contemporary confusion over the very nature of telephone service itself. The master was obviously perplexed by the Smith decision, and interpreted it as requiring no more than a recognition of "uses" to which telephone plant is part. But, in his perspective:

> Toll cannot use exchange plant and exchange cannot use toll plant. The customer uses the plant either in connection with transmitting toll calls or in connection with transmitting exchange calls, but the use is always customer use. The customer pays for that use. If the customer pays for it but once, and a reasonable amount when he pays it, he has no complaint; not does the company have a complaint if it is compensated for each use of its property. [emphasis added][155]

The master, in upholding the board-to-board method of separations, clearly viewed exchange plant as equivalent to electric or gas distribution systems. The plant was dedicated to the use of the customer, and the customer should pay for that plant; whether the customer uses those facilities for toll or local connections was irrelevant. The District Court, however, took the diametrically opposite position in requiring a station-to-station separation. It cited the "irrepressible rate conflict between toll and exchange patrons... The effect of approving the plaintiff's method of allocating the uses, revenues, and expenses of its plant would result in loading the exchange rate with rates and expenses which are partly attributable to long-distance business, without adequate compensation therefore out of toll revenues."[156]

Again, we have a demonstration of how separations theory can lead to different conclusions depending on the level at which it is applied. By viewing separations at the customer level, it is obvious that if the individual customer does not pay for the facilities dedicated to his or her use, someone else will be burdened with that cost. Viewed at the exchange level, it is equally obvious that the toll system and the toll user benefit from the connection to the exchange, and therefore should help support it (although the court's supposition that "use" can be equated with cost causation was, of course, erroneous. Moreover, the District Court pointed out that Bell's argument supporting board-to-board separations was inconsistent with its rate structure. Local calls made from a pay station cost five cents, but if the call was made to the toll board, the nickel was refunded to the customer. Also, San Antonio had measured service, but when an exchange customer called the toll board, that charge was not applied. The board-to-board theory of separations, if consistently applied, would require that in both these instances, the customer be charged for accessing the toll board on the same basis as any other local call.

But a U.S. Circuit Court of Appeals took a different attitude when the case was brought before it. The court cited the Houston v

Southwestern Bell and the Smith and Lindheimer decisions as alternative methods by which a separation could be made--apparently seeing no conflict between them. The former case, in which a percentage of toll revenues were credited to the exchange, was viewed as the simplest method available. But the case did not turn on legal interpretations of the Supreme Court's view on separations procedures. More important was the fact that toll rates were actually based on the board-to-board theory, while the U.S. District Court had apportioned local exchange plant on the station-to-station theory:

> If the toll rate for the communication be fixed so as to cover the use of the exchange property so apportioned to the toll business, the owner will be compensated for the use of all his property when exchange rates are likewise fixed or a basis of the apportionment. <u>But if one rate-making body apportions the exchange property together with its expense and maintenance and the other does not, the inconsistency may result in serious injustice.</u> [Citation omitted.] The required apportionment has many practical difficulties which might be mitigated by legislation or by conference and agreement among the ratemaking bodies... <u>If, as we understand, there is no direct legislation on this point and no specific action by the rate-making bodies concerned, we think it was the managerial right of the company to initiate a mode of dealing with the situation</u>, but subject to control by the rate-making bodies and subject to the criterion of the court... 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... The finding of a formula for an apportionment or the finding that none is practicable seems rather a question of fact to be settled in the first instance by the trial court than one of law which the reviewing court can or ought now to attempt to solve. [Emphasis added][157]

The court remanded the case for reconsideration, and appeal was made to the U.S. Supreme Court, which refused to review the case.[158] The Court of Appeals decision, and the Supreme Court's refusal to grant a writ of certiorari, was consistent with the changing attitude of the court in the mid-1930's.[159] Ratemaking was a legislative function; the courts would review a case to determine whether the decision was grounded in reason and fact, but would not substitute its ratemaking formula for that of the commission. The primary issue was confiscation, not ratemaking. What was apparent to the court--and to the industry as well as the regulatory agencies--was the fact that a consistent separation procedure would have to be developed and applied at both the state and national level.

Another test of the meaning of the Supreme Court Smith v Illinois decision was its applicability to <u>intrastate</u> separations between the local and toll services. If the Supreme Court's intent was to establish toll as a separate class of service, that classification should therefore be consistently applied to the intrastate as well as interstate toll services. The question was raised on several occasions in state courts, and decisions in these courts in the 1930's paralleled the Southwestern Bell v San Antonio case. In Oregon, the commission denied the propriety of allocating exchange revenues to the toll service, although it required a station-to-station separation at the same time that intrastate toll rates be based on the board-to-board theory. The reasoning was somewhat novel: the toll department of the Pacific Telephone and Telegraph Company was an "exchange user", and although not the exact equivalent of other exchange customers, it nevertheless used exchange plant and should be required to pay for that use.[160]

Pacific Telephone and Telegraph appealed to an Oregon Circuit Court. In reviewing other court decisions on this issue, it found that although the Smith v Illinois decision had mandated a station-to-station separation, it "said nothing as to the effect to be given to the rate structure."[161] While the law was inconclusive on the question of allocating exchange revenues to the toll services--the Supreme Court in the Lindheimer decision not having passed directly on the issue--the Circuit Court upheld the company's contention because the commissioner had "...through the medium of a separate valuation of exchange property and separate determination of exchange rates juggled revenues and expenses as between the two branches of the telephone company's business, in such a way as to decrease the expense and increase the revenue exchange, and increase the expense and decrease the revenue of toll." [Emphasis in the original.][162]

The Oregon Supreme Court upheld that position. The commission had the power to prescribe ratemaking methods. It could not allocate exchange expenses on the station-to-station basis, when toll rates were based on board-to-board separations, unless it also allocated exchange revenues to the toll service. The commission had to consider the company's property as a whole, and the issue of confiscation dominated any of the supposed ratemaking implications of the Supreme Court's decisions.[163]

The Wisconsin Supreme Court, in a similar case, used even stronger language:

> What the Supreme Court of the United States was doing was to require interstate business to be separated from intrastate business. It said nothing whatever about the allocation of revenues as between exchange and interstate toll service.
>
> The Supreme Court did not say that the exchange subscriber might not be charged as a part of the exchange rate for the transmission of a message from his station to the toll board. What the Supreme Court said was that the intrastate business could not be made to bear a part of the expense fairly attributable to interstate business... The Supreme Court of the United States did not concern itself upon what basis intrastate rates should be determined, provided they were compensatory.

> The law relating to the segregation of intrastate from interstate tolls does not control the action of the commission in making intrastate allocation of exchange and toll property.[164]

Thus, the state regulatory commissions were under no legal compulsion to adopt either the board-to-board or station-to-station theories of separations for intrastate toll ratemaking purposes. The only requirement was consistency between ratemaking and separations to protect the property of the telephone company from confiscation. In the late 1930's, there were substantial reasons for a state commission adherence to the board-to-board theory of ratemaking for intrastate toll services--a subject that will be discussed further below. Of major significance, however, is the fact that separations as a ratemaking philosophy was still a moot question.

In their consideration of separations in the years 1930 to 1943, state regulatory commissions were primarily occupied with the legal interpretation of the intention and import of the Smith v Illinois case and with the development of practical methods for effecting the only uncontested portion of the Supreme Court's decision--the necessity of making a jurisdictional separation on a station-to-station basis. However, some commissions, prodded not only by the Smith decision but also by the increasing economic importance of the toll services, began to give serious consideration to the whole issue of telephone ratemaking and the nature of telephone service and costs.

The dialogue between the master and the U.S. District Court in the Southwestern Bell v San Antonio case was representative of the prevailing views on the matter of separations and ratemaking. The focus was on cost causation, and whether the customer or the service was viewed as the unit of "use" was critical in determining attitudes towards separations as a ratemaking theory. The proponents of the station-to-station theory were on especially untenable grounds in assuming that toll use of the local subscriber loop and station equipment actually created costs for the local exchange operation. The Supreme Court, in the Smith v Illinois case at least, seems to have drawn that erroneous conclusion. The commissioner in the Oregon case cited above extended this reasoning to its logical conclusion: he assigned a disproportionately large share of the company's depreciation charge to exchange plant on the theory that exchange plant is "subject to heavier and more constant usage, which would increase the depreciation rate."[165] As a practical matter, value of service considerations were a dominant if not controlling factor in commission decisions on separations even before 1930, but this theory was not systematically developed in reference either to the joint cost characteristics of local plant or the interdependency of demand for telephone service.

In 1931, the Wisconsin Public Service Commission confronted the practical problem of applying the precepts of the Smith v Illinois Bell decision. The Wisconsin Telephone Company had presented a relative usage study for allocating exchange costs between local and toll. The commission, however, looked at separations as both a jurisdictional and a ratemaking problem. Therefore, it entered into an extended discussion of toll ratemaking as it was affected by separations. No conclusion was reached in this case, but the commission did set forth the notion that value of service could be a consideration in the distribution of joint costs, citing the transportation industry as a precedent for this line of reasoning. Moreover, it considered how separation results on the station-to-station basis could be translated into a toll rate structure. Previously, the Wisconsin Commission and others had held that the exchange rate, under the board-to-board theory, incorporated a "readiness to serve" charge in the local exchange rate. Now, it considered extending this principle under the station-to-station theory of ratemaking: large toll users would pay a larger "readiness to serve" charge and toll calls to these users would be relatively low priced. Occasional toll users, on the other hand, would pay a lower "readiness to serve" charge, but a higher rate on any toll calls. Since local exchange plant costs are, with the exception of switching costs, independent of usage, it seemed only natural that they be recovered through a fixed charge. A rate based on actual usage that incorporates fixed costs not only unduly restricts usage of that service but also makes problematical the exact recovery of the fixed costs so allocated.[166] There was considerable merit in this approach; incorporating a value of service charge for fixed costs in toll rates is economically inefficient because it prices toll service above incremental costs. The Wisconsin Commission did not further develop this ratemaking approach, and the notion of recovering the local exchange costs allocated to toll through a flat-rate toll charge independent of toll usage all but disappeared from the history of separations.

The most elaborate exposition on the nature of telephone service costs and toll ratemaking was provided by the Michigan Public Utilities Commission in 1935. Indeed, their position had been formulated a year earlier in a comprehensive brief on the matter of separations submitted to the U.S. Supreme Court in the Lindheimer case. Briefly, the commission described the joint cost characteristics of local exchange plant and demonstrated the fallacy of distributing those joint costs on any basis other than value of service, citing the available academic literature in support of its position. The relative usage formula for allocation of joint costs only masked the problem; cost was not correlated to use, and relative usage was therefore a value assignment that simply assumed that a minute of local use had an economic value equal to a minute of toll use.

Moreover, the Michigan Commission went on to attack the "predilection to infer independent property elements correlative with apparently independent regulative authorities,"[167] i.e., jurisdictional separations of any sort, and proposed that the jointly used property be considered as a whole. Thus, the commission would consider the entire revenues--including the interstate toll revenues, expenses, and plant of the utility in the state, and determine intrastate rates on that basis. The commission had, in fact, been employing that method of ratemaking for many years. But the commission was concerned with more than the theoretical difficulty of dividing the indivisible. The interstate services were consistently earning a higher rate of return than the intrastate services. The FCC had only been recently established, and had as yet taken no action on interstate toll rates; thus, the interstate toll services were still substantially unregulated and correspondingly profitable. A strict jurisdictional separation should require that the intrastate properties be considered alone. Therefore, a state commission would be put in the position of raising intrastate rates to avoid confiscation of the company's intrastate property at the same time that the company's overall earnings on all property was, because of the high return earned on interstate toll, quite sufficient. What the commission wanted was the right to reduce intrastate rates by the amount of excess profits earned by the interstate services, or, in its words, to equalize the rate of profit for all services.

