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Decision No. 90362 JUN 5 1975

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application)
of The Pacific Telephone and)
Telegraph Company, a corporation,)
for telephone service rate)
increases to cover increased)
costs in providing telephone)
service.)

Application No. 55492
(Filed February 13, 1975;
amended April 19, 1975 and
January 16, 1976)

Investigation on the Commission's)
own motion into the rates, tolls,)
rules, charges, operations, costs,)
separations, inter-company)
settlements, contracts, service,)
and facilities of THE PACIFIC)
TELEPHONE AND TELEGRAPH COMPANY,)
a California corporation; and of)
all the telephone corporations)
listed in Appendix A, attached)
hereto.)

Case No. 10001
(Filed November 12, 1975)

(Appearances are listed in Appendix A.)

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FINAL OPINION
(LICENSE CONTRACT ISSUES)

I. INTRODUCTION

In this opinion we resolve issues relative to the Bell System license contract. The basic question before us is: How much of the sums paid by The Pacific Telephone and Telegraph Company (Pacific) to the American Telephone and Telegraph Company (AT&T) under the license contract are reasonably and properly charged to the ratepayer?

Application No. 55492 is an application for general rate relief. Case No. 10001 is an investigation into Pacific's rates and practices which has been consolidated with Application No. 55492 since its inception. We have already issued our basic rate order in this proceeding (Decision No. 88232 dated December 13, 1977, _____ CPUC _____). (Writ denied.) The rates prescribed in that decision are subject to refund pending our final determination of license contract issues, and other matters.^{1/}

^{1/} Interstate-intrastate separation of toll revenues, which is the subject of separate hearings in this proceeding, and certain tax issues which are the subject of other proceedings.

Certain license contract issues were decided in Decision No. 88232 for rate-setting purposes at that time. Insofar as additional evidence on these points was offered during the hearings specifically devoted to license contract problems, these subjects will be reexamined. Hearings devoted exclusively to license contract issues were held before Administrative Law Judge Donald C. Meaney on various dates from October 26, 1977 to April 19, 1978. Final briefs were submitted in September 1978.

The evidence and testimony are voluminous. Notwithstanding the importance of the subject matter, the descriptions of the issues, the evidence, and the contentions of the parties must be acutely truncated if this decision is to be kept to reasonable length. Tables, charts, and quotations will be employed only when essential, but references to the exhibits, the testimony, and the arguments will be given in sufficient detail for anyone wishing to understand the subject in greater depth than can be presented within this opinion.

II. GENERAL PRINCIPLES AND LEGAL ISSUES

A. History of the License Contract

AT&T is the parent company of the Bell System, which consists of 23 operating telephone companies (OTCs) serving all or part of every state but Hawaii and Alaska. All but four of the OTCs are wholly owned by AT&T. AT&T owns approximately 90 percent of Pacific's common stock. AT&T also owns the Western Electric Company (Western Electric). AT&T and Western Electric jointly own Bell Telephone Laboratories (Bell Labs). AT&T's Long Lines Department manages the interstate network for the Bell System.

Ever since the early years of this century it has been AT&T's decision to centralize research and certain services. The first license contract containing provisions similar to the present contract was signed in 1918. The present license contract provides that AT&T will furnish the OTCs advice and assistance on matters pertaining to the telephone business, and will prosecute continuously fundamental research, investigation and experimentation in telecommunications, making the benefits of such research available to the OTCs. Prior to October 1, 1974, the licensee companies^{2/} paid one percent of their adjusted revenues for services on the contract. Since then the payment has been determined by an annual AT&T study of license contract costs which allocates the payments on a monthly basis among the OTCs (Exhibit 286, Chapter 1).

In connection with the license contract generally, one of the Commission's concerns has been the rapid growth of Pacific's payment under the contract:

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY
License Contract Expense Account No. 674
1965 - 1976

<u>Year</u>	<u>Account No. 674</u>	<u>Percentage Yearly Increase</u>
1965	\$12,202,646	
1966	13,281,993	8.85%
1967	14,292,557	7.61
1968	15,586,876	9.06
1969	17,757,434	13.93
1970	19,091,445	7.51
1971	20,357,444	6.63
1972	21,846,035	7.31
1973	24,667,386	12.91
1974	29,633,116	20.13
1975	46,657,254	57.45
1976	59,268,295	27.03

^{2/} The OTCs in the United States plus Bell of Canada. In January 1975, AT&T disposed of the remainder of its Bell of Canada stock and the Canadian company is no longer a license contract signatory. An allocation is also made to AT&T's Long Lines Department (see Exhibit 73).

The above figures are from Table 1A of Exhibit 286, which was prepared before the recorded 1977 figure for Account No. 674 was available. We take notice that this recorded figure, now on file with us, indicates Pacific's 1977 license contract payment as \$69,411,000, a 14.61 percent increase over 1976. For 1977 this amounts to 2.08 percent of Pacific's operating expenses, including taxes.

B. Prior Rate Treatment of the License Contract

A brief summary of our prior decisions on this subject appears in Exhibit 286, Chapter 1. As mentioned in Decision No. 88232 (slip opinion, p. 71), our license contract adjustment now consists of (1) a 6.04 percent factor applied to adjust the license contract expense downward to cover what is deemed "identifiable" investor related expenses, and (2) a 7.25 percent downward adjustment, deemed to eliminate "unidentifiable" investor related expenses from operating expenses ultimately charged to the ratepayer.

These percentage adjustments, particularly the latter, were applied in the absence of a detailed study of all phases of the license contract. In this proceeding, two staff witnesses, Lloyd M. Humphrey and Thomas J. O'Rourke, both CPAs, completed a two-year study which included several field trips to Bell Labs, Western Electric, and AT&T in the New York metropolitan area. Pacific and the other parties were offered the opportunity to present complete evidence on license contract payments by Pacific.

As will be apparent from the evidence, no study on a subject this complex can ever unravel all its details. Nevertheless, we now have specific evidence on all general areas for which license contract funds are used. Therefore, after we make whatever adjustments are warranted by the evidence, the rationale for the percentage adjustments mentioned above is no longer present. These adjustments will be eliminated.

C. General Theories and Considerations

In order to formulate our objectives clearly, we will discuss generally the theories and contentions of the various active parties^{3/} before proceeding to a detailed discussion of the evidence on each specific area in which license contract funds are expended. ✓

The staff recommends disallowance of that part of license contract funds used by AT&T for investor related purposes. These recommended disallowances are separate from the staff's "product related" disallowances. Pacific does not contest that expenses of benefit to the stockholder and not the ratepayer should be disallowed, but disagrees as to the staff's application of this principle to many items.

Regarding product-oriented use of license contract funds, the staff's premise is that cost of product development is properly chargeable to Western Electric and not to the ratepayers of the OTCs via the license contract. This theory applies whether the funds are channeled to Bell Labs or one of AT&T's departments. The staff argues that it is unreasonable to make Pacific's ratepayers foot the bill for the development of products which will compete with those manufactured by non-Bell System companies. Such companies, not having access to a similar source of funds, must add research and development costs to the product itself. Price comparisons are thus distorted in favor of Western Electric. The staff believes it is our duty under Northern California Power Agency v PUC (1971) 5 Cal 3d 370, 96 Cal Rptr 18, and other cases cited in the staff's opening brief, to stop license contract funds from being used to create such an economic advantage in favor of Western Electric (see, generally, the staff's opening brief and staff Exhibits 285 and 286).

The analysis of the staff witnesses, therefore, attempts not only to identify investor related expenditures, but also funds used for "product related" purposes. The staff's analysis is supported by Interconnect and Compath.

^{3/} Pacific, the Commission staff, Toward Utility Rate Normalization (TURN), California Interconnect Association (Interconnect) and Compath. Although others requested to be listed as interested parties (see appearance list) only counsel for the cities of Los Angeles, San Diego, and San Francisco attended on certain days and did not file briefs. An attorney attended certain hearings on behalf of Bell Labs but did not request to enter an appearance. ✓

Pacific argues, inter alia, that the staff's recommendation is wrong as a matter of law, pointing out that we are without power to "revise the contractual relationships within the Bell System" and that the extent of our jurisdiction as to license contract payments is limited to the disallowance of unreasonable expenses. (Pacific Tel. & Tel. Co. v PUC (1950) 34 C 2d 822; 215 P 2d 441; see discussion, Pacific's opening brief, pp. 8-13.)

We must analyze these contentions keeping in mind our objectives in this proceeding. Application No. 55492 is a rate increase application; Case No. 10001 is an investigation into Pacific's rates, tariffs, and practices. The license contract account, however controversial it may be, is still one account of many in Pacific's results of operations for the test year in this proceeding.

Our purpose here, regarding the license contract, is the same as it was in dealing with the "Western Electric adjustment": to scrutinize payments between affiliates and to disallow such payments to the extent that they primarily benefit the parent corporation and its stockholders rather than the subsidiary utility and its ratepayers (cf. Pacific Tel. & Tel. Co. v PUC (1965) 62 C 2d 634, 659-662; 44 Cal Rptr 1).

We thus agree with the staff that Pacific's ratepayers should not be forced to pay for the development of Western Electric products designed to compete with those manufactured by other companies. We recognize that a high level of usage of Western Electric terminal equipment within Pacific's service area increases revenues to Pacific, possibly benefiting the ratepayer by forestalling the need for a rate increase, but to the extent that we afford Western Electric a source of capital through funding by way of Pacific's rates (regardless of whether Western Electric's pricing policies are reasonable or unreasonable), the real direct beneficiaries are Western Electric itself and the AT&T stockholder. Allowing Western Electric such "captive" funding is inimical to our responsibility to determine proper operating expense levels and to set rates based upon such determination.

We disagree with the staff's position to the extent that it suggests our responsibility is the regulation of Western Electric's prices (as distinguished from Pacific's rates). Pacific is correct that we cannot revise the Bell System's corporate relationships. Our task is to determine how much of Account 674, license contract expenditures, should be charged to the ratepayer so that we may ascertain Pacific's revenue requirement and set California intrastate rates at correct levels. It is not our direct objective to force the Bell System to "make meaningful price comparisons" or to assure independent manufacturers that Western Electric prices are computed on the same basis as those of the independents.

When dealing with actual rates, of course, and when we have direct pricing evidence before us,^{4/} we may directly fulfill our responsibilities under Northern California Power Agency v PUC, supra, by seeking to eliminate subsidized rates in the "competitive area" which tend to discriminate against a competitive supplier. If our determination on the total license contract payment which should be allowed for ratemaking purposes also assists in preventing anticompetitive pricing, so much the better, but we must recognize that we have no jurisdiction to order Western Electric to change its pricing policies. Nor, at least in the absence of financial emergency, of which there is no evidence,^{5/}

4/ See, for example, Offering of Dimension PBX by Pacific Tel. & Tel. Co. (1977) CPUC _____, Decision No. 87962 and Commission Investigation of Centrex Rates, Case No. 10191, a generic investigation into Centrex rate methodology, now in progress.

5/ There has never been a Supreme Court case dealing with our power to take direct action of this sort under Public Utilities Code Sections 701 and 702 in the event of immediate financial emergency. In California American Water Company (1977) CPUC _____, Decision No. 86807, Case No. 9350, we determined that a parent company was siphoning an unreasonable amount of funds from a subsidiary for dividend payments, leaving the subsidiary undercapitalized and without sufficient operating funds. We ordered payments to the parent to cease until further order. The discussion on this issue specifically distinguishes the facts and issues in the case from those relating to the Bell System license contract, and specifically recognizes the California Supreme Court's holding in Pacific Tel. & Tel. Co. v PUC (1950) 34 Cal 2d 822; 215 P 2d 441.

can we order Pacific not to make the license contract payments to AT&T (Pacific Tel. & Tel. Co. v PUC (1950) 34 C 2d 822; 215 P 2d 441). Therefore, if we justifiably decide to make a license contract disallowance for rate-setting purposes, license contract payments to AT&T will continue at the same level, unless there is independent action by AT&T management to revise such payments downward.^{6/} As a corollary, Bell System can, regardless of our action here, continue to bill research and development expenses to the OTCs via the license contract and can set Western Electric's prices (as distinguished from Pacific's rates and charges) as it always has.

The Bell System has the knowledge and expertise to make meaningful cost and price studies, license contract or no license contract. If it does not, this is probably a conscious choice. The staff concedes it did not investigate the reasonableness of the levels of Western Electric prices. In a "product" case like Dimension PBX, supra, or in a generic rate investigation such as the Centrex case, supra, we may make a detailed study of Pacific's rate levels for specific equipment offerings. In so doing we may, to the extent our workload permits, attempt to determine whether such rates result from unreasonably high or low prices charged by Western Electric (although, as we have stated, we have no jurisdiction to order Western Electric to change its prices). Here, however, our task is the ascertainment of Pacific's test year revenue requirement.

Stating this objective does not lessen our interest in the license contract issue, but we wish to place the matter in its proper regulatory context and to emphasize that whatever result we achieve will not necessarily change any Western Electric prices. Such changes depend upon the attitude of Western Electric and AT&T management, or upon legal action which is not the province of this forum.

^{6/} Since AT&T owns 90 percent of Pacific's capital stock, there is no basis for regarding the license contract as an arm's length transaction between AT&T and Pacific. See discussion, Pacific Tel. & Tel. Co. (1948) 48 CPUC 1, 13-14.

Lastly, we must consider that in this and in future license contract investigations^{7/} it is only fair to reach a result within a reasonable time. Turning an investigation of the license contract account into a piece-by-piece product pricing investigation would unduly prolong it, since there are hundreds of "products", by anyone's definition of that term.

D. What Test Should Be Used in Determining the Value of License Contract Expenses to the Ratepayers?

Having clarified our objective, the next consideration is to state clearly the rules or tests which should guide us in determining what license contract expenses are reasonable for ratemaking purposes. While we have rejected the staff's apparent contention that our primary and direct objective is forcing changes to Western Electric prices, this does not necessarily dispose of the staff's "product relation" test, discussed above, as a useful tool in determining the correct amount of license contract expenses which should be passed on to the ratepayer.

Proposed staff adjustments to the license contract account are based upon contentions that specific amounts should not be included for ratemaking purposes rather than upon a challenge to the contract's method of allocating a percentage of its total cost to Pacific. As mentioned, on and after October 1, 1974, the OTCs' share of license contract payments has been based upon annual AT&T studies of actual license contract costs (see, generally, the testimony and accompanying exhibit of Robert F. Wentworth of AT&T, Exhibits 23 and 24). Under present license contract billing, AT&T recovers what its studies show to

^{7/} We are convinced from this record that future license contract investigations should be separate proceedings, conducted every few years, and that between such investigations, the results of the most recent investigation should be employed in any pending rate increase case of Pacific. (This should not limit, however, the staff from recommending adjustments in other areas of the license contract, not covered by the most recent investigation.) The license contract issues took almost as much time as all the remaining rate issues, counting preparation, discovery, and briefing time, as well as time spent in actual hearings. In this instance the staff was able to employ two accountants, full-time, for approximately two years, on this issue alone. This is ordinarily not possible with a Pacific rate increase pending, which explains why this is our first really complete investigation of this issue.

be the actual license contract costs, plus a return on that portion of its equity investment devoted to supplying such services. The return billed by AT&T equals the previous year's Bell System telephone operations earned rate of return (a weighted average) applied to the license contract investment, reduced by AT&T's patent royalties, and increased by federal income taxes to provide the return on investment (Exhibit 286, pp. 1-2). Although the staff investigated this methodology, it did not challenge it.

Staff witness O'Rourke investigated use of license contract funds by various AT&T departments. His study recommends disallowances either on the basis of product orientation or because of an investor related use. Mr. O'Rourke stated that in the course of his study of AT&T's marketing department, he was able to "identify functions which influence the product development process". (Exhibit 285, p. TO-7.)

Staff witness Humphrey studied Bell Labs and made a major recommended disallowance for use in future Pacific rate increase cases because he determined that the charges recommended for disallowance "consist of research and development work which was an integral and necessary part of product development." (Exhibit 285, p. LH-2.) Mr. Humphrey stated, "Such expenses are of no benefit to the operating telephone companies until they result in new or improved products. They are on a continuum with the types of expenses already being funded by Western Electric, and should, logically, be treated as a product development cost and applied to the cost of the product." (Exhibit 285, pp. LH 2-3.) Mr. Humphrey also stated that budgetary control problems influenced his recommendation, pointing out that those who fund the license contract (the OTCs) are not the ones with final budgetary approval over license contract expenditures (Exhibit 285, pp. LH 3-4).

Compath and Interconnect generally support Mr. Humphrey's recommendation.

Pacific contends that a "product relation" test is of no use because it fails to determine the value of any particular expenditure to Pacific and the other OTCs. Based upon City of Los Angeles v FUC (1972) 7 Cal 3d 331, Pacific argues that we must allow Pacific to recover

actual costs of the license contract services in proportion to the value (to Pacific) of the services rendered (Pacific's opening brief, pp. 9-10).

Pacific presented the following witnesses on the subject of the use of license contract funds:

<u>Name and Position</u>	<u>Subject</u>
Morris Tanenbaum, V.P., Engineering and Network Services, AT&T.	License contract funded work at Bell Labs, including basic research, applied research, systems engineering, and quality assurance.
Kenneth G. McKay, Exec. V.P., Systems Engineering and Development, Bell Labs.	Research and development by Bell Labs for OTCs.
Bruce C. Netschert, V.P., National Economic Research Associates, Inc.	Nature of research and development in the U.S. and methods of funding.
Edward Goldstein, Director of Product Management, Marketing Department, AT&T.	Benefit to OTCs of work of AT&T marketing department funded by license contract.
Robert J. Brown, Assistant V.P., Marketing, Pacific.	Pacific's marketing policy; how AT&T marketing work is used by Pacific.
John E. Dennis, Manager, License Contract and Regulatory Matters, AT&T.	195 Broadway Corp., AT&T securities servicing; pool of funds; Public Affairs Dept.; EEOC expenses; federal income tax expense & other tax matters; patent admin- istration expenses; Public Relations and Employee Information Dept., Network Operations Division; certain other AT&T uses for license contract funds.
C. Lee Wade, Director of Affiliated Interest Studies, Pacific.	Review of guidelines to establish classifications of Bell Labs work (license contract funded vs. Western Electric funded); use of license contract funds by various AT&T departments.

The individual contentions of these witnesses concerning their particular areas of responsibility will be discussed elsewhere, but they were critical of the staff's theory of disallowance on the basis of product orientation. Any statement attempting to synthesize the views of all of Pacific's witnesses leads to oversimplification, but basically their opinion is that a "benefit" test should apply - that is, license contract fund expenditures should be allowed as ratemaking expenses when their primary purpose is to benefit the OTCs.

The staff witnesses have used the term "product related" broadly. Particularly in the case of Mr. Humphrey's testimony, the term is applied to certain things not usually categorized as "products" unless the term is used simply to mean "end result". Witness Humphrey denied employing the term in that fashion (tr. 9195), but his testimony indicates that he regarded as product related, and disallowed, the development of methods of using existing products on the basis that a new method is impossible without a new product (tr. 9196), that he believes the elimination of the necessity of using an existing product to save money is impossible without a new product to take its place (tr. 9199), and, therefore, that any modification of existing plant requires research and development, and therefore "leads to products which are mainly manufactured by Western (Electric) which are then incorporated into that product to improve it" (tr. 9199), and, "if there is no product added, you cannot possibly improve the existing plant" (tr. 9200). There is no basis in the record for such generalizations.

Pacific, on the other hand, has in some instances attempted to shelter under the umbrella of "benefit to the OTC" certain expenditures of primary value to AT&T, Western Electric, or the shareholders of AT&T, and of only secondary or consequential value to the OTCs.

The record demonstrates that we cannot apply either the staff's or the company's test exactly as those parties have done. We should ask the following question: Is the expenditure of direct and primary benefit to the ratepayers of the OTC? If the answer is "yes", the expenditure should be allowed (unless serious public policy reasons

favor its disallowance) in spite of indirect or consequential value in other areas, including the possible development of products. Conversely, if an expenditure's purpose is not shown to be directly and primarily beneficial to the ratepayers, it should not be charged to them regardless of some secondary or consequential benefit to them. "Benefiting the ratepayer" includes directly assisting the OTCs in carrying out their fundamental responsibility of providing and maintaining a modern, reliable telephone network. This, in turn, includes non-"investor related" support activities in such fields as administration, finance, etc, as well as the actual engineering of the network. It does not, in our opinion, include subsidizing the manufacturing arm of the Bell System in its development of competitive equipment. We express no opinion to the effect that Western Electric should not compete in the terminal equipment field but only that such competition should not be subsidized by the ratepayers through the license contract.

Regarding "product relation": An expenditure for the primary purpose of developing a marketable product (intended to compete with those of independent telecommunications suppliers) should be treated as not chargeable to rates notwithstanding any indirect or consequential benefit to the ratepayer. Regarding the scope of product orientation, we agree with Interconnect and Compath that support activities directly related to competitive products are part of the process. We recognize in making this statement that some projects may have as their purpose the integration into the network of products from any source, and therefore would have no "lock in" value to Western Electric. Such expenditures are not product related as we use that term here.

E. Method of Analyzing Expenditures

Individual determination of the value to the ratepayer of each budgeted item, one at a time, would produce a decision a few hundred pages long, since there are thousands of such items. Such a decision would probably fail to state general principles clearly and would, therefore, be of little use in future proceedings. A better method is to analyze the evidence, including, as necessary, individual budget items, according to major departments or categories. When necessary, individual items will be considered separately but in most cases without

apportioning such items between the ratepayer and the company. The witnesses did not attempt percentage divisions of individual items.

F. Qualifications of Staff Witnesses

Pacific vigorously argues that staff witness Humphrey's qualifications do not form a basis for his opinions and conclusions. We agree essentially with the ALJ's comments on this subject in his ruling dated February 3, 1978. Pacific's arguments go to the weight of Mr. Humphrey's presentation and not its admissibility (except for matters stricken by the ALJ pertaining primarily to Mr. Humphrey's comments on antitrust law). Granted that Mr. Humphrey is a CPA and not additionally a scientist and an engineer; however, his conclusions are not based upon hypotheticals but upon an actual investigation during which he conferred with Bell System scientific and technical personnel. If either staff witness misunderstood certain material given them, this should be dealt with by weighing their conclusions rather than ruling the evidence inadmissible.

G. Issues Raised by TURN

The only substantive issue raised by TURN on brief concerns license contract expenditures by AT&T in the public relations and employee information category. This subject will be discussed later in this opinion.

Procedurally, TURN contends (1) that the ALJ erroneously found the AT&T budget decision packages (BDPs) to be a legitimate subject of a trade secret privilege by Pacific; (2) that disclosure of the Bell Labs case authorizations should have been allowed not only to TURN's counsel but to TURN's consultant; and (3) disclosure of the BDPs and the case authorizations (to the general public) was required by the California Freedom of Information Act.

