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Decision No. 87962 OCT 12 1977

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY, a corporation, for a tariff covering the offering of the DIMENSION PBX System Service.

Application No. 55723
(Filed June 6, 1975)

William B. Rowland and Clay C. Burton, Attorneys at Law, for The Pacific Telephone and Telegraph Company, applicant.
Bruce P. Saypol and Edwin B. Spievack, Attorneys at Law, for North American Telephone Association, Rolm Corporation, and Compath, Inc; Joel Effron, for Scott-Buttner Communications, Inc; Roger L. Mosher, Attorney at Law, for Rolm Corporation; and Otha P. Rice, Jr., for O'Brien, Rice, Quam & Associates; interested parties.
Peter Arth, Attorney at Law, and Paul Popenoe, for the Commission staff.

I N D E X

O P I N I O N

Procedural Background

The Pacific Telephone and Telegraph Company (Pacific) requests the Commission to authorize tariffs for a new private branch exchange service designated "Dimension PBX".[1/] Dimension PBX is an electronic switching system incorporating recent developments in switching technology. It comes with a new electronic attendant console and offers a variety of new features. The system has a nominal capacity of 360 station lines with 96 trunks. The equipment is housed in an attractive cabinet, operates quietly, and can be located in general office space. Stored program technology permits new features to be added to existing dimension systems without replacing the PBX.

Pacific proposes two different payment plans for Dimension PBX, the "two-tier payment plan" and the "companion monthly plan".

The first optional payment plan, the two-tier payment plan, was authorized by Decision No. 83958, dated January 7, 1975 in Application No. 55242. Tariff Schedule No. 147-T, setting forth the general provisions of the two-tier payment plan was filed on January 28, 1975 and became effective on February 7, 1975. Specific rates were not set in Application No. 55242 nor filed in Schedule No. 147-T. This Application No. 55723 has been filed to provide rates for Dimension PBX equipment.

The two-tier payment plan divides the cost of Dimension PBX service into two components and utilizes present worth analysis. The Tier A component, or fixed monthly rate, is paid over a one, thirty-six, sixty, eighty-four, or one-hundred-twenty month fixed contract period. If the customer discontinues Dimension PBX service prior to the expiration of the contract period, he still has to pay the full capital cost. The Tier A

1/ A registered trademark of American Telephone and Telegraph Company.

rates are intended to cover the cost of investment, including return and income taxes, and are not subject to change for any existing customer although new vintage Tier A rates may be filed from time to time. The Tier B component, or monthly charge, is designed to cover ongoing costs such as maintenance, administration, ad valorem taxes, and repair material. The monthly charge continues for as long as the equipment is in service, is not set by contract, is the same for all subscribers at any given time, and is subject to change.

The companion monthly plan is a traditional, straight monthly payment arrangement which levies a single rate on a monthly basis for so long as the customer keeps the service.

Written protests to Pacific's application were received from the North American Telephone Association, Rolm Corporation, Scott-Buttner Communications, Inc., Executone of Northern California, Inc., and California Interconnect Association. The protestants were either manufacturers or purveyors of similar equipment and associations representing such manufacturers or purveyors. They alleged that the tariff would be noncompensatory and anticompetitive because:

(a) The costs to Pacific to provide Dimension PBX service are not adequately reflected in the proposed rates;

(b) Pacific has failed to include in its rates additional contribution to the Company to deter the premature displacement of other revenue producing vehicles which could be churned out as a result of the introduction of Dimension PBX in the California marketplace; and

(c) The two-tier pricing plan is inherently anticompetitive.

Pacific's application was assigned to Commissioner Symons and referred to Examiner Boneysteele for hearing. Hearings on the application were commenced on February 2, 1976 and between that date and May 10, 1976, 13 days of hearing were held. The hearings were complicated by discovery motions by Rolm Corporation (Rolm) and the Compath Division of Scott-Buttner Communications, Inc. (Compath) for cost data from Pacific and also by a counter motion (not granted) by Pacific for in camera hearings and a sealed record.

In the meantime the Commission had received numerous letters from prospective Dimension customers inquiring about and protesting the delay in authorizing the service. At the twelfth day of hearing, on May 10, 1976, Pacific having by that time supplied detailed cost data on an open public record, the examiner suggested that Rolm and Compath propose an interim provisional rate that they believed would be compensatory, pending final resolution of the proceeding.

Pacific completed its direct showing at the thirteenth day of hearing, May 13, 1976, and on June 3, 1976 filed a petition for interim provisional rates proposing a surcharge of 5 percent over the two-tier and companion rates originally proposed in Pacific's Application No. 55723. On June 15, 1976 the Commission staff filed its response to Pacific's petition. On June 30, 1976 Rolm and Compath filed their proposed interim tariff for the Dimension PBX, in response to the examiner's request for proposed interim rates.

On July 27, 1976 Pacific filed a second petition in which it requested the Commission to approve interim rates for the Dimension PBX at the levels and under the conditions recommended by the Commission staff in its June 15, 1976 response. In addition Pacific requested the Commission to issue expeditiously a final order at the conclusion of the hearings, such order to authorize both a two-tier payment plan and a companion tariff.

Ten days of additional hearings had been scheduled for the period July 26 through August 6, 1976, for the purpose of completing the showing contemplated by Rolm and Compath and submitting the proceeding for final decision. On June 11, 1976, however, Pacific directed sets of documents to Rolm, Compath, and North American Telephone Association (NATA) entitled "First Interrogatories".

Counsel for the protestants, by telephone on July 6, 1976 and by letter of July 12, 1976, requested a delay in the mailing date of protestants' prepared direct testimony from July 13, 1976 to September 23, 1976 and of the initial resumed hearing date from July 26, 1976 to October 4, 1976. Counsel declared that the delay was necessary to respond to Pacific's first interrogatories.