The allocation of local plant to the interstate toll services by the relative usage criteria would do little to alleviate the excess profits being earned on those services. But, the commission, as well as lacking the authority to set interstate toll rates, was unsuccessful in developing a precise formula for applying value of service principles to the overall development of joint rates. The Michigan Commission, then, never acted on the theories it had so elaborately set forth.[168]

4. THE DEVELOPMENT OF SEPARATIONS AS A PUBLIC POLICY

The development of separations from 1930 to 1943 in commission and court cases was, then, inconclusive. The Smith v Illinois decision had acted as a catalyst, provoking much discussion but yielding no definite legal rulings. The necessity for jurisdictional separations was unquestioned, but the ratemaking controversy between the board-to-board and station-to-station theories was still unresolved. In 1942, ten states still defined exchange rates as incorporating a charge for access to the toll board. The position of many other states was ambiguous.[169] The final resolution of the issue of toll ratemaking, then, was not to be found in court decisions, but in considerations of national policy. What was required, and what was not forthcoming until 1943, was decisive action by the only entity that had authority to prescribe ratemaking principles for the interstate services--the FCC.

Federal Regulation and Jurisdictional Conflict

By 1930, the failure of the state regulation to fulfill its intended functions could be easily documented. Yet, the fault could not entirely be placed on the state regulators themselves. Besides the perennial lack of funds and expertise, the essentially local utilities which commissions had been created to regulate were now interstate operations, important aspects of which were beyond the jurisdiction of state regulation. Nor had the courts proved friendly to the compromise between unregulated monopoly and public ownership that largely underlay the development of state regulation.

While individual states reassessed state regulation and its failures and attempted to develop solutions--the New York Commission to Investigate Regulation, cited above, being an example--the movement to rejuvenate state regulation was primarily centered in the efforts of the National Association of Railroad and Utility Commissioners (NARUC). NARUC had its inception in 1887 when Judge Thomas Cooley, first Chairman of the ICC, proposed the need for continuing state and federal coordination and cooperation under our system of dual regulation. By 1930, NARUC was not only the established vehicle for effecting such cooperation, but also functioned as a forum for the discussion of national regulatory problems. More important, NARUC, through select committees composed of state regulators, undertook detailed studies of specific regulatory problems, and participated in legislative hearings as a kind of lobbyist for the state commissions. While NARUC lacked legal status as such, and while its position and recommendations concerning particular issues was neither binding on the individual states nor necessarily representative of the opinion of all state regulators, it nevertheless had a dominant influence in the resolution of regulatory issues.

The attempt to revive the state commissions as an effective form of public utility regulation had three facets: internal reform, an attack on the federal courts, and the establishment of federal regulation that complemented rather than usurped the powers of the state regulators. Indeed, legislative reform of the mandate of the state commission was approached as enthusiastically as the original establishment of state regulation. Between 1931 and 1934, many states, conforming more or less to the model legislation developed by NARUC, did act to strengthen the powers of state regulation.[170] While these actions did confer important new powers such as the right to temporarily suspend proposed rates, the needed reforms largely lay beyond the jurisdiction of the state legislatures.

The need for strong federal regulation of the telephone industry was obvious to most state regulators by 1930. The long and expensive rate cases of the 1920's, in which state regulation had been notably unsuccessful in securing the detailed information they required concerning the interstate holding company operations of AT&T, had conclusively demonstrated that need. AT&T had itself steadfastly refused to honor requests for such information,[171] and the withdrawal of Long Lines from the provision of intrastate toll services was at least partly motivated by the desire to foreclose state investigation of that entity.[172] Even the Smith v Illinois Bell decision, which enhanced the ability of states to secure concrete data on the costs of AT&T's services, was not an adequate solution. State by state investigation of these matters was not only expensive and time consuming, but also of dubious value; it was found, for instance, that AT&T's alleged license contract costs consistently and substantially exceeded the license fees charged to the company.[173] Whether AT&T was actually providing these services at a loss or whether it was presenting misleading or erroneous cost data was a question that could be answered only through a nationwide investigation that was beyond the resources and legal jurisdiction of the individual state.

But the states were as suspicious of federal regulation as they were cognizant of the need for it. Their experience with dual regulation had largely centered on the ICC and the transportation industry, where they soon found that in cases of jurisdictional conflict, the federal agency held the preeminent power. The theoretically clear split between state and federal jurisdiction did not exist in practice, and the state regulatory power over the transportation industry was rapidly attenuated by federal preemption. The symbol of what was regarded as federal usurpation of state regulatory power was the Shreveport rate cases[174] in 1914, in which the U.S. Supreme Court upheld the right of the ICC to, in effect, prescribe intrastate rates to replace those authorized by a state commission on the grounds that the latter were too low and hence discriminatory against interstate commerce. In the Transportation Act of 1920, Congress, responding to the anguished protests by the states, provided for cooperative proceedings between the ICC and the states in matters of common concern, but the jurisdictional preeminence of the ICC was left unchanged.

The jurisdictional conflict, of course, mirrored larger political conflicts, as had the earlier conflicts between state and municipal regulation. Thus, NARUC's concern with preserving state power found considerable sympathy in Congress. NARUC's political activities were not unsuccessful, and the enactment of the Johnson and Communications Acts of 1934 largely reflected the state's solution to the problems of encroachment on state regulatory powers by, respectively, the federal judiciary and federal regulatory agencies.

The Johnson Act simply denied the lower federal courts jurisdiction to review a state commission rate order when a prompt remedy was available to the utility in the state courts. This did not prevent eventual appeal to the U.S. Supreme Court, but it ensured, for those states that complied with the requisites of the act, that the case would not be tried de novo in a federal court, and that review by the Supreme Court would be on the basis of the record developed by the state commission. The importance of the Johnson Act was not only that it provided an alternative to the dual trial system, but also and more importantly, that it conveyed an increased prestige and dignity on state regulation itself.[175] And it was during this time that the Supreme Court, perhaps in response to the political debate that encompassed the passage of the Johson Act, began a process of restoring to the commissions a wider range of administrative discretion in the exercise of their ratemaking powers.[176]

The Communications Act was greeted with the same sense of euphoria. NARUC had, indeed, actively lobbied for national regulation, and the provisions in that act for the preservation of state power reflected the position of NARUC. Section 2(b) provided that "...nothing in this

Act shall be construed to apply or to give the Commission jurisdiction with respect to (1) charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service by wire or radio or any carrier..."[177]

Moreover, the Act provided for cooperation between state regulators and the FCC, including authorization for the FCC to assign cases to be heard (but not decided) by a joint board composed of state commissioners who had an interest in a particular problem. And, indeed, there was extensive cooperation between the states and the FCC throughout this period. NARUC was instrumental in prodding Congress to appropriate funds for the FCC's Telephone Investigation;[178] individual states provided assistance to the FCC in this inquiry and the FCC, in turn, made available information and personnel to aid them in their intrastate rate cases. Telephone accounting rules and regulations were cooperatively developed and then successfully defined by NARUC and the FCC before the federal courts when AT&T sought to enjoin their adoption through legal action.[179] By 1938, NARUC was able to promulgate a detailed plan for state and federal cooperation in the regulation of the telephone industry.[180]

Yet, the Communications Act of 1934 had not resolved, or even addressed, the problem of separations, and at least some state regulators appreciated that, despite the neat theoretical definition between intrastate and interstate services, the fact remained that almost every telephone facility, including exchange plant, was used in the provision of interstate toll services, and therefore the potential scope of federal regulatory power was, indeed, very wide.

The problem of jurisdictional conflict, then, was not resolved, but only latent. Certainly, the position of many state regulators on the issue of separations was informed by their concern for protecting their jurisdictional powers. Despite their wariness, however, some state regulators were among the strongest proponents of federal regulation of the telephone industry.

The Michigan Public Utilities Commission in 1935 recognized that "the mere exercise of supervision and control is not an end in itself and there is little point in insisting that, because most of the traffic is intrastate commerce, the dominant powers of regulation must be distributed to the states and withheld from the nation.

"The national character of the business organization and its operations has already been portrayed. To decentralize it in the interest of making its parts more amenable to state control would be detrimental. On the contrary, a national telephone system is so desirable that the regulatory and supervisory power should be concentrated and enlarged so as to extend to every operation of the Bell System. We have indicated the intermingled nature of the various operations, and how, as a result thereof, the regulation of one affects the others, and we conclude that the regulation of rates for intrastate services is genuinely a matter of national concern."[181] And, as one state commissioner put it, federal regulation "... does not necessarily mean that the field of state activity is thereby diminished but rather that the states for legal and constitutional reasons cannot adequately regulate the business enterprises now occupying such a large part of the interstate commerce. Federal regulation... means that business previously not regulated by any public authority is being subjected to public scrutiny. As stated, the sphere of the states is not thereby diminished."[182]

This logic, however, could not be pushed too far. The contradiction between the preservation of state regulatory jurisdiction and the economic realities of a telephone system that was, in fact, nationwide in scope, could be concealed but not reconciled by such generalities. The states relied heavily on the notion that public policies that transcended state jurisdictional boundaries could be resolved by coordination and cooperation rather than by coercion by the federal agency. And, this process worked extremely well at least through 1943. But the tension remained, and jurisdictional conflict was an important consideration in the opposition of many state regulators to the adoption of the station-to-station principle, which was equated with the invasion of the jurisdictional province of state regulation.

Toll Rate Disparity: Intrastate - Interstate

Jurisdictional separations, as encompassed in the Supreme Court decision and the tensions of dual regulation, was only one dimension of the problem that made separations the dominant issue in the regulation of the telephone industry in the late 1930's and early 1940's. By 1930, the proposition that the telephone network was an economically and technically integrated system could hardly have provoked any dissent. The overriding regulatory problem, as the Michigan Commission and others clearly recognized, was not to separate it in some artificial manner but to regulate it, for the first time, as an integral whole.

What was especially irksome to state regulators was the earnings disparity between the individual associated Bell Companies and AT&T as a whole. Much of this disparity was due to the fact that the interstate toll services were substantially unregulated. Its magnitude is revealed by the following comparison between the percentage return on net book cost earned by the Associated Companies and long lines between 1913 and 1939.[183]

Period	Associated Companies	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

The decreased rate of return earned by Long Lines in the latter two periods are largely accounted for, respectively, by the four voluntary interstate toll reductions made by Long Lines between 1926 and 1930, totalling some $11 million,[184] and the adverse effects of the depression.

The simplest and most obvious task of the newly created federal commission was to reduce the earnings of Long Lines. The Michigan Commission had hoped to accomplish this through the "equalization of the rate of profit" --i. e., by reducing the Bell System overall earnings by a reduction in intrastate rates. But the FCC moved instead to reduce the level of Long Lines interstate rates. By 1934, Long Lines earnings had begun to recover from their depression low and on four occassions between June 1, 1935 and January 15, 1937, Long Lines agreed to reductions totalling over $20 million,[185] and thereby created a jurisdictional disequilibrium that has never been entirely corrected.

The Postmasters' General schedule of 1919 had established a uniform intrastate and interstate toll rate schedules. Some divergencies occurred with the interstate toll reductions initiated by AT&T in 1926, but not until the reductions effected by the FCC did the problem of toll rate disparity become a critical issue.