Trade secret privilege: An inspection of the BDPs* (see the description in the ALJ's ruling on discovery dated February 3, 1978, hereinafter referred to as "the ruling") clearly demonstrates that they are proper subject matter for the privilege, but the short answer to

* BDP stands for Budget Decision Package which describes a single unit of activity that can stand alone and be separately funded.

this contention is that TURN was not aggrieved by this ruling because the ALJ required disclosure to the active parties, including TURN, stating:

"The trade secret privilege is not absolute, and trade secrets may be disclosed in a court's discretion (United States v National Steel Corp. (S.D. Tex. 1960) 26 FRD 603), and conditions or limitations may be imposed on such discovery (CCP 2019 (b)(1), supra; Greyhound Corp. v Superior Court (1961) 56 Cal 2d 355, 378-380, 384 P. 2d 226; Investigation of Minimum Rates (1968) 68 CPUC 21, 72 POR 3d 237; cf. Annotation, 17 ALR 2d 386.)

"Considering the fact that detailed cross-examination by using the BDPs was undertaken by company counsel, I believe it would 'work injustice' as that phrase is used in Evidence Code Section 1060 if the BDPs were not received into evidence so that counsel for the active parties^{1/} in the license contract phase of this proceeding could make reference to them in preparing their briefs, or any rebuttal case. Further, the nature of the material contained in them, while within the 'trade secret' category, is, in my opinion, not so sensitive as to create a security problem for this commission if it is maintained as a sealed exhibit, available only to counsel for the parties who have actively participated in the cross-examination relating to Mr. O'Rourke's use of them (specifically, counsel for Pacific, the staff, ComPath, Interconnect, and TURN; see footnote 1)." ^{8/}

TURN's brief removes from context the remarks of the ALJ on the subject of discovery and contains the misstatement of the record that he "never ruled on whether TURN would be allowed to examine and use the budget decision packages." The ruling states:

- "1. The BDPs shall be received into evidence. They shall be placed in a sealed container and shall be available only to counsel for Pacific, the staff, TURN, ComPath, and Interconnect. No copies of them shall be made."

^{8/} The footnote in the ruling mentions that certain parties played an inactive role in the proceeding. TURN is specifically mentioned as an active party.

TURN comments on certain negotiations between the parties concerning the BDPs prior to the February 3 ruling (brief, pp. 6-7), but the ruling superseded any protective order signed by stipulation prior to that time. The record does not demonstrate that at any time after copies of the BDPs were turned over to TURN's counsel (Ms. Murphy) TURN was denied an opportunity to cross-examine any staff or Bell System witness concerning them, or was otherwise prejudiced. (It should be noted that the argument over whether a consultant should be allowed to review Bell System material had to do with the Bell Labs case authorizations and not the BDPs. TURN made no request that a consultant review the BDPs, nor did any other party.)

TURN's comments at the bottom of page 3 and the bottom of page 4 of its brief, when read together, infer that the ALJ or the Commission somehow prevented TURN from receiving the BDPs when other parties did. If this occurred, it was by action of the parties, and not the ALJ or the Commission.

Finally, if there is any doubt about the "trade secret" character of the BDPs, an examination of them readily establishes it (see ALJ's Ruling, pp. 5-6). The reasons for limiting disclosure to certain parties are adequately discussed in the ruling and need not be repeated.

TURN argues (brief, pp. 6-8) that the actions of the Commission and the ALJ subsequent to the ruling (plus delays in receiving the material from Pacific) frustrated TURN in its attempt to make use of it. TURN's description of the record is misleading by way of omission.

It is true that when witness O'Rourke first took the stand concerning this subject matter (January 3, 1978) counsel experienced difficulty cross-examining him without examining the BDPs and having them available. This was the very reason for that part of the ruling referring to them, as the ruling states on page 3. There is no showing, nor can there be based upon a full reading of the record, that after the BDPs were distributed, TURN or any other party was denied opportunity to cross-examine witnesses based upon them.

To characterize the remarks of the ALJ as "chastising" (brief, p. 4) is unreasonable. The ALJ remarked only that TURN's request for

discovery was tardy, which was true. Notwithstanding this, however, the ALJ included TURN on an equal basis in his ruling of February 3, and otherwise treated TURN equally with the other parties regarding discovery and cross-examination.^{9/} The ALJ's remarks quoted on page 5 of TURN's brief concerning his refusal to set additional hearing dates were not directed at TURN, but at any party which might seek a delay in the proceeding to present a tardy case or to prepare for cross-examination in an untimely fashion.

Disclosure of case authorizations: Because TURN's description of the record on this matter treats certain events out of chronological context, we will summarize the use of the Bell Labs case authorizations* in this proceeding. They were first reviewed by staff witness Humphrey in the course of his investigation. As the ALJ's ruling states:

"In the course of his investigation, Mr. Humphrey examined 85 case authorizations for Bell Labs research funded by AT&T. These documents were sent to Mr. Humphrey from Bell Labs, examined at the State Building in San Francisco, and returned to Pacific personnel. They were kept in a confidential status, were not made part of the record, and no photocopies were made of them. Mr. Humphrey held numerous telephone conversations with the Bell Labs personnel responsible for the case authorizations in making his determinations as to which were product-related.

"Unlike the situation which developed with the BDPs, Pacific's counsel did not use the case authorizations to cross-examine the witness, although he was generally cross-examined regarding his use of them in making his investigation." (Ruling, p. 3.)

This staff investigation took place during 1976 and 1977. The staff exhibits on the subject are dated August 26, 1977 and were distributed to the parties shortly thereafter. They were marked for

^{9/} The ALJ's statements quoted in TURN's brief at this point mentions a January 3 ruling. On that date the ALJ had copied into the record (tr. 7390-7391) a letter ruling that a motion by Compath and Interconnect for a 60-day extension of time to present an affirmative showing would be denied. There was also lengthy argument over a protective order to which TURN was not a party; TURN did not participate in the discussion.

* All work done at Bell Labs is performed under a series of authorizations called cases.

identification as Exhibits 285 and 286 on October 25, 1977 (when cross-examination of Mr. Humphrey began) and received into evidence two days later. The cross-examination of Mr. Humphrey continued through October 27, when he was excused subject to recall. A review of the transcripts for these dates indicates that TURN did not cross-examine the witness at that time.

A discussion of scheduling and of production of the Bell Labs case authorizations took place on October 27 (tr. 7227-7249). While the ALJ participated in the discussion he declined to issue any ruling on the subject, stating that no motion had been made upon which he could rule (tr. 7234). Later, counsel for Pacific offered to provide nine case authorizations subject to certain conditions. This was unacceptable to Compath and Interconnect. Counsel for Pacific moved to limit production to the nine cases. This was the first motion by any party on the subject. The ALJ denied the motion (tr. 7249), commenting that anyone would be permitted to make a later motion for production of more case authorizations and that any party might propose a protective order.

TURN did not participate in the aforementioned discussion. The October hearings continued for only one more day, when proceedings were adjourned until January 3, 1978.

Between the conclusion of the October hearings and the beginning of the hearings in January, TURN made no motion on any subject. (Compath and Interconnect moved to extend the date for filing their own exhibits; see quotation from ALJ's ruling below. This motion was denied.)

Still no motion was made by any party regarding the case authorizations until Mr. Spievack, counsel for Compath, moved, inter alia, for production of 85 case authorizations, in a letter dated January 13, 1978, the motion being argued on January 20. Counsel for TURN joined in the motion (tr. 8020-8027). Argument also dealt with BDPs and with whether portions of Mr. Humphrey's testimony should be stricken. The ALJ ruled (1) that the BDPs should be received into evidence, available to counsel for the active parties, including TURN;

(2) that Pacific should not be required to produce the Bell Labs case authorizations; and (3) that certain minor portions of Mr. Humphrey's testimony should be stricken as argumentative.

The ruling concerning the case authorizations was based on the ALJ's belief that showing this volume of proprietary data to independent telecommunications experts (which was the intention of the movants) afforded Pacific and Bell Labs inadequate protection (Ruling, pp. 8-11). He stated, inter alia, "In my opinion, insofar as Pacific's revenue requirement and rates in general are concerned, the public, in this instance, is more than adequately protected by the exhaustive staff investigation and testimony on the subject of Bell Labs." (Ruling, p. 11.) The ruling then continued by stating that even if otherwise the requests should be granted "they should in my opinion be denied as being thoroughly tardy." (Ruling, p. 12.) Relating to this subject, the ruling continues:

"Application No. 55492 was filed on February 13, 1975, and a substantial amendment was filed on January 16, 1976. Two prehearing conferences and 63 days of hearings were held through 1976. License contract issues were originally considered as part of the case-in-chief (indeed, some facets of it were presented in the staff's Exhibit 38 and associated testimony; see Decision No. 88232, supra, pp. 71-76). But because of complications in dealing with the voluminous material the Finance Division witnesses (Humphrey and O'Rourke) had to work with, the matter was submitted regarding other issues (subject to briefing) on November 5, 1976. Hearings were originally scheduled for mid-1977 on the license contract matters but further delays postponed them until October 25-28, 1977. ComPath and Interconnect appeared for the first time at these hearings; TURN had been an appearance since January 26, 1976." (Ruling, p. 12; footnotes omitted; emphasis added.)

After briefly reviewing certain matters relative to the October 1977 hearings, discussed previously, the ruling continues:

"Hearings resumed as scheduled on January 3, 1978. There was some dispute among counsel regarding whether the protective order discussed in the section of this ruling concerning the BDPs also included the Bell Labs case authorizations. In

my opinion (and as I ruled on the record) it did not. No formal motion concerning the Bell Labs material on which I could rule was made until Mr. Spievack's letter of January 13, 1978, which was heard on January 20, 1978. This ruling is the subject of that motion.

"Since ComPath and Interconnect were not ready to file any exhibits in December or present witnesses in January, they now state that they seek production of the case authorizations to cross-examine Pacific's witnesses and to present rebuttal at the April hearings. In my opinion this request is unreasonable.

"In addition to considering the entire length of this case, and the fact that there was no secret during the case-in-chief (in 1976) that license contract issues would be considered, over two months went by from the October 1977 license contract hearings to the January hearings, when ComPath, Interconnect, or TURN could have moved for discovery.

"I find it extremely unlikely that, considering the complexity of the material involved, granting access to the case authorizations at this time to ComPath, Interconnect, TURN, or any other party would materially assist the Commission in its deliberations on the license contract issues (at least not unless the hearing schedule was completely revised and ComPath and Interconnect, or TURN, were given a tardy chance to present a case-in-chief, or at least a very detailed rebuttal case, later in the year.

"In any event, I believe it is unreasonable to commence such large-scale discovery this late in the proceeding. A rate increase application and its associated investigation (Case No. 10001) are not endless chains. The test year in this matter expired June 30, 1976. Further scheduling of hearings is not warranted." (Ruling, pp. 13-14.)

TURN petitioned the Commission concerning certain aspects of the ruling. The Commission declined to modify it.

This was not, however, the end of the matter concerning the case authorizations. After the January hearings concluded on January 24, further hearings were set beginning April 4 for cross-examination of witnesses from AT&T and Bell Labs. On April 7

Mr. Spievack, counsel for Compath, moved to produce a more limited amount of case authorizations. During the discussion on this motion it was made clear that the purpose of the motion was to effectively cross-examine Bell Labs' witness Dr. McKay, that the material would be used by counsel only, and that no further hearings were desired and the proceeding would not be delayed. After considerable discussion (tr. 8451-8503), the ALJ ruled: (1) the case authorizations referred to by Mr. Spievack should be produced, (2) which ones should be received into evidence would be determined later^{10/}, and (3) they would be received under the same restrictions as the BDPs. The ALJ explained that in his opinion this motion was distinguishable from the previous motion because its more limited scope would not delay the proceeding (tr. 8469-8470). TURN was allowed equal access with the other active parties.

Discussion: A review of the entire sequence of events concerning production of evidence shows that the ALJ acted properly and that TURN's substantial rights (and those of the parties) were preserved. While the ALJ placed certain limitations on discovery, he denied repeated motions by Pacific to conduct in camera hearings and to seal the transcript concerning Bell Labs' material. The case authorizations received into evidence were an adequate cross-section for the purpose of testing the theories of the appropriate witnesses.^{11/} Requests for more all-encompassing discovery should have been initiated much earlier in the proceeding.

TURN argues that the ALJ erroneously required disclosure of the name of TURN's technical consultant (who was not intended as a witness) citing Swartzman v Superior Court (1964) 231 CA 2d 195, 41

^{10/} Those received are in Exhibits 314 and 316.

^{11/} The case authorizations were extensively used in cross-examining Dr. McKay of Bell Labs and for recross-examination of Mr. Humphrey. Pacific refused to produce certain case authorizations. The disposition of this refusal is contained in the substantive discussion of the Bell Labs evidence (Section III).

Cal Rptr 721 and California Deposition and Discovery Practice, vol. 1, paragraph 2.08 (3)(a). A legitimate claim of the trade secret privilege was not the subject of these citations. The purpose of allowing nondisclosure of a consultant under the circumstances in the citations is principally to prevent a subpoena to a person not intended as a witness, in order to avoid an invasion of the attorney's work product (cf. discussion, Louisell & Wally, Modern California Discovery, §11.02). Here, the purpose of the disclosure was to insure that proprietary Bell System material would not be turned over to an expert closely associated with a competitor of Western Electric. This requirement of disclosure was reasonable under the circumstances. Any improper attempt to take the deposition of TURN's consultant or otherwise invade the work product of TURN's attorney could have been prevented at a later stage.

In any event, TURN was not prejudiced by the disclosure. Pacific, through counsel, indicated that it had no objection to the particular consultant, and there was no refusal to turn over any material to TURN on that basis (tr. 7969).

Finally, there is no basis for TURN's argument that the California Freedom of Information Act displaces the Evidence Code, the relevant sections of the Code of Civil Procedure, or Public Utilities Code Section 583.

TURN excuses its untimely participation in familiarizing itself with the complex Bell Labs material by stating that only when the cross-examination of the staff witnesses commenced did it "become clear" (TURN's brief, p. 3) what records the staff relied on in reaching its conclusions. It "became clear" to TURN only at that time because TURN did not engage in discovery at an earlier date.

TURN cannot reasonably claim that it was aggrieved by the ALJ's ruling. TURN's description of the sequence of events lifts remarks of the ALJ from context and reviews only selective portions of the entire sequence of events. TURN cannot place itself in a special disadvantaged category; TURN was allowed access to Bell System material on the same basis as the other active parties.

Further procedural points raised by TURN have been reviewed and are found not to require discussion.

III. USE OF LICENSE CONTRACT FUNDS BY BELL LABORATORIES

A. Introduction

Bell Labs is a nonprofit corporation owned equally by AT&T and Western Electric. It carries out research, development, and design for the Bell System.

There are two essential categories of work: research and fundamental development (R&FD) and specific development and design (SD&D). The latter concerns the design of specific products, is paid for by Western Electric, and no license contract funds are used.

R&FD is a broad term covering several major areas. Analysis of R&FD is made difficult by the fact that there is no consensus as to how to subdivide it into scientific or engineering categories. Dr. McKay of Bell Labs offers the following breakdown:

<u>Category</u>	<u>Percentage of License Contract Funds Used</u>
Basic Research	25%
Applied Research	40%
Systems Engineering	30%
Quality Assurance and Patent Administration	5%

The percentages represent fractions of the entire license contract payment for R&FD. According to Dr. McKay, these are approximate and vary somewhat from year to year. Dr. McKay described these categories (except for patent administration, the description of which is taken from the staff's exhibit) as follows:

Basic Research. This category is concerned with the exploration of "fundamental phenomena and the advancement of the understanding of the natural laws that govern them." The objective is "fundamental scientific understanding", although "concepts may be invented and exploratory devices fabricated for experimental purposes." (Exhibit 298, p. 18.)

Applied Research. Activities in this category are of wide scope and are hardest to define with precision. Certain theoretical experiments are similar to those in "basic research". Others are for the purpose of establishing technical feasibility. Another category is reliability

of technology used by OTCs; still another covers work in advanced technology in such areas as transmission, switching, and terminals. (Exhibit 298, pp. 28-36.)

Systems Engineering. This category exists for the purpose of engineering the telephone network to meet future requirements. Activities in this area include "planning network configurations for efficient traffic handling; planning for continuity of service under conditions of high load, equipment failure and disaster; planning introduction of new technology; establishing service objectives; and developing requirements for compatibility among all of the apparatus and equipment that make up the physical network." (Exhibit 298, p. 7.)

Quality Assurance. Bell Labs quality assurance "acts as a quality acceptance organization" for the OTCs. The purpose of this category is to establish quality standards for products, to perform in-process analyses, to test final performance, and assess installations. (Exhibit 298, pp. 42-44.)

Patent Administration. This category concerns patent applications, licensing, patentability studies, and other similar work for the purpose of protecting Bell Labs inventions and allowing freedom of use by the Bell System of telecommunications technology. (Exhibit 286, pp. 2-17.)

Projects are actually carried out on a "case" basis, each case having a title and number. Some cases are funded for specific short periods; others are considered continuous and remain active for years, or indefinitely (Exhibit 286, pp. 2-6 and 2-7).

Regarding the R&FD case materials furnished the staff, there was no specific segregation by Bell Labs personnel, or by any system of numbers or codes, corresponding to the aforementioned general categories, except for quality assurance and patent administration, which are funded under specific case authorizations. Therefore, while one may review the direct testimony of Dr. Tanenbaum (Exhibit 297) or Dr. McKay (Exhibit 298) and identify the particular cases specifically discussed as falling into one category or the other, for most of the cases^{12/} one

^{12/} Staff witness Humphrey analyzed the 85 case authorizations which were indicated to him as being license contract-funded. (See Table 2-A in Exhibit 286.) There were approximately 200 more which were charged to Western Electric and therefore not charged directly to the ratepayers of the OTCs.

must make assumptions based on the case descriptions. Dr. McKay's terms, "basic research", "applied research", and "systems engineering" are, therefore, descriptive terms and not specific budgetary or accounting categories.

A tabulation based upon billings from Bell Labs to AT&T for the latest periods available at the time of the staff investigation (Exhibit 286, p. 2-8) shows a different breakdown:

BELL LABS R&D EXPENSES BILLED TO AT&T

<u>Category</u>	<u>12 Months Ended April 30, 1976</u>	<u>1975</u>	<u>1974</u>
Switching and General Central Office Research and Fundamental Development	\$ 49,896,304	\$ 47,826,361	\$ 35,043,815
Transmission Research and Development	47,696,817	46,846,473	49,929,053
Status Research and Funda- mental Development	12,244,106	11,481,306	11,199,595
<i>Outside Plant Research and</i> Fundamental Development	12,701,551	11,585,105	9,968,082
General Research and Funda- mental Development	88,030,026	83,009,126	77,554,685
Associated Work	<u>7,439,091</u>	<u>7,230,417</u>	<u>6,187,756</u>
Total Research and Fundamental Development	218,007,895	207,978,788	189,882,986
Special Services	16,302,070	13,890,547	7,619,666
Support Services	<u>5,566,474</u>	<u>4,353,593</u>	<u>3,170,540</u>
Total Billed AT&T	<u>\$239,876,439</u>	<u>\$226,222,928</u>	<u>\$200,673,192</u>

AT&T rebills the OTCs for these amounts through the license contract. Pacific's percentage share of the total under the present contract is 9.38 percent for its California operations (that is, after excluding the amount charged to Nevada operations). The allocations to Pacific for the years 1965 through the 12 months ended April 30, 1976 are as follows:

PACIFIC'S ALLOCATION OF BELL LABS R&FD EXPENSES

<u>Year</u>	<u>Amount</u>
1965	\$ 6,513,798
1966	7,505,947
1967	7,951,033
1968	8,552,541
1969	9,199,407
1970	10,049,522
1971	11,085,438
1972	12,700,593
1973	14,208,382
1974	16,835,475
1975	19,181,134
12 months ending 4/30/76	20,174,617

The staff notes that approximately 40 percent of license contract expenses originate at Bell Labs. (Exhibit 286, p. "1".)

B. The Staff Analysis

The staff's opinion is that the majority of R&FD work is "directly related to, and is, in fact, essential to the development of products manufactured by Western Electric and as such, should be funded by Western Electric rather than by the operating telephone companies."^{13/} The staff maintains that the general distinction between R&FD and SD&D is "an arbitrary one for purposes of funding." (Staff opening brief, p. 6.) The linchpin of the staff's reasoning is that without R&FD, SD&D "would have no starting point", and, therefore, "to the extent that such research can be identified as ultimately product related," (emphasis added), the expenditures should not be charged to the rate-payers through the license contract. (Staff opening brief, pp. 9-10.)

Compath and Interconnect generally support the staff's view (see their opening brief, pp. 13-22).

As previously stated, staff witness Humphrey applied his "product relation" test to over 85 individual Bell Labs case authorizations in the R&FD area. His determinations culminated in the following conclusion, based on costs for 12 months ending April 30, 1976:

^{13/} Exhibit 286, p. 2-2. Unless otherwise indicated, material attributed to the staff in this section is taken from Exhibit 286, Chapter 2, or from Mr. Humphrey's prepared testimony in Exhibit 285.

for the total R&FD expenditures of \$218,007,895, \$153,860,296 is product related and only \$64,147,599 is properly charged to the license contract. Under the current license contract formula, Pacific's share of the \$64,147,599 would be \$6,433,409.

It is impossible in a decision of reasonable length to review Mr. Humphrey's determinations on a case-by-case basis. Examples will be given to illustrate his general approach, using the general categories of Dr. McKay, listed previously.

Mr. Humphrey recommended disallowance^{14/} of all basic research and all applied research cases categorically (with a few isolated exceptions listed on page 2-20 of Exhibit 286).^{15/} The staff cites as examples of either basic or applied research the following cases:

- 38543 - Electron Dynamics
- 39093 - Quantum Electronics Research
- 38235 - Chemical Research
- 49090 - Physical Chemical Research
- 38139 - Physics Research
- 29090 - Nuclear Physics Research
- 38932 - Fundamental Development - Telephone
Switching
- 20131 - Fundamental Development of Electronic
Power Systems

^{14/} For convenience in discussing Mr. Humphrey's testimony, we employ the terms "disallowance", "allowance", etc. To state Mr. Humphrey's recommendation with complete accuracy, he recommends that in future Pacific rate increase cases, we assume that "product related" projects be funded under SD&D and, therefore, not recognized as part of the license contract billing. At one point in cross-examination Mr. Humphrey said: "I haven't really disallowed anything. I am simply recommending a change of funding procedure." (Tr. 7122.) We cannot force AT&T and Bell Labs to change accounting procedures (see discussion, ante, under the heading "General Theories and Considerations"). Our task is to determine whether, in setting rates, we should make future disallowances regarding license contract funding of Bell Labs in order that Pacific's ratepayers pay only for projects of direct benefit to them. We do not agree that we need apply his recommendations to future cases only. See discussion under Section III D.