In a letter of July 21, 1976 Pacific's counsel questioned the need for additional time, reiterated that Pacific's direct showing was complete, and requested that the provisional rates be implemented. Also, on July 21, 1976 the examiner reset the hearing from July 26 to August 2, 1976 for the purpose of discussing Pacific's rate proposal. None of the parties wished to discuss the matter, however, and it seemed from Pacific's first interrogatories that Pacific was contemplating additional discovery efforts and an extensive rebuttal showing, with resulting further postponement of the ultimate completion of the proceeding. The examiner, therefore, on July 29, 1976, reset the date for protestants' showing to October 4, 1976. On August 3, 1976, Rolm and Compath filed a response to Pacific's July 27, 1976 petition.

It appearing from these events that final submission of this application was far from imminent, the Commission, on September 1, 1976, issued its interim Decision No. 86352, by which it allowed Pacific to offer Dimension PBX at the utility's proposed companion rate plus 10 percent. These rates are subject to refund should lower rates ultimately be authorized.

Subsequent to the issuance of Decision No. 86352, protestants Rolm and NATA, by a motion filed September 20, 1976, requested the Commission to reopen the two-tier Application No. 55242 and consolidate that proceeding with the subject Application No. 55723. In the motion, Rolm and NATA stated that during the hearings on Application No. 55723, they had attempted to reintroduce the question of the validity of two-tier pricing but that the examiner refused to allow the introduction of this question, stating that "...just the reasonableness of the specific rates under the two-tier concept are all that is of concern in this case. And if the concept itself is to be attacked, it should be in that previous case [Application No. 55242]." (Tr. 1009.) Protestants alleged that since they were foreclosed from introducing the question of the validity of two-tier pricing into this case, they were estopped from proving that the specific rates proposed in this case are noncompensatory, discriminatory, and anticompetitive.

By means of a letter from the Executive Director of the Commission, dated September 28, 1976, counsel for Rolm and NATA was advised that the protestants' motion was not the appropriate way to seek modification of Decision No. 83958 and that, pursuant to Rule 43 of the Commission's Rules of Practice and Procedure, a new application should be filed.

On October 5 through 8, 1976, four additional days of hearing were held for the purpose of receiving the protestants' and staff's showing, the matter was submitted on October 8, 1976 subject to concurrent briefs to be filed on November 15[2/] and reply briefs on December 1.

2/ The November 15 date was extended to November 17, 1976.

At the October 8, 1976 hearing, the examiner identified and received two one-page exhibits, one done in pencil and one in ink, both on 8-1/2- by 11-inch lined yellow paper. These exhibits, numbered 69 and 70, had been prepared by John W. Wilson, Ph.D., a witness for Rolm and Compath, during the evening recess to illustrate points made during his testimony on the previous day. October 8 being the last day of hearing, the examiner granted Pacific an opportunity to file a late-filed exhibit in response. Pacific, on November 1, 1976, filed such an exhibit which it asked to be received as the next number in order, Exhibit 72.

Exhibit 72 consisted of nine pages of economic and legal analysis, five graphs, and a copy of Decision UF 3107 of the Public Utility Commissioner of Oregon. Protestants Rolm and Compath objected to the introduction of Exhibit 72 and asked that the exhibit be rejected. In the alternative they requested that the record be reopened so that their counsel could cross-examine the author or authors, or, at the very least, recall Dr. Wilson to comment on the exhibit.

On December 28, 1976, protestants filed a motion requesting that portions of Pacific's briefs be stricken. Protestants alleged that Pacific, in its briefs, by citations, transcripts, decisions, and articles, presented quotations not for the purpose of argument but for the purpose of establishing the truth of facts stated.

Pacific, in its response dated January 24, 1977, stated that it had "cited other sources to demonstrate how Pacific's evidentiary showing persuades the trier-of-fact to approve the proposed tariff for Dimension PBX, and to demonstrate that some of the evidence placed in the record by protestants was misleading, and was selectively incorporated so as to result in an unfair characterization of the subject."

Altogether there were 17 days of hearing, seven witnesses testified (four for Pacific, two for protestants, and one for the Commission staff) and 71 exhibits were identified of which 70 were[3/] received.

Issues

Although the procedural maneuvering in this case was particularly intricate and the record long, only two main issues were raised in the case namely:

(a) Are the rates and charges that Pacific is proposing unreasonably low? and,

(b) Is the two-tier payment plan inherently anticompetitive?

Regarding the latter issue, we have noted above that the examiner declined to hear evidence in this proceeding on the reasonableness of the two-tier payment plan as a general concept. We also noted that the Executive Director advised the protestants that it was not appropriate to reopen the two-tier proceeding and consolidate it with this one but that any challenge of Decision No. 83958, the two-tier decision, should be made by the filing of a new application. We concur with both of these actions.

The purpose of generic proceedings such as the two-tier Application No. 55242 is to establish general policies that may be applied in individual cases. To allow the reasonableness of established generic policies to be challenged each time such policies are sought to be applied would be to permit the wasteful and inefficient use by the Commission of the public funds

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3/ Exhibit 23, presented by William E. Thornton of Western Electric Company (Western), was not admitted because it did not, in the examiner's opinion, provide an adequate explanation of Western's costs. Mr. Thornton later presented, in Exhibit 48, a detailed cost explanation.

appropriated to support its activities. This is especially true where the generic policies have been formalized by filed tariffs, as was the two-tier plan by tariff Schedule Cal. P.U.C. No. 147-T.

In this case, therefore, we will not reconsider the reasonableness of the two-tier payment plan in general but confine ourselves to evaluating the reasonableness, including the anticompetitive aspects, of the specific two-tier rates and charges and the corresponding companion rates proposed by Pacific in Application No. 55723. Our declining to reconsider the reasonableness of the two-tier concept in this proceeding does not, of course, preclude protestants or other interested parties from seeking reconsideration of our established policy by means of a new application.

According to what was, in the recent past, conventional utility regulatory procedure, our concern in examining rates for a service offering similar to the Dimension PBX would be to insure that the revenues collected would recover the cost of service and thus not unduly burden the utility's other service offerings. Should the utility wish to institute a new service at a promotional rate, any revenue deficiency could be cured, for ratemaking purposes, by imputing a reasonable revenue level. However, in 1968 with the Carterfone decision,[4] the Federal Communications Commission held that those provisions of communication utility tariffs which prohibited the interconnection of customer-furnished terminal equipment with the network of the utility were unlawful. With the subsequent competition introduced into aspects of the telecommunications industry, conventional analysis became too limited.