The states, of course, were embarassed and annoyed that the intrastate toll rates under their jurisdiction were higher than interstate rates for calls for corresponding length and duration. One remedy for the situation was to apply the extant interstate rate schedule to the intrastate services. As early as 1930, New York had required New York Telephone to adopt the existing interstate schedule for intrastate toll services.[186] The Pennsylvania Public Utility Commission in 1938 required such conformance on the grounds that the higher intrastate rates constituted discrimination against intrastate commerce.[187]

In that case Bell argued, among other things, that the disparity in rates was grounded in a disparity in costs, and submitted evidence to support the fact that Long Lines costs, on which the interstate were based, were substantially lower than Pennsylvania Bell's toll costs. But the Commission rejected this argument, pointing out that in many instances, the same facilities were used for both intrastate and interstate toll calls. It could find no justification for a higher rate for an intrastate toll call than for an interstate toll call when they both used the same facilities and the only difference was that the interstate call, in fact, used more facilities than the intrastate call. Bell appealed the decision, and the case eventually came before the U.S. Supreme Court. The issue of confiscation had not been raised, and the Supreme Court dismissed Bell's appeal for want of a substantial federal question. [188]

Michigan followed this precedent, and, like Pennsylvania, prevailed in the subsequent court appeals. [189] Georgia and Louisiana were able to negotiate conformance with Southern Bell in 1937 without resort to formal hearings on the matter; Indiana and Illinois also were successful in negotiating uniformity. [190] But, as most regulators realized, the problems went much deeper than the question of discrimination itself.

Toll rate disparities reflected, in part, the fact that the jurisdictional cleavage of the industry paralleled an economic and technological cleavage within the industry.

The disjunction between the toll and local services was not reflected in aggregate growth statistics. The growth of toll services, to be sure, was impressive, but it only reflected the growth of the industry as a whole. Between 1915 and 1940, toll revenues as a percentage of total telephone operating revenues in the Bell System only increased from

24.8% to 26.8% (although World War II brought the figure to about 39% at the time the FCC adopted the station-to-station theory of separations).[191]

Rather, the disjunction was reflected in the changing characteristics of toll service itself. Early technical improvements were aimed at extending the distance at which a call could still be audible, and not until 1915 was it possible to make a transcontinental toll call. But once the capability was developed, long-haul message grew proportionately more than short-haul messages. By the mid-1930's carrier systems, which were first employed in 1918, and other methods for effecting line-haul economies were being utilized at least in the longer-haul, more heavily trafficked segments of the toll network.

In 1930, AT&T developed a General Toll Switching Plan for systematizing toll connections in a more economical manner. Operating efficiences and improvements such as the combined line and recording method, whereby a single operator recorded all the details of the call as well as made the connection, were equally important in reducing the costs and increasing the quality of toll service. In 1920, it took, on the average, fourteen minutes to set up a toll call, and in only 10% of the calls did the customer actually hold the line while the operator made the necessary connections. By 1935, the average time to set up a toll call had been reduced to 1.4 minutes, and 92% of the customers were able to hold the line while the connection was made.[192]

To what extent actual economies of scale were an important factor in the toll rate disparity problem is not clear. Certainly, the industry and its regulators were well aware that a fundamental shift and imbalance in the economics of the industry was occurring as the downward trend in toll costs coincided with an upward trend in local exchange costs.[193] But the issue was clouded by the organizational structure of the Bell System and the method of toll ratemaking itself.

The organization of the toll network, as recounted above, was largely dictated by Long Lines, which thereupon reserved to itself the more lucrative segments of the business--the backbone toll routes. Thus, in 1935, almost 90% of the toll messages handled by the associated companies were for distances less than forty airline miles. By vitrue of the "forty mile turnover", Long Lines handled no messages in this category, and over 50% of its messages were for distances greater than 140 miles.[194] Moreover, Long Lines was able to rely on associated companies' feeder routes to terminate its interstate toll calls, paying for those facilities only as they were used. Correspondingly, Long Lines was able to ensure, by its assignments of toll business, the full utilization of those facilities under its ownership.

This, of course, raised the whole issue of the division of toll revenues and their adequacy. But the FCC, in negotiating the rate reduction with Long Lines, had not even broached the question. Consequently, the historic pattern of uniform settlements without regard to the costs of individual companies was continued, although cost-based compensation was developed in some instances.[195] Originating commissions were increased in 1926, 1927, 1936, and 1937, partly to reflect higher costs and partly to protect the Bell associated companies from any adverse effects due to reductions in Long Lines' rates. In the late 1920's, several of the associated companies undertook cost studies themselves, reflecting their dissatisfaction with the originating commission schedules as well as with the division of the toll business, and

Long Lines also responded with a study of its own. The results showed a wide variation between costs and commissions actually received: New Jersey, for example, found that it was incurring a deficit of 8.5 cents per toll message handled for Long Lines, while AT&T's study showed that in 1928 the associated companies as a whole received originating commissions some $2.2 million in excess of their actual costs.[196]

While the originating commissions and prorates constituted little more than 2% of associated companies' revenues in 1936, they comprised 24% of Long Lines' gross revenues in that year,[197] and, therefore, the equitability of these payments--both to individual companies and to the associated companies as a whole--had an important bearing on the reasonableness of Long Lines interstate rate schedule.

There was, therefore, substantial doubt that Long Lines costs, as defined by their accounting records and including their payments to the associated companies, were a meaningful standard for toll rates. Even more, interstate toll rates were themselves the product of an averaging process represented by the uniform rate structure based only on time of day, type of call, duration, and distance. The interstate schedule, then, gave no indication of toll costs within a limited jurisdictional area such as a state. The Utah Commission's attempt to conform intrastate rates to the interstate level was rejected by the Utah Supreme Court on just this basis: interstate rates that were themselves not based on costs could not be used as a yardstick for measuring discrimination.[198]

The toll rate disparity problem encompassed not only the public policy conflict between discrimination and costs in the ratemaking process, but also the issue of separations itself. The states were put in the position of either accepting the interstate schedule for intrastate toll purposes, or tolerating the discriminatory effects (and adverse public opinion) of maintaining the higher schedules. And if the interstate schedule did not, for any of the reasons discussed above, reflect the costs of toll service within a state, the effect of eliminating the toll rate disparity would be to throw any toll revenue deficiencies back on the exchange operations at a time when there was widespread belief that exchange rates were as high as subscribers were willing and able to pay.[199]

There were, of course, elements of jurisdictional rivalry in the toll rate disparity problem. But the rapid disintegration of what had been a reasonably uniform state and interstate toll rate structure also contradicted what most regulators, including the FCC, felt to be sound public policy. The telephone was used extensively for social as well as business purposes; the most often cited analogy to telephone service was the postal system, and, indeed, uniformity was regarded as the "postalization" of toll rates. In the conflict between discrimination and cost-based pricing, the preference of regulators was clearly to eliminate the former.

As a practical matter, most states did not act to eliminate the disparity, and by May of 1937, the FCC staff could publish a study in which it found that "the Bell System's toll rates, both interstate and intrastate, could be reasonably grouped under eighteen basic schedules."[200]

Toll Rate Disparity: Interstate

The FCC, in negotiating rate reductions with Long Lines, had created problems for itself as well as for the state commissions. Long Lines confined its activities exclusively to the interstate services and therefore the FCC was able to evaluate its earnings without making any separations studies. (This, of course, required acceptance of the existing division of toll revenues and originating commission payments.) But the six multistate Bell associated companies also conducted interstate toll business within their own operating areas under their own tariffs. Thus, the Long Lines' rate reductions in the mid-1930's also created a disparity among interstate toll rate schedules. Only one company, Southwestern Bell, was persuaded to reduce its interstate rates to match Long Lines rates after 1937. The remainder refused to negotiate such reductions, and the FCC had no basis for measuring the reasonableness of their rates without undertaking to separate their interstate and intrastate properties. The FCC, however, found that it could resolve its toll rate disparity problem without recourse to a separations study.

In 1939, the Washington Department of Public Service had filed a complaint with the FCC that the interstate rates of Pacific Telephone and Telegraph were unreasonable and discriminatory against telephone users in the State of Washington. Pacific Telephone maintained two interstate rate schedules: An "interstate Pacific" schedule applicable to business with the company's operating territory and "other interstate" schedule (which was actually Long Lines' rates) applicable to toll calls originating or terminating--but not both--in Pacific Telephone's territory. The determination of the reasonableness of Pacific Telephones interstate toll rates, of course, required a consideration of the costs of providing that service and, for the first time, the FCC was directly confronted with the problem of separations.

The FCC specified neither how the study was to be conducted nor on what basis, and the Pacific Company submitted a separation based on the board-to-board theory which attempted to demonstrate that it earned no more than a reasonable rate of return on its toll costs.

In addition to the board-to-board versus the station-to-station controversy, it was confronted with the dilemma that if it accepted any separations study, the real differences in toll costs among the various associated Bell companies would have to be reflected in a continuing interstate toll disparity. The FCC staff had already reflected its preference that the interstate toll business be taken over in toto by Long Lines--a reorganization that would not only ease the FCC's regulatory problems but would also preserve the uniform rate schedule.[201]

The FCC therefore proceeded to destroy the validity of the separations study submitted by Pacific Telephone so that it could base its decision on other grounds. The line of reasoning by which it accomplished this objective was somewhat strained. The company claimed that toll rates were constructed on the board-to-board theory of separations (which they were), but the FCC noted that toll rates in California were based on the station-to-station theory. While the intrastate toll rate structure of California had no bearing on the interstate rate issue, the FCC then evaluated the company's separation study from the perspective of the station-to-station theory. Since the company's board-to-board study showed only a minimal level of earnings on the interstate services, the determination of toll costs on the station-to-station basis would obviously have showed a deficit in the earnings for those services. On this basis, the FCC concluded that:

> This is further proof that the separation study basis is either unsound or so inaccurate as to destroy any probative value thereof. The acceptance of such a result requires the assumption that the management of the Pacific System has been satisfied to operate its interstate toll service at cost or at a loss when it has been, for many years, practically free from restriction by any regulatory body. No such assumption is justified, neither are we entitled to believe that the state regulatory authorities have permitted the intrastate operations to carry the entire load of producing the overall profits of the Pacific System.[202]

Having discredited the company's separations study by demonstrating that the existing rates were not compensatory under a costing theory that was neither used by the company to develop those rates nor accepted by all state commissioners, the FCC then concluded that those same rates which were found to be too low should be reduced. This conclusion was reinforced by comparative analysis. Since Long Lines interstate services in the Pacific territory used substantially the same facilities and personnel as did Pacific Telephone, there could be no difference in costs, and thereby no justification for a rate differential. But, this reasoning was hardly compelling since Long Lines rates were based on nationwide average costs and had no necessary relationship to toll costs in the Pacific territory.

The FCC was not simply dodging the separations issue. It was enunciating a basic principle of toll ratemaking, i.e., the principle of nationwide rate averaging. Cost differentials did not obviate the need to avoid discrimination:

> 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.'[203]

In addition to its importance as a basic public policy in the regulation of the telephone industry, nationwide rate averaging greatly simplified the separations problem. All that was required was the determination of aggregate interstate costs. But the impetus for this came not from the FCC, but from AT&T itself, which 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 of the associated Bell companies could no longer be postponed, and when the FCC announced its intention to negotiate further reduction in interstate rates in April of 1941, AT&T filed a formal petition before that body requesting a determination of the methods and principles to be used for jurisdictional separations.

The Development of Separations as a Public Policy

In the wake of AT&T's petition for an FCC decision on the issue of separations--a decision that would apparently be binding on the states, NARUC requested that the hearings be conducted on a cooperative basis. Before such an arrangement could be worked out, the FCC succeeded in negotiating a $14 million reduction in toll rates without, however, resolving the separations question. Subsequent to this case, NARUC and FCC established a joint committee to investigate not only the issue of separations, but also Western Electric costs, depreciation practices, and other matters of common concern to the state and federal regulators.