^{15/} Due to conflicting methods of categorizing cases (compare Dr. McKay's "categories" with the budgetary divisions in Table 2-A, Exhibit 286), it is not always possible to apply Dr. McKay's categories to each individual case, unless the subject of that case and its "category" arose on cross-examination. From the titles, the cases enumerated on p. 2-20 of Exhibit 286 appear to be basic or applied research, except for the last one (#29483) which appears to be systems engineering.

- 39273 - Fundamental Development - Subscriber Loop Systems
- 20123 - Fundamental Development of Integrated Optical Subsystems
- 28765 - Fundamental Development of Business Communication Systems
- 28796 - Electric Protection and Coordination of Communication Facilities
- 20102 - Fundamental Development of Discrete Semiconductor Devices
- 20105 - Fundamental Development of Magnetic Devices

The staff's reasons for a proposed 100 percent disallowance may be summarized as follows: (1) in spite of the largely theoretical approach, many products useful to telecommunications have been developed, e.g., the laser, the transistor, magnetic garnets, and the silicon solar cell; (2) research is an integral and necessary part of "the basic [Bell Labs] mission of providing new and improved products for the telecommunications industry" (p. 2-10); and (3) the cases in the staff's opinion, often have counterparts in the SD&D area funded directly by Western Electric.

"For example, AT&T Case No. 20105, 'Fundamental Development of Magnetic Devices' is comparable to Western Electric Case No. 20247, 'Development and Design of Magnetic Devices'; AT&T Case No. 20107, 'Fundamental Development of Primary and Secondary Energy Sources' is comparable to Western Electric Case No. 20207, 'Development and Design of Primary and Secondary Energy Sources'; AT&T Case No. 20104, 'Fundamental Development of Piezoelectric Devices' is comparable to Western Electric Case No. 20245, 'Development and Design of Piezoelectric Devices.' This comparability of cases, of which the above examples are a small part, shows the continuity of the research and development efforts in those fields in which materials, devices and products are the end result. Further, such comparable cases as those shown above are worked on by persons in the same departments." (Exhibit 286, pp. 2-11 and 2-12.)

According to the staff, this process means that there is a continuous flow from theoretical research to end product, with Western Electric simply taking over the funding under SD&D when technical feasibility is established.

Compath and Interconnect support the staff disallowance, arguing that examples of product related work appear in the 13 complete case authorizations furnished for the record (Exhibits 314 and 316):

"The record establishes that the distinction between specific design and development funded by Western Electric and research and fundamental development funded by AT&T through the license contract is 'gray' and elusive, to use the words of the License Contract Study of Bell Labs performed by the operating telephone companies themselves in July, 1973 (see, Exhibit 307, p. 15).

"As exemplified by two cases (Case 38896 and Case 38765), research and development work performed by Bell Labs and paid for by AT&T under the license contract specifically and exclusively relates to competitive business terminal equipment.

"Case 38896, 'Engineering Studies of Business Communications Systems,' and Case 38765, 'Fundamental Development of Business Communications Systems,' concern exclusively business terminal equipment, products and services, most notably the Dimension PBX, either by its trade name or by its generic name, CSS-201. Work conducted under Case 38896 related to the formulation of various station and system features for the Dimension PBX (Tr. 9051); additional features to be provided with the Dimension PBX (Tr. 9052); work with respect to testing station and console features of the Dimension for conformance to customer requirements (Tr. 9053); analysis and resolution of Dimension feature problems (Tr. 9054); studies with respect to Dimension custom telephone service objectives, plans and requirements (Tr. 9055); the development of other services to be provided to Dimension customers, such as private network features or alternate data capabilities (Tr. 9055); simulation studies for the Dimension PBX; evaluation of Dimension 100 PBX and reports furnished to AT&T (Tr. 9058); as well as evaluations of other competitive products, such as the Western Electric 801A PBX (Tr. 9058) and certain key systems (Tr. 9057).

"Moreover, Case 38896 encompassed work on marketing and statistical studies for competitive terminal equipment (Tr. 9059) and work on pricing models for competitive terminal equipment to be used by

the Bell operating telephone companies (Tr. 9059), as well as establishment of a tracking data base for PBX's and key systems (Tr. 9064).

"Because Case 38896 was styled a 'systems engineering case,' the authorized funding for the years 1975 (\$3,494,800) and 1976 (\$3,485,500) was allocated to AT&T and charged exclusively by AT&T wholly through the license contract (Tr. 9050 and 9066). During this two-year period, over \$7 million of research specifically and exclusively related to competitive terminal equipment products was not paid for by Western Electric and not included in the Western Electric Dimension product price, but was the result of funds collected by AT&T through the license contract mechanism paid by all ratepayers." (Reply brief of Compath and Interconnect, pp. 15-16.)

Compath and Interconnect assert in a footnote to this discussion that Case 38896 is not unusual; that cross-examination revealed that significant product related work was conducted in other R&FD cases. (Reply brief, note 6; opening brief, Section II, pp. 13-21.)^{16/}

In the field of systems engineering, Mr. Humphrey made a partial disallowance on a case-by-case basis - that is, he determined for each case examined whether product related work predominated or it did not, and either allowed or disallowed 100 percent of the case on this basis. His conclusions are summarized in the following table (Exhibit 286, p. 2-14).

^{16/} Case 38765 is a fundamental development case. Case 38896 is a systems engineering case. The thrust of the argument is that there is a continuous flow of research, development, and engineering terminating in the specific design of a product.

DETERMINATIONS OF STAFF WITNESS HUMPHREY
CONCERNING SYSTEMS ENGINEERING CASES

License Contract	Product Related	Case Number	Case Title
	X	35826	Transmission Studies - Voice Frequency Systems
	X	36801	Network Objectives and Performance
	X	38482	Transmission Studies - Radio Systems
X		38730	Loop Plant Systems Engineering Studies
X		38738	Station System Studies
X		38862	Transmission Studies - Tolls and Metropolitan
	X	38867	Signaling Systems Studies
X		38896	Engineering Studies of Business Communications Systems
X		38931	Traffic Systems Studies
	X	38933	Human Factors Engineering Research
X		38964	Local Switching Systems Studies
	X	39065	Telegraph and Data Communications Studies
X		39351	Toll Switching and Special Network Systems Studies
X		39445	Mobile Communications Systems Planning Studies and Fundamental Development
X		49008	Traffic Network Planning
X		49009	Facilities Network Configuration Planning
	X	49014	Systems Engineering and Fundamental Development of Main Distributing Frame
X		49023	Fundamental Studies of the Operation, Administration Maintenance of Switching Systems
X		49059	Fundamental Studies of Corporate Analytical and Data Needs
X		49154	Billing Systems Studies
	X	49155	Switching Maintenance Studies
X		49156	Operator Services Systems Studies
X		49186	Network Operations Planning

Compath and Interconnect point out that Case 38896, allowed by the staff, concerns development of business terminal equipment, including Dimension PBX (see quotation from their brief, ante, p. 30). The staff's exhibit summarizes this activity:

"This activity overlays both exploratory development and Specific Design and Development. Its purposes are to optimize communication facilities in the most cost effective manner to ensure compatibility of components within the Bell System network, to plan the introduction of new and possible future equipment and systems into the Bell System in such a manner as to assure continuity of service, and to study customer reactions to service impairments such as noise, hiss, echo, and crosstalk, to determine the minimum acceptable level of such impairments, and to allocate impairments to the system in the most cost effective manner. This latter activity is one of the ways in which Systems Engineering influences the development and design of products. Other functions include formulating the requirements for new and improved equipment, making cost studies to determine the most cost effective trade off between cost of products and cost of future maintenance expenses, the gathering, analysis and study of the performance data of all systems and components of the Bell System, and on-going revision and updating of the design of the network, the development of maintenance, operation and administrative procedures for telephone plant, making studies of what technological developments are needed, using 'information theory' to determine what developments are possible, and assuring that products under development both in exploratory stages and in specific design stages will meet the needs of the operating companies.

"Systems Engineering governs both exploratory development and Specific Design and Development by preventing or minimizing the random invention of products which are not compatible with the system network technical and performance needs and objectives, which are not cost effective or which will not meet the needs of the operating telephone companies." (Exhibit 286, pp. 2-12 and 2-13.)

Quality assurance is funded under one continuous case (No. 38100), "Quality Assurance and Quality Theory". The staff's summary of its objective is as follows (Exhibit 286, p. 2-15):

- "a. Development of inspection and quality control theory and techniques.
- "b. Formulating quality objectives for new systems and quality standards for new

products and performing continuing surveillance of quality standards for existing products.

- "c. Development and specification of quality inspection procedures.
- "d. Quality surveys which review all the factors which related to the quality of a particular product including design, manufacture, and use. These surveys are carried out jointly with personnel from Western Electric.
- "e. Appraising quality of products as indicated by the results of quality assurance inspections performed by Western Electric personnel at their plant locations according to BTL quality inspection specifications.
- "f. Quality reporting consisting of documents of these appraisals for management purposes.
- "g. Supports the evaluation of general trade products work done by the Bell System Purchased Product Division (BSSPPD) of AT&T. This work includes formulation of quality standards, creation of a quality system to monitor the quality of general trade products and participation in the appraisal of the quality of general trade products."

It should be well noted that there is a separate case (Case 38200, "Engineering Complaints, Product Performance Evaluations, Nonconformance Cases and Field Engineering") for quality control funded by Western Electric.

The staff recommends a 100 percent disallowance. The staff states (Exhibit 286, p. 2-16):

"The staff's opinion is that it is inappropriate for the operating companies to fund the quality assurance work performed at BTL. Work performed under Case No. 38100, with the exception of evaluation of general trade products, is the type of warranty work that normally is performed by a manufacturing company. Quality assurance work is usually labeled quality control by most manufacturers and is the method they employ to assure that the products coming off their production line and sold to their customers meet their standards of quality. It is recommended, therefore, that Case No. 38100 be funded by Western Electric rather than by the operating companies."

Lastly, regarding patent administration, the staff recommends that all such expenses incurred at Bell Labs be funded by Western Electric "and subtracted from royalty income to obtain net royalty income". The staff believes that this will result in the same treatment for such expenses at Bell Labs as at Western Electric.

The staff describes patent administration as follows (Exhibit 286, p. 2-16):

- "a. Preparation, filing and prosecutions of United States and foreign patent applications assigned to BTL, AT&T and Western Electric.
- "b. Work on interferences (conflicts between two parties claiming a patent on the same item) involving United States patent applications or patents.
- "c. Patentability studies at BTL, AT&T and Western Electric.
- "d. Right to use studies including cross licensing agreements with other companies arising out of work at BTL, AT&T and Western Electric.
- "e. Publication release studies.
- "f. Patent studies of outside inventions or patents submitted to BTL.
- "g. Routine studies of U.S. and foreign patents.
- "h. Patent studies relating to copyrights, trademarks and miscellaneous matters arising out of BTL activities."

The staff report also describes the staff's views of the purposes and fiscal results of this category (Exhibit 286, p. 2-17):

"The general aim of patent work is to protect BTL inventions and to allow a freedom of use by the Bell System of all pertinent technology which may be useful in the telecommunications industry. This is accomplished through a system of patents and royalty-free cross-licensing agreements with other technologically oriented institutions. BTL is a prolific procurer of patents, obtaining 500 to 600 a year. It is not known whether BTL gives more in potential royalty revenues than it receives under the cross-licensing agreements. However, BTL believes that the advantages to technological progress through the freedom-to-use provisions of the cross-licensing agreements outweigh any loss in royalty revenues.

"Patent royalties from all sources flow to Western Electric, regardless of whether BTL, Western Electric, or AT&T is the developer of the product which was patented. Western Electric subtracts its costs of patent administration and the resulting net royalty income is divided equally between AT&T and Western Electric. The share of net royalty income received by AT&T is used to reduce the amount of License Contract expense billed to the operating telephone companies."

The staff's report (Exhibit 286) also contains certain other categories which appear to be superfluous. "Mathematics research" includes cases which from their descriptions are either basic or applied research. "Operations research" should be considered as part of systems engineering. "Other cases" (all of which were determined not to be product related) are apparently all basic or applied research except for Case 39483, a study of reserve power systems for telephone operations, which is probably best categorized as systems engineering.

The staff exhibit also describes two similarly named areas: "business information systems" (BIS) - the development of software programs for use by the OTCs - and "business information systems studies", which covers certain long-range planning of business operations, including computer software and hardware systems. The former is funded outside the license contract and is not the subject of this investigation (see Decision No. 88232); the latter may be regarded as part of systems engineering.

C. Pacific's Presentation

Pacific's arguments against the staff's view of Bell Labs may be summarized as follows: (1) the staff witness (Humphrey) had insufficient background to understand the nature of Bell Labs' work and, therefore, failed to understand its significance to Pacific and the other OTCs; (2) the staff erroneously classified research work as "product related"; and (3) the staff's recommendations to disallow quality assurance and patent administration are based upon a misunderstanding of the purpose of the work.

Because of these problems with the staff analysis, according to Pacific, if the recommendations of the staff are followed, there will be an adverse impact on long-range system planning and the quality of service.

Dr. McKay testified that the purpose of basic research is "fundamental scientific understanding" (Exhibit 298, p. 18). One may actually manufacture a device for experimental purposes in the course of experiments but such a device cannot be considered a product. Dr. McKay points to Mr. Humphrey's characterization of the transistor as an example of misunderstanding. The first transistor was not "developed" or "produced" in physics research at Bell Labs, but was a device in a laboratory experiment demonstrating signal amplification in a solid state material. The device was, at that point, "of no commercial use". (Exhibit 298, p. 18.) Dr. McKay explained certain other semiconductor experiments, which were carried on over several years and which studied the behavior of electrons. Dr. McKay testified that he did not undertake the work with an understanding that it would be of benefit in developing products. (Exhibit 298, pp. 19-20.)

Dr. McKay similarly listed and described several projects in areas of mathematical research, chemical research, and environmental and energy studies. Dr. McKay, in answer to the question, "Does Bell Labs have a long-term commitment to ongoing research?", stated (Exhibit 298, pp. 24-25):

"Yes. One example of our long-term commitment is basic research in microwave radio systems. In the late 1930's our radio research people began building experimental microwave devices and measuring microwave radio propagation through the atmosphere. Some of their instruments were used in radar research and development in the early 1940's, and in the subsequent development of the transcontinental microwave radio relay system. However, the fundamental studies continued. For example, we measured the effect of atmospheric refraction on microwaves and discovered the scattering of microwaves by the troposphere. This latter effect has been exploited in tropospheric scatter radio systems built by many manufacturers. More recently, we have conducted extensive studies of the effects of rain on higher frequency microwave radio. We have shown, for example, that heavy rainstorms are relatively localized phenomena; we have assembled experimental arrangements to show that, with appropriate system designs, the effects of rain attenuation can be overcome. We believe these findings will make it feasible to open new frequency bands

for satellite communication as well as terrestrial microwave radio relay systems. Over the years, too, we have made extensive measurements of radio propagation at frequencies appropriate for mobile radio telephone services. These endeavors laid the foundation for the high capacity system now being explored in Chicago. These are also basic to the non-Bell mobile system that is to be tested in Washington D.C."

The witness stated that Mr. Humphrey's view that all such theoretical work is product related is "wrong".

"Of course, the products produced by manufacturers, including Western Electric, will be better products for the Operating Telephone Companies as a result of this work. To make sure that this occurs, we are aggressive about publishing basic research results. Entire industries have been started or enhanced by Bell Labs' basic research results: the semiconductor industry is one example. Only with the products of that industry could the worldwide computer industry provide the low-cost, reliable products which have been of such immense benefit to the Operating Companies,

"But basic research results are also of primary benefit to the Operating Companies in other ways. I have given several illustrations: mathematics and radio propagation data being used by systems engineers in their direct work for the Operating Companies, and chemists working directly with Operating Companies in contaminant control, environmental protection and energy conservation. In every basic research area there are comparable examples.

"All of our basic research is necessary for AT&T's technical support of the operations of PT&T."
(Exhibit 298, pp. 26-27.)

Both Dr. McKay and Dr. Tanenbaum stressed that fundamental research should not be left to equipment manufacturers. He pointed out that one aspect of such research is establishing technical feasibility. It is not known, he said, whether a desired function can be achieved based on certain ideas until a trial is carried out. "Even if the trial were to be a success", he said, "no specific product would have been formulated." (Exhibit 298, p. 29.)

Similarly, as to applied research, both witnesses testified to the negative effect of abandoning this area. Dr. Tanenbaum stated (Exhibit 297, pp. 23-24):

"Even in cases where manufacturers may contribute to the development of new technology, such as in lightwave communications technology, it is still necessary for the Operating Telephone Companies to do applied research in order to be knowledgeable planners, purchasers and users of the technology. Some of the information the telephone companies would need to acquire to be knowledgeable in this new area includes, for example: how the new technology can be best used in the existing network, how cable and splice design affect properties over long periods of time, and whether optical systems can be maintained efficiently. Because of questions like these, a telephone company should not commit to use this new technology without first generating an adequate fundamental understanding of how it could affect their operations and the cost of providing service.

"This is true of all technologies that can affect telecommunications. The telephone companies need the ability to choose among complex technical alternatives and also to place requirements on the potential suppliers of equipment to assure they get what they can use most efficiently."

Summing up his opinion regarding the effect of ending the funding of such work by the OTCs, Dr. Tanenbaum said (Exhibit 297, p. 26):

"If the Operating Telephone Companies were not to fund this work at Bell Laboratories, much of it would probably not be done. As I have demonstrated, the scope and direction of this work goes far beyond that normally funded by manufacturers. Thus, Western Electric could not be expected to fund and direct it. Since it is unlikely that any single Operating Telephone Company could individually support basic research of the magnitude and caliber of that which they support jointly at Bell Laboratories through the License Contract, it is likely that the quantity and quality of basic research in telecommunications would diminish significantly and the extraordinary benefits that have occurred in the past would not be matched in the future."

Dr. McKay pointed out that there is a wide scope of activities in applied research; at one end of the spectrum the projects involve basic research, and at the other they are similar to systems engineering. A list of some of the activities includes semiconductor research; technical feasibility studies; reliability of technology to be used by the OTCs; and maintainability studies (testing case of maintenance of technologies). Dr. McKay gave the following example of the last category (Exhibit 298, pp. 31-32):

"Recent progress in laser reliability is a good illustration. The laser in an optical transmission system is a solid state device about the size of grain of salt - a size comparable to the end of the optical fiber into which it couples. Two years ago, such devices had a mean time to failure of 10,000 hours, which although suitable for the experimental trials of optical communications now going on in Chicago are not nearly long enough for widespread Bell System application. (Electronic component failure is a statistical quantity. The mean time to failure must be much longer than the average lifetime of a system to provide satisfactory service.) The process of improving reliability started with an investigation of failure mechanisms. Our basic research people developed a method they called 'deep level transient spectroscopy' to measure the aging process of solid state lasers. They found that in operation a point defect would grow into a line that caused catastrophic failure. Subsequent analysis showed that the source of the fracture was migration of elements within the crystalline structure of the device. Knowing this source of failure enabled the applied research people to devise a structure immune to this mechanism. The result was a device with a mean time to failure of one million hours. Devices with this reliability may be adequate for some applications, but further improvements are required for widespread applications. We are pressing on with reliability studies and hope to uncover the technology that will be the basis for devices with a mean time to failure of at least 10 million hours - the level desired for widespread commercial service in the Bell System."

The witness testified that the above study concerned failure mechanisms, not design and manufacture. Several other examples were cited (pp. 34-36).

He stressed that such research did not lead to prototype equipment and that "specific development" would be needed "to translate these results into configurations suitable for actual Bell System use." (Exhibit 298, p. 36.)

Proceeding to systems engineering, Dr. McKay described its function as:

"...planning network configurations for efficient traffic handling; planning for continuity of service under conditions of high load, equipment failure, and disaster; planning introduction of new technology; establishing service objectives; and developing requirements for compatibility among all of the apparatus and equipment that make up the physical network." (Exhibit 298, p. 7.)

Dr. McKay cited several examples of work in this area. He first summarized projects under the "continuity of service" category (Exhibit 298, p. 8):

"Continuity of service is a requirement foremost in the minds of systems engineering planning activities. There are many facets of engineering to meet this single requirement. Automatic alternate routing algorithms or procedures are employed to utilize the network efficiently under varying load conditions. Standby power is planned so that telephone service will continue in the event of commercial power failure. The combination of standby power and network management procedures is effective in continuing to provide telephone service in the event of disasters. The network must be capable of accepting new kinds of equipment without conflicting with existing equipment and while continuing to provide uninterrupted service. This single requirement of continuity of service while introducing novel technology is the reason that systems engineering organizations must be responsible for establishing compatibility and performance requirements for all the elements that enter the network. These requirements reflect the service needs of the Operating Companies rather than the interests of manufacturers of telecommunications products."

Dr. McKay outlined the methods of disseminating the results of such research to the OTCs (Exhibit 298, pp. 10-11).

Another area of systems engineering is network planning, described by Dr. McKay as follows (Exhibit 298, pp. 11-12):

"A typical network planning study starts with computerized models of the network. The models contain representations of network components - including terminal, loops, short and long haul trunks, switching systems and associated apparatus and equipment - and reflect the ways these components are interconnected in the network. These models are based on studies of the characteristics of network components and surveys of network connections carried out by Bell Labs, and on various routine measurements reported by the Operating Companies. In the studies, systems engineers simulate large numbers of telephone connections and develop statistics on end-to-end performance. Furthermore, these models provide flexibility in evaluating the effects of possible changes in one or more of the components and in network configuration.

"To predict the effect of network changes on customer opinion, additional information is required. For voice services this is provided by subjective tests in which participants talk or listen over telephone connections. For each test condition the transmission characteristics such as loss, noise, and echo are determined in carefully controlled human factors studies. Models of customer opinion are established based on the ratings of many participants on a range of transmission conditions and incorporated in the network models. Data service studies require similar information on the sources and effects of error characteristics, including both short term (seconds) and long term (days) periods of error-free transmission. This, too, is provided by carefully controlled laboratory tests as well as through customer need studies.

"The use of the computerized network models, customer opinion models, and data error models permit many alternatives in network component choice and interconnection to be evaluated. Overall network optimization can be achieved by considering trade-offs among components. Cost studies of the more promising alternative are carried out. Recommendations for improvements in network objectives which may result from introduction of new technology are made and

reviewed by AT&T. Upon acceptance, new network objectives are included in appropriate Bell System practices and summarized in publications such as 'Notes on Distance Dialing'."