4/ In re Use of the Carterfone Device and Thomas F. Carter et al. v American Telephone and Telegraph Co. et al. (13 FCC 2d 420). Reconsideration denied (14 FCC 2d 571).

Shortly after Carterfone, changes in the scope of regulatory analysis were signalled by the Northern California Power Agency case. 5/ In that case the California Supreme Court advised us that we should consider the antitrust implications of matters before us, and further, declared that we may, and should consider, sua sponte, every element of public interest affected by facilities which we are called upon to approve. Taken together, these two landmark cases require us to determine not only whether new service or equipment offerings by public utilities might be uncompensatory and thus burdensome to other service but also whether they might lessen or foreclose competition.

Public utilities must file tariffs with the appropriate regulatory agency or agencies before the utilities can offer equipment requiring establishment of new rates and charges. Nonregulated purveyors of similar equipment are not bound by any such requirement. It is therefore to the advantage of such purveyors to delay the introduction of competitive offerings and incumbent upon regulatory authorities to see that such offerings are not deferred by procedural tactics, while at the same time seeing that the rights of the nonregulated competitors are maintained. As the history of this case shows, this responsibility is easier recognized than carried out.

Nature of Parties' Direct Showings

Pacific's direct showing was presented by four witnesses, three of whom were employees of Pacific and one of Western.

5/ Northern California Power Agency v PUC (1971) 5 C 3d 370.

Robert Aulwes, engineering staff manager, explained the methodology used in developing the costs for Dimension PBX using a procedure set out in Pacific's Form GE-100.

Glenn J. Sullivan, staff director - revenue planning, was responsible for the price levels and rate structure proposed for Dimension PBX. He explained how the rate structure was determined by the use of an incremental market analysis (IMA) study and, based upon this study, he designed rates and charges that were, in many instances, considerably above the level indicated by the GE-100's.

Arthur J. Parmiter, also an engineering staff manager, described the procedure for the IMA, which study he had supervised. Mr. Parmiter described the IMA as a study designed to answer the question, "What will be the effect on the cost-revenue relationship of the total firm of offering the study-product at a given rate or set of rates over a specified rate-planning period?"

William E. Thornton, price manager for Western, testified as to the development of the prices charged Pacific by Western for the components of the Dimension PBX and the cost to Western to produce those components.

Protestants Rolm and Compath presented two economists, Richard A. Galligan and John W. Wilson, Ph.D., both employed by J. W. Wilson & Associates, Inc. of Washington, D.C. Mr. Galligan and Dr. Wilson described what they considered to be economic shortcomings and defects of the proposed Dimension tariffs.

It is the practice of Pacific to organize interdepartmental product teams to establish schedules and to coordinate the effective introduction of new equipment into Pacific's product line. Such a team was formed for Dimension PBX under the leadership of Monte Baggs, district staff manager. Depositions were taken from Mr. Baggs and four other members of the Dimension interdepartmental product team by counsel for Rolm, Compath, and NATA on April 27, 28, 29, and 30. The depositions were taken into the record, on October 19, 1976, as Exhibit 47.

The staff presented Paul Poponoe, Jr., P.E., assistant chief communications engineer in the Communications Branch[6/] who described the use by the staff of Form GE-100 in analyzing costs of service in connection with fixing rates for specialized telephone equipment.

Pacific's Cost Justification

Pacific, with its application, provided 209 pages of rate computations which were made using Pacific's Form GE-100. Because of its importance to the record, the application was taken into the record as Exhibit 1. Mr. Aulwes explained that there were actually two sets of GE-100's, one used to develop cost support for the two-tier payment proposal and one for the proposed companion rate payment. Most of the cost elements on the two sets were the same but some of the entries differed because of the different rate treatment.

The material costs were based on prices quoted by Pacific's supplier, Western, the equipment being either manufactured by Western, purchased by it, or produced by a combination of the two. Although based on Western's prices, the unit costs shown on the GE-100 sheets were not Western's current prices but, to give them a "forward-looking" aspect, they had been increased by 9.1 percent. (Subsequent price increases by Western reduced this disparity to about 6 percent.) Labor and administrative costs were also estimated on a "forward-looking" basis.

6/ Now the Communications Division.

For his GE-100 studies, Mr. Aulwes used a rate of return of 12 percent. He calculated composite state and federal income taxes, using a 50 percent debt ratio and a nine percent interest rate to determine the interest deduction. He made no reduction in income taxes to allow for the effects of accelerated depreciation or investment tax credit.

Mr. Aulwes used a ratio of 0.79 for net plant in determining required return and associated income taxes. The 0.79 figure is Pacific's recorded total net plant ratio, that is the ratio of the difference of total depreciable plant less accrued depreciation to total depreciable plant. He explained that this procedure had been formulated some years ago by the Commission staff and its purpose was to insure that proposed new offerings would generate additional revenues in support of the overall company operations. Conventional engineering economic studies, made where regulatory considerations are not a factor, use a net plant ratio of 0.50, the average net plant over the life of a specific service. Use of the mathematically current 0.50 ratio would generate substantially less revenue than would the use of the recorded average net plant ratio of 0.79.

For the companion rate study Mr. Aulwes assumed that the equipment would have a "location life" of three years in any specific location and a total "revenue producing" life of eight years. He assigned all non-recoverable costs to the installation charge and, using the GE-100 procedure, determined a monthly rate that would cover ongoing operating and maintenance costs, depreciation, and return.

The two-tier rates, since they are offered under a contract for specified periods which guaranteed cost recovery, required a different approach. The same cost factors were used as were used for the companion rate, but it was not necessary to recover all the "non-recoverables" in the installation charge. It was also necessary to make one series of computations for the fixed "Tier A" rate and a second series for the variable "Tier B" rate.