But separations was the first priority. By the early 1940's the absence of definitive separations principles and procedures had thrown the industry into a near state of chaos. This was most clearly indicated by the shifting position of AT&T. On the issue of separations principles, AT&T's adherence to the board-to-board theory continued even after the establishment of the FCC. While competition was a diminishing factor (the telegraph companies, for example, were requesting rate increases at the same time telephone toll rates were being reduced), it did not go unnoticed that in practice, AT&T's pricing philosophy was "the greater the extent of monopoly, the higher the rate."[204] The FCC's preference for negotiating rate reductions necessarily left this basic ratemaking principle undisturbed. In the 1941 rate reduction, to be sure, the FCC had gained an understanding that settlements between Long Lines and the Independents as well as the Associated Bell companies, which were tied to toll revenues, would be adjusted to prevent their absorbing part of the reduction in the interstate toll rates. But AT&T had voluntarily done this in the past, at least for the Bell System companies, and it in no way constituted a basic change in the division of revenues.

That AT&T would push for an inquiry into an issue that was presently resolved in its favor was a reflection of their concern for the FCC's method of effecting reductions in the interstate rates of the Associated Companies. The interstate rate disparity problem had not been completely resolved (not until 1947 would all of the Associated Companies conform, as a matter of course, to Long Lines rate schedules); but the FCC had clearly set a course wherein interstate rates would be set only on Long Lines costs, with conformance of the Associated Companies effected by the prohibition against discrimination. This process, of course depended on the ability of the FCC to reject cost justification for rate differentials by discrediting the methods and accuracy of the Associated Companies' separations of interstate toll costs. By requesting that the FCC itself establish those separations procedures, AT&T was apparently attempting to foreclose this method of ratemaking. The FCC could hardly reject cost studies based on principles that it had itself sanctioned.

While the concern of AT&T in the above instance was centered on the actual methods by which separations were effected, the ratemaking controversy of the board-to-board and station-to-station principles of separations was no less an issue. The state commissions had responded, when they responded at all, to the Smith v. Illinois decision in a variety of ways. Consequently, exchange rates in some states were still based on the board-to-board basis, while in others they excluded the station-to-station costs of interstate toll service. And although the relative use criteria was generally accepted, there was no conformity in its application. An environment in which some of the costs of providing telephone service went unrecognized by any regulatory jurisdiction solely because of differences in separations procedures was anathema to the industry, and by 1942, AT&T was particularly stressing the need for uniform jurisdictional separations procedures.

The state commissions also recognized the need for a final determination of the separations issue, albeit for different reasons. Their dilemma was summarized by the 1942 "Report of the Committee of Five, cooperating with the Federal Communications Commission in Special Telephone Studies":

> Several of the state commissions had become concerned over the recurring and substantial reductions in interstate telephone toll rates. The reason for their concern was founded upon several considerations. It is well known that the cost of supplying toll service has declined much more rapidly than the cost of supplying exchange service, and, under the Bell System's method of stating rates, whereby costs in connection with toll service are included in the exchange rate, it was believed that the increasing burden upon the exchange placed the state commissions in an unfavorable position with respect to regulation of intrastate rates. There was the further consideration that recurring reductions in interstate toll rates resulted in discriminations between interstate and intrastate toll rates and the equalization of the two scales further removed the possibility of adjustment in exchange rates in the future.[205]

The states fully realized that, jurisdictionally, they were caught on the wrong side of the diverging cost trends within the industry. They also were keenly aware that the toll rate disparity problem was at least partially a result of the inequitability of the division of revenues (which were not based on state by state costs) and the very organization of the toll network itself.[206] In addition to questioning the separation of toll properties, state regulators began to suspect that the practice of including toll terminal charges (the local exchange "costs" attributable to toll) in the local rate was untenable in view of the changing economics of the industry. Finally, the lack of definitive separations procedures rendered state ratemaking an exceedingly difficult task. The Pennsylvania Commission, for example, had petitioned for FCC assistance in separating the intra-state properties of Bell of Pennsylvania; when the FCC replied that it had not yet ruled on this issue, the rate case came to a "lame termination."[207]

The consensus of the state regulators on the necessity of developing practical methods for jurisdictional separations did not extend to the issue of whether these separations should be based on board-to-board or station-to-station costs. The NARUC Committee of Five studiously avoided making a recommendation on this point,[208] indicating the conflict of opinion among individual state commissioners.

Theoretical discussions of the issue showed no marked inclination to improve. In 1940, a commissioner from Michigan would still ponder the paradox that whereas a non-toll user paid for a service that he or she did not use under the board-to-board theory of stating local rates, that subscriber also received an undue benefit from the station-to-station method of stating local rates. The latter resulted from the fact that the subscribers' facilities were not used in the toll service, but it was impractical to separate plant and base rates on a customer by customer basis.[209] There was, however, a growing appreciation of the changing economic characteristics of the telephone industry; the historic view that the toll services were of great value to the exchange operations was yielding to the perspective that the exchange network was of great value to the toll services, and should be compensated for the valuable and costly origination and termination functions that it performed for the toll services.

Undoubtedly, jurisdictional considerations impeded this view. But adherence to the board-to-board theory did not necessarily imply that the exchange should not be compensated by the toll services for the use of its facilities. One view would be to treat the toll company as a "subscriber" to the exchange services. Compensation could be effected through settlements although the jurisdictional limits of the FCC would end at the toll board. This argument was advanced by a member of the NARUC Committee of Five in a supplemental statement filed with the 1942 report of the Committee:

> It is my view that the procedure for separating property, revenues, and expenses among exchange, state toll, and interstate toll services, should be on a board-to-board basis, so as to avoid conflict between state and federal jurisdictions.
>
> The cost of that portion of the toll message that cannot be completed without the use of exchange facilities should be compensated for by mutual agreements arrived at by and between the toll companies and the owners of exchanges. All such agreements should be subject to approval and, if necessary, revision of the appropriate state bodies having jurisdiction of the rates for exchange services.
>
> This method would relieve the Federal Communications Commission of the necessity of making any separation of property, revenues, and expenses as between exchanges and interstate toll lines, and would avoid all jurisdiction disputes. It would accomplish what Congress set out to do in the Communications Act, and would comply with the rule laid down by Chief Justice Hughes in the case of Smith v. Illinois Bell. . .[210]

That separations as a ratemaking procedure was still an open question was widely recognized. There was no legal compulsion to establish local rates on the station-to-station principle, nor was there a legal bar to stating those rates on a board-to-board basis. Even adherents of the board-to-board recognized that the method of stating the rates was a problem distinct from the basis of cost determination.[211] The board-to-board method of stating local rates did not obviate the fact that those rates included costs attributable to the interstate jurisdiction as defined by the U.S. Supreme Court. While the attempt to define the limits of the federal jurisdiction as ending at the toll board and at the same time charging to those services costs for facilities beyond that point, had some emotional appeal, it could be sustained neither in law nor in practice.

The FCC itself was also beset by the same conflicting internal considerations towards the adoption of a definitive set of separations procedures. The separation of the toll properties of the associated Bell companies, as well as the possibility of allocating local exchange costs to the interstate jurisdiction on the station-to-station basis, implied relatively higher interstate toll rates than if only Long Lines costs and the existing division of revenues were considered in setting those rates. Moreover, the FCC preferred negotiating rate cases rather than resorting to the lengthy process of formal hearings and valuation of the company's property. This was not simply a matter of convenience; previous rate reductions had done little to reduce Long Lines earnings as economies of scale and growth of demand--which was partly due to the stimulation of demand by rate reduction--interacted to produce a continuing upward trend in profits. Only by the relatively speedy technique of negotiation could the FCC hope to keep pace with the economic dynamics of the services it was empowered to regulate. But the issue of separations could no longer be avoided, and on June 9, 1942, the FCC formally convened Docket 6328: In the Matter of Methods for Separating Telephone Property, Revenues, and Expenses.

As formal hearings on Docket 6328 began in August of 1942, the sole contribution of state commissions favoring the board-to-board theory of separations was a series of letters expressing their support of that theory. AT&T also submitted a brief espousing the board-to-board principle, but it did so in a more consistent manner--rejecting both the FCC's jurisdiction and the notion that the toll services should make any contribution to exchange plant. The basis for that conclusion lay in the argument that the Communications Act of 1934 had superseded the Smith v. Illinois Bell decision, and that Congress intended to give the individual states jurisdictional authority over exchange facilities, even if such facilities were partially used in interstate commerce.[212] This was apparently the first time such a contention had been made by either AT&T or a state commission.

Only two state regulatory agencies (New York and California) submitted formal briefs in Docket 6328, and they both supported the station-to-station theory of separations. Although keenly aware of the economic advantages of the station-to-station theory in respect to local exchange costs, it is of some interest to note that neither viewed their support as trading jurisdiction for reduced rates. To the contrary, the station-to-station theory, in the words of the California Commission, "...is in harmony with the provisions of the Communications Act, reserving to the State Commissions the right to regulate intrastate rates. Clearly this right is limited if the Federal Communications Commission should find that the intrastate revenues must contribute to the support of interstate service through the use of the board-to-board separations methods in prescribing jurisdictional boundaries."[213] The station-to-station theory, then, was viewed simply as cost-based pricing. That the FCC should consider those costs in the development of interstate toll rates did not, in the view of at least one witness, in any way threaten state regulatory control over the local exchange facilities themselves; thus, the station-to-station theory was not seen as a diminution of the jurisdictional powers of the states.[214]

That the board-to-board versus the station-to-station debate should provoke so little dissent by state regulators now that it was, for the first time, being discussed as a federal regulatory policy, is not altogether surprising. The jurisdictional question had, in fact, been resolved in 1930, despite lingering protests to the contrary. The interpretation and application of the Smith v. Illinois decision had created innumerable difficulties, as recounted above, but it was only the lack of federal regulatory action that kept the jurisdictional issue alive. The ratemaking implications of the two theories was the only problem that, realistically, was unresolved. Even before 1930, state regulators were aware that, in some fashion, the toll services could or should be assigned a portion of the exchange costs. The board-to-board method of stating rates was, on occasion, defended on an incremental cost basis, but primarily it was justified on the grounds of convenience and value-of-service considerations. Studies for the separation of exchange plant between the local and toll services were a difficult and expensive task.

In the sense expressed by the California Commission in the above quote, the state commissions that advocated the station-to-station theory were jurisdictionally motivated. The board-to-board method of stating rates incorporated interstate "costs" in the local exchange rate, and in light of the disparate cost trends in the telephone industry, this only accentuated the invidious comparison between the rates set by the state commissions and the rates under the jurisdiction of the FCC.