Dr. McKay also described systems engineering of communications equipment:

"A recent example is measurements made by Bell Laboratories engineers in September 1976 on microwave interference problems at a microwave station in Los Angeles. The microwave interference is caused by reflections, particularly from new and tall buildings adjacent to the microwave station." (Exhibit 298, p. 14.)

In answer to the question, "Are such microwave interference measurements 'product related'?" Dr. McKay said:

"No, not in any sense related to the development or design of products. The problem had to do with the proper use of existing equipment. In fact, at this Los Angeles microwave station there is some non-Western Electric equipment together with Western Electric TD2 equipment." (Exhibit 298, p. 15.)

Exhibit 298 and 299 illustrate other examples of license contract work in various categories. The testimony stresses present or future value to the network rather than to a product or series of products. This is why, according to Dr. McKay, such research should be supported and does not overlap with actual manufacturing research.

Regarding quality assurance, the witnesses stated that Mr. Humphrey's view of quality assurance as a testing of products is incorrect and is based on his misunderstanding of the subject matter covered. Dr. McKay emphatically distinguished "quality assurance" from "quality control", the latter being the function of Western Electric (or another manufacturer).

"The AT&T-funded Quality Assurance organization at Bell Labs, acting on behalf of the Operating Companies, establishes quality standards for products, is responsible for in-process analyses, tests final performances and assesses installations. For example, if Quality Assurance determines that a given western electric product does not meet the prescribed standards, that equipment can be, and is, prevented by Bell Labs from being shipped from Western Electric to an Operating Company. Quality

Assurance is, for the Operating Companies, like an effective Customer Protection Agency, and this is not the type of work that would be performed by a manufacturer. Quality Control, on the other hand, is a manufacturer's function used to control the cost, yields and quality of products, a function for which Western Electric is renowned. Western Electric also funds Bell Labs' activities relating to the identification and correction of field problems falling under the warranty provisions of the Supply Contract between Western Electric and the Operating Companies and to the maintenance of product conformance to design requirements." (Exhibit 298, pp. 43-44, emphasis added.)

The witness stated that contrary to Mr. Humphrey's assertions, the work is not done in isolation from Pacific, that two field representatives are assigned to Pacific and maintain their offices in San Francisco, and that the quality assurance organization audits switching and transmission installations, product performance, and repair services in California. Certain specific examples were mentioned (Exhibit 298, pp. 42-43). The witness stated that the OTCs could not rely on the manufacturers' quality control work to assure the purchase of reliable equipment (Exhibit 298, p. 45).

The work done under quality assurance does not include a comparison of Western Electric products with those of other manufacturers, leading to a "make or buy" decision. Such analyses are performed by the AT&T Purchased Products Division (see testimony of Robert F. Wentworth of AT&T, tr. 2653; see also the prepared testimony of John E. Dennis (Exhibit 304) and C. Lee Wade (Exhibit 305) on this subject).

For the purpose of distinguishing the license contract work of Bell Labs from SD&D performed for and financed exclusively by Western Electric, Dr. McKay summarized SD&D in his prepared testimony (Exhibit 298, pp. 45-47).

"Q. Please describe the specific development and design work done at Bell Labs.

"A. About 45% of the total Bell Labs effort is devoted to 'Specific Development and Design' (SD&D). This work is paid for by Western Electric. Specific development begins with requirements for service and usage, with the expectation that the prescribed economic and technical goals can be met. From there the

architecture of the system must be devised, the devices and circuits and the equipment designed, prototypes built and field tested, the information that is used as the basis of manufacture delivered to the manufacturer, changes introduced as problems arise during manufacture, follow up as new systems are introduced in the field, and subsequent redesign for cost reduction and service improvement.

"Q. Does 'R&FD' work provide a specific outline for the activities for specific development and design?

"A. No. Any assumption that the R&FD work at Bell Labs provides a blueprint so that specific development and design can flow easily and without mistakes or false paths is erroneous. Specific development and design is a very difficult undertaking with many false paths and false leads involved in the pursuit.

"Q. Does applied research of a technology stop when specific development based on that technology begins?

"A. No. Exploration for future opportunities continues even while current product development is underway, as I illustrated in connection with applied research of microwave radio systems.

"Q. When both applied research and Specific Development involving the same technology are being carried on simultaneously, how are the two distinguished?

"A. Applied research represents the continuing search to enhance the technology of telecommunications; it is open-ended work with unscheduled results. On the other hand, specific development represents the confluence of feasible technologies with Operating Company needs. It results from a decision to develop a specific product at a time that it will be of practical use. Specific development projects are undertaken for well-identified products and with project completion objectives. At the termination of one specific development another may or may not be started depending on advances in the technology and changing needs of the Operating Companies. But

applied research continues as long as that field is of current or potential significance to telecommunications.

"Q. If you review the progress in an applied research area and find that technology and Operating Company needs are not joined closely enough to warrant specific product development, what do you do?

"A. If, in our judgment, the potential of the technology remains great, we will continue applied research. Our work in magnetic garnets to advance the technology of bubble memories, is an example. It was only after years of searching that we found materials with requisite properties and reliability. We started specific development of a recorded announcement device using bubble memories, while continuing applied research in magnetic garnets. Just what technology to emphasize in applied research and what technology to pursue in specific development are separate decisions that involve a great deal of analysis and management judgment."

Dr. McKay contradicted Mr. Humphrey's opinion that Bell Labs is a "service department of Western Electric", pointing out that R&FD work (as distinguished from SD&D) is undertaken whether or not it is in the best interest of Western Electric as a manufacturer (citing examples of research mentioned earlier in this opinion).

Pacific's viewpoint on patent administration was offered by AT&T witness John E. Dennis, Manager of License Contract and Regulatory Matters. Mr. Dennis stated that the staff's recommendation that all patent expenses be paid for by Western Electric and charged against royalty income would actually cause the OTCs to pay more than at present.

"Each company is billed for associated domestic patent work based on the percentage of research, development and related Bell System work performed by BTL during a given period of time. Accordingly, because Western funds a higher percentage of BTL work than AT&T, Western has been billed a higher percentage of the expenses of the Laboratories' patent activities relating to its research, development and other related activities conducted on behalf of the Bell System. If these expenses were to be deducted from royalties, Western would, in effect, only be paying 50% rather

than paying a higher percentage based on the proportion of the funding of BTL's research, development and other inventive activities on behalf of the Bell System. The net effect would be that the operating companies would be paying a higher percentage of the regular BTL patent expenses than they are now paying." (Exhibit 304, pp. 17-18.)

The witness pointed out that patent expenses are not deducted from royalty income by Western Electric but are charged against Western Electric's products, except for litigation expenses directly concerned with enforcing Bell System patents, and expenses concerning patent license agreements. Western Electric's expenses in obtaining U.S. patents, in making novelty and right-to-use studies, and other domestic patent activities are "charged by Western Electric as expenses against its products and are not deducted from royalty income before the royalty income is shared with AT&T." (Dennis, Exhibit 304, pp. 18-19.)

According to Mr. Dennis, work in the area of patent procurement and "general patent studies" is not performed in the same area as invention-related patent work. He stated that the staff's understanding of Bell System cross-licensing agreements is erroneous. Most such agreements are bilateral and when necessary, in order to balance the exchange values, the other party undertakes to meet specific royalty obligations to the Bell System (Exhibit 304, p. 20). Mr. Dennis concluded (Exhibit 304, p. 21):

"Most patent license agreements entered into by Western do not include an obligation for the Bell System to make royalty payments, as such, but do require the licensee to make cash royalty payments to Western if the licensee uses licensed Bell System patented inventions."

Pacific's final criticism of the staff's approach to investigating Bell Labs' use of license contract funds is that the staff failed to investigate the value of the expenditures to Pacific by contacting Pacific or Pacific's personnel.^{17/}

^{17/} This argument also applies to staff witness O'Rourke's investigation of the various AT&T departments, discussed elsewhere.

Pacific presented the testimony of C. Lee Wade, Pacific's Director of Affiliated Interest Studies. He stated his responsibility was reviewing contracts and agreements with AT&T "to assure that the value of the services to Pacific equals or exceeds our payments under these contracts." (Exhibit 305, p. A-1.)

Mr. Wade stated that he reviewed the "tangible output" of the material investigated by Mr. Humphrey and found that a significant amount of it assisted Pacific in "developing procedures to most effectively utilize and operate existing equipment." (Exhibit 305, p. B-4.) He cited the following examples, all of which Mr. Humphrey regarded as "product related" (Exhibit 305, pp. B-4 to B-7):

- "1. A procedure for using a computer to control the testing of coin sets under various loop arrangements, central office configurations and environmental conditions.
- "2. Methods for marking and identifying coinage for security investigations.
- "3. Studies of various techniques for mounting power equipment and methods to dissipate or transfer the heat generated by power equipment.
- "4. Development of standards for wiring for use in prewiring of buildings and in providing wiring arrangements for mobile homes.
- "5. Studies for determining the extent of fraud in a geographical area including measuring techniques and how to evaluate the statistical data generated.
- "6. Work related to the establishment of optimum inventory levels required to maintain service and other studies related to the economics of field repair of products versus junking or return.
- "7. Investigation of ways to remove water from pressurized underground and PIC cables.
- "8. Development of methodology to determine the optimum point in time to rehabilitate buried cable.
- "9. Preparation of a handbook establishing standards and guidelines for maintenance of loop plant.

- "10. Development of computer programs to be used by the outside plant engineer in the analysis and design of pressurization systems by determining the optimum location of air sources and the location of pressure monitoring devices.
- "11. Procedures for mechanizing repair service administration records, analysis and testing procedures.
- "12. Procedures and computer programs to assist the operating companies in the assignment and record keeping functions pertaining to main frames to minimize the investment and operating costs by relieving congestion and improving load balance.
- "13. Overall planning for wire center distributing frames including a reorganization of existing trunk frames which are being exhausted.
- "14. Studies to assist the operating companies in reducing the number of trouble reports closed out as 'no trouble found.'
- "15. The review of the existing outside plant engineering practices to determine if they are current and provide adequate information.
- "16. Studies of the procedures used in the upkeep and restoration of the outside plant facilities associated with carrier systems in order to develop more effective procedures.
- "17. Investigation of the possible use of Automatic Message Accounting data in the analysis of switching trouble reports.
- "18. Studies to determine the feasibility and desirability of consolidating small community dial offices into larger entities by use of pair gain devices.
- "19. Studies of new uses for loop electronics in urban and suburban networks as well as finding new ways of economically providing and upgrading service in rural areas.
- "20. Analysis of transmission, signalling, cost and administrative considerations associated with the design of long routes.
- "21. Development of a computer based system for the collection and analysis of operator reported troubles.

- "22. Development of economic models and studies to assist the operating companies in determining the most cost effective way of accomplishing a conversion or of operating its equipment."

The exhibit identifies the above list only as R&FD work, but it appears to fall within the parameters of systems engineering. The same may be said of a subsequent list (Exhibit 305, pp. B-9 to B-11) dealing with engineering guidelines for the use of general trade products and another list (pp. B-13 to B-14) encompassing the following:

- "1. Studies of ways to provide artificial inflections for recorded speech which will reduce the amount of storage in audio announcement systems.
- "2. Studies to limit the electrical noise associated with power equipment and studies of packaging and mounting power equipment.
- "3. Work with optical fibers to analyze the reliability of loop transmission systems based on optical fibers.
- "4. Studies of methodology which will increase the efficiency, reliability and load carrying capabilities of existing equipment.
- "5. Exploration of technology to allow pair gain devices to solve the fluctuating mobile homes telephone demand.
- "6. Studies of outside plant configurations associated with carrier equipment.
- "7. Investigations to improve the reliability and maintenance procedures of existing equipment."

Mr. Wade concluded this portion of his testimony by stating that in his opinion, this work benefits the OTCs in the form of new information on which to plan new services (Exhibit 305, p. B-14). He stressed that, unlike a manufacturer, Pacific must provide a total communications network.

D. Discussion

As an important preliminary, we see no legal or regulatory reason to reserve the application of our determination on the use of license contract funds by Bell Labs for future proceedings. As explained,

we deal here not with "accounting changes" for the Bell System but with determining Pacific's test year revenue requirement. To the extent that we are convinced that license contract expenditures by Bell Labs are not the responsibility of Pacific's ratepayers, they will be disallowed in this proceeding.

Basic research and applied research will be discussed together since they present the same analytical problems.

In our opinion, neither the claims of the staff and others supporting the staff, on the one hand, nor those of Pacific, on the other hand, are entirely borne out by the evidence. We have been led to the conclusion that, regarding the two "research" categories, the product is equally useful in potential benefit to the ratepayers via modernization and improvement of the network or telecommunications generally, and, on the other hand, in potential advancement in techniques of designing and marketing competitive products. Stated from a different perspective, the work performed, even in the "applied" category, is basic enough so that the majority of it cannot be clearly labeled "OTC related" or "product related". Therefore, we should allow 50 percent of the expenses in these "research" categories as proper license contract expenditures.

We have made previous reference to Mr. Humphrey's concept of product relation and to the fact that in his opinion, new methods are not possible without new products (ante, p. 13). Such a broad conclusion is insupportable, and applying this reasoning to Bell Labs' work under the license contract leads to disallowance of projects, although it might be possible to conceive ultimate "spinoff" benefits in the product field.

There is, for example, the work performed with basic devices, such as the semiconductor, the transistor, the laser, magnetic garnets, and the silicon solar cell. There is no demonstration that such work necessarily deals with embryonic ideas for future marketable products. The devices themselves, in their laboratory form, are not marketable telecommunication products, and there is no evidence that there are any Bell System "pioneer" patents on them,^{18/} from which royalties would

^{18/} Subject to certain limitations, it is possible to patent a pioneer or basic invention. Westinghouse v Boyden Power Brake Co. (1898) 170 US 537; see discussion, Walker on Patents, 2d Ed., Vol. 4, §225.

be derived. Dr. McKay points out that the transistor was originally a laboratory device used in an experiment demonstrating signal amplification in a solid state material, and, at that point in its development, of no commercial use (Exhibit 298, pp. 18-19). While work presently in progress concerning basic devices may eventually lead to marketable products, it is at least of equal likelihood that such experimentation will result in improvements in network transmission or network configurations.

Other clear-cut examples are the projects discussed in Dr. McKay's testimony under basic research and those experiments at the more esoteric or purely scientific end of applied research. The evidence and argument offered by the staff and the various interested parties do not demonstrate, in our opinion, "product relation" as we have defined that term earlier in this opinion.

Applying the reasoning of Dr. Tanenbaum and Dr. McKay across-the-board to all basic research, applied research, and systems engineering is not possible, however, when certain Bell Labs cases, submitted for review, are examined.^{19/} (It should be remembered that a major difficulty in examining the testimony of these witnesses is that their descriptions of areas of work were not correlated to budgetary categories or specific cases. We should order, in future investigations on this subject, that such a tie-in be presented.)

Thirteen supposedly representative cases were examined by Compath and Interconnect (Exhibits 314 and 316).^{20/} The results of this

^{19/} Reasons why only a limited number of cases were examined are reviewed, ante, pp. 18-22.

^{20/} Pacific resisted production of six other cases, Pacific's counsel stating (tr. 8491) that, if necessary, Pacific would agree that the expenses concerning them could be disallowed. The ALJ did not order their production but said that in his opinion the nondisclosure created a presumption that the expenses associated with them should be disallowed. Later in the proceeding, a different attorney for Pacific withdrew from the previously stated position (tr. 8573). Regardless of this change in position, we agree with the ALJ. Refusal to produce in this instance amounts to a failure of proof that the expenses should be borne by the ratepayer. Cf. Evidence Code, Section 550.

examination demonstrate that as one moves from extremely conceptual research toward more specific goals it becomes easier in some cases to identify a tie-in with SD&D, while in other cases the lack of such a connection is more readily shown.

Case 38896 is entitled "Engineering Studies of Business Communications Systems". This was a continuous or "annual" case which terminated in 1976. Its introductory statement for 1976 says:

"This continued annual case covers engineering studies of, and formulation of requirements for, Business Communication Systems including Customer Switching Systems, Key Telephone Systems, Business Services from Central Offices, Automatic Call Distributors, and Special Private and Government Systems. In addition, it covers assistance to operating companies on specific customer applications and on related problems as agreed with the American Company."

The content of the case contains repeated reference to the Dimension PBX, usually by its generic name, CSS-201. A review of the entire case shows that the description of it in the opening brief of Compath and Interconnect is essentially accurate and that it is principally concerned with developing standards and features for Western Electric PBX vehicles, principally of the Dimension variety and developing pricing models for PBX's, although the case also includes pricing work on business communications systems generally.

Case 38765 - "Fundamental Development of Business Communications Systems" - and its case description indicates that it covers fundamental development of new and improved business communications systems including self-contained PBX systems "usable over the entire range of customer sizes", key telephone systems, systems combining PBX and key features, and certain exploratory work on other phases of business communications systems.

Although the words "fundamental development" appear frequently in the authorization, a fair reading of it shows that it is not in the category of basic research as defined by Dr. McKay but is closely related to development of business terminal equipment.

The above two cases are the most clear-cut examples at the "product relation" end of the spectrum, but other cases show similar, although lesser, connections with terminal equipment.

Case 49186 is titled "Network Operations Planning" and a reading of it shows that this title is a fair description of most of the work; however, one subsection of the case indicates work supportive of the Dataspeed 40, and another paragraph shows certain studies regarding PBX features (although regarding the latter, Dr. McKay testified that the feature belonged to the network and not the PBX; tr. 9032-9033).

Case 39394 is continued research in the basic elements of communications systems. At the risk of oversimplifying its synopsis, it may be described as research into the use of the silicon integrated circuit in the network, and how to increase network reliability and maintainability through silicon chip circuitry. Compath and Interconnect point out that the case includes some work respecting development of digital PBX terminal equipment. While Dr. McKay testified (tr. 9044-9045) that this is not a production system, the description in the case seems to indicate that prototype equipment is being developed. To place this work in proportion, we should mention that the digital switching system work is covered in one paragraph of a 20-page case.

Case 20137 is a 20-page document entitled "Fundamental Development of Common Systems" and by its description covers exploration of ringing tone and cadence systems, digital storage systems, and recorded announcement systems which are used in "switching and customer systems". A reading of this case seems to indicate that it may have equal application to the network or to certain types of customer equipment.

Case 49008 is entitled "Traffic Network Planning". It is cited in the opening brief of Compath and Interconnect as a case in which design of terminal equipment is being conducted. The brief does not make reference to any particular paragraph. A reading of the case seems to indicate that it in fact concerns traffic network planning, with the possible exception of a section referring to private network traffic analysis.

Case 20410 is entitled "Fundamental Development of Device Design Methods and Concepts". The Compath-Interconnect opening brief cites it as another example of development of product related features.

The work is basic in nature but some of the work seems at least equally useful in network configurations or in some terminal equipment. For example, it is mentioned (p. 3 of the case) that a certain proposed design could satisfy needs ranging from key telephone controllers up to control applications of minicomputers.

We have stated that the budgetary (R&FD vs. SD&D) dividing lines are not arbitrary. Basic or conceptual work under R&FD must be done before it makes economic sense to commence more specific work in the actual product design field under SD&D (tr. 8354). However, the testimony of Dr. McKay (tr. 9014-9098) does not rebut the showing of the staff and others, based on a review of the actual cases, that there is in many instances a comparability between R&FD and SD&D. A scenario in which SD&D personnel anxiously wait at the door for Prometheus to spring forth with a torch of fire from the Olympian realms of R&FD is unrealistic. The real world is found in Exhibit 315, the accounting manual for Bell Labs, which demonstrates a correlation in certain areas between work conducted for AT&T and work conducted for Western Electric. As the staff pointed out (Exhibit 286, pp. 2-11 and 2-12):

"These [fundamental development] cases quite often have counterparts in the cases which are funded by Western Electric under the Specific Design and Development category. For example, AT&T Case No. 20105, 'Fundamental Development of Magnetic Devices' is comparable to Western Electric Case No. 20247, 'Development and Design of Magnetic Devices'; AT&T Case No. 20107, 'Fundamental Development of Primary and Secondary Energy Sources' is comparable to Western Electric Case No. 20207, 'Development and Design of Primary and Secondary Energy Sources'; AT&T Case No. 20104, 'Fundamental Development of Piezoelectric Devices' is comparable to Western Electric Case No. 20245, 'Development and Design of Piezoelectric Devices.' This comparability of cases, of which the above examples are a small part, shows the continuity of the research and development efforts in those fields in which materials, devices and products are the end result. Further, such comparable cases as those shown above are worked on by persons in the same departments."

Drs. McKay and Tanenbaum point out that much of the research work leads to publication of data of general use to the OTCs and others.

There are other areas, however, regarded as secret. It is not possible to estimate precisely what percentage of the secrecy relates to product oriented development as against, for example, patentable devices having general application, or methods having only network application or some other use which is not marketable. There is nothing improper in the Bell System's protecting its inventions from piracy, but since this is necessary we are not prepared to presume that which exists in this area is 100 percent related to telecommunications research which has potential value only to the OTCs, and which has no potential value to Western Electric and its future marketable products.

Regarding systems engineering, it is our opinion that the same 50 percent disallowance should apply, based on this record. We should be able to make a more precise allocation in this category but we are not always certain whether particular cases fall into the systems engineering category.

The case which shows the clearest product relation, discussed above, is a systems engineering case (Case 38896). Cases in which disclosure was refused (see footnote 20) appear to be systems engineering cases or at least to contain elements of systems engineering (see tr. 8482). A disallowance should be made which will cover such nondisclosure, not as a penalty but because Pacific bears the affirmative burden of showing its expenses under the license contract reasonable.

On the other hand, we disagree with Mr. Humphrey's proposed disallowances in the "network engineering" category (part of systems engineering).^{21/} Clearly, the direct purpose of such work is improvement of the network and any possible product application is consequential. We recognize that merely labeling a project "network engineering" does not make it so, but a general review of this category and the staff testimony connected with it convinces us that the expense is of primary and direct benefit to the OTCs.

^{21/} On two occasions Mr. Humphrey stated that, in his analysis, he made no distinction between "products" available to the public and those useful only as part of the basic telephone plant. (Tr. 7220; 7277 et seq.) He further stated that this was true even if it could be shown that no one other than Bell Labs was performing research in a particular area (tr. 7280).

Regarding quality assurance, we are convinced that the work done under this case is of direct benefit to Pacific and the other OTCs. It should be noted, however, that the staff witness was understandably influenced in his determination by the unavailability of the Western Electric-funded quality control case material. We recognize its probable sensitivity (and the fact that none of it is ratepayer-funded), but if we are to continue to recognize quality assurance as a legitimate ratepayer expense in future investigations, at least a sampling of quality control material should be made available for comparison purposes in future investigation on this subject.