For the Tier A computation, Mr. Aulwes assumed that the Dimension would have both a ten-year location life and a ten-year revenue life. That is, the equipment would last for ten years and would be installed in one location for that entire period. Using these assumptions, Mr. Aulwes then proceeded to determine the "total annual capital costs" that would recover depreciation, return at 12 percent, and associated income taxes.

The present worth, at 9 percent, of this series of ten annual capital cost charges was obtained by use of a mathematical formula. An installation charge, determined by rate people, was deducted from the present worth and the difference designated as the Tier A basic charge.

This basic charge was then amortized, again at 9 percent, over 10 different 12-month periods, ranging from 12 months to 120 months.

It should be emphasized that there are two different interest rates involved in the GE-100 rate computation process, the 12 percent rate of return or profit element used for both the companion and two-tier calculations and the 9 percent rate used for the capitalization and amortization of the Tier A basic charge. The 9 percent rate was used because of the provision in tariff Schedule No. 147-T which reads:

> "The fixed monthly rate is determined by a standard computation using an interest rate, which compounded monthly is equivalent to the current rate of return of the Utility as authorized by the California Public Utilities Commission, rounded to the nearest whole percentage and compounded annually."

Basis of Proposed Tariffs

According to Mr. Sullivan, the rates proposed for Dimension PBX, both two-tier and companion, are designed to recover all relevant costs, including a return on capital in excess of Pacific's authorized rate of return. He explained that, traditionally the Commission has authorized tariffs which were equal to one-half of the nonrecoverable cost of the service, the remaining one-half of the nonrecoverable cost being returned through monthly rates. The result of such a tariff structure is to set monthly rates at levels high enough to cover not only the ongoing costs of maintenance, return, taxes, administration, and the like, but also high enough to cover depreciation on both reusable and nonreusable equipment.

Mr. Sullivan said that many customers, such as those whose funding is derived from tax-oriented sources, prefer to pay a relatively high initial amount and then relatively low recurring charges. Hospitals, schools, and governmental agencies have often requested payment plans for PBX service that allow them to allocate a high initial payment in a single fiscal year, thereby reducing the necessity for annually seeking budget allowances for heavy communications overhead. Some customers find that they would benefit by spreading a relatively high initial charge over a specified number of years and then only retaining an obligation for a relatively low monthly payment for ongoing costs. The two-tier payment plans introduce this type of flexibility. With the advent of the first significant major new PBX product line to be introduced by Pacific in several years, it was Mr. Sullivan's belief that these known customer payment preferences should be accommodated in the Dimension PBX offering.

Mr. Sullivan then proceeded to describe the tariff which contained the general provisions of the two-tier plan, Pacific's Schedule No. 147-T, which became effective February 7, 1975, pursuant to authority granted by Ordering Paragraph 1 of Decision No. 83958. After describing the mechanics of the two-tier payment plan, he pointed out that only rates for common equipment were carried over directly from the Form GE-100's to the proposed tariffs, the basic common equipment being one rate element that is needed regardless of the size of the capacity of the Dimension PBX. Most of the remaining rate elements vary with the number of stations, trunks, and special services required by the customer, and these rate elements were priced above the level indicated by the GE-100's, with the result that the rates and charges proposed for any given configuration of the Dimension PBX are considerably above the GE-100 costs.

Mr. Sullivan testified that Pacific's objective was to recommend prices for the Dimension PBX that would not encourage existing PBX customers to change prematurely to a Dimension PBX, and therefore price levels had to be set at or above existing or prospective PBX rate levels. Pacific was concerned that if it priced Dimension at too low a level, it would create an accelerated retirement of existing PBX investment and would also increase the requirement for additional new capital to pay for Dimension PBX systems as replacements.

The primary market that Pacific wishes to serve with Dimension PBX systems is made up of customers who are moving to new locations, who are forming new businesses, or who are outgrowing their present systems. In each of these instances, some new investment by Pacific would be required in any case. If the Dimension PBX were to be priced to appeal to these customers at levels significantly above the GE-100 indicated rates, the resulting financial benefits would help cover the shortfall of revenues that Pacific experiences in providing some of its monopoly services and would alleviate the requirement for additional revenues in an inflationary period.

Mr. Sullivan explained that to determine these rate levels Pacific began by identifying the number of its existing dial PBX services and segregating them into three market segments according to size as measured by the number of station lines. Four different test rate levels were then assigned to each anticipated Dimension PBX market segment. The lowest rate level was comparable to the rate of the most cross-elastic or competitive Pacific Company PBX in that line size. The other three rate levels were set at varying higher rate levels. At each rate level, marketing forecasts were made of the anticipated sales of the Dimension PBX and the resulting impact on Pacific's cross-elastic PBX's.

From this analysis, the test rate level which would produce the best balance considering the provision of protection against unwarranted displacement of existing PBX's, the need for new capital associated with installations of new Dimension PBX systems, and improvement in revenues, was then determined. This determination resulted in rate levels for a composite Dimension PBX system in each market segment which Pacific believed would generate the optimum positive change in the revenue-cost relationships for the entire Pacific PBX market as it was studied. Pacific's object was to achieve total rate levels that would create the maximum financial benefit to the firm while still making the Dimension PBX generally available.

For the purpose of designing actual two-tier rates Mr. Sullivan selected one-, 36-, 60-, 84-, and 120-month contract payment plan periods. Two-tier rates for these periods were proposed, in tariff form, in Application No. 55723.

Mr. Sullivan thought that the companion rate, the more conventional tariff approach, would have a limited appeal relative to two-tier. He did believe, however, that there would be some customers who would prefer that the telephone company assume the risk of capital investment. He predicted that these would be, primarily, customers who could not predict the longevity of their business or the stability of their communications requirements for more than a short period of time. He explained that Pacific estimated that the average location life of the companion rate customer group would be about three years.