Further support for the station to station theory was provided by the Independents, who perhaps more than the state regulators grasped the importance of the changing economic characteristics of the telephone industry for the issue of separations. The history of the relationship between separations and the economics of the industry provided in one Independent brief admirably summarizes the shifting economic significance of separations for telephone ratemaking:

> During the early history of telephony each local exchange developed as a single or isolated unit. Toll facilities were generally a later development, and the toll facilities were frequently owned by an entirely different company. This being so, exchange rates were established to cover the expenses, and the costs for the use of facilities used, in connection with rendering exchange services. Furthermore, the first toll lines did not provide for connection with the subscribers exchange telephone, but, instead, it was necessary for subscribers who wished to make a toll call to go to a different "long distance" telephone in a toll office (or possibly to make arrangements with the toll company to install a "long distance" telephone in his office which could be connected only with the toll system)... Subsequently, and in most cases at the determined insistence of the local exchange company who sought the <u>privilege</u> of making it possible for its subscribers to have their telephones connected to the toll line, so that they would not have to go to the separate toll office, such interconnection was arranged, and there was no thought at that time of the exchange owning company asking any payment from the toll owning company as a result of the different arrangement, but rather "access to the toll system" was one of the services offered by the local exchange company to such subscribers and available to them as a part of the exchange service for which they paid a fixed monthly charge. Also, at this early stage in the development of telephony, the number of toll calls was very small and even if it had been thought desirable to include exchange costs as a part of the cost of rendering toll service, the additional costs of that exchange service between the toll board and the exchange subscribers equipment would have been but a relatively insignificant portion either of the exchange company's operating cost or the total toll charge. As toll traffic became the larger part of telephone traffic, arrangements were naturally made for the local exchange company to collect the toll charges and certain

costs were incurred and arrangements were likewise naturally made for the terminal company to be paid for its part in the endeavor, without, however, any change in the rate or any consideration of the use of the exchange property itself in the toll service. There has been logical reason for this practice. In the rendering of exchange service, the telephone company offers various classes of service (business and residence classification) in order to meet the needs of its subscribers, and also makes available various grades of service under those classifications (one, two, and four-party service, etc.) so that subscribers within a class, may in a measure, determine how much of the overall cost of rendering the service they are willing to pay. Due to the variation of use as between classes of subscribers and grades of service within those classes, there must necessarily be an averaging process. ...Acess to the toll board has been considered as part of the exchange service which the subscriber received in return for his exchange rate, and it is probably that during most of the period up to within the past few years any unbalance which might be ascribed to the use by certain exchange subscribers of exchange equipment for toll service as against the smaller use or the complete non-use of such equipment by certain other subscribers for toll service is no greater than, if as great as, the unbalance existing between various residential subscribers and their use of the exchange plant. ...What has happened in the past few years is (a) that the volume of toll traffic has so increased that it has become such an appreciable part of the service rendered to telephone subscribers of local exchanges that it probably now deserves consideration as a separate classification, so to speak, and (b) the rapidly declining unit costs of rendering toll service have now reached such a low level that the exchange portion of toll traffic is no longer an insignificant but is rapidly becoming a significant factor in rendering such service. ...Thus there is ground for considering whether or not a change in practice in connection with the determination of the costs of the terminal company and, therefore, in the determination of the basis of stating toll rates, should not be made. In other words, the cost of handling toll traffic from exchange subscribers has thus become sufficient that if exchange rates for purely exchange service are not to be burdened with the cost of rendering the exchange portion of toll service, then the exchange must be adequately compensated out of the toll revenues for its participation in the furnishing of the toll business.[215]

It was, then, the shift in economic balance between the various telephone services and not the niceties of pricing philosophy, that dominated the consideration of the separations issue. The Independents, in the brief quoted from above, fully realized that what was occurring within the telephone industry was an economic revolution. It was comparable, to use one of their examples, to what the shift in the economic importance of kerosene and gasoline meant to the petroleum industry. Initially, kerosene for lighting purposes was the primary output of that industry, and gasoline was merely a by-product. But with the advent of the automobile and the wide-spread availability of electricity for lighting, the economic importance of these two products for the petroleum industry was reversed. A similar shift, it was argued, was occurring between toll and local telephone services, and it was now necessary to adopt the rate practices of the industry to the changing economic environment.[216]

The other issue addressed in Docket 6328, that of the methods of separations themselves, engendered even less debate. In May of 1942, the NARUC-FCC Committee issued a report, prepared in cooperation with representatives of AT&T, that outlined in some detail methods for separations. The report took no position on the board-to-board and station-to-station question, but simply included procedures for both within its report. The recommended procedures were based on the actual use criteria and, indeed, were nothing more than a standardization and simplification of the methods that had been generally used by the states. Since most participants in Docket 6328 had, in fact, also participated in the development of these procedures, the lack of opposition to them is understandable.

The NARUC-FCC report was not, however, the only alternative considered. In August 1941, Manfred K. Toeppen, an FCC staff member, published a memorandum entitled "Distribution of Common Costs of Communication" which was primarily an attack on the actual relative use principle that was in vogue. Toeppen actually espoused two principles.

The "economic savings basis" was a somewhat confused attempt to identify and allocate to each service its proper share of the savings that resulted from the common use of integrated facilities.[217] Even the author of this method rejected it as a ratemaking principle.[218] The second method proposed was the "value of service basis." Toeppen had worked for the Michigan Commission in 1934; at that time, it will be remembered, the commission had developed an awareness of the joint cost characteristic of local plant, and the consequent need to recover those joint costs through value of service pricing. Apparently, however, Toeppen was notable to develop a practical method for measuring value and applying this theory, and his value of service principle was, in effect, an allocation of costs on the basis of revenues[219]--the very principle that the Supreme Court had rejected in the Minnesota Rate cases thirty years earlier.

Hearings in Docket 6328 terminated in October, 1942. With the exception of AT&T, the testimony and briefs submitted subsequent to the hearings showed a marked preference for the station-to-station principle. It was, indeed, inconceivable that the FCC would reject that principle. And while some Independents complained that the proposed separations methods were too costly and difficult to apply, those procedures otherwise elicited the support of participants in the docket.

Before a decision was reached in Docket 6328, the FCC initiated another investigation into the earnings of Long Lines, which again were becoming excessive. Both NARUC and twelve states individually intervened in Docket 6468, taking the position that the division of toll revenues was inadequate and a burden on intrastate telephone customers, and that the FCC should immediately require a more equitable division of those toll revenues.[220]

And, indeed, nowhere was the growing imbalance in the economics of the industry better evidenced than in the historical settlements procedures. The division of toll revenues was, it will be remembered, accomplished basically by prorating toll revenues, less originating commission, on the basis of the relative proportion of the circuits provided by each company. But Long Lines' costs per circuit mile were, by 1942, decreasing much more rapidly than the associated companies' cost per circuit mile: moreover, the average toll traffic density was less for the associated companies than for Long Lines; and, finally, toll rates--and hence revenues--were based on Long Lines' lower costs. These circumstances combined to render the existing division of toll revenues palpably inequitable for the associated Bell companies.[221]

What followed was the historic compromise wherein AT&T, acceding to the inevitable, agreed to establish interstate rates on the station-to-station basis. Of only slightly less importance in terms of the money made available to the intrastate jurisdiction was AT&T's agreement to increase the division of toll revenues to the associated Bell and Independent telephone companies.[222] The states thus received the relief for which they had petitioned.

In 1944, settlement procedures, at least within the Bell System, were effected on a cost basis--as costs were determined through separations procedures, and with that change, the essential features of modern separations in the telephone industry were in place.

Epilogue

The adoption of the station-to-station theory of separations in 1943 was, in truth, anti-climactic. The FCC itself never formally approved the principle, apparently desiring to keep its options open and unwilling to commit itself to a ratemaking principle the economic impact of which was still unknown, and no decision was ever rendered in Docket 6328. The state regulators, in turn, accepted the station-to-station principle of jurisdictional separations without protest; the most positive action taken by the states subsequent to the termination of Docket 6468 was the organized effort of eight commissioners to make an independent audit of Southern Bell to determine precisely the amount of benefits made available to the intrastate operations by the FCC's decision.[223]

AT&T's acceptance of the station-to-station principle appears to have been a political compromise. In return for its concession on this issue, it was able to realize its objective of securing uniform nationwide separations methods. (Although such methods were not formally approved either by the FCC or state commissions, they were accepted in practice.) Moreover, AT&T also hoped that the benefits of the improved division of toll revenues and the adoption of the station-to-station principle would be at least partly reflected in increased intrastate earnings as well as decreased intrastate rates.[224]

That the promulgation of separations procedures, and especially the adoption of the station-to-station theory of separations, engendered so little controversy was due to the convergence of many considerations. The legal requirement, of course, left little choice in the matter, but the law dictated neither the methods nor content of separations procedures.

Part of the explanation lies in the manner by which the ratemaking implications of jurisdictional separations were minimized. By 1943, both the FCC and most state commissions had firmly rejected separations for ratemaking purposes. For reasons of policy, they preferred to deal only with aggregate revenue requirements and to develop rates on a value-of-service basis. Thus, the detailed cost allocations required by jurisdictional separations, and their implications for the development of specific rates, were to some extent contradictory to the current ratemaking practices.

This again raised the fundamental question the level or unit of administering separations, as a ratemaking thoery. The choices, of course, were many; for example, costs could be "separated" to develop rates for particular toll routes or specific exchange areas. The choice of the level at which separations are to be administered and translated into rates inevitably reflects one's perception of the telephone network and the nature of telephone service itself. Both the FCC and most states had already adopted the viewpoint that the telephone network within their respective jurisdictions should be treated as an integral whole, and, consequently, the separations procedures promulgated in 1943 simply, and logically, extended these viewpoints in making the telephone system, in its entirety, the level at which separations were to be administered. The determination of toll "costs" for specific jurisdictions or particular services, hence, had no relationship to the corresponding toll rates and toll revenues. Only at the system level, where toll costs were equated with toll revenues, was there any correlation between separations and ratemaking. Except in the aggregate sense of defining the revenue requirements attributable to each jurisdiction, neither the methods nor the results of jurisdictional separations had any meaning for the development of specific rates.

Thus, separations as that term became defined in 1943 and thereafter, was characterized by the juxtaposition of highly refined, complex cost allocations with rate-averaging (and hence cost-averaging) of the broadest sort. The FCC continued to insist on a uniform interstate toll rate structure; and, eventually the interstate operations of the entire Bell System were considered on a consolidated basis for interstate toll ratemaking purposes. Similarly, jurisdictional separations did not impinge on the historical practices of statewide ratemaking and value-of-service pricing on the state level, and only a few states have ever required a separation of intrastate toll and local exchange services in the development of intrastate rates. The greatest fear of the state regulators--that the FCC, like the ICC before it, would in effect prescribe intrastate rates--proved unfounded.

Most important, though, the acceptance of the station-to-station theory was grounded in the economic changes within the telephone industry that began in the mid-1930's. The notion that some local exchange costs could be charged to the toll services had long been recognized, and the shift from the board-to-board to the station-to-station theory was more of a change in the method of stating toll and local rates than a change in the conception of the costs for these services. Toll costs previously incorporated into board-to-board exchange rates were now broken out and included in the toll rates under the station-to-station theory. There was, then considerable continuity in the transition, and the change largely reflected the shifting economic characteristics, especially the divergent cost trends, of the local and toll services.

The evolution of separations since 1943 has served to emphasize this basic continuity. Despite their superficial appearance as cost allocations, they are, in fact, simply extensions of the basic ratemaking principles that characterized both state and federal regulation prior to that time. Jurisdictional boundaries were an artificial division of an industry and a service (as well as a corporation) that was already nationwide in scope by 1920, and the development of jurisdictional separations since 1943 has reflected the attempt not to subdivide the indivisible, but, contrary to the implications of the word "separations", to treat the telephone system as an economic whole.

The separations principles developed in 1943 proved admirably adaptable for this task. Since the relative use criterion has no intrinsic justification and can, in fact, be calculated and modified in an infinite number of ways to produce any desired result, and since jurisdictional separations as cost allocations techniques have no relationship to ratemaking except in the grossest sense of defining jurisdictional revenue requirements, separations procedures could be, and were, manipulated at will to adjust economic relationships within the industry. In practice, although not in theory, separations have closely followed the precepts of the value-of-service method of recovering joint costs.