It would defeat the purpose of quality assurance for Western Electric to fund it;^{22/} such funding would ask the manufacturer to approve, not on its own behalf, but on behalf of the "customer" (the OTC) the quality of the products. Under the present system, quality assurance personnel can stop a shipment from Western Electric to an OTC. The work described in this area by Mr. Dennis is of direct value to the OTCs. While we are willing to disallow individual expenses under this program brought to our attention which are demonstrated to be inappropriate, the quality assurance program in general cannot be characterized simply as quality control for Western Electric.

Regarding patent administration, based upon Pacific's explanation of its funding, we will make no disallowance. While Mr. Humphrey's recommendation may be sound from a theoretical standpoint, it apparently would result in the ratepayers actually paying more than under the present procedures.

In conclusion concerning Bell Labs, we recognize that Pacific is part of a high-technology industry and that we should allow Pacific to support research and development to its benefit and the ultimate benefit of its ratepayers. Our purpose here has been to attempt to separate that portion of such work of primary benefit to Pacific and its ratepayers from work of primary benefit to AT&T, the AT&T shareholder, or Western Electric.

^{22/} We recognize that we cannot tell AT&T how programs should be funded and that our purpose is to determine allowable expenses for setting rates; however, the staff's argument was that this expense is appropriately funded by the manufacturer.

IV. AT&T USE OF LICENSE CONTRACT FUNDS

A. Introduction

The staff license contract investigation also encompassed the AT&T departmental use of license contract funds. Staff recommendations^{23/} regarding disallowances fall into three basic categories: (1) recommendations based upon product relation similar to the staff's analysis of Bell Labs; (2) recommendations based upon the staff's view that the expenditures are the direct responsibility of the AT&T shareholder; and (3) certain miscellaneous categories.

The first category concerns the following departments and divisions:

Marketing Department, consisting of:
Product Management Division
Market Management Division
Service Management Division^{24/}
Sales Development Division

Customer Services Department, consisting of:
Customer Facilities Division
Customer Assistance Division
Functional Accounting Division
Corporate Security Division

Engineering and Network Services Department,
consisting of:
Network Operations Division
Transmission Division
Switching Division.

The second category concerns license contract expenditures for:

195 Broadway Corporation
Administrative Service Department
Treasury Department
Secretary Department
Public Relations and Employee Relations Department
Dues, Donations, and Contributions
Community and Education Relations Division
Public Relations Planning
Advertising, Closed Circuit TV, and Films Expenses

^{23/} In most instances the staff was supported in its recommendations by Compath and Interconnect and by TURN. Where there are significant differences, the positions of these parties will be discussed separately.

^{24/} Called the "Market Services Division" by the staff. Except when quoting from staff exhibits or testimony, the name Service Management Division will be used.

Legal Department (exclusive of antitrust)
Antitrust Lawsuit Expense
Washington Office
Controller's Department
Executive Department.

Miscellaneous recommendations not falling into either the "product relation" or "investor interest" category concern expenditures connected with:

Human Resources & Development and EEOC expenses
AT&T moving expenses
Taxes (federal and New York State).

As with Bell Labs, we will attempt to decide whether the activities in each area are properly borne by the ratepayer. Exhibit 296 contains over 400 BDPs. If we analyze these one at a time we will not enunciate rules or principles applicable in future proceedings, since no matter what determination is made on one BDP one may single out another which suggests the opposite conclusion for the same general area. More importantly, a department-by-department determination is better than a one-at-a-time BDP analysis because BDPs are constantly modified or terminated and new ones begun. Analyzing BDPs one at a time would, therefore, at best, produce a result which would be accurate for one point in time only.

The "product relation" category concerning the Marketing, Customer Services, and Engineering and Network Services departments is proposed as a disallowance in future cases only, on the same theory that Mr. Humphrey proposed this treatment for Bell Labs' adjustments. We reject this approach for the same reason we did so with Bell Labs: that we deal not with "accounting changes" for AT&T but how much of the license contract is reasonably billed to Pacific's ratepayers, regardless of how AT&T (or Pacific) should account for the expenditures. Expenses not properly chargeable to the ratepayers will be the subject of a present disallowance in this proceeding.

One problem common to all departments was the method of allocating overhead. Apparently for accounting convenience, AT&T placed most office overhead expenses into two accounts. The staff determined that a more realistic assessment of true expenditures on a

departmental basis would be obtained by reallocating overhead among the departments in proportion to total amount expended. Witness O'Rourke thus accomplished the following overhead redistribution (Exhibit 286, Table 3E).

AT&T - LICENSE CONTRACT
Schedule of Overhead Allocation

Department	Department Expense	Overheads Applied ^{1/}	Total Department Expense
Executive	\$ 5,765,119	\$ 780,812	\$ 6,545,931
Federal Regulatory	2,541,123	1,024,834	3,565,957
Secretary	860,191	551,888	1,412,079
State Regulatory	4,567,922	2,173,614	6,741,536
Customer Service	23,697,853	9,641,121	33,338,974
Engineering and Network Services	20,587,620	9,066,219	29,653,839
Corporate Planning	4,181,545	1,701,611	5,883,156
Public Relations Employee Information	11,322,156	3,814,421	15,136,577
Legal	7,057,593	3,127,697	10,185,290
Marketing	25,082,174	9,134,716	34,216,890
Labor Relations	955,415	268,651	1,224,066
Controllers	18,415,264	16,198,394	34,613,658
Treasury	25,438,473	25,307,067	50,745,540
Construction Plans	5,799,292	2,696,333	8,495,625
Administration D	9,610,679	4,517,312	14,127,991
Administration C	10,482,550	4,755,751	15,238,301
Washington Office	1,414,906	694,186	2,109,092
Administrative Services	62,422,194	(57,285,202) ^{2/}	5,136,992
Human Resources Development	9,563,963	3,920,693	13,484,656
HRD - General Department	7,712,413	(3,632,790) ^{2/}	4,079,623
Bell Telephone Labs			217,078,787
Non-Overhead Items			21,966,990
Total	\$257,478,445	\$ 38,457,328	\$534,981,550

^{1/} Overheads applied include amounts for pension and death benefits, other employee benefits, social security taxes, rent, Administrative Services and Human Resources Department serving the General Departments.

^{2/} Overheads applied

Rent allocated to other departments	\$ 4,419,480
Administrative Services allocated to other departments	(22,816,377)
	<u>(38,188,305)</u>
	<u>\$ (57,285,202)</u>

^{3/} Overheads applied

HRD allocated to other departments	\$ 2,231,297
	(5,864,087)
	<u>\$ (3,632,790)</u>

The amounts in the table are totals and not Pacific's share of the billings.

Pacific did not submit any rebuttal to this reallocation, and we adopt it.^{25/} Amounts for departmental expense quoted hereafter include the redistributed overheads. For specific budgetary amounts, recommended disallowances, and adopted amounts, see the table in Section V of this opinion.

B. An Overview of "Product Development" Arguments

The staff sees the Marketing, Customer Services, and Engineering and Network Services Departments as "integral parts of the Bell System product development process" (Exhibit 286, p. 3-29). Cited is the fact that "product teams" have been formed:

"Product teams are comprised of personnel from many disciplines within the Bell System who study a product or concept relative to their respective expertise. Members of product teams include representatives from AT&T's Marketing, Administrative C, Customer Services, Engineering and Network Services, Controllers Departments, BTL and Western Electric. The members of a product team change as a product progresses from concept, to manufacture, to introduction into the market place. In the early phases of development the product team will have need for the technological expertise of the team members from BTL, Engineering and Network Services and Customer Services; as the product becomes more tangible, the team members from Western Electric, Controllers and Administrative C Departments will play a dominant role. The responsibilities of the product team continue throughout the life of the product to include profitability analysis and competitive position analysis which define or assure the advantage of marketing the product.

"The expenses incurred by the product teams' members from AT&T are charged to the licensee companies as License Contract expense. The expenses of members from Western Electric are recovered through Western's sale of products. The expenses of BTL are recovered partially from License Contract and partially from Western.

"For the test period the staff has determined that the Marketing, Customer Services, and Engineering and Network Services Department each perform work

^{25/} The reallocation was contested in a few specific areas which will be discussed hereafter.

related to product development. Product development expenses charged in the License Contract fees to Pacific for the test period are set out below:

Marketing Department	\$ 458,647
Customer Services Department	263,871
Engineering and Network Services Department	<u>538,667</u>
Total	\$1,261,185 ^{26/}

The staff concludes that the expenses incurred by the product team which are related to the development of new products "are as much a component of product cost as the raw materials from which the product is made". (Exhibit 286, p. 3-30.)

Pacific does not dispute the existence of product teams, but takes the position that the staff does not understand their function, nor the functions of the departments they represent. Pacific's position is (1) that the staff failed to determine the value of the activities to Pacific; (2) that the support it receives from AT&T in this area enable it to understand customer needs and devise offerings (not "products") to meet those needs, manage its marketing, tariff service offerings, inventories, and lives of service offerings, and measure results of sales efforts; (3) that the staff witness misunderstood the purpose and effect of much of the material he examined; (4) that many "products" identified as such by staff witness O'Rourke are actually network components and of no lock-in value to Western Electric; in other words, the staff confused the term "system" with specific products; (5) that the staff failed to consider the effect of its recommendations on the cost of service; and (6) that the evidence does not support the staff's theory that marketing and associated activity leads to underpricing of Western Electric products. (See, generally, Pacific's opening brief, pp. 37-58.)

^{26/} The figures indicate only the staff's opinion of amounts which are product related. The total amounts allocated to Pacific (including redistribution of overhead) are: Marketing Department, \$3.8 million, Customer Services Department, \$3.7 million, and Engineering and Network Services Department, \$3.0 million. See the table in this opinion, page 107.

There is no separate breakdown for "product teams" since they are interdepartmental. The staff's and Pacific's general arguments in this area must be considered separately as to each department since the functions are different. Regarding "underpricing", we have no price evidence before us, and, in any event, as we have previously outlined in some detail, our objective in this proceeding is to determine Pacific's operating expense level for revenue requirement purposes, not to force Western Electric price revisions.

C. Marketing Department

The AT&T Marketing Department has experienced rapid growth following a 1973 consultant's investigation and report (Exhibit 310) entitled "Meeting the Competitive Challenge in Business Terminal Equipment". The report is an extensive analysis of marketing, not of methods of funding or of what particular products should be manufactured (or, in the alternative, purchased). The staff's comment that the report calls for the Bell System "to change from its previously technological approach to the telecommunication industry to a market needs approach" is a reasonable description.

The staff describes the four divisions of the Marketing Department and makes recommendations as follows (Exhibit 286, pp. 3-31 to 3-34):

"Marketing Department

"The Marketing Department of AT&T has grown significantly in size and responsibility during the last four years. The primary reason for the growth in the Marketing Department was in response to a management policy restatement of the responsibilities of the department, calling for the Bell System to change from its previously technological approach to the telecommunication industry to a market needs approach.

"The organization of this department is patterned after a basic structure for the AT&T Marketing Department which was developed and recommended by an outside consulting firm, McKinsey and Company, Inc. This consulting firm was hired to conduct a study of the business terminal equipment market. The report that was issued by that firm is entitled 'Meeting the Competitive Challenge in Business Terminal Equipment.' It is evident,

therefore, that the growth in size and operating expenses of this department was in direct response to competition the Bell System was, and still is encountering from other manufacturers of telecommunication equipment. The Marketing Department is composed of four divisions which approach the telecommunications market from different perspectives. The four divisions are titled Product Management, Market Management, Marketing Services, and Sales Development. The following paragraphs describe the function of the four divisions. The expenses of all divisions of the Marketing Department are allocated to the License Contract companies on the relative relationship of revenues.

"Product Management Division

"The Product Management Division is composed of four operating sections, Visual Communications Services, Customer Switching Products, Pricing Plans and Station Products, and Data Services. This division is product development oriented and is in the forefront for product introduction, monitoring product profitability and eventual termination of a product offering. The work undertaken in this division does not represent the singular effort of one section, division or department. This division is charged with coordinating the efforts of all participants (other AT&T departments, BTL and Western Electric) whose efforts are directed to development of new products or the modification of existing products. The division's work is principally product team activity which includes the planning for features to existing products, monitoring the profitability of products in the market place, and assistance with pricing principles relative to both existing products and products under development.

"Conclusion

"The staff concludes that the expenses that the Product Management Division incurs in its participation in the development of new products should be borne by a manufacturing company.

"Market Management Division

"The Market Management Division is composed of four sections, Industrial, Commercial, GEM (Government Education and Medical) and Cross Industry. Generally, this division performs the

exploratory market identification work which is intended to determine the needs the business community has for telecommunication services.

"In order to manage a review of all markets, this division has divided the telecommunication market into 62 groups which have common traits; they include nonprofit organizations, inventory sensitive industries and commercial enterprises.

"Market Services Division (Service Management Division

"The Market Services Division develops and manages service offerings to insure that services are responsive to market needs and that pricing policies are profitable. In addition, this division provides general AT&T marketing support activities including product and market research, customer and competitive research, economic trends, systematized data bases, coordination of advertising and sales promotion programs.

"This division also performs the market research on residential and long distance customers much the same as Market Management Division performs on business customers. The research is published as Market Plans, Service Plans, and Market Strategies.

"Sales Development Division

"The Sales Development Division's purpose is to assist operating telephone companies in becoming more effective in their sales efforts. The major functions performed include developing sales action programs and guidelines that support market and product plans being introduced by the operating telephone companies. This division also provides guidance to the telephone companies for restructuring the sales and customer service function which include(s) guides on selecting, training, and compensation for sales and service personnel.

"The development work of this division covers principally training materials. The materials cover a large strata of topics related to the marketing effort of the operating telephone companies.

"Summary - Marketing Department

"Based upon its review of the department, the staff has determined that \$458,647 billed to Pacific in the test period as License Contract

fees are expenses which directly relate to the development and evaluation of products which are manufactured by Western Electric.

"Conclusion - Marketing Department

"The Marketing Department engages in activities that relate to the development of products which are manufactured by Western Electric."

Edward Goldstein, Director of Product Management in AT&T's Marketing Department, testified that in his opinion the activities of the Department were primarily of benefit to Pacific and the other OTCs. He stated that the phrase "product management" is a marketing term used by a number of different industries and means the management of all aspects of product or hardware used by the OTCs to provide tariffed service offerings. He described the growth in marketing as necessitated by (1) general availability of inexpensive computing power which necessitates more communications specialists to recommend new services; (2) inflation, which necessitates development of cost-cutting in installation, repair, and inventory; and (3) competition. In this regard, he said (Exhibit 301, p. 6):

"There is increasing competition faced by the Operating Telephone Company from companies who provide communication products and services to customers. In addition, there are other common carriers who provide intrastate and interstate private line services in direct competition with Operating Telephone Company tariffed service offerings. The Operating Telephone Company must continuously adapt to keep itself in position with new tariffed service offerings, pricing options, and sales strategies to compete with these organizations in providing communications services to its customers."

The increased activity is centralized at AT&T, he said, to make full use of highly qualified specialists. The Market Management Division of the department analyzes market segments, such as:

"transportation, which is further segmented into airlines, trucking railroads, etc.

"distribution, which is further segmented into food chains, discount stores, catalog sales, etc.

"residence - which is further segmented into various socio-economic groups, such as by age and income." (Exhibit 301, p. 9.)

The studies are usually performed with the assistance of the OTCs. The purpose is to develop market strategies for each market segment. In this regard the witness comments (in part):

"If, in the process of studying the market segment, there is a need or application identified for which there is not a tariffed solution currently available, a general statement of this identified customer need is prepared. This statement addresses the specific communications needs in this market segment but does not indicate what the hardware solution ought to be. The statement merely describes the emerging communications needs of the Operating Telephone Company customers and is not product related nor supplier dependent.

"This statement, which is referred to as a 'Functional Product Need', is transmitted to the Product and Service Management Division for evaluation of alternative solutions which could satisfy the identified needs." (Exhibit 301, p. 11, emphasis added.)

Regarding staff witness O'Rourke's view of the above process, the witness states emphatically that it exists to enable the OTC to meet communications needs and identify communications problems, not to further the interest of the product supplier. The witness cites the following examples as results of the work:

"[P]lanning and recommendations for implementing PhoneCenter Stores, where customers have a chance to see and try out a variety of tariffed services before making a choice. This method of distribution is less costly for the Operating Telephone Company, provides a more efficient means for the residence customer to become aware of available services tariffed by the Operating Telephone Company, and therefore results in lower charges to the customer. It is also important to note that the products of several manufacturers are distributed through PhoneCenter channels, therefore this work is not dependent upon any particular supplier. It is in the interest of the Operating Telephone Company and their ratepayers to have these more efficient and economical distribution outlets available. The benefits realized from better distribution methods will go to the Operating Telephone Company, not the supplier.

"Recommendations of organizational structures for the Operating Telephone Company sales forces to permit them to better meet their customers' needs. For example, in the business market this has led to the reorganization of the sales force on a market segment basis, thus enabling salespeople to better understand specific customers' needs and to recommend tariffed offerings that best meet these needs." (Exhibit 301, pp. 13-14.)

Mr. Goldstein discussed the Product Management Division and Service Management Division together, stating that their functions are (1) to generate detailed requirements on behalf of the OTCs for new services or for modifications of existing services; (2) to coordinate introduction of the services by the OTC; and (3) to provide advice and assistance to the OTC on all existing tariffed services to assure continued profitability. In this connection he stated:

"If there is no existing or planned tariff offering to meet this need, then the Bell System Purchased Products Division is requested to review available General Trade Supplier hardware which might satisfy the Operating Telephone Company's needs. If there are no General Trade products available, the AT&T Engineering and Bell Telephone Laboratories organizations are requested to evaluate the technological and economic feasibility of developing new hardware. If this analysis results in strong indications that hardware could be developed and made available within the cost objectives, detailed requirements are prepared for the new equipment. These requirements are not hardware designs. They are not a substitute for the development of equipment designs and manufacturing data which are produced and utilized by the manufacturer." (Exhibit 301, p. 15.)

The witness also responded to the staff's characterization of interdepartmental product management teams with the following descriptions of some of the teams:

"The Customer Services and Engineering and Network Services organizations analyze and recommend specific equipment configurations that will satisfy the majority of customer requirements. (E.g., in a PBX system there are a variety of configurations of equipment possible depending on the number of stations at

a customer location, the specific feature options chosen, the amount of traffic generated from each station, etc.) In addition, this organization also provides estimates of the amount of time required in the Operating Telephone Company to engineer specific system configurations to meet individual customer needs.

"The Customer Services, Installation and Repair Organizations estimate the amount of time required in an Operating Telephone Company for its people to install each equipment configuration at a customer location. This organization also estimates the amount of time and the materials required to assure the continued satisfactory operation of the system. This includes activities such as repair and preventive maintenance.

"The Construction Plans, Inventory Management Organizations recommend the amount of each equipment component the Operating Telephone Company should hold in its inventory to assure meeting customer demands and for repair purposes. They also develop the procedures for the Operating Telephone Company to manage its inventory which is an essential element in controlling the costs of providing service. Note that the objective of this work on inventory control is for the benefit of the Operating Telephone Companies - it is their inventory, not the suppliers', that is being managed.

"The Service Costs Organizations develop and recommend the methodology and provide computer programs to assure that all costs that an Operating Telephone Company will incur associated with the purchase, installation, maintenance and inventory are identified and accounted for in its rates.

"The Rates and Tariff Planning Organizations develop and provide guidelines for the Operating Telephone Company on the recommended payment plan and rate structure for each service offering." (Exhibit 301, pp. 18-19.)

The witness pointed out that the teams perform their work on behalf of the OTCs, not the manufacturer. He pointed out:

"A manufacturer specifies and charges a price for its hardware - a very important element in the cost of the Operating Telephone Company's providing service. However, in addition to this equipment cost, the Operating Telephone

Company incurs costs for installation, maintenance, inventory, selling, promotion, taxes, overheads, etc. during the market life of the equipment. All of these items must be recovered in the rates for service. The proper identification and recovery of all these cost elements are critical to the profitability of the Operating Telephone Company. It is the responsibility of each Operating Telephone Company, a responsibility that I might emphasize is independent of the manufacturer, to minimize its capital investment, to control its expenses, and to ensure that its revenues exceed costs." (Exhibit 30, p. 21.)

According to Mr. Goldstein, once a service offering is tariffed, the Product Management Division and the Service Management Division perform "life cycle management", which includes such matters as "tracking and strategies for improving profitability" (Exhibit 301, p. 22) and other marketing research functions.

Mr. Goldstein's testimony concludes by discussing specific BDPs and his opinion of the value to the OTC.

Pacific also expressed the same criticism of the staff's investigation of marketing as it did relating to Bell Labs, that the staff witness never contacted Pacific's personnel to determine the value of the work at the "OTC end" of the spectrum. Pacific introduced the testimony of R. J. Brown, Pacific's Assistant Vice President of Marketing, on this subject (Exhibit 303). After reviewing the structure of his department and its goals, he reviewed several specific areas where in his opinion the AT&T marketing efforts under the license contract were useful to Pacific, such as the PhoneCenter store concept, directory advertising research, coin and mobile telephone developments, and revenue forecasting, none of which benefit Western Electric (Exhibit 303, pp. 15-22).

The witness described "product management" work as managing the investment of Pacific in equipment (p. 23). He cited the following example of work in this area (Exhibit 303, p. 26):

"COM KEY 416 was introduced in 1977. Documents of advice and assistance were provided by AT&T, including cost methodology, training information,

rate and tariff guidelines and service strategies to indicate what customer needs the service would best fill.

"AT&T also provides product management pricing consultation which gives advice and assistance to Pacific's Product Managers on pricing matters for most new services. (Estimation of revenue producing lives, carrying out Long Range Incremental Analysis, analyzing causes of price level inconsistencies in rate proposals, etc.)

"In addition to this kind of information from AT&T, we get product information from Western Electric just as we do from general trade manufacturers. This information consists of detailed instructions for installing, maintaining and repairing the equipment and is provided to us as part of the equipment purchase."

He also cited a specific example of a situation involving AT&T's marketing research which led Pacific to the conclusion to offer a product manufactured by an "independent" rather than by Western Electric. This was the case of Western Electric's Dimension 100 PBX.

"The DIMENSION 100 PBX would have served basically the same size PBX customer as the Northern Telecom SG-1 and SG-1A PBX line which Pacific had been actively merchandising in California since 1974.

"We felt it would not be economically prudent to offer a second vehicle in this line size and, therefore, run the risk of creating undesirable churn and shortened life of the existing product." (Exhibit 303, p. 33.)

The remainder of this witness' testimony (Exhibit 303, pp. 36-72) is devoted to analyzing the BDPs in the marketing area which staff witness O'Rourke recommended for disallowance and explaining their value, in Mr. Goldstein's opinion, to the OTC.