After assigning all of the nonrecoverable investments as an installation charge, so that each customer would pay for the costs that he alone incurred, he selected a monthly rate for each rate item that, when composited into a Dimension PBX service offering, would equal a little more than the monthly plan rates of a customer who chose a 60-month two-tier plan and somewhat less than one who chose a 36-month two-tier plan. In this manner, the companion rate customer can achieve the advantage of not assuming an economic penalty of early discontinuance of service. The company will, however, recover all costs, relating to both recoverable and nonrecoverable investments over the shortened eight-year revenue producing life.

As a comparison of the level of proposed Dimension PBX rates and the rate level for other PBXs, Mr. Sullivan presented a plot of Dimension PBX monthly charges, and those of other PBX systems, by line size. In most instances the Dimension charges were above the charges for other PBXs. He said that where this is not the case there were reasons why the cross-elastic impact of Dimension is reduced. The equipment items represented by the price curves higher than Dimension are relatively recent additions to the PBX product line and are not as vulnerable to displacement because of remaining termination liability under the two-tier plan contracts.

A comparison of GE-100 and proposed rates for representative Dimension components, by Bell System "Uniform Service Order Code" (USOC) is shown, for five- and ten-year contract payment plans, on the following table:

Comparison of Rates For Selected
Dimension PBX Equipment Under
Two-Tier Payment Plan and Companion Rate

Tariff Item No.	Equipment USOC a/	Description	Installation Charge	Two-Tier: GS – 100 Basic Charge b/	Two-Tier: Proposed Basic Charge b/	Two-Tier: GS – 100 5-Yr. Monthly Rate	Two-Tier: Proposed 5-Yr. Monthly Rate	Two-Tier: GS – 100 10-Yr. Monthly Rate	Two-Tier: Proposed 10-Yr. Monthly Rate	Companion Rate: Installation Charge	Companion Rate: GS – 100 Monthly Rate	Companion Rate: Proposed Monthly Rate
1	202	Common Equipment	$700.00							$3,096.00		
		Tier A		$18,501.92	$18,502.00	$ 380.92	$ 380.92	$ 230.87	$ 230.87			
		Tier B		124.95	124.95	124.95	124.95	124.95	124.95			
		Total Monthly Charge		N.M.	N.M.	505.87	505.87	355.82	355.82		$ 315.35	$ 531.15
3	208	Auxiliary Cabinet	40.00							201.05		
		Tier A		1,176.84	2,704.76	36.58	55.69	22.17	33.75			
		Tier B		11.25	11.25	11.25	11.25	11.25	11.25			
		Total Monthly Charge		N.M.	N.M.	47.83	66.94	33.42	45.00		32.20	70.30
5.a.	2TN	Thermal Control	5.00							22.70		
		Tier A		198.34	905.59	4.08	18.64	2.47	11.30			
		Tier B		3.70	3.70	3.70	3.70	3.70	3.70			
		Total Monthly Charge		N.M.	N.M.	7.78	22.34	6.17	15.00		5.90	23.34
6	200	Trunk Carrier	30.00							147.05		
		Tier A		1,589.90	2,776.89	32.73	57.17	19.84	34.65			
		Tier B		10.35	10.35	10.35	10.35	10.35	10.35			
		Total Monthly Charge		N.M.	N.M.	43.08	67.52	30.19	45.00		28.80	70.90
7	20L	Line Carrier	30.00							135.30		
		Tier A		1,541.02	2,792.92	31.73	57.50	19.23	34.85			
		Tier B		10.15	10.15	10.15	10.15	10.15	10.15			
		Total Monthly Charge		N.M.	N.M.	41.88	67.65	29.38	45.00		28.10	71.05
8.a.(1)	27Q	Trunk Card	2.00							6.80		
		Tier A		254.26	412.75	5.23	8.50	3.17	5.15			
		Tier B		2.35	2.35	2.35	2.35	2.35	2.35			
		Total Monthly Charge		N.M.	N.M.	7.58	10.85	5.52	7.50		5.65	11.40
9	20N	Line Circuit Pack	2.00							6.15		
		Tier A		249.11	336.59	5.13	6.93	3.11	4.20			
		Tier B		2.30	2.30	2.30	2.30	2.30	2.30			
		Total Monthly Charge		N.M.	N.M.	7.43	9.23	5.41	6.50		5.60	9.70

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Comparison of Rates For Selected
Dimension PBX Equipment Under
Two-Tier Payment Plan and Companion Rate

Tariff Item No.	Equipment USOC a/	Description	Two-Tier: Installation Charge	Two-Tier: GE - 100 Basic Charge b/	Two-Tier: Proposed Basic Charge b/	Two-Tier: GE - 100 5-Yr. Monthly Rate	Two-Tier: Proposed 5-Yr. Monthly Rate	Two-Tier: GE - 100 10-Yr. Monthly Rate	Two-Tier: Proposed 10-Yr. Monthly Rate	Companion Rate: Installation Charge	Companion Rate: GE - 100 Monthly Rate	Companion Rate: Proposed Monthly Rate
10	20X	4K Memory Card	$ 2.00							$ 4.15		
		Tier A		$ 517.71	$ 517.71	$ 10.66	$ 10.66	$ 6.45	$ 6.46			
		Tier B		4.30	4.30	4.30	4.30	4.30	4.30			
		Total Monthly Charge		N.M.	N.M.	14.96	14.96	10.76	10.76		$ 11.25	$ 15.70
15	254	Console Common Equipment	2.00							4.15		
		Tier A		485.41	485.41	9.99	9.99	6.06	6.06			
		Tier B		4.15	4.15	4.15	4.15	4.15	4.15			
		Total Monthly Charge		N.M.	N.M.	14.14	14.14	10.21	10.21		10.65	14.85
16.c.	290	Console	50.00							212.15		
		Tier A		1,773.48	2,564.51	36.51	52.80	22.13	32.00			
		Tier B		28.00	28.00	28.00	28.00	28.00	28.00			
		Total Monthly Charge		N.M.	N.M.	64.51	80.80	50.13	60.00		48.25	84.85
17	27T	Frequency Generator	20.00							78.15		
		Tier A		223.69	1,486.62	4.61	30.61	2.79	18.55			
		Tier B		11.45	11.45	11.45	11.45	11.45	11.45			
		Total Monthly Charge		N.M.	N.M.	16.06	42.06	14.24	30.00		12.85	44.35

a/ Bell System "Uniform Service Ordering Code".

b/ Basic charge totals not meaningful since Tier A is a lump sum and Tier B a monthly payment.