Briefly put, separations have been utilized to share the benefits of the economies of scale realized in the provision of toll services with the local exchange services (where no comparable economies of scale were available). As the earnings of the interstate services would become excessive, it became common practice not only to reduce toll rates but also to revise separations procedures to allocate more and more local exchange costs to the interstate jurisdiction. But the economic environment of the toll services was not static, and the growth of the toll services (partly due to the stimulation of demand caused by reduced toll rates), combined with increasing economies of scale, would again produce excessive interstate earnings, reinitiating the cycle of reduced toll rates and changes in separations procedures.[225]

These subsequent developments were not, of course, even contemplated in 1943. Yet, the first separations procedures anticipated (but did not fully articulate) a basic principle: that separations should be utilized not as a means of subdividing the telephone network into economically self-sustaining and independent units, but, rather, separations--administered on a nationwide scale--should be employed for adjusting economic relationships among the telephone services and between the regulatory jurisdictions in a manner consistent with a perception of that telephone network as an integral whole. And, the evolution of separations since that time has been primarily an elaboration of that principle, consistent with both the institutional framework and the objectives conceived by that initial effort.

NOTES

1. Boritzki, B. J., "Settlements and Separations", Public Utilities Fortnightly, October 10, 1974, pp. 27-32.

2. Response of the Bell System Companies, FCC Docket No. 20003, In the Matter of Economic Implications and Interrelationships Arising from Policies and Practices Relating to Customer Interconnection Jurisdictional Separations and Rate Structure, p. 58.

3. Boritzki, op. cit.; "Regulatory Policy Changes and the Future of the Independent Telephone Industry", Systems Analysis Incorporated. This study estimated that by 1985 the economic impact of competition will cause a rise in individual residential subscriber rates of up to 60%. This impact is almost exclusively due to the elimination of the toll contribution to the support of local exchange plant now provided through separations procedures.

4. Kahn, Alfred E. and Charles A. Ziclinski, "New Rate Structures in Communications", Public Utilities Fortnightly, March 25, 1976, pp. 19-24.

5. "Report after Investigation", An investigation into the economic and quality of service impact on telephone service subscribers resulting from the interconnection subscriber-provided equipment to the public switch telephone network and from competition by the specialized common carriers in the provision of telecommunication services, NARUC Committee on Communications, pp. 13-14.

6. Separations Manual, NARUC-FCC Cooperative Committee on Communications, February, 1971, p. 5.

7. Gabel, Richard, Development of Separations Principles in the Telephone Industry, Michigan State University, 1967, p. 126. NARUC has also been investigating a revision to the existing separations procedures which would allocate even more intrastate revenue requirements to the interstate services. See 1974 NARUC Proceedings, pp. 432-467.

8. This is not strictly true. In the earlier part of the century it was necessary to upgrade local distribution transmission wires to meet the higher standards of the toll network. A more modern example is the seven digit local exchange numbering system. In many areas a smaller number of digits would suffice, but the seven digit plan has been adopted because of toll calling requirements.

9. Wheat, Carl, "The Regulation of Interstate Telephone Rates", Harvard Law Review, Vol. 51, 1938, pp. 846-847.

10. Stehman, J. Warren, The Financial History of the American Telephone and Telegraph Company, Reprints of Economic Classics, Augustus M. Kelley (ed.), 1967 (First edition, 1925), pp. 166-167.

11. Seavey, Clyde C., "State Commissions and Federal Courts", NARUC Proceedings, 1930, pp. 180-193; Bauer, John, Transforming Public Utility Regulation, Harper and Brother Publishers, New York, 1950, pp. 64-65.

12. Thus, one observer could comment: "Telephone cases are used as horrible examples by commentators on the ratemaking process." "Direct Regulation of the American Telephone and Telegraph Co,", The Yale Law Journal, April, 1939, p. 1019.

13. Bauer, op. cit., p. 337.

14. Ibid., p. 65; Millett, John D., "Judicial Review of the Indiana Public Service Commission: The Johnson Act Re-Examined", Journal of Land and Public Utility Economics, August, 1936, p. 265.

15. Bauer, op. cit., pp. 66-69; Sumner, John D., "New York State Studies Regulation", Journal of Land and Public Utility Economics, August, 1930, pp. 258-69.

16. Troxel, Emery, Economics of Public Utilities, Rhinehart and Co., New York, 1947, p. 53.

17. Bemis, Edward W., "Some Present Day Issues of Public Utility Regulation", The Annals of the American Academy, Vol. 57, January 1915, p. 63.

18. Stehman, op. cit., pp. 93-94.

19. Smith, K. Allen, "Effect of State Regulation of Public Utilities on Municipal Home Rule", The Annals of the American Academy, Vol. 53, May 1914, p. 86.

20. Erickson, Halford, "The Advantages of State Regulation", The Annals of the American Academy, Vol. 57, January 1915, p. 148.

21. Lewis, Ben W., "Commission Regulation and Home Rule in Ohio", Journal of Land and Public Utility Economics, Vol. 9, No. 2, May 1933, pp. 207-214.

22. NARUC Proceedings, 1930, p. 190. The liberal provisions in the California Constitution for municipal ownership as well as general sympathy for municipal ownership was a potent factor in convincing utilities not to appeal commission rate orders.

23. See, for example, Herring, James M. and Gerald C. Cross, Telecommunications, McGraw Hill, New York, 1936, pp. 135-136. Also, Re N.Y. Telephone Company (N.Y.) P.U.R. 1923 B 545, 635, 638; Bogart v Wisconsin Telephone Co. P.U.R. 1916 C, 1020, 1054.

24. Sickler, Barclay J., "A Theory of Telephone Rates", Journal of Public Utility and Land Economics, Vol. 4, May 1928, pp. 175-188.

25. Outerbridge, E. H., "Lower Telephone Rates for New York City", The Annals of the American Academy, Vol. 53, May 1914, p. 67.

26. See Tri-County Telephone Company v Gandy Switchboard Company, (Neb.), P. U. R. 1918 F., 120 for an example of the complications this fragmented ownership produced in the Division of Revenues.

27. Stehman, op. cit., p. 127.

28. Remund v Dakota Central Telephone Co., P. U. R. 1916 A 364.

29. Re Campbell Telephone Co. (Cal.), P. U. R. 1926 C, 82.

30. Newcastle v Bell Telephone Company, P. U. R. 1921 B, 378, 380.

31. Re N. Y. Telephone Company, P. U. R. 1922 A, 497.

32. Smith, J. Allen, "Effect of State Regulation of Public Utilities Upon Municipal Home Rule", The Annals of the American Academy, Vol. 53, May 1914, p. 89.

33. Re N. Y. Telephone Company, P. U. R. 1922 A, 497, 502.

34. Message Toll Telephone Rates and Disparities, a Report of the Telephone Toll Rates Subcommittee of National Association of Railroad and Utilities Commissioners and Federal Communications Commission, Washington, D. C., 1951, p. 25. However, the rapid growth of the toll services did not greatly exceed the growth of local service.

35. Quoted in Public Service Commission v Mountain State Telephone and Telegraph Company, P. U. R. 1924 C, 545, 557, 558.

36. Ibid., 556.

37. Statement made by George B. Jeanerett, legal staff of AT&T, to Frederick P. Fish, president of AT&T, quoted in "Investigation of the Telephone Industry in the United States", House Document 340 (76-1), pp. 413-14.

38. Stehman, op. cit., pp. 56-57; Message Toll Telephone Rates and Disparities, op. cit., pp. 10-13.

39. Message Toll Telephone Rates and Disparities, op. cit., p. 19.

40. Stehman, op. cit., pp. 147-148.

41. Letter from N. C. Kingsbury, Vice President AT&T to Attorney General of the United States, December 19, 1913.

42. Message Toll Telephone Rates and Disparities, op. cit., p. 19.

43. Garfield, Paul J. and Wallace F. Lovejoy, Public Utility Economics, Prentis Hall, N. J., 1964, p. 460.

44. Baggett, Stuart, "Telephone Consolidation Under the Act of 1921", Journal of Land and Public Utility Economics, February 1931, pp. 22-35.

45. Garfield and Lovejoy, op. cit., p. 461.

46. Message Toll Telephone Rates and Disparity, op. cit., p. 19.

47. Jarmon, W. Roy, "Independent Telephone Transition from 'Agent' to 'Partner'", Public Utilities Fortnightly, December 20, 1973.

48. Message Toll Telephone Rates and Disparities, op. cit., p. 200.

49. New York Telephone was apparently an exception in that it attempted to separate intrastate toll on a station-to-station basis. See Re New York Telephone Co., P.U.R. 1926 E, 1.

50. Wheat, op. cit., pp. 846-847.

51. Nash, L.R., Public Utility Rate Structures, McGraw-Hill, 1931, p. 116; Message Toll Telephone Rates and Disparities, op. cit., pp. 6-7. In 1926, telephone toll service accounted for 60% of rapid intercity communications.

52. State Ex. Rel. Hopkins v Southwestern Bell Telephone Company (Kansas Supreme Court), P.U.R. 1924 D, 338, 408.

53. Southern Bell Telephone and Telegraph Co. v Railroad Commission of Georgia, 274 Fed. 439, P.U.R. 1922 A, 419.

54. "Investigation of the Telephone Industry in the United States", House Document 340 (76-1), 160.

55. Ibid., 436.

56. "Report on American Telephone and Telegraph Company Long Lines Department Division of Message Toll Business Between Long Lines and Associated Companies", Federal Communications Commission, Accounting Department, Telephone Investigation, Special Investigation Docket No. 1, pp. 9-10.

57. In Southwestern Telephone and Telegraph Co. v City of Houston, 268 Fed. 878, 884, the Federal Court found that the 25% of originating toll revenues was the "customary allowance" made at that time (1920).

58. Message Toll Telephone Rates and Disparaties, op. cit., p. 188.

59. "History of Settlements Among Bell and Independent Telephone Companies", in Telephone Cost Separations, United States Independent Telephone Association, 1971, pp. 1-18.

60. "Division of Message Toll Business Between Long Lines and Associated Companies", FCC, pp. 111-112.

61. Gable, op. cit., p. 20.

62. Re Southern Bell Telephone and Telegraph Company (N. C. Corporation Commission), P. U. R. 1921 D, 447, 458.

63. See, for example, Re Central Union Telephone Co. (Ind.), P. U. R. 1920 B, 813; Re Michigan State Telephone Co., P. U. R. 1923 A, 30.

64. Hardy v Hollis Telephone Company (N. H.), P. U. R. 1918 F, 68a; Re Fixing Tempary Toll Rates and Charges (Mich.), P. U. R. 1920 B, 876; Re Telephone Toll Rates in Nebraska, P. U. R. 1920 B, 780; Public Service Commission v Mountain States Telephone and Telegraph Company, P. U. R. 1924 C, 545; Re Montezuma County Telephone Co., P. U. R. 1928 A, 518.

65. Tri-County Telephone Company v Gand Switchboard Company (Neb.), P. U. R. 1920 B, 760, 765.

66. USITA, "History of Settlements Among Bell and Independent Telephone Companies", op. cit., pp. 1-20; Intermountain Telephone and Electric Company v Mountain States Telephone and Telegraph Company (Mont. P. U. R. 1918 C, 120, 123).

67. Re Northwestern Telephone Exchange Company (Minn.) P. U. R 1921 A, 652, 654.

68. See, for example, Re Columbia Telephone Company (Mo.), P. U. R. 1923 E, 458; Re Oklahoma-Arkansas Telephone Co., P. U. R. 1928 E, 47; Tri-County Telephone Co. v Gandy Switchboard Co. (Neb.) P. U. R. 1918 F, 120.

69. See, for example, Armenia Telephone Co. v Necadah Telephone Co. (Wis.), P. U. R. 1918 B, 888; Re Illinois Telephone Co., P. U. R. 1928 D, 371, 375; Re Chileno Valley Telephone Co., P. U. R. 1923 A, 409 (Cal.).

70. Tri-County Telephone Company v Gandy Switchboard Company (Neb.), P. U. R. 1920 B, 760, 765, for an example of this problem.