Exhibit 296, a compilation of BDPs, consists of over 400 of them^{27/} divided by sections into BDPs for Marketing, Customer

^{27/} Based upon a count of the tabulation and review of them in the appendix to the brief of Compath and Interconnect.

Services, Engineering and Network Services, and Public Relations and Employee Information. One BDP is made up of several pages containing a description and the goals of the BDP, along with budgetary and data processing information. At the expense of brevity, a small sampling of the marketing BDPs will be reviewed since all the parties concerned with the marketing issue rely upon them in support of their respective positions. Compath and Interconnect, for example, recommend a heavier (90 percent) disallowance of marketing expense than the staff, based on a review of them.

BDP 1222/OCO: This BDP is recommended for disallowance by both the staff and Compath and Interconnect. It is entitled "New Products, Basic" and its "general description" statement reads:

"Direct the final development and introduction to the OTCs of new customer network switching, key telephone, PBX and central office products designed to meet the varied needs of customers spanning the very small to the very large sizes; lead the Product Team in development of all supporting information necessary to permit timely uniform offering of new products; develop new or augment existing Product Plans and Binders for these new products; support OTCs in introducing products in their companies & in responding to RFPs (requests for products)."

Under "description of results to be accomplished", it is stated that the goal is to remain competitive in product offerings. Several new terminal products are mentioned as specific examples.

Pacific's witness Goldstein testified that all the marketing BDPs should be allowed as a license contract expense. His statement concerning BDP 1222/OCO is (Exhibit 301, pp. 42-43):

"This BDP supports activities necessary for the Operating Telephone Company to introduce as tariffed offerings certain new customer switching products (Key Telephone, PBX, etc.) in its serving area. This effort results in documentation of guidelines provided to the Operating Telephone Company covering relevant cost estimates, recommendations on measurement systems for managing related investments and expenses, and recommended pricing structure and

estimated pricing levels for new customer switching products. This information is provided to the Product Management Team in the Operating Telephone Company which will modify the recommended guidelines consistent with its local conditions so it can develop the information required by its regulatory bodies for filing tariffs.

"Contrary to the allegations of the staff this effort is not done in the interest of the supplier. Rather, this effort is clearly performed in the interest of the Operating Telephone Company which must file tariffs for new service offerings in its operating areas, and which must efficiently manage its investment and expenses."

Another BDP recommended for disallowance is BDP 1222/OEO, "Life Cycle Management - Basic". Its general description says:

"Management and improvement of existing product lines; includes planning feature improvement to existing systems to meet customer needs and thereby protect installed base; implementing tracking plan to determine costs, revenues, investment and profitability of our products; providing specific guidance on the pricing of improvements and the repricing of existing offerings and on the phasing out of selected products."

Under "results" the objective is stated as the updating of current offerings. Included under specific examples are Centrex and varieties of PBX and key equipment. Elsewhere it is mentioned that maintaining, and possibly increasing, contribution levels on existing products is one objective. (Mr. Goldstein's direct testimony does not contain a statement on this BDP.)

An example of a different variety is BDP 1222/OGO, "Product Price Positioning". Its general description reads:

"Provide results of product positioning studies to AT&T Product Managers in sufficient detail, and with appropriate documentation, to permit conversion into product specific pricing guidelines, rate & tariff letters including ranges of rates; to oversee the short term & long term pricing of the customer switching products with specific attention paid to

product interactions and product position; to analyze existing or develop new market information in support of price levels recommended; to form long range plans for positioning products; to examine structure & levels for existing products and make recommendations regarding repositioning; to make available computer tools to facilitate LRIA studies and educate OTCs in their use; and to continue to seek out methods that permit rapid introduction of customer switching products with more uniform structures & level."

LRIA stands for "long range incremental analysis", a type of cost study used in designing rates. One of the goals of the BDPs is to allow OTCs to file tariffs for new products within a narrow time after their availability. It is mentioned that failure to carry out the goals described would result in (among other things) a loss of ability to manage profitability.

Mr. Goldstein's statement regarding why this is a reasonable license contract expense is (Exhibit 301, pp. 43-44):

"This BDP covers work to provide methodologies and guidelines to the Product Managers in each Operating Telephone Company which will permit them to analyze the pricing of all of their customer switching services. The objective of this effort is to assure that each tariffed service is properly priced in relationship to other similar services, to assure that each tariffed service is recovering all of its associated costs with proper contribution; to refile tariffs on existing services if necessary; and to file tariffs on new related services with consistent tariff structure and price levels. The foregoing is what we refer to as product price positioning. This work will also enable the Operating Telephone Company to file tariffs for new service offerings in a more efficient and timely manner.

"The allegation of the staff that 'this effort is directly related to development and evaluation of products manufactured by Western Electric' is wrong. Contrary to the apparent misunderstanding of Mr. O'Rourke, we are talking about the pricing of tariffed services that the Operating Telephone Company offer, rather than the relative prices for a supplier's hardware. The thrust of this work is to assure that each customer switching

service is tarified to recover all of its costs. Also, it is in the interest of the Operating Telephone Company, and its customers, to introduce tariffs for new services in a timely fashion so that the Operating Telephone Company can be competitive in the marketplace. The sole objective of this work is to provide advice, and assistance to the Operating Telephone Company so it can better manage its existing and new investments to meet the communications needs of its customers."

Another example of the same variety is BDP 1223/1B0 - "Pricing Strategy and Plans". Its general statement for 1977 says "Development and implementation of a unified terminal equipment pricing strategy and specific pricing plans." The general statement for 1978-1981 says "Refinements and clarifications of various pricing plans." No specific products are mentioned. Objectives are listed as development of terminal equipment pricing strategy; government pricing plans, installment billing plans, and refinement of the two-tier pricing plan. Witness Goldstein's testimony on this BDP is (Exhibit 301, p. 45):

"This BDP funds work to develop and evaluate various strategies for pricing all types of station products offered under tariff by the Operating Telephone Company. The focus is to provide guidelines to the Operating Telephone Company on the long term contribution of potential pricing plans such as Two-Tier and Installment billing. It should also be apparent that these issues relate to how the Operating Telephone Companies, including Pacific, recover their investment and expense with such new pricing plans.

"This effort is not done in the interest of a supplier and does not relate to the prices a manufacturer should charge for its equipment. Rather, the work is clearly performed in the interest of the Operating Telephone Companies who must file tariffs for their service offerings. The structure of these tarified offerings must be competitive with the pricing options available to the customer from other communications equipment providers."

What might be described as a third category are BDPs having no specific connection with rates, rate structure, costs, or equipment

configurations. BDP 1254/OLO, for example, is concerned with developing product/service statements for various industrial market sectors. Under "results", various market sectors such as "aerospace" are mentioned. Another example in the same category is BDP 1254/OBO, entitled "studies, plans, strategies" and its general description reads:

"To develop Market Plans and Strategies for those segments in the Industrial Sector for which none have yet been prepared; this includes preparing industry profiles, conducting industry market studies with leading-edge customer, and completing written Bell System Market Plans and Strategies based on the analysis of these profiles and studies."

Certain industrial market sectors such as "forest and paper products" are mentioned as targets.

Discussion: The massive evidence on this one facet of the case does not point to the easy categorical solutions suggested by the parties. Pacific is able to maintain that 100 percent of the marketing work paid for by the license contract should be allowed because it measures the work against a "benefit to the OTC" standard which is so broad that it overlooks whether the OTC is in fact the direct or primary beneficiary (cf. discussion; ante, pp. 13-14). The staff and Compath and Interconnect would exclude all marketing work connected with studies of rates and costs, because such studies refer in part to products.

The BDPs discussed above illustrate the problem. The first two are, in our opinion, primarily concerned with marketing specific products, despite the statement of Mr. Goldstein on one of them. The last two have, at the most, an indirect and consequential application to any terminal equipment. The middle two ("product price positioning" and "pricing strategy and plans") are the problem because they are typical of a large amount of marketing BDPs. They defy easy categorization. They contain, in varying degrees, elements useful to the OTC and the Bell System manufacturer, Western Electric. While they may, to an extent, promote the use of Western Electric products, they also assist OTCs in formulating rates, rate structures, and marketing strategies. Furthermore, the work involved in some of them is general enough so

that the principles involved may be useful even when an OTC offers, say, a PBX manufactured by a Western Electric competitor.

We believe that the interweaving of objectives is such that an allowance of 50 percent of the license contract marketing expenses is appropriate. It is no easier to select a specific percentage than it was with the Bell Labs research expenditures. Furthermore, specific BDPs are started, changed, and terminated constantly. By allowing half the marketing expenses we recognize marketing's value to the OTC without ignoring its connection to Western Electric products. While we acknowledge (and believe we are carrying out) our responsibilities under Northern California Power Agency v FUC, supra, we do not think this forces us to decide that Pacific must cease spending sums on marketing equipment, whether manufactured by Western Electric or an "independent" manufacturer (in competition with a manufacturer or distributor who sells terminal equipment directly to the public). We recognize the contribution to Pacific's revenue requirement that the offering, under rates, of terminal equipment makes. This contribution may tend to keep rates for the residential and single telephone business user down. Ignoring this fact might have a detrimental long-range effect on rate levels for the small user.

Compath and Interconnect point out that in Decision No. 88232 in this proceeding (December 13, 1977), our main rate order, all of the marketing expenses were disallowed. The various license contract adjustments in that decision (mimeo, pp. 71-73) were made for rate setting purposes based upon what we deemed to be the best information at the time, pending full hearings on the license contract evidence. For example, in that decision we allowed all of the Bell Labs fundamental research expenses which are the subject of a 50 percent disallowance in this decision. We do not regard the license contract determinations of Decision No. 88232 controlling here, except as they remain unchanged by this decision.

D. Customer Services Department

The staff's Exhibit 286 (pp. 3-35 to 3-37) contains a succinct summary of its view of this department:

"The Customer Services Department of AT&T is composed of four divisions, Customer Facilities, Customer Assistance, Functional Accounting, and Corporate Security. The general function of this department is to consider the problems and needs that the operating telephone companies experience when servicing customers. This department provides assistance to the operating telephone companies regarding operating plant located between the central office and customers' premises, and services requiring personal contact with customers. This department also participates extensively in the product development process and is very active on product development teams.

"Customer Facilities Division

"The Customer Facilities Division of the Customer Services Department is composed of six sections:

- "1. Data and special services.
- "2. Management operational analysis.
- "3. Installation and repair procedures.
- "4. Customer equipment systems.
- "5. Outside plant, safety and supplies, administration.
- "6. Operations of the Bell System Center for Administrative Training.

"The staff interviewed responsible representatives of this division and examined materials supplied to Pacific. The services performed by this division fall within two general categories, (1) assistance in the product development process and (2) centralized study, design and monitoring of operating telephone companies' systems to assist in the management of customer premises plant. Examples of the two types of activities follow:

- "1. Assistance in the Product Development Process.
 - "a) Assistance to BTL and Western Electric for the development of coin telephones.
 - "b) Assistance and direction to Bell Labs and Western Electric for the development of Private Branch Exchanges (PBX), Key Telephone Sets, other voice terminal equipment and data communication instruments.

"2. Centralized study, design and monitoring of operating company systems.

"a) Provide uniform procedural manuals to assist the operating company in installation, repair, and testing of customer premises equipment.

"b) Provide the operating telephone companies with uniform methods to assess the efficiency and productivity of customer premises equipment.

"Customer Assistance Division

"The Customer Assistance Division is charged primarily with providing assistance to the operating companies for all activities which require contact with customers. The sections of this division are, Operator Services, Business Services, Productivity and Forecasting, Training, Organization and Collections and Contact (sales and service) activities.

"Generally, the work of this division entails designing procedures for operating and managing service functions which require large groups of people performing identical tasks. Additionally, this division participates in the design and development process of products which are necessary for the provision of customer assistance services. Examples of the type of services provided by this division include:

"1. Development of operating procedures for operator handling of all types of telephone calls and the development of practices for new or existing equipment.

"2. Development of procedures for billing and collection activities.

"3. Collaborate with BTL on the development of operator services equipment, i.e., Traffic Service Position Systems, Directory Assistance, Call Distributing Systems, Automatic Intercept Systems and other products.

- "4. Development of training materials for large team management training courses aimed at training managers of labor intensive operator services and to deal with special management problems unique to such operations..
- "5. Development of standard 'units of work' for sophisticated customer equipment and to assist the operating companies in monitoring work force efficiency.

"Functional Accounting Division - (FA)

"The Bell System has undertaken a full-scale revision of its product and services costing system. The undertaking titled Functional Accounting (FA) is coordinated by this division. The purpose of FA is to develop an all-inclusive accounting system which will provide detailed information regarding the revenues and expenses of the Bell System service offerings.

"The activities of this division include coordinating with all other departments the necessary procedures to identify component costs and revenues to determine the proper accumulation system.

"Functional Accounting is an extensive effort on the part of AT&T. In the test period AT&T incurred and billed through the License Contract approximately \$10 million. The staff has not attempted to appraise the propriety of FA as a cost-effective activity.

"Corporate Security Division

"The Corporate Security Division of the Customer Services Department is a small division which provides the operating companies with general assistance on investigative techniques and general guidance in protecting Bell System assets against theft, sabotage and fraud.

"Summary - Customer Services Department

"Based on its review of this department, the staff has determined that \$263,871 billed to Pacific as License Contract expense is directly

related to the development and evaluation of products which are manufactured by Western Electric.

"Conclusion

"The staff has concluded that certain activities of this department are related to the development of new products and therefore, are not a proper License Contract expense. Expenses related to product development should properly be borne by a manufacturing company."

The staff exhibit states that it has determined the sum of \$263,871 of the amount billed to Pacific should be disallowed. Using total license contract figures (without the previously mentioned redistribution of overhead), Compath and Interconnect state that approximately one-third of this department's license contract expenses relate to "competitive equipment and products" and should be disallowed (brief, p. 26).

John E. Dennis, manager of license contract and regulatory matters for AT&T, stated that the staff's recommended disallowance was based on a misunderstanding of the work.

"These activities are necessary to the provision of quality service and are not the responsibility of a manufacturer, whether it be Western Electric or a General Trade Supplier. The Staff has a basic misunderstanding as to the work performed by AT&T and also the role which the Operating Telephone Companies must play in providing quality telecommunications service. The effect of the Staff's proposal would be to place the Operating Telephone Companies and their customers in a vacuum unable to effectively influence the future development of the telephone network. The Operating Telephone Companies, however, have an obligation to see that their requirements, and the requirements of their customers are adequately met. Simply stated, AT&T through the Customer Services Department, is providing the Operating Telephone Companies and their customers a vehicle by which future service needs may be satisfied.

"The Staff has also confused the term 'system' with specific products. The Operating Telephone Companies must use specific products or groups

of products regardless of source in providing a service to its customers. Considerations such as maintenance, system and network compatibility, durability, capacity, etc., are necessarily a part of this process. Customer needs for new services which have been identified are coordinated by the Customer Services Department and requirements such as required capacity, compatibility, and durability are determined. Manufacturers, both Western and General Trade, must then design and develop equipment to satisfy the Operating Telephone Companies' (their customers) requirements." (Exhibit 304, pp. 29-30.)

The rest of Mr. Dennis' testimony on this subject is a review of the specific BDPs disallowed by the staff.

In the interest of brevity, we will not discuss individual BDPs as we did with marketing. The problem is the same. However, a review of all the Customer Services BDPs in Exhibit 294 shows a slightly different slant than for marketing: it may be stated that a majority of them do not concern competitive products while a minority have such a connection (see, for example, BDP 0524/390 and BDP 0535/730). There are, as in marketing, arguable cases. The staff's adjustment is within the range of reasonableness and will be adopted.

E. Engineering and Network Services

The staff's review of this department also resulted in recommending a partial disallowance of its activities. The staff's opinion of this department's activities is as follows (Exhibit 286, pp. 3-38 to 3-40):

"The Engineering and Network Services Department is charged with the general responsibility of providing planning, assistance and advice to the operating companies for all plant which connect central offices to the Bell Network.

"This department consists of three divisions, Network Operations, Switching, and Transmission which is oriented toward the technical aspects of operating a telephone system. Significant portions of this department participate in the Product Development Process in consort with representatives of BTL and Western Electric.

"Network Operations Division

"The Network Operations Division performs coordination and staff work for the planning, design, maintenance and operation of the Bell System network. Examples of the work of this division include:

- "1. Development of long range network planning studies which evaluate the future needs of the network including present and future possibilities in product modification or development.
- "2. Coordination and evaluation of the effects of current planning and implementation principles and procedures on long range planning results.
- "3. Assistance in development of forecasting methods for busy-hour customer usage and translating the forecasts to network capacity.
- "4. Publication of procedures which enunciate the most efficient configuration of central office equipment when faced with service needs.
- "5. Coordination of BTL and Western Electric product development work.
- "6. Development of performance measurement plans to evaluate the quality of services provided by a switching system.
- "7. Development of training courses in operating and maintenance procedures for network systems.

"Transmission Division

"The Transmission Division is responsible for providing guidance and expertise to the operating companies in all areas which affect the transmission of telecommunication signals. The emphasis of this division is on long and short-haul transmission. In general, the process of transmission can be described as the transporting of a signal from one point to another while maintaining a consistent quality. The work of this division includes:

- "1. Development of systems and facilities which convert telecommunications signals into a transmittable form.

- "2. Design and development of transmission systems and facilities upon which the converted signal may travel.
- "3. Guidance and direction of BTL's development of the type of products necessary, and characteristics the systems or facilities must possess.
- "4. Development of operations and repair methods for present and existing systems, and systems under development.
- "5. Definition of standards for the operating companies' construction of outside plant to assure compatibility and uniformity of Bell System plant.

"The Transmission Division is vitally involved in the Product Development Process. Some members of this division participate on customer product teams and others on transmission product teams. This division spends considerable time in monitoring and imputing changes into the development work undertaken at BTL and Western Electric.

"Switching Division

"The Switching Division of the Engineering and Network Services Department is responsible for central office connection with the communications network. This division oversees the systems and equipment which process signals incoming from a customer or the network, which necessarily must be switched to the proper line or trunk to be directed to the proper destination. The activities of this division include:

- "1. Development and coordination of design modifications of Switching Systems which will allow additional services to be offered through the use of central office equipment, rather than through the use of customer premises equipment.
- "2. Close direction and monitoring of the development process of BTL and Western Electric to include the development of switching components and software equipment.

- "3. Development of repair and testing procedures which are uniformly applicable to standardized switching equipment.
- "4. Coordination for standardization of support systems and equipment.
- "5. Participation in the determination process of when to begin production of a particular type of switching system.

"The Switching Division is involved with those product teams instrumental in the Product Development Process. The staff has determined that activities of the Switching Division are contributory to the product development process.

"Summary - Engineering and Network Services

"Based on its review of this department, the staff has determined that \$539,667 of the License Contract fees billed Pacific relate directly to the development and evaluation of products manufactured by Western Electric."

Compath and Interconnect essentially support the staff position, arguing that certain design activities are related to promotion of Western Electric's products (opening brief, p. 26).

Pacific's witness Dennis describes the work of this department as ensuring the efficient utilization of the network facilities (Exhibit 304, p. 42). We will summarize his testimony regarding the four divisions (Exhibit 304, pp. 43-52).

Switching Division: The division is responsible for the engineering, operating, maintenance, and improvement of the telephone switching plant. This includes advance planning and establishment of performance standards. Staff's proposals would disallow some of this type of work, for example:

BDP 0631/060, which is a study to assure compatibility of switching and signalling between Bell and non-Bell operating companies.

BDPs 0631/020, 030, 080, and 110, which concern engineering of voice terminal, exchange, intercity, and other switched services, introduction of new services, and efficient operation of existing services.

BDP 0631/070, concerning the newest electric toll switching system.

BDP 0631/100, regarding centralized operator assistance systems.

The witness mentions other specific examples. He points out that the division also assists OTCs in central office performance measurement and power systems, holds seminars regarding engineering methods of reducing energy consumption of switching systems, and studies the re-use of power equipment from electromechanical switching systems in electronic systems. The staff, he points out, recommends disallowance of some BDPs which include this work. "These are not activities which a manufacturer should be expected to perform", he said. (Exhibit 304, p. 46.)

Network Operations Division: Mr. Dennis stated that this division studies long-range development of the nationwide network and advises OTCs how to plan for the future. He pointed out that the staff's proposed disallowance concerned only BDP 0625/050, which should be allowed, in his opinion, as providing documentation to the OTCs to help them efficiently engineer electronic switching systems.

Transmission Division: Mr. Dennis described its function as coordinating advance planning, including standardization and introduction of new or improved transmission. This includes advice and assistance to the OTCs and education and training of management personnel in transmission matters. Mr. Dennis said that the staff's disallowance would include much of this work. He cited as examples:

BDPs 0644/020, 040, and 060, concerning planning for future needs, efficient use of existing equipment, and re-use of equipment.

BDP 0644/140, concerning technical and administrative network advice, including providing OTC representatives to meet with independent companies, industry, and the U.S. Government.

BDP 0642/420, relating to Dataphone service (improving utilization of data equipment by the OTCs and reducing need for repair).

BDPs 0642/710 and 820, regarding transmission maintenance engineering.

Discussion: A review of the individual BDPs in issue shows that Mr. Dennis' descriptions of them, and of the division's functions are substantially accurate and the staff's characterizations are not.^{28/} The strongest evidence in favor of the value of this division's work to the OTCs can be found by reviewing the individual BDPs themselves, one at a time. The work is clearly in the category of network engineering. In 141 BDPs, specific pieces of terminal equipment are mentioned in only two of them, and regarding those two, a reading of the full BDPs shows that their purpose is solving network problems. Furthermore, it is impossible to conceive of the engineering work in them as not being equally useful in connecting similar competitive equipment to the network. In this regard, there is even a BDP providing engineering support for evaluation of general trade (non-Western Electric) network transmission products for systemwide use. (See BDP 0644/130 - "General Trade Programs".)

The analysis of the staff, and of Compath-Interconnect, dismisses genuine network planning and engineering as a mere incidental to the selling of competitive products. On this record, there is no basis for the disallowance of the license contract work of this division and none will be made.

F. 195 Broadway Corporation

With this section, we pass from the "product relation" problem and begin the analysis of whether certain license contract funds are used by AT&T for investor related functions. We have previously ruled that costs incurred primarily for the benefit of the investor and not the ratepayer are not proper ratemaking expenses. (Pacific Tel. & Tel. Co. (1964) 62 CPUC 775, 850; approved sub nom. Pacific Tel. & Tel. Co. v FUC (1965) 62 Cal 2d 634, 663; 44 Cal Rptr 1.)

^{28/} The position of Compath-Interconnect is essentially the same as the staff's, except that Compath-Interconnect's individual analysis leads them to recommend disallowance of certain BDPs in addition to those recommended by the staff (see appendix to Compath-Interconnect brief).