The development of five-year and ten-year two-tier rates, and corresponding companion rates, for a typical 200 line Dimension PBX are shown on the following two tables:

Development of Two-Tier
Payment Plan Charges for
200 Line Dimension PBX

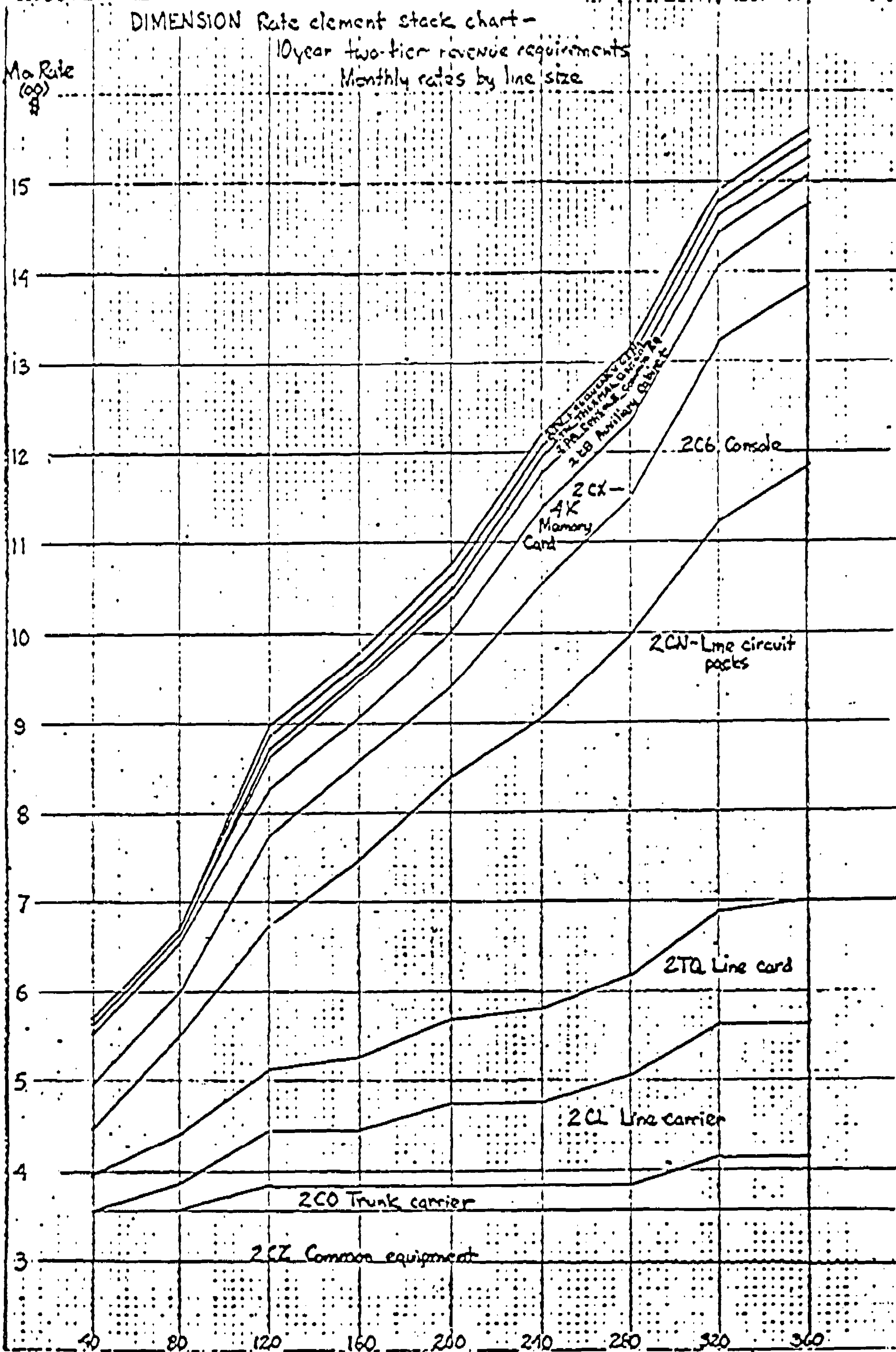
			Monthly Rates			
Equip. USOC	Number Required	Installation Charge	GE - 100 5-Yr.	Proposed 5-Yr.	GE - 100 10-Yr.	Proposed 10-Yr.
2CZ	1	$ 700	$ 505.87	$ 505.87	$ 355.82	$ 355.82
2CE	1	40	47.83	66.94	33.42	45.00
2TN	2	10	15.56	44.68	12.34	30.00
2CO	1	30	43.08	67.52	30.19	45.00
2CL	3	90	125.64	202.95	88.14	135.00
2TQ	17	34	128.86	184.45	93.84	127.50
2CN	50	100	371.50	461.50	270.50	325.00
2CX	6	12	89.76	89.76	64.56	64.56
2DA	1	2	14.14	14.14	10.21	10.21
2CG	2	100	129.02	161.60	100.26	120.00
2TV	1	20	16.06	42.06	14.24	30.00
		$1,138	$1,487.32	$1,841.47	$1,073.52	$1,288.09

Development of Companion Charges
for 200 Line Dimension PBX

Equip. USOC	Number Required	Installation Charge	Monthly Rates GE-100	Proposed
2CZ	1	$3,096.00	$ 315.35	$ 531.15
2CB	1	201.05	32.20	70.30
2TN	2	45.40	11.80	46.68
2CO	1	147.05	28.80	70.90
2CL	3	405.90	84.30	213.15
2TQ	17	115.60	96.05	193.80
2CN	50	307.50	280.00	485.00
2CX	6	36.90	67.50	94.20
2DA	1	6.15	10.65	14.85
2CG	2	464.30	96.50	169.70
2TV	1	79.15	12.85	44.15
		$4,905.00	$1,036.00	$1,933.88