71. Re St. Croix Valley Telephone Co., P. U. R. 1928 A, 133; Re Highland Telephone Co., P. U. R. 1925 A, 400; Re Southern Corry Telephone Co., P. U. R. 1918 F, 42; Re Inter-County Telephone Company, P. U. R. 1931 B, 5.

72. Northern Kentucky Mutual Telephone Company v Bracken County Telephone Company, P. U. R. 1928 D, 84.

73. Southern California Telephone Company (Calif.), P. U. R. 1925 C, 627; Re Missouri and Kansas Telephone Company (Ka.), P. U. R. 1918 C, 55; Re Chesapeake and Potomac Telephone Company (Va.) P. U. R. 1926 E, 481, in which the Virginia Commission expressed a preference for the station-to-station theory but did not actually implement it.

74. Re Indiana Telephone Company, P. U. R. 1922 C, 348; Re Michigan State Telephone Company, P. U. R. 1923 A, 30; Re Northwestern Bell Telephone Company, P. U. R. 1923 B, 112; Buck v North York Telephone Company, P. U. R. 1921 E, 798; Public Utilities Commission v New England Telephone and Telegraph Company (R. I.), P. U. R. 1926 C, 207; (South Carolina), P. U. R. 1928 E, 221; Re Wisconsin Telephone Company, P. U. R. 1925 D, 661.

75. Stone v New York Telephone Company, P. U. R. 1921 D, 736, 751.

76. In Re St. Croix Telephone Company (Wis.), P. U. R. 1916 A, 552.

77. State Ex. Rel. Hopkins v Southwestern Bell Telephone Company (Kansas Supreme Court), P. U. R. 1924 D, 338, 473.

78. Re Missouri and Kansas Telephone Company (Ka.), P. U. R. 1918 C, 55.

79. Re Chesapeake and Potomac Telephone Company (Va.), P. U. R. 1926 E, 481.

80. Public Utilities Commission v New England Telephone and Telegraph Company (R. I.), P. U. R. 1926 C, 207, 261. See also, In Re St. Croix Telephone Co. (Wis.), P. U. R. 1916 A, 552, 590, 591.

81. State Ex. Rel. Hopkins v Southwestern Bell Telephone Company (Kansas Supreme Court), P. U. R. 1924 D, 338, 408.

82. Re Missouri and Kansas Telephone Company (Ka.) P. U. R. 1918 C, 55.

83. State Ex. Rel. Hopkins v Southwestern Bell, op. cit., 472.

84. North Dakota Board of Railroad Commissioners v Abercrombie Telephone Company, P. U. R. 1923 E, 471.

85. Stone v New York Telephone Company, P. U. R. 1921 D, 736, 752.

86. Ibid.

87. Re Northwestern Bell Telephone Company (Neb.), P. U. R. 1923 B, 112, 170.

88. Ibid. See also Re Rock County Farmers Telephone Company (Wis.), P. U. R. 1925 A, 178, 180.

89. State Ex. Rel. Hopkins v Southwestern Bell Telephone Company, op. cit., 473.

90. Sickler, op. cit., pp. 176-177.

91. North Dakota Board of Railroad Commissioners v Abercrombie Telephone Company, op. cit., 472.

92. Stone v New York Telephone Company, op. cit., 752.

93. North Dakota Board of Railroad Commissioners v Abercrombie Telephone Company, op. cit., 472; In Re St. Croix Telephone Company, op. cit., 567; Public Utilities Commission v New England Telephone and Telegraph Company (R.I.), op. cit., 261.

94. Re Michigan State Telephone Company, P.U.R. 1923 A, 30, 116; Kansas City v Kansas City Telephone Company (Mo.), op. cit., 492. See also, Re Indiana Bell Telephone Company, P.U.R. 1922 E, 46, 78.

95. Sickler, op. cit.

96. Kansas City v Kansas City Telephone Company, op. cit., 491.

97. Ibid., 494.

98. Re Missouri and Kansas Telephone Company (Ka.), op. cit.

99. Simpson v Shepard, 230 U.S. 352, 57 Led. 1511, 1566 (1912).

100. State Ex. Rel. Hopkins v Southwestern Bell Telephone Company, 409, 410.

101. 57 L ed., 1555.

102. See also, Millett, John D., op. cit., p. 265.

103. Quoted in Chesapeake and Potomac Telephone Company v Commonwealth of Virginia (Va. Supreme Court of Appeals), P.U.R. 1927 B, 484, 500.

104. Cumberland Telephone and Telegraph Company v Louisiana Public Service Commission, 283, Fed. 215, 594, P.U.R. 1923 A, 594, 599. Also see, Southern Bell Telephone and Telegraph Company v Railroad Commission 5 R(2d) 177, P.U.R. 1926 A, 613.

105. Re Michigan State Telephone Company, op. cit., 114.

106. "Division of Message Toll Business Between Long Lines and Associated Companies", FCC, op. cit., 30, 31, 36.

107. Re Southern Bell Telephone and Telegraph Company (North Carolina), P.U.R. 1921 D, 447, 453, 454.

108. "Investigation of Telephone Industry in the United States", op. cit., p. 435.

109. State Ex. Rel. Southwestern Bell Telephone Company vs. Public Service Commission (Missouri Supreme Court), P.U.R. 1922 A, 773.

110. Southwestern Telephone and Telegraph Company vs. City of Houston, 268 Fed. 878, 884 (1920). See also Cumberland Telephone and Telegraph Company vs. City of Louisville, 187 Fed. 637, 651 (1911), in which the same principle is upheld.

111. Houston v Southwestern Bell, 254 US 318, 66, Led 961, 964 (1922).

112. Wheat, op. cit., pp. 873, 874. See also, Chesapeake and Potomac Telephone Company v Whitman, P.U.R. 1925 D, 407, 447.

113. Pacific Telephone and Telegraph Company v Whitcomb, 279 F(2d) 279, 288 (1926).

114. Northern Kentucky Mutual Telephone Company v Bracken County Telephone Company, P.U.R. 1928, 84. See also Shafor v Cincinnati and Suburban Bell Telephone Company (Ohio), P.U.R. 1916 A, 51.

115. Stehman, op. cit., pp. 258, 259.

116. Re Southern Bell Telephone and Telegraph Company (North Carolina), P.U.R. 1921 D, 447, 455, 456.

117. Chesapeake and Potomac Telephone Company v Whitman, P.U.R. 1925 D, 407, 450, 451.

118. People Ex. Rel. William H. Kotter v Michigan Bell Telephone Company, 224 N.W. 438. P.U.R. 1929 D, 455, 460.

119. People Ex. Rel. Ptter v Michigan Bell Telephone Company, P.U.R. 1929 E, 27, 28.

120. The right of the Michigan Commission to secure the desired information from AT&T was upheld by the Federal District Court in 1931. P.U.R. 1931 E, 222.

121. Bauer, op. cit., pp. 66-69. Sumner, op. cit.

122. Wilson, G. Lloyd, James M. Herring, and Roland B. Eutsler, Public Utility Regulation, McGraw Hill, New York, 1938, p. 269.

123. St. Joseph Stockyards v U.S., 298 U.S. 38, 80, Led 1035, 1060, 1061, 1062, 1063, which details the history of both the Chicago and New York telephone rate cases. See also, Emory Troxel, "Chronology of Two 'Old-Age' Rate Controversies", Journal of Land and Public Utility Economics, February 1938, pp. 99-105.

124. Illinois Bell Telephone Company v Gilbert, 3F Supp. 595, P.U.R. 1935 E, 301.

125. Lindheimer v Illinois Bell Telephone Company, 292 U.S. 151, 78 Led 1182.

126. Illinois Bell Telephone Company v Moynihan, 38 F(2d) 77.

127. Smith v Illinois Bell Telephone Company, 282 U.S. 133, 75 Led. 255, 264.

128. Northern Pacific Railroad Company v North Dakota, Ex. Rel. McCue, 59 Led. 735 (1915).

129. For a discussion of this issue, see Mountain States Telephone and Telegraph Company v Public Service Commission, (Utah Supreme Court 51 P.U.R. (N.S.), 275, 290-296. But, see also C.O. Ruggles, Problems in Public Utility Economics and Management, McGraw-Hill, New York, 1933, p. 219, who holds that the Supreme Court was prescribing a rate making theory.

130. Smith v Illinois Bell Telephone Company, 75 Led 255, 263.

131. Ibid.

132. Ibid., 267, 268.

133. Lilienthal, David, "Recent Developments in the Law of Public Utility Holding Companies", Columbia Law Review, February 1931, p. 207.

134. Morehouse, E.W., "The Supreme Court Views the Economics of the Telephone System", Journal of Land and Public Utility Economics, February 1931, pp. 103-108. But see Stickler, op. cit., and L.R. Nash, Public Utility Rate Structures, McGraw-Hill, New York, 1933, p. 268, where the author notes telephone service "...lacks the commodity-cost element which is commonly encountered in other classes of utilities."

135. Bonbright, James C., Principles of Public Utility Rates, Columbia University, New York, 1961, p. 355.

136. "Economic Aspects of the Judicial Apportionment of Joint Costs", Columbia Law Review, May 1929, p. 648.

137. Ibid., p. 647.

138. Ibid.

139. Ibid., p. 650.

140. Smith v Illinois Bell Telephone Company, 75 L.ed. 255, 264.

141. Ibid.

142. This was true not only of the Supreme Court. Wheat, op. cit., pp. 868, 869, footnote 4, cites Oregon and Missouri as having adopted the station-to-station principle. However, in the City of Kansas v Kansas City Telephone Company, P.U.R. 1922 A, 466, 491, the Missouri Commission clearly states that it allocated only jointly used trunk lines between the toll and local service. This was a modification of the board-to-board theory, but was not full adoption of the station-to-station theory. In Re Pacific Telephone and Telegraph Company, P.U.R. 1924 D, 39, the Oregon Commission did not approve the station-to-station theory, but was discussing the widely accepted division of revenue technique which was based on the board-to-board theory. The Supreme Court itself was wrong in ascribing adoption of the board-to-board theory by Virginia in Chesapeake and Potomac Telephone Company, P.U.R. 1926 E, 481. The commission in that case only expressed a general inclination that toll services should help support the local exchange plant. The Virginia Supreme Court of Appeals in P.U.R. 27 B 484 agreed only that such joint use should be a consideration in determining the "going value" of the company's intrastate properties.

143. Illinois Bell Telephone Company v Gilbert, 3 F Supp. 595, P.U.R. 1933 E, 301.

144. Lindheimer v Illinois Bell Telephone Company, 292 U.S. 151 78 L.ed. 1182, 1187.

145. West v Chesapeake and Potomac Telephone Company, 295 U.S. 662, 79 Led 1640, 1644 (1935). This is consistent with the Smith decision 75 Led 262, in which, in footnote 1, they note that they had not required separations in an earlier case because the issue had not been contested.

146. Re (Mich. Bell Telephone Company) 10 P.U.R. (N.S.) 149.

147. "Trend of United States Supreme Court Decisions Affecting Rates of Public Utilities", American Bar Association Journal, September 1934. See also NARUC Proceedings, 1938, pp. 353-60.

148. "Smith v Illinois Bell Telephone Company: A Development in the Law of Public Utilities", Harvard Law Review, March 1931, p. 834.

149. Smith v Illinois Bell Telephone Company, 75 L.ed. 255, 263.

150. Lindheimer v Illinois Bell Telephone Company, 78 L.ed. 1187.

151. Re Wisconsin Telephone Company, 13 P.U.R. (N.S.) 224, 297 (1936).

152. Re Southwestern Bell Telephone Company (Oklahoma), 16 P.U.R. (N.S.), 18 (1936); Re Michigan Bell Telephone Co., 15 P.U.R. (N.S.), 530.