The 195 Broadway Corporation (195) is wholly owned by AT&T. 195 owns and operates the buildings which house the General Departments of AT&T.

The staff regards 195 as having been formed to comply with the New York State franchise laws "which prohibit two telephone utility companies from owning property in the same service area. Since New York is served by New York Telephone Company, 195 had to be created for AT&T to be in conformity with state law." (Exhibit 296, p. 3-3.)

According to the staff, 195 provides space by purchase or lease, attends to providing furniture and fixtures, and janitorial services. As compensation, 195 bills AT&T at cost. However, AT&T includes a return on its investment in 195 in the license contract billings. The staff report states:

"The return is computed upon AT&T's average equity investment in 195 as compared with the used and useful property 195 employs in rendering services to AT&T. For the test period the equity investment of 195 allocated to License Contract activity was \$216,907,916, while the used and useful property (rate base) was \$111,320,400. The principal items which cause the difference between the rate base and the equity investment is 195's average construction work in progress and a parcel of land 195 owns with no specific future purpose.

"It is a basic regulatory principle that a utility should earn a return on the capital which it has invested in used and useful property employed in its service to the public.

"The staff's review disclosed that there is no reasonable relationship between plant dedicated to servicing AT&T represented on 195's books and the equity investment which AT&T allocates to the License Contract.

"The staff views the existence of 195 simply as a means to comply with a legal technicality. The staff believes that any defense raised by claiming that 195 is not a regulated utility and is not subject to ratemaking principles is inappropriate and does not recognize the true nature of 195.

"The staff has calculated a rate base for 195 by calculating a weighted average of used and useful property in service, a working cash allowance and a deduction for deferred income taxes."

The staff recalculated 195's used and useful property and determined working cash allowance using one-half of operating expenses for the period. The staff also removed from rate base certain real property for which there is no planned use. The staff recommends that 195's rate base "be recognized as the proper basis for determining the reasonable amount of compensation for capital used by AT&T" in providing license contract services.

Pacific (through AT&T witness Dennis) agrees that the real property with no specific future purpose should be removed from used and useful plant, and as a result of the staff recommendation, AT&T has already done so. Otherwise, Pacific disagrees with the staff methodology. Mr. Dennis points out that 195 is not a utility and its financial position must be reported to the Securities and Exchange Commission (SEC) as a nonutility.

Regardless of how this subsidiary must be accounted for to the SEC, we believe that a rate base calculation is appropriate for license contract purposes. We agree with Pacific's argument, however, that if a rate base approach is adopted, allowance for funds during construction must be calculated, and therefore the proper adjustment is \$842,699 rather than the staff's recommended adjustment of \$1,051,045 (see, generally, Pacific's opening brief, pp. 89-92 and appendices and tables referred to therein).

G. Treasury Department

The Treasury Department has two principal functions: (1) financial management of AT&T's investments in Bell System companies, and (2) management of the pool of funds.

Management of investments. According to the staff this category accounts for most of the expenditures of the department. (\$3.5 million was billed to Pacific in the test period.) The staff exhibit (Exhibit 286, p. 3-8) lists the following as the major functions in this area:

- "1. Furnishing standards on banking, financing, and OTC treasury department practices.
- "2. Providing trends and statistics useful for capital planning.
- "3. Developing and maintaining a complete system for pension fund record keeping reports and analysis."

The staff categorizes the above functions as those of a parent holding company in servicing its securities and recommends a total disallowance. While the testimony of Pacific's witness Wade shows that Pacific received some valuable financial advice from this department, we agree with the staff that such advice seems to be secondary to the main purpose of servicing securities, and the principal beneficiary of the activities in this category is the shareholder. We adopt the staff adjustment.

Pool of funds. The purpose of these funds is described by the staff as follows (Exhibit 286, pp. 3-8 and 3-9):

- "1. Provide advances to licensee companies on short notice with interest charged at average prime rates.
- "2. Provide short-term capital to licensee companies with interest charged at average prime rate.
- "3. Provide capital backing for operating company commercial paper issues.
- "4. Provide the financial backing for all outstanding drafts of the operating companies at any point in time.
- "5. Provide AT&T with short-term investment capital when the funds are not advanced to the operating companies. In the calendar year 1975 the Pool of Funds earned \$85 million on short-term investments."

We are concerned here not with the funds themselves but with the cost of administering them. The staff seeks to disallow \$29,817, the amount billed to Pacific for the test period, arguing that while the earnings from short-term investments are retained by AT&T and not credited to the OTCs, the costs of administration are charged as license contract expenses.

Pacific points out that if the pool of funds were maintained, alternate methods of meeting legal and financial for supporting outstanding drafts, tax liabilities, and commercial would cause Pacific increased costs of \$905,000. Pacific further state

"Mr. O'Rourke has incorrectly assumed that the Pool of Funds earns a return in two ways: from interest charged the operating companies when funds are out on loan and from earnings on short-term investments. As he recognized (Tr. 7331-7332), monies on loan to the operating companies are no longer a part of the Pool of Funds, and thus the only return of monies in Pool of Funds is from short-term investments (Exh. 305, p. D-14). AT&T could certainly earn a higher return from the monies in the Pool of Funds (Exh. 304, p. 6; Tr. 8953). Both Mr. Wade and Mr. Dennis testified that if AT&T were to allocate the interest income from the short-term investments to the operating companies, as recommended by Mr. O'Rourke, and then require a return on the total investment employed in rendering this license contract service, as implied by Mr. O'Rourke's methodology, the cost to Pacific would be substantially greater than the \$29,817 paid by Pacific for the costs of administering the Pool of Funds (Exh. 304, p. 6; Exh. 305, p. D-15; Tr. 8954)." (Opening brief, p. 66.)

The staff notes that for 1977-78, Pacific did not utilize the funds because the rates charged by AT&T exceeded those available to Pacific from other sources. Therefore, the staff argues, there was no ratepayer benefit, at least for that period.

We will allow these administrative expenses for the present. They are not an investor-related expense. We will, however, review the subject in the future, and if the AT&T pool of funds interest rates continue to be uneconomical for Pacific, we may revise our determination.

H. Secretary Department

The staff excluded \$139,948 billed to Pacific for the test year for this department, which staff Exhibit 296 lists as having the following functions:

- "1. Preparation and coordination of executive and shareowner correspondence concerning general corporate policy.
- "2. Coordination of shareowner, Board of Directors, and executive meetings.
- "3. Maintenance of minutes of Board of Directors' meetings."

CORRECTION

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HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY

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Witness Dennis' prepared testimony contains a brief statement (Exhibit 304, pp. 28-29) to the effect that the department is of benefit to Pacific in helping Pacific deal with its own board of directors.

The activity of this department is clearly the responsibility of the stockholder and any cost saving benefit to the ratepayer is incidental and consequential. The staff's 100 percent disallowance is adopted.

I. Public Relations and Employee Information

The AT&T Public Relations and Employee Information (PR&EI) Department, according to staff Exhibit 296 (p. 3-11), coordinates systemwide information and public awareness programs of the Bell System companies. It is composed of the following divisions:

Advertising Administration
Closed Circuit TV and Films
Press Relations
Public Relations Planning
Employee Communications
Contributions
Community and Educational Relations.

The staff's exhibit lists the activities of this department as follows (Exhibit 296, p. 3-11):

- "1. Coordinates the national advertising effort of the operating telephone companies relative to sales and corporate activities.
- "2. Manages and operates the Bell System communication network via closed circuit television broadcasts and films for use with associated company employees and public audiences.
- "3. Manages the Bell System press liaison activity including responding to inquiries from the world and national press agencies and magazines.
- "4. Undertakes research studies which include testing of the effectiveness of public relations activities and defining strategies for future public relations activities.
- "5. Prepares executives' speeches and correspondence which deal with policy issues affecting the Bell Systems.

- "6. Develops material which advises the public of regulatory and financial matters, including the annual report to shareowners and newsletters.
- "7. Designs and edits employee publications which are distributed throughout the Bell System.
- "8. Manages the AT&T charitable contributions, educational and community relations programs which include projects such as the AT&T Centennial and United States Bicentennial Celebrations."

The staff made selective disallowances to the divisions (some of the 100 percent category) based upon its analysis of each division.

Compath and Interconnect employ a different approach, analyzing the BDPs in connection with PR&EI (part of Exhibit 296) and concluding that 53 percent of the departmental expense relates to promotion of competitive products and recommending a disallowance on that basis.

TURN recommends a 100 percent disallowance of the entire department, arguing that staff witness O'Rourke failed to apply Commission precedent^{29/} properly when he reviewed the BDPs. TURN includes its own analysis in its brief.

Pacific criticizes the staff for failure to contact anyone at Pacific (rather than AT&T) to determine the value of PR&EI expenses to Pacific in increasing its operating efficiency. Pacific's witness Wade reminds us that the BDPs furnished the staff are not for the test year period but for 1977, and, in any event, BDPs change constantly. Mr. Wade stated that in his opinion staff witness O'Rourke did not understand the value of many of the BDPs and took certain words and phrases out of context. Mr. Wade's testimony (Exhibit 305, pp. D-33 to D-83) explains the different sectional breakdowns for funding purposes and

^{29/} TURN cites Decision No. 84902 (Pacific Gas and Electric Company, (1975) 78 CPUC 638, 688-696). See also our extensive discussion of Pacific's advertising and our policies on advertising and public relations generally in Decision No. 88232 (December 13, 1977) in this proceeding (slip opinion, pp. 56-69). We intend to apply those policies here.

analyzes many of the BDPs in this area individually. Mr. Wade did not contest all of the staff disallowances, but his general opinion is that the "vast bulk" of the work promotes efficiency and economy in Pacific's operations. (Exhibit 305, p. D-38.)

Regardless of the fact that we might not have a perfect test year picture, we regard the BDPs as the best evidence available to test the assumptions of the witnesses. All of the parties concerned with the issue rely upon them in support of their various positions.

An examination of all the PR&EI BDPs in Exhibit 296 (there are over 80 of them) as well as the testimony and arguments of the parties, convinces us that on this record, none of the PR&EI expenses should be regarded as proper license contract expenses. The BDPs show that Mr. Wade's opinions are in many instances not supportable or are of no assistance in determining the value of individual items as expenses to be borne by the ratepayer because his conclusions rest on a "benefit to the OTC" test which is so broad as to encompass activities of primary benefit to the investor or activities in the image-building area.

We will discuss examples in different categories to demonstrate how we reach this determination. There are what might be described as "base" BDPs, as well as those for specific projects, which fund the day-to-day administration of the divisions. (See, for example, BDP 0931/002 and BDP 0951/105.) These will not be individually analyzed; in our opinion these underlying administrative costs stand or fall with the license contract value of the specifically funded programs of the divisions.^{30/} A further problem (as TURN points out) is that the distribution of the PR&EI BDPs is not entirely consistent. The staff

^{30/} We stated previously (p. 61) that Pacific did not contest the redistribution of overheads. While Pacific made no argument on brief concerning this, Mr. Wade testified (Exhibit 305, p. D-43) that their application to PR&EI was inconsistent. However, the staff's methodology is more appropriate than the company's, and, therefore, adopted for this proceeding.

recommended disallowances in an area covered by BDPs beginning with Serial Number 0976. Pacific, through Mr. Wade, contests the disallowances. Exhibit 296 contains no BDPs in the 0976 series.

Advertising Administration. A few of the BDPs in this area include administering national advertising efforts for yellow pages or specific service offerings (BDPs 0931/002, 011, and 021). Most of the others are of questionable value in the area of advertising which we have allowed to be charged to the ratepayer. The BDPs in this area in Exhibit 296 include expenses connected with presentations at the annual AT&T meeting (0931/031), Disneyland expenses (0931/041),^{31/} experimental exhibits (0931/051, concerning innovative exhibit designs, the subject matter being unspecified), "Corporate Advertising Administration" (0932/002), which describes under "results" the utilization of mass media "to explain our corporate objectives [to the general public and to selected segments] in the areas of service, earnings, employment, management, organization, and competition," and "Corporate Identification Program" (0932/022), which concerns use of such materials as the company trademark, vehicle identification, use of company stationery, and other studies of visual communications.

Mr. Wade's objections to the staff's disallowances are not borne out by reference to the BDPs. He recommends allowance of BDP 0931/051 (see above) because the product is used in trade shows, for customer instruction, and employee training, and "not solely for Disneyland exhibits." (Exhibit 305, p. D-81.) While this is true, the subject matter is not stated and the product can as easily be image building as direct information of service offerings (or a combination of both). Regarding the Corporate Identification Program (BDP 0932/022) Mr. Wade says that the purpose is

"...of an operating nature and provides direct benefits to the customer. Customers benefit from the uniformity of these identifying

^{31/} The subject of Disneyland was thoroughly explored in Decision No. 88232 in this proceeding and our reasons for disallowing expenses associated with the Bell System Disneyland exhibit are explained in that decision.

markings when admitting telephone personnel to their homes, when in need of emergency assistance and when wanting to locate various telephone company locations or coin phone facilities. If AT&T did not provide this guidance, Pacific would have to perform this work itself at greater cost and with a loss of uniformity throughout the country."

While such operational goals can be inferred from the language in the BDP, they are not specifically mentioned; furthermore, the BDPs' language is so broad as to include an admixture of operational and image-building "corporate identity" goals. (See, particularly, the language under the box of BDP 0932/022 entitled "Benefits to Be Achieved".)

Press Relations and Public Relations Planning. It is not always easy to separate these two functions when reference is made to the BDPs. There are four BDPs in the 0940 series in Exhibit 296. Only one of them makes reference to any problem which could be the responsibility of the ratepayer (BDP 0941/001, concerning furnishing certain materials to regulatory agencies).

The 0951 series appears to be in this category. There are 18 BDPs in this series included in Exhibit 296. Many of them fund surveys of customer opinions. Mr. Wade denies that image building is included and states that the purpose is to learn what customers expect from OTCs so that policies and procedures can be modified when necessary. Also, trends are analyzed so that operational changes may be made. A review of the actual BDPs shows that Mr. Wade's opinion is only partially borne out. While some seem to support his view (BDPs 0951/103, 107, 116), others appear aimed primarily at corporate status objectives (BDPs 0951/106, 108, 113), and still others are so broad that they defy precise analysis (BDP 0931/114). Some include a mixture of goals in such a way that they cannot be quantitatively separated. For example, BDP 0951/102 "public overview" funds the measurement of trends in "public attitudes toward various aspects of service, cost of service, and the company itself. Additional questions cover employees, consumer issues, antitrust and competition matters, and service/cost tradeoffs."

Another division which is the subject of considerable commentary by Mr. Wade is Public Relations Planning. Mr. Wade did not contest all of the disallowances (e.g., BDPs 0953/001 and 007) but states that the BDPs studied by the staff are not typical of the work of the division. A review of the BDPs in the 0951 series demonstrates that they contain another mixed bag of objectives, and out of 13 of them, only four demonstrate on their face a direct value to the OTC (BDPs 0951/107, 111, 112, 116).

We understand Mr. Wade's (and Pacific's) point that these BDPs were prepared as internal documents and were not necessarily intended to be totally self-explanatory to an "outsider" reviewing them for the first time. Even considering this argument, however, we do not believe that Mr. Wade's interpretations of them can be proved in all cases. We could continue with this analysis through the remaining BDPs. We will not, in the interest of brevity, because the rest of the available BDPs are, except for the 0981 series, clearly related more to the corporate image area than to the type of marketing, advertising, or administrative expense which we have announced we would allow. As for the 0981 series, while certain labor relations and associated goals may be appropriate for license contract funding (BDPs 0981/201 and 202) the remainder have goals more in the nature of community relations. ✓

In any event, we have stated elsewhere in this decision why we believe we should determine the value of license contract expenses based on areas of subject matter rather than by analyzing hundreds of items individually and determining upon which side of the line each one falls. The BDPs in the area of PR&EI may work very well for internal corporate use, but from our own regulatory standpoint they contain a mixture of objectives, the majority of which are outside the scope of what we have, in the past, determined to be administrative and support activities properly charged to the ratepayer. The entire charge of \$1,608,507 is disallowed.

J. Contributions

We have already discussed the PR&EI department generally, but certain activities in that area deserve mention on a separate ground.

The staff identified certain amounts as used for dues, donations, contributions, and educational relations, recommending a total disallowance: (See Exhibit 286, pp. 3-13 and 3-14.)

We have excluded from operating expenses such amounts contributed directly by Pacific. (Pacific Tel. & Tel. Co. (1964) 62 CPUC 775.) There can be no distinction between Pacific's direct contributions for such purposes and amounts billed to Pacific through the license contract for the same purpose. We will disallow license contract billings in this area in the amount of \$129,866.

R. Legal Department

According to staff Exhibit 286 (p. 3-18), the AT&T Legal Department is concerned with such fields as antitrust, corporate and financial, FCC, general litigation, labor, personnel, patents, and federal, state, and local tax matters for AT&T.

The staff recommends a \$61,981 disallowance for corporate and security matters, specifically:

- "1. Corporate matters including records, reports, directors' and stockholders' meetings (AT&T), charters and by-laws, incorporation of subsidiaries mergers....[sic]
- "2. Financing - All SEC matters including registration under the Securities Act of 1933 and reporting under the Securities Exchange Act of 1934, shareholders relations, and security analyst relations." (Exhibit 286, p. 3-19.)

This disallowance represents 100 percent of the activities of the Corporate and Securities Division of AT&T's Legal Department.

Mr. Wade testified that the staff erroneously assumed that the above activities were all the work that the division performed, while actually there are numerous areas in which Pacific receives valuable advice from the division. He enumerated (1) assistance with SEC filings and regulations and (2) assistance with long-term financing, redemption, debenture and stock issues.

We agree with Pacific that the disallowance is inappropriate. This work is not "servicing securities" in the sense that only the

investor is benefited. The ratepayer benefits from proper corporate and financial advice of this nature.

L. Department of Justice Antitrust Lawsuit Expenses.

We have reviewed the arguments on this issue. No evidence on this subject was presented after the issuance of Decision No. 88232 in this proceeding on December 13, 1977. We will allow our partial disallowance of these expenses to stand for the reasons stated in Decision No. 88232 (slip opinion, pp. 71-72).

M. Washington Office

The activities of this office are entirely charged to the license contract. Pacific's test period billing for this activity was \$224,080. The staff recommends a 100 percent disallowance on the ground that the work of the office falls into the category of legislative advocacy, the expense of which we have excluded from operating expenses chargeable to the ratepayer. The staff summarizes the activities of this office as follows (Exhibit 286, pp. 3-23 and 3-24):

- "1. Consumer Communications Reform Act, suggesting action to be taken and assisting in action taken.
- "2. Activities related to issues concerning communications services; monitors legislative developments, determines system position, advocates position with government officials, advises and assists OTC's.
- "3. Activities related to the regulation and control of corporate and industrial concerns by the Executive Departments and government agencies (other than FCC). Follows developments in those Federal departments and agencies that relate to corporate operations, determines system position, advocates position with government officials, advises and assists OTC's.
- "4. Activities related to maintaining liaison with Executive Departments and government agencies (other than FCC) on telecommunications policy matters. Follows developments in those Federal departments and agencies that relate to communications services, determines system position, advocates position with government officials, advises and assists OTC's.

- "5. Reviews on a daily basis the activities in Congress, the executive departments, and Federal agencies, which may affect the Bell System. Publishes six regular weekly and monthly reports to AT&T, Western Electric, BTL and all OTC's. Maintains current legislative files on all Federal legislation of interest to the Bell System and legislative history files on previous congressional action. Serves as centralized information point for OTC's and AT&T on Federal legislative matters.
- "6. Conferences and briefing sessions for the purpose of informing officers of the OTC's, BTL, Western Electric and Long Lines on current developments of critical issues.
- "7. Centralized information bank on State legislative matters (legislation, positions and trends). Information exchanged with OTC's AT&T, Western Electric and BTL.
- "8. Centralized Data Bank and Information Interchange involving publications and reports of State and local legislative activity, outside liaison responsibility for Bell System with national legislative groups, conferences and meetings for State public affairs representatives."

The staff report also comments that one of the main functions of the office is to analyze pending legislation to determine its impact on the Bell System.

Pacific objects to this disallowance. Mr. Wade and Mr. Dennis both testified that the main activity of the office is to monitor legislation, and to keep OTCs informed of developments for regulatory and legal compliance purposes, not in order to lobby against (or for) the legislation.

On cross-examination, Mr. O'Rourke conceded that some of the informational activities of the office were not in the category of legislative advocacy.

The evidence shows that one of the principal activities of the office is liaison with Congress. Regarding this function, we find it impossible to separate the furnishing of information from legislative

advocacy. On the other hand, a heavily regulated corporate structure such as AT&T must have a means of rapidly disseminating information on newly enacted or proposed legislation to insure prompt compliance, thus avoiding penalties and confusion. The record does not quantify how much of the Washington Office's time is spent in one category of work or the other. We will allow 50 percent of the expenditures.

N. Controller's Department

Staff Exhibit 286 states (p. 3-28) that due to time restraints the staff did not perform an extensive study of the Controller's Department. The staff simply recommends a disallowance of expenses associated with preparation of Bell System reports, amounting to \$130,589 billed to Pacific, including allocation of overhead. This recommendation is reasonable.

O. Executive Department

The staff's discussion of the AT&T Executive Department is as follows (Exhibit 286, p. 3-47):

"Executive Department

"The Executive Department which includes the top corporate officers of AT&T, is responsible for the management of the entire Bell System, and therefore, many of its activities are in dealings with AT&T's shareholders.

"The staff reviewed the activities of this department and determined that the following are investor interest expenses:

- "1. AT&T Annual Report to Shareholders.
- "2. AT&T shareholders meetings.
- "3. Contributions charged to operation expenses.
- "4. Directors' fees.

"The staff has excluded \$319,910 which represents the amount allocated to Pacific during the test period for the aforementioned activities.

"In addition to the identified items above, the staff has excluded an additional \$78,894 from the Executive Department to recognize this department's overall responsibility for investor interest activities.

"Conclusion

"The staff concludes that:

- "1. The expenses for AT&T's Annual Report to Shareholders, AT&T shareholders meetings, contributions charged to operating expenses and Directors' fees are investor interest expenses.
- "2. The Executive Department has overall responsibility for managing AT&T.

"Recommendation

"The staff recommends that \$397,814 be excluded from Pacific's License Contract expense as being investor interest activities."

Pacific states on brief that for this proceeding it does not contest the disallowance except for what it believes to be improper allocation of overhead. Pacific argues that no overhead should be assigned to payment of directors' fees, since such payments are independent of support activities such as pensions, floor space, etc. This amounts to a reduction in the staff adjustment of \$3,505. The amount involved is de minimis, but we believe the allocation should stand. Payments to directors include some processing and, while the overhead may be low, it is not likely to be zero.

Because we disallowed certain investor interest areas in other parts in this decision, we need not adjust the staff recommended disallowance to the Executive Department to reflect allowances or disallowances elsewhere.

P. Human Resources Development Department

With this section we begin our discussion of certain miscellaneous problems not falling into either the "product development process" or the "investor interest" category.

The staff recommends a \$810,249 disallowance of AT&T's Human Resources Development (HRD) charges including U.S. Equal Employment Opportunity Commission (EEOC) expenses on the ground that these sums are now being expended because of past unfair business practices, and hence, as a policy matter, they should not be billed to the ratepayer. During the test year, Pacific was allocated \$390,654 for implementing EEOC programs. (See staff's discussion of this subject, Exhibit 286, pp. 3-42 and 3-43.)

Pacific emphatically argues that the staff misconstrues these expenses as flowing from a consent decree, whereas most of the funds expended are as a result of ordinary ongoing activities (including handicapped programs) and compliance with regulations issued from time to time by the agencies concerned with such programs.

Earlier in this proceeding (Decision No, 88232, slip opinion, p. 92) we adjusted Pacific's own expenses resulting from a consent decree. We stated in this connection:

"We emphasize that our disallowance is limited to penalty payments to employees, and does not include amounts connected with litigation of EEOC problems, administration of EEOC programs, or compliance with the consent decree."

The staff has not presented us with any breakdown showing what amount, if any, is traceable to penalty payments. The staff's recommendation will not be adopted.

Q. AT&T Moving Expenses

During the test period, AT&T was in the process of a major relocation of some of its offices and staff. The staff considers the expense reasonable but recommends it be amortized over ten years. This is proper in a case such as this where the total amount of moving expenses is not typical of the usual year. (See staff Exhibit 286, pp. 3-43 and 3-44 for adjustment of \$419,595.)

R. Tax Calculations

The staff proposed two separate adjustments for AT&T tax payments billed to the OTCs under the license contract.

New York State Franchise Tax. The staff excluded Pacific's share of these taxes on the following basis:

"AT&T is assessed a tax by the State of New York for the opportunity to do business in that state. The basis for determining the tax is contingent upon the investment AT&T holds in its subsidiary corporations factored to the State of New York. It is the staff's opinion that taxes based on a corporation's subsidiary holdings represent holding company expenses which fall within the definition of investor interest expenses. For the test-year, \$964,064 was allocated to Pacific in License Contract fees representing New York State Franchise Taxes." (Exhibit 296, p. 3-46.)

Pacific disagrees with the underlying premise of the adjustment - that only "holding company expenses" are involved and that therefore it is an expense which should be borne by the stockholders. Pacific's witness Dennis pointed out that the franchise tax is levied for the privilege of doing business in New York and that calculating the tax based on capital stock is simply a formula to arrive at the level of taxation. (Exhibit 304, pp. 15-16.)

We agree that the franchise tax is a proper operating expense and does not represent simply an "investor interest". The Uniform System of Accounts requires such taxes to be accounted for as operating tax expense and not a capital expenditure. AT&T is taxed as a utility under New York State law and not as a "holding company". The staff's adjustment will not be adopted.

Federal Income Taxes. The staff exhibit (Exhibit 286, p. 3-45) states that AT&T bills Pacific via the license contract for federal taxes, amounting to \$1.3 million for the test year. The staff witness determined that AT&T elected to take advantage of certain tax writeoffs ("vacation pay deduction" and "interest expense deduction") which, in the opinion of the staff witness, resulted in no tax liability. The staff's opinion is that since AT&T incurs no tax liability, it should not include amounts for income taxes in its license contract billings.

Pacific points out that, on cross-examination, Mr. O'Rourke stated that while the basis for his recommended adjustment was no tax liability, he also testified he was actually unfamiliar with whether AT&T incurred tax liability on a consolidated basis (tr. 7420-7422), while Mr. Dennis testified that AT&T's federal income tax liability has always been positive (Exhibit 304, p. 13).

The staff counters with the argument that when it used the term "AT&T taxes" it referred to taxes on the general departments (which provide the license contract services) which, to the knowledge of the company witness, have never shown a positive tax liability. Therefore, runs the staff argument, the negative tax liability should benefit the OTCs. The staff also argues that interest on AT&T's debt should be used to offset federal income tax payments allocated to the OTCs.

Pacific, in turn, argues that it agrees with the staff that interest on AT&T's debt should offset federal income tax payments allocated to the OTCs but that this is already done. (The staff argues that this is, in fact, not done.) Mr. Dennis testified that the interest on AT&T's debt allocable to Bell Labs and the 195 Broadway Corporation reduces federal income tax allocations and, in turn, Pacific's license contract billings. Pacific emphasizes that if this were not done, "Pacific's license contract billings would be substantially higher" (reply brief, p. 35).

In Decision No. 88232 we considered the problem of AT&T's taxes and determined that we would use AT&T's effective tax rate of 5.12 percent. The evidence and arguments presented here do not convince us that we should deviate from this ruling. We will apply this tax rate to the license contract account.

V. SUMMARY AND CONCLUSION

The detail in this opinion was made necessary by the character of the evidence and the fact that, to our knowledge, this is the first complete investigation of the Bell System license contract.^{32/} It is our hope that in future investigations evidence and argument may be simplified by our determinations in this proceeding.

Our determinations in this investigation result in a test year California intrastate disallowance for license contract expenditures of \$16.0 million. The actual effect on Pacific's present (Decision No. 88232) revenue requirement is \$5.8 million. The difference between the two figures is caused by the fact that Decision No. 88232 had already made certain across-the-board percentage adjustments which are now replaced by our adjustment based on the full evidence on this issue (see discussion of our previous license contract treatment in the introductory section). The table which follows details the adjustments.

^{32/} Other state commissions, as well as this Commission, have made adjustments to the license contract on various bases. See review of cases in other states in Telephone License Contract Payments, Public Utilities Fortnightly, October 12, 1978, p. 46.

The Pacific Telephone and Telegraph Company
 LICENSE CONTRACT EXPENSES^{1/}

Department	L.C. Billing ADJ. for O.N. Allocation	Allocation to California State	Staff- Proposed Disallowances ^{2/}	Commission Adopted Disallowances		Commission Adopted L.C. Expenses
				D-88232	Present Decision	
Executive	\$ 6,545,931	\$ 649,148	\$ 397,817		397,817	\$ 231,331
Federal Regulatory	3,565,957					
Secretary	1,412,079	139,948	139,948		139,948	
State Regulatory	6,741,536	747,840				747,840
Customer Service	31,138,974	3,526,168			263,871	3,262,317
Engineering & Network Services	29,653,839	2,966,903				2,966,903
Corporate Planning	5,883,156	585,531				585,531
Public Relations Employee Information	15,136,577	1,608,507	1,044,659		1,608,507	
Legal	10,185,290	734,739	61,981			734,739
Marketing	34,216,890	3,631,967		\$ 4,314,000 ^{2/}	1,815,964	1,815,963
Labor Relations	1,224,066	136,921				136,921
Controllers	31,613,658	3,523,304	130,569		130,569	3,392,735
Treasury	50,745,540	4,714,700	3,561,570		3,531,153	1,182,947
Construction Plans	8,495,625	876,314				876,314
Administration D	14,127,591	552,613				552,613
Administration C	15,238,301	1,543,791				1,543,791
Washington Office	2,109,092	224,080	224,080		112,040	112,040
Administration Services	5,136,932	282,440				282,440
Human Resources Development	13,484,656	1,524,777	810,249		419,595	1,105,182
IKD General Department	4,079,623	409,012				409,012
Other Non-Overhead Items						
Contributions	1,310,335	129,066	129,066		129,066	
Taxes	15,690,301	1,282,573	964,064			1,282,573
D.O.J. Antitrust Litigat	1,602,644	119,445	119,445	247,500 ^{2/}	59,728	59,727
Western Electric	3,353,210			6,636,321 ^{1/}		
Investor-Related Adjustment						
Total General Departments	317,902,763	29,910,601		11,217,827	8,609,698	21,300,919
Bell Telephone Labs						
Patent Admin. & Quality Assurance	7,609,885	688,769				688,769
Research and Engineering	209,468,902	19,485,844		453,000	9,742,922	9,742,922
Total Bell Telephone Labs	217,078,787	20,174,613		453,000	9,742,922	10,431,691
Gross Billing	334,981,550	50,089,220				
Return On Investment	28,110,561	2,682,014	1,051,045	798,000	842,699	1,839,315
Federal Income Tax & ITC	11,889,664	1,328,238	1,328,238	1,300,000	1,300,000	28,238
Less Royalties	(18,979,232)	(594,211)				(594,211)
Net Billing	566,002,743	53,101,239				32,605,950
Total Adjustment			9,961,561	13,768,827	20,455,519	

(Red Figure)

- ^{1/} Certain amounts may vary from estimates used in D-88232, since this table uses recorded information.
- ^{2/} The company proposed a license contract disallowance of \$3,604,000.
- ^{3/} These amounts differ from those in the "Allocation to California State" column, because test year estimates were used in D-88232, while recorded information was employed for this decision.

A.55492, C.1001 /km/ks /dz *

The Pacific Telephone and Telegraph Company
 California Intrastate
 Adopted Expense

: Line: : No.:	General Services and Licenses	: Adopted :	
		: Total Calif. (A)	: Calif. Intrastate (B)
		(Dollars in Thousands)	
1	Decision No. 88232	\$ 40,219	\$ 31,029
2	This Decision	<u>32,606</u>	<u>25,156</u>
3	Difference	7,613	5,873

Change to Gross Revenue Requirements

: Line: : No.:	Description	: Amount (A)
		(Dollars in Thousands)
1	California Intrastate Adjustment	\$ 5,873
2	Allowance for Uncollectibles [Line (1) x 0.95%] 1/	56
3	Revenue Reduction [Line (1) - Line 2]	5,817

1/ D.88232 (slip opinion p. 116).

We will order Pacific to file a refund plan for the difference between the amount collected under the revenue requirement established in Decision No. 88232 and that established here. We will further order Pacific to propose a rate spread to effectuate the reduced revenue requirement in the future. Appearances in this phase of the proceeding will be given time to comment on the refund and the proposed spread of rates (or to make proposals of their own).

Findings of Fact

General Principles and Legal Issues

1. The Bell System license contract has existed in a form similar to the present contract since 1918. Since October 1, 1974 the Bell System OTCs and the AT&T Long Lines Department have paid license contract fees to AT&T as determined by an annual AT&T study of license contract costs.

2. Pacific's share of license contract expense has grown rapidly, from \$12.2 million in 1965 to \$69.4 million in 1977.

3. We have made previous adjustments to Pacific's license contract payments for ratemaking purposes, for the purpose of disallowing certain investor related expenses, in the absence of a complete investigation of all facets of license contract expenditures.

4. Qualifications of the staff witnesses to express the opinions attributed to them have been established, except as their testimony was specifically stricken by the ALJ. This is not a finding on the weight to be accorded the staff's evidence.

Use of License Contract Funds by Bell Laboratories

5. Bell Labs, a nonprofit corporation owned equally by AT&T and Western Electric, carries out research, development, and design for the Bell System.

6. There are two basic categories of Bell Labs work: R&FD and SD&D. The latter category is paid for by Western Electric and is not billed to the license contract.

7. R&FD consists of five categories: basic research, applied research, systems engineering, quality assurance, and patent administration. For purposes of this decision we incorporate into this finding the definitions of these terms at the beginning of Section III of the opinion section of this decision (slip opinion, pp.24-25).

8. The record does not contain a budgetary breakdown by the categories mentioned in Finding 7, except for quality assurance and patent administration, which are funded under specific case authorizations.

9. For the test year in this proceeding the portion of license contract expenditures devoted to Bell Labs approximates 40 percent. Pacific's allocation of Bell Labs' R&FD expenses has grown from \$6.5 million for calendar year 1965 to \$20.2 million for the 12 months ending April 30, 1976.

10. The product of Bell Labs' basic research and applied research is equally useful, on the one hand, to the ratepayers of the OTCs and the OTCs themselves through modernization and improvement of the telephone network, or through advancement of telecommunications generally, and, on the other hand, in potential advancement in techniques of designing and marketing competitive products.

11. Systems engineering contains work of assistance in developing the network. There is also included some work related to the development of products. The extent of product-oriented work in this category cannot be accurately assessed due to refusal of disclosure of certain case authorizations, and because of difficulty in identifying which cases are considered to be within this category.

12. Quality assurance is NOT SYNONYMOUS with quality control. The former is performed by Bell Labs on behalf of the OTCs; the latter is funded separately by Western Electric and is not billed to the license contract. Quality assurance is of direct benefit to Pacific's ratepayers.

13. The staff's recommendation regarding the accounting treatment for patent administration would result in the ratepayers' paying more than under the Bell System's present methodology.

AT&T Use of License Contract Funds

14. The staff's reallocation of overhead expenses is more reflective of conditions and more reasonable than AT&T's methodology.

15. In the Marketing Department there is an interweaving of marketing objectives which are of primary benefit to the ratepayer and the OTC, on the one hand, and of primary benefit to the marketing of Western Electric's products, on the other hand.

16. The Customer Services Department's work is of benefit to the ratepayer, but some of it is connected with product development.

17. The Engineering and Network Services Division's work is not connected with product development and all of it is of benefit to the ratepayer and the OTC in maintaining and improving the network and in planning for future network needs.

18. For license contract purposes, a "rate base" methodology is appropriate in determining the expenses of the 195 Broadway Corporation; however, allowance for funds during construction should be included in the calculation.

19. Functions of the Treasury Department concerning management of investments are primarily investor related.

20. The pool of funds benefits the ratepayer by providing the OTC with low cost financing.

21. The activities of the Secretary Department are in the area of administrative work concerning shareowner and associated executive matters.

22. The Public Relations and Employee Information Department's activities in the "corporate image" area predominate. The evidence does not lend itself to selecting individual items of possible primary value to the ratepayer and apportioning the expenses of the department.

23. Amounts billed to Pacific via the license contract for dues, donations, and contributions do not benefit Pacific's ratepayers.

24. The work of the Corporate and Securities Division of the AT&T Legal Department is not simply "servicing securities" for the benefit of the investor. The ratepayer benefits by the OTCs' receiving necessary regulatory and financial advice.

25. The Washington Office performs a combination of legislative advocacy functions and activities in the nature of furnishing prompt information on legislation or potential legislative action to AT&T and the OTCs to insure prompt compliance and avoid confusion. The record does not quantify such activities.

26. It is not reasonable to allocate the expenses of the Controller's Department connected with preparation of Bell System reports to Pacific's ratepayers.

27. The staff's disallowance of investor interest activities connected with the Executive Department, including allocation of overhead, is reasonable.

28. The staff's proposed disallowance of certain HRD and EEOC expenses is unreasonable in that the expenses in question are not traceable to penalty payments to employees.

29. The staff's method of amortizing nonrecurring AT&T moving expenses is reasonable.

30. The New York State franchise tax is a proper operating expense and does not simply represent an investor interest.

31. It is reasonable to continue to use AT&T's effective tax rate of 5.12 percent to compute federal taxes for license contract billings because it is reflective of actual conditions.

Conclusions of Law

General Principles and Legal Issues

1. Since we now have adequate evidence on all general areas for which license contract funds are used, we should substitute adjustments based on this record for our previous adjustments. (Finding 3.)

2. Future license contract proceedings should be separate investigations conducted every few years with the results being applied to Pacific's rate increase applications. Pending completion of these periodic determinations the last adopted ratemaking adjustments should be applied in Pacific's general rate cases.

3. License contract expenses of primary benefit to the ratepayers should be borne by them, regardless of incidental or consequential benefit to Bell System investors or to the process of developing, manufacturing, and selling Western Electric products intended to compete in the marketplace with products of other manufacturers.

4. Activity of "benefit to the ratepayer" includes directly assisting the OTCs in carrying out their fundamental responsibility of providing and maintaining a modern, reliable telephone network. This, in turn, includes non-"investor related" support activities as well as actual engineering of the network.

5. License contract expenses of primary benefit to Bell System investors, or of primary benefit to the process of developing products designed to compete in the marketplace with those of other manufacturers, should not be borne by the ratepayers regardless of alleged or actual incidental or consequential benefit to them.

6. Determination of the value of license contract expenses by analyzing each budgetary item individually is undesirable because such items change constantly and because such methodology would fail to develop rules or principles of use in future proceedings. When it is necessary to examine an individual item, it is more appropriate to find the item's primary purpose rather than to make a percentage apportionment.

7. The rulings of the ALJ production of, and limitation on the use of, Bell Labs' case authorizations and AT&T BDPs were correct. TURN's rights were not violated, nor was the Commission prevented by such rulings from completing a reasonably thorough investigation of the subject matter.

Use of License Contract Funds by Bell Laboratories

8. Since our obligation in these proceedings is to determine Pacific's test year revenue requirement, we should disallow, in this present proceeding, any R&FD expenses not reasonably borne by the ratepayer.

9. Since the product of Bell Labs' basic research and applied research is equally useful, on the one hand, to the ratepayers of the OTCs and the OTCs themselves through modernization and improvement of the telephone network, or through advancement of telecommunications generally, and, on the other hand, in potential advancement in techniques of designing and marketing competitive products, Pacific's ratepayers should be billed for only 50 percent of the work in such categories. (Finding 10.)

10. The same 50 percent disallowance should apply to systems engineering because of refusal to disclose certain case authorizations connected therewith, and because some of the available case authorizations contain objectives related to the development of products. (Finding 11.)

11. No disallowance should be made to quality assurance expenses based on this record. (Finding 12.)

12. The staff's recommendation regarding accounting treatment for patent administration should not be adopted. (Finding 13.)

AT&T Use of License Contract Funds

13. The staff's reallocation of overhead expenses should be adopted for ratemaking purposes in this proceeding. (Finding 14.)

14. Pacific's ratepayers should be charged with no more than 50 percent of Pacific's share of license contract expenses associated with the AT&T Marketing Department. (Finding 15.)

15. The staff's adjustment to expenses connected with the AT&T Customer Services Department is within the range of reasonableness and should be adopted. (Finding 16.)

16. No disallowance should be made to expenses in the area of Engineering and Network Services. (Finding 17.)

17. Expenses for the 195 Broadway Corporation should be calculated by a rate base methodology, including allowance for funds during construction, resulting in a downward adjustment of \$842,699 for this account. (Finding 18.)

18. Treasury Department expenses concerning investment management should be disallowed. (Finding 19.)

19. No disallowance should be made at this time to expenses connected with the pool of funds. (Finding 20.)

20. Secretary Department expenses should be disallowed. (Finding 21.)

21. Public Relations and Employee Information expenses should be disallowed. (Finding 22.)

22. Amounts billed to Pacific via the license contract for dues, donations, and contributions should be disallowed on the same basis that we have previously disallowed such amounts contributed directly by Pacific. (Finding 23.)

23. No disallowance should apply to Corporate and Securities Division expenses. (Finding 24.)

24. Fifty percent of the expenses connected with the Washington Office should be disallowed. (Finding 25.)

25. Expenses of the Controller's Department should be disallowed. (Finding 26.)

26. We should adopt the staff's disallowance of investor interest activities connected with the Executive Department, including the staff's method of overhead allocation. (Finding 27.)

27. We should not adopt any disallowance to certain HRD and EEOC expenses. (Finding 28.)

28. We should adopt the staff's method of amortizing AT&T moving expenses. (Finding 29.)

29. The staff's proposed ratemaking adjustment to New York State franchise tax expenses should not be adopted. (Finding 30.)

30. We should continue to treat federal taxes as in Decision No. 88232 and continue to use AT&T's effective tax rate of 5.12 percent. (Finding 31.)

Summary and Conclusion

31. Based upon the above determinations, we conclude that Pacific's Account 674, license contract payments, should be adjusted for ratemaking purposes from \$40,219,000 to \$32,606,000 for the test year in this proceeding. The detail of this adjustment is contained in the "adopted" column of the tables and calculations appearing in Section V ("Summary and Conclusion") and is incorporated by reference into this conclusion.

32. The test year effect on Pacific's California intrastate revenue requirement, established in Decision No. 88232, is a reduction of \$5,873,000, which translates to a gross revenue requirement reduction of \$5,817,000. Pacific should be ordered to file a proposed refund plan from the effective date of Decision No. 88232 reflecting this reduction in revenue requirement and should be further ordered to file revised rates designed to produce revenue based upon the reduced revenue requirement.

FINAL ORDER
(LICENSE CONTRACT ISSUES)

IT IS ORDERED that:

1. The gross California intrastate revenue requirement determined in Decision No. 88232 is reduced by \$5,817,000.
2. Within twenty days of the effective date hereof, The Pacific Telephone and Telegraph Company (Pacific) shall file a proposed refund plan for funds collected in excess of the reduced revenue requirement.
3. Within twenty days of the effective date hereof, Pacific shall also file a proposed rate design for the reduced revenue requirement.

4. The appearances to the license contract phase of this proceeding shall have twenty days from the date of the filings made pursuant to Ordering Paragraphs 2 and 3 to file comments to such filings or to file their own proposed refund plans and rate designs.

5. In future investigations on this subject, Pacific shall present information regarding Bell Telephone Laboratories, Inc. which will allow the Commission to correlate budgetary categories with the general descriptive areas of the work performed under the license contract.

The effective date of this order shall be thirty days after the date hereof.

Dated at San Francisco, California, this 5th
day of JUNE 1, 1979.

John E. Guyn
President
James J. Ferguson
Richard D. Charles
Charles J. Delaney
Samuel W. King
Commissioners

APPENDIX A

LIST OF APPEARANCES
(License Contract Issues)

Applicant (and respondent in C.10001): Gerald H. Genard, James S. Hamasaki, and Christopher Rasmussen, Attorneys at Law.

Protestants and interested parties: William L. Knecht, Attorney at Law, for California Interconnect Association; Edwin B. Spievack, Attorney at Law (District of Columbia), for Compath, Inc.; Paul Alexander, Attorney at Law, for Citizens Utilities Company; Victor A. Silveira, Executive Vice President, for California Independent Telephone Association; Edward J. Perez, Deputy City Attorney, for the City of Los Angeles; William S. Shaffran, Deputy City Attorney, for the City of San Diego; Leonard Snalder, Attorney at Law, for the City and County of San Francisco; H. Ralph Snyder, Jr., Attorney at Law, for General Telephone Company of California; William H. Booth, Attorney at Law, for California Manufacturers Association and California Retailers Association; Glen J. Sullivan, Attorney at Law, for California Farm Bureau Federation; and Robert W. Russell, Chief Engineer and General Manager, for Department of Public Utilities and Transportation, City of Los Angeles.

Commission Staff: Timothy E. Treacy, Rufus G. Thayer, and Mary Carlos, Attorneys at Law, and James D. Pretti.