The variation of 10-year two-tier monthly rates, by number of lines (line size) is illustrated by the following chart, taken from Pacific's Exhibit 11:

A.55723 HN


DIMENSION Rate element stack chart -
10year two-tier revenue requirements
Monthly rates by line size
Mo Rate (00) $
15
14
13
12
11
10
9
8
7
6
5
4
3
2CB Auxiliary Cabinet
2CX - 4K Memory Card
2C6 Console
2CN - Line circuit packs
2TQ Line card
2CL Line carrier
2CO Trunk carrier
2CZ Common equipment
40
80
120
160
200
240
280
320
360
Line Size

Incremental Market Analysis

As mentioned above, Mr. Sullivan testified that, except for common equipment, the rates and charges proposed for Dimension PBX are higher than indicated by the GE-100 cost studies so as not to encourage present PBX customers to change prematurely to Dimension. As a basis for the optimum rate levels, Pacific used an IMA prepared by Mr. Parmiter and his associates.

Mr. Parmiter testified that the purpose of an IMA is to determine the effects that a proposed set of rates would have on the total firm over a specified period. In order to accomplish this, it is necessary to determine which costs and revenues would change as a result of offering the study product at each proposed rate and to determine by how much they will change.

According to Mr. Parmiter, one of the most important points to note about an IMA is that costs and revenues associated with the study product are not the only items which would change. The costs and revenues of "cross-elastic" products would also change and these changes must be considered to compute the effect on the total firm. The positive and negative changes in revenues and costs to the firm are computed, and the net change in cost is then subtracted from the net change in revenue to produce the net change in contribution to the total firm. The proposed or test rate for a product which produces the greatest positive change in contribution is generally identified as the optimum rate.

Mr. Parmiter said that the rates selected by means of the IMA are above the rates indicated by the GE-100's because they have been raised to take into account possible lost contribution from the affected cross-elastic products. These rates would result in smaller Dimension PBX sales as well as in a lower total market investment. The investment Pacific did make, however, would be more profitable and thus of more benefit to the firm and the general ratepayer.

To make the study, Mr. Parmiter's group divided the total Dimension PBX market into three segments on the basis of line sizes. Market Segment 1 was zero to 80 lines, Segment 2 was 81 to 140 lines and Segment 3 was 141 to 400 lines.

Typical systems for Dimension PBX and cross-elastic products were then identified within each market segment. Since it would be unrealistic to study each rate element separately, typical systems were used for simplicity and market forecast reality.

The next step was to select ten-year two-tier test rates for each market segment that were above and below the similar rates for typical configurations for cross-elastic products.

After test rates were selected a price quantity forecast was made by forecasting, within each market segment, of Dimension PBX sales for each test rate over a five-year rate-planning period extending to 1979. Each cross-elastic product was forecasted on the assumption that the Dimension PBX would not be offered and these forecasts were used as bases. Next, a new forecast was made for each cross-elastic product at each Dimension PBX rate. The effect the Dimension PBX would have on cross-elastic products at each test rate was the difference between the base forecast and the test rate forecast at that test rate.

After the forecast of sales had been made the group next developed the costs associated with each product.

Mr. Parmiter explained that, in an IMA, the final result is determined by totaling the positive and negative changes in contribution, that is revenue minus costs, which result from the study. He emphasized that the important word is changes. It is necessary to study the costs which change as a result of the selection of any given test rate. The costs which change with the sale of a unit of a product are the direct or incremental costs. Common overhead loadings do not change and are therefore not included in the analysis. He said that the study of cost changes is especially important in the analysis of cross-elastic products which are "churned out" before the end of their economic life and cannot be reinstalled because of lack of demand. The churned-out product stops producing revenues immediately but all the costs associated with the product are not eliminated. Mr. Parmiter said that it was obvious that recurring expenses such as maintenance and administration can cease but capital costs, return, income tax, and depreciation continue. Consideration of these effects resulted in the selection of even higher rates for the Dimension PBX.

After determining the total estimated changes in revenue and expense associated with the introduction of Dimension PBX at each test rate, the optimum rate within each market segment was identified as the rate which produced the greatest positive change in contribution to the firm. Since there were three segments to the study, based on line size, the study produced three separate rate levels. These results were sent on to Pacific's rate people who used them to design the rates proposed in the application.

Western Electric Cost Information

As explained earlier, Pacific purchases its Dimension PBX components, as well as most of its other plant and maintenance items from Western. American Telephone and Telegraph Company (AT&T) controls 89.79 percent of Pacific's voting stock and 100 percent of that of Western. AT&T thus has the ability to influence the prices at which Western sells, and Pacific purchases, telephone plant items, including those comprising Dimension PBX.

Since the material costs used on the Form GE-100's were based on Western's list prices, the GE-100 studies did not demonstrate that the costs derived by those studies were reasonable on an overall Bell System basis. Accordingly, the examiner requested that Pacific supply a witness to describe the cost of the Dimension PBX to the Bell System as a whole.

In response to this request, Pacific presented William E. Thornton, a price manager employed by Western, to explain the price setting mechanism used by Western.

Mr. Thornton described the method that Western uses to calculate "standard costs" for each of the several hundred thousand individual products that Western manufactures. He explained that the standard cost is made by estimating three elements: materials, labor, and overhead. Western then applies a factor to each standard cost which is designed to allow for variation from the estimated costs and to provide for all of Western's other costs and for a reasonable return on investment.

Mr. Thornton told how, for accounting and management control purposes, Western has divided its products and services into groupings, called product lines. These product lines have evolved over the years and contain both competitive and noncompetitive products. They provide product accounting classifications which contain homogeneous groupings of products which require the same general kinds of manufacturing facilities, technology, and know-how and have similar investment and expense characteristics. He said that the purpose of maintaining product line groupings is to allocate those expenses attributable to a product line fairly across all products in that line so that the price of a product properly reflects its cost. The allocation of these expenses to product groupings for cost assignment is consistent with accepted accounting practices and is customary for multi-product companies.

One of the expenses so allocated is development expense. Mr. Thornton explained that development expense includes billings from Bell Telephone Laboratories, Inc.[7/] (Bell Labs) for product

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7/ AT&T owns 50 percent of the stock of Bell Labs. The remaining 50 percent is owned by AT&T's wholly owned subsidiary, Western. Thus AT&T ultimately controls the entire Bell Labs activity.

development plus Western's internal expenses associated with the design and manufacture of new products. He said that Western's method of allocating development expense by product line recognizes that technology has broad impact and cannot be pigeonholed. The development on one product often makes an important contribution to another product. According to Mr. Thornton, a comprehensive, ongoing development program such as Western's inevitably results in cross-fertilization of benefits and ideas among products which no separate, product-by-product accounting could measure or reflect. Over the years this has been the pervasive and continuing characteristics of the results of Bell Labs' and Western's R&D effort. This effort involves a continuing interchange of ideas and developments among products that can benefit from them, and among scientists and engineers working on different products with similar or related technological problems.

At the conclusion of his direct testimony, Mr. Thornton summarized Western's price policies as follows:

1. Western seeks to recover its costs and a reasonable rate of return on investment and to pass on the benefits of its efficiency to the Bell operating companies, and therefore to the public, in the form of lower prices.

2. In pricing individual products, it is Western's policy to seek to recover its costs and expenses including a reasonable return on investment.

3. Pursuant to the standard supply contract which Western has with each Bell telephone company, Western's prices are uniform to all Bell customers for like materials and services under comparable conditions.

Accordingly, Western does not have the flexibility that many other companies have, with respect to specific transactions, to raise or lower the price of its product to meet a particular competitive situation.

4. Western's prices are cost related. Western does not seek to maximize its profits by charging whatever the market will bear.

It does not use the pricing mechanism to influence or control telephone company procurement decisions to its own advantage.

5. Western seeks to maintain substantially uniform rates of return on each of its product lines and the products therein.

In achieving this end, Western's practice is to develop price factors for each of its homogeneous product lines, for general application to the standard costs of the products comprising the line. These costs and prices are determined by Western independently of the telephone companies. The same costing and pricing policies and procedures are followed by Western regardless of whether a product is for use by the telephone company to provide a competitive service or not.

Mr. Thornton testified that these policies were followed in establishing Western's prices for Dimension PBX. Mr. Thornton did not, at his first appearance as a witness on February 18, 1976, give a specific justification of Western's costs. He did explain that Western's costs have been reported annually to the NARUC-FCC Staff Subcommittee on Manufacturing and Service Affiliates and that they have met with the approval of two nationally known accounting firms.

At the conclusion of Mr. Thornton's testimony, counsel for Pacific declared that Western's cost information was regarded as highly proprietary, and that, to go beyond a general description of the methodologies and procedures used to develop Western's costs, a protective order involving closed door hearings and a sealed record would be required.

Counsel for Rolm and Compath had no objection to the issuance of a protective order but the examiner declined to participate in a closed proceeding and Mr. Thornton was temporarily excused, pending resolution of the question if or under what conditions the cross-examination of Mr. Thornton would be conducted. The case continued with the cross-examination of Pacific's other witnesses.

After consideration of the procedural problem, Pacific and Western determined to go forward with a complete cost showing, and distributed a 300-page volume which was intended to support Western's pricing of Dimension PBX and to demonstrate that Western did follow the costing procedures described in Mr. Thornton's earlier testimony. Mr. Thornton returned on May 12, 1976. His report was received into evidence and his cross-examination completed on that day.

Protestants' Showing

The first of Rolm's and Compath's witnesses, Mr. Galligan, stated in prepared testimony that his academic qualifications consisted of a master's degree in economics and the completion of the course work requirements for a Ph.D degree. He had taught economics at several midwestern colleges and, for about 20 months, had worked for the Minnesota Public Service Commission as a senior staff member.

Mr. Galligan testified that he could not determine, from Pacific's cost data, what Pacific's Dimension revenues and costs would be with and without cross-elastic effects. He said that, if the costs associated with early retirement of existing equipment resulting from the introduction of Dimension were not to be included in the price of Dimension, the early retirements would become a burden to the ratepayers of the monopoly portion of Pacific's operations. Consumers in competitive markets could not be forced to bear the costs of such inter-product subsidies, and they should be protected from similar inequities within the regulated environment.

Mr. Galligan questioned the allocation of Western's development costs, including billing from Bell Labs. Instead of allocating these costs to specific products, they are recovered by applying a uniform factor to the standard manufacturing cost of each product in the product line. Thus these "sophisticated, solid state, programmable dimension products" are classified into the customer premises products line along with the more than 9,000,000 telephones that Western manufactures each year. Spreading these development costs over a large number of rather dissimilar products results in a dilution of Dimension developmental cost responsibility. According to Mr. Galligan, this practice shifts cost responsibility away from Dimension products, thus artificially lowering the price of Dimension products and raising the price of the basic telephone instrument.

The use of the 12 percent overall cost of capital used in the GE-100 studies was also questioned by Mr. Galligan. He claimed that Pacific's capital structure (50 percent equity and 50 percent debt) and low-risk utility financing costs constitute an additional source of subsidy and an unfair competitive advantage over Pacific's rivals. He also said that Pacific's lower financial risks translate into lower overall costs of capital than are available to the electronics industry as a whole and represent an unfair, subsidized cost of capital for Pacific's competitive services.

The second witness for Rolm and Compath, Dr. Wilson, president of J. W. Wilson and Associates, Inc., served for two years as an assistant professor of economics at the United States Military Academy, at which time he was also an economic consultant to the Antitrust Division of the United States Department of Justice. For two years he had been employed by the Federal Power Commission (FPC), first as a staff economist and then as Chief of the FPC's Division of Economic Studies. In 1973 he left the FPC to practice as an independent consultant and in 1975 he established his present consulting firm. Dr. Wilson has authored 17 published articles and dissertations, including his doctoral thesis. He has testified many times before federal and state legislative committees and regulatory