153. See Los Angeles v Southern California Telephone Company, 14 P.U.R. (N.S.), 252; La. Public Service Commission v Southern Bell Telephone and Telegraph Company, 8 P.U.R. (N.S.), 1; Re (Wisconsin Public Service Commission), P.U.R. 1931 E, 101. An FCC study found that of 17 states that had expressed formal written opinions on the separation issue, 11 officially adopted the station-to-station basis while 3 favored the board-to-board base. See "Proposed Findings of Fact and Conclusions of the Railroad Commission, State of California", FCC Docket 6328, p. 6.

154. Re Wisconsin Telephone Company, 13 P.U.R. (N.S.), 224, 295; Re (Michigan Bell Telephone Company), 10 P.U.R. (N.S.), 149, 203; Department of Public Service of Washington v Pacific Telephone and Telegraph Company, 34 P.U.R. (N.S.), 193, 219.

155. Southwestern Bell Telephone Company v City of San Antonio, 2 F (2d), 611; P.U.R. 1933 D, 405, 413.

156. Ibid., 414.

157. Southwestern Bell Telephone Company v City of San Antonio, 75 F(2d) 880, 884.

158. 295 U.S. 754.

159. "Trend of United States Supreme Court Decisions Affecting Rates of Public Utilities", op. cit., NARUC Proceedings, 1938, pp. 363-360. See especially, Los Angeles GE Corp. v Railroad Com., 77 L. ed. 1180, 1192, 1193, as an example of the shifting attitude of the U.S. Supreme Court.

160. Re (Pacific Telephone and Telegraph Company) (Ore.), 8 P.U.R. (N.S.), 61, 85 (1934).

161. Pacific Telephone and Telegraph Company v Thomas (Oregon Circuit Court, County of Multnomah), 13 P.U.R. (N.S.), 337, 392 (1936).

162. Ibid., 394.

163. Pacific Telephone and Telegraph Company v Wallace (Oregon Supreme Court), 23 P.U.R. (N.S.), 65, 92, 93.

164. Wisconsin Telephone Company v Public Service Commission, 30 P.U.R. (N.S.), 65, 123, 124 (1939). See also State v Tri-State Telephone and Telegraph Company (Minnesota Supreme Court), 28 P.U.R. (N.S.), 158, 184; Re The Ohio Bell Telephone Company (Ohio), P.U.R. (N.S.), 113, 122, 133 (1934).

165. Pacific Telephone and Telegraph Company v Thomas, 13 P. U. R. (N. S.), 337, 376.

166. Re Wisconsin Telephone Company, P. U. R. 1931 E, 101, 129. See also, Re Southern Bell Telephone and Telegraph Company (N. C.), 7 P. U. R. (N. S.), 21, 32 (1934).

167. Re Michigan Bell Telephone Company, 10 P. U. R. (N. S.), 149, 191.

168. Ibid., 223.

169. NARUC Proceedings 1942, p. 172.

170. Marlett, D. L. and Orba F. Traylor, "Public Utility Legislation in the Depression: I State Laws Extending and Strengthening Commission Jurisdiction", Journal of Land and Public Utility Economics, May 1935, pp. 173-186.

171. See Chesapeake and Potomac Telephone Company v Whitman, P. U. R. 1925 D, 407, 445, for an example of this difficulty. The attitude of the Bell System is illustrated by the following statement by the President of the Virginia Company in 1921: "We have held back in giving that information directly to the Commissions because we do not want to admit their rights to that information and the consequent right of objection to any of the items, as obviously we cannot conduct those services subject to the control of forty Commissions, but we have no objections to their knowing the facts. I am not proposing to state it each year, but I have the feeling that if we give that information once for all and remove the mystery connected with it, that it will go a long way towards silencing any question on that point. We are arguing for better earnings for the American Telephone and Telegraph Company." (P. U. R. 1926 E, at p. 600.)

172. "Division of Message Toll Message Business Between Long Lines and Associated Companies", FCC, op. cit., p. 27.

173. NARUC Proceedings 1943, p. 390.

174. 234 U.S. 342-360 (1914).

175. Seavey, Clyde L., "The Johnson Act and its Practical Effect on State Regulation of Utility Rates", NARUC Proceedings 1934, p. 61.

176. "Report of Special Committee on History and Current Developments in Regulation", NARUC Proceedings 1938, p. 350.

177. U.S.C.A., 47, Chapter 5, Section 152.

178. Public Resolution Number 8, 74th Congress, March 5, 1935. See also, NARUC Proceedings 1934, p. 444; NARUC Proceedings 1940, p. 345.

179. Address by Paul Walker of the Federal Communications Commission, NARUC Proceedings 1938, pp. 146-148.

180. "A Plan of Cooperative Procedure in Matters and Cases Under the Provision Section 410 of the Communications Act of 1934", NARUC Proceedings 1938, pp. 228-233. This plan was modeled on an earlier cooperative plan adopted with the Federal Power Commission.

181. Re Michigan Bell Telephone Company, 10 P.U.R. (N.S.), 149, 224.

182. Remarks of Robert A. Nixon, Public Service Commission of Wisconsin, NARUC Proceedings 1940, p. 352.

183. "An Investigation of the Telephone Industry in the United States", FCC op. cit., p. 435.

184. Message Toll Telephone Rates and Disparities, op. cit., p. 98.

185. "Investigation of the Telephone Industry in the United States", op. cit., p. 756.

186. Re New York Telephone Company, P.U.R. 1938, 461.

187. Public Utility Commission v Bell Telephone Company of Pennsylvania, 23 P.U.R. (N.S.), 173, p. 38.

188. Bell Telephone Company of Pennsylvania v Pennsylvania Public Utility Commission, 309 U.S. 30, 84 L. ed. 563.

189. Re Michigan Bell Telephone Company, 23 P.U.R. (N.S.), 24 (1938) affirmed in Michigan Bell Telephone Company v Michigan Public Service Commission (Michigan Supreme Court), 39 P.U.R. (N.S.), 111.

190. Message Toll Telephone Rates and Disparities, op. cit., p. 37, footnote 4. See also NARUC Proceedings 1940, p. 360.

191. Ibid., p. 25.

192. Ibid., Chapter 4, pp. 50-95.

193. See Supplemental Answer and Brief on Behalf of Associated Telephone Company, et al., FCC Docket 6328, pp. 6-11.

194. "Division of Message Toll Business Between Long Lines and Associated Companies", op. cit., p. 125.

195. "An Investigation of the Telephone Industry in the United States", op. cit., pp. 428-429.

196. Ibid., pp. 432-433.

197. Ibid., p. 430.

198. Mountain States Telephone and Telegraph Company v Public Service Commission, 51 P. U. R. (N. S.), 275, 296.

199. NARUC Proceedings 1939, pp. 66-69. For other expressions of the states' concern with reducing local exchange rates, see NARUC Proceedings 1941, P. 118, and Report of the Committee of Five Cooperating with the Federal Communications Commission and Special Telephone Studies, NARUC Proceedings 1942, p. 167.

200. "Final Report of the Telephone Rate and Research Department", Federal Communications Commission, June 15, 1938, p. 44.

201. Ibid., p. 51.

202. Department of Public Service of Washington v The Pacific Telephone and Telegraph Company, 37 P. U. R. (N. S.), 129, 141.

203. Ibid., 150.

204. O'Hara, John, "Problems in Apportionment of Property Revenues and Expenses between Exchange Business and Toll Business", Michigan Public Service Commission, NARUC Proceedings 1940, p. 363.

205. Report of the Committee of Five Cooperating with the Federal Communications Commission on Special Telephone Studies, NARUC Proceedings 1942, p. 167.

206. Nixon, Robert B., "The Public Interests in Uniformity of Interstate and Intrastate Toll Rates", Wisconsin Public Service Commission, NARUC Proceedings 1940, p. 364.

207. Remarks of Richard J. Beamish, Public Utility Commission of Pennsylvania, NARUC Proceedings 1941, pp. 109, 110.

208. NARUC Proceedings 1942, pp. 177-178.

209. O'Hara, John, op. cit., pp. 369-371.

210. Dissenting Opinion of Commission Murphy of South Dakota to the Report of the Committee of Five Cooperating with the Federal Communications Commission on Special Telephone Studies, NARUC Proceedings 1942, p. 174. See also, NARUC Proceedings 1934, p. 414; and Re Pacific Telephone and Telegraph Company (Oregon) 8 P. U. R. (N. S.), 61, 85 in which the same idea was expressed.

211. Report of the Committee of Five Cooperating with the Federal Communications Commission on Special Telephone Studies, NARUC Proceedings 1942, p. 172. See also NARUC Proceedings 1940, p. 367.

212. Brief of Bell System respondence, FCC Docket 6328.

213. Proposed Findings of Fact and Conclusions of the Railroad Commission, State of California, FCC Docket 6328, p. 7. See also Testimony of Milo Maltbie in FCC Docket 6328, pp. 1110-1111.

214. The question was put to Milo Maltbie of the New York Public Service Commission in the following manner:
"Q. Do I understand that it is your position that the law is construed to give them [the FCC] that power [to set interstate rates on the basis of station-to-station costs] and at the same time can be construed not to give them the power to regulate exchange facilities; that is, over such things as a tariff for installing a telephone and so forth.
"A. That is exactly what I believe."
FCC Docket, p. 1124.

215. Supplemental Answer and Brief on Behalf of Associated Telephone Company, et al., FCC Docket 6328, pp. 6-9.

216. Ibid., pp. 10, 11.

217. Memorandum of August 22, 1941, on <u>Distribution of Common Costs of Communication</u> as presented to the Joint NARUC-FCC Cooperating Staff Committee by Manfred A. Toeppen. The example given by Toeppen was this: "A pole line for ten circuits (eight of which are used for exchange and two for toll) costs $829. If constructed to carry only the eight exchange lines, it would cost $655, and if constructed only for the toll lines, $356. Under the relative use criteria, costs would be allocated 80% to local and 20% to toll. This allocates almost $9 more to local than the actual costs that would be incurred if the pole line were built to accommodate only the eight local lines." Toeppen proposed that the costs be allocated on the ratio of the separate cost of each line to the sum of the separate costs. Thus, local exchange would be allocated 655/(655+356) or 64.8% of the common costs. There are, of course, many other approaches available--see, for example, <u>Economics of Water Resources Planning</u>, L. Douglas James, Robert P. Lee, McGraw-Hill, pp. 527-39 for a discussion of this and similar methods used in evaluating public works projects. Toeppen's appraoch is especially vulnerable because he does not consider separable costs (which he has already developed) in the distribution of the total costs. Consequently, there is no check against the possibility that a service could be allocated, under his formula, an amount that exceeds its separable cost.

218. Brief of Bell System respondence, FCC Docket 6328, p. 41.

219. Toeppen, op. cit., pp. 9-10. Toeppen can also be criticized for his failure to distinguish between common costs, which can be directly allocated, and joint costs, which because they are invariant in respect to usage, cannot be directly allocated and therefore must be recovered through value-of-service pricing. See also, Brief of Bell System respondence, FCC Docket 6328, pp. 42-43. The City of Detroit also intervened in Docket 6328, advocating the same value of service distribution of joint costs, but their witness was also unable to devise a practical method by which this could be done, except allocating costs on the basis of revenues. See Bell Brief, p. 48.

220. NARUC Proceedings 1943, pp. 320, 321.

221. Message Toll Telephone Rates and Disparities, op. cit., p. 189.

222. NARUC Proceedings 1943, p. 322.

223. Ibid., 383.

224. Ibid., 383, 389.

225. See Boritzki, B. J., "Settlements and Separations", for a more detailed explanation of the development of separations since 1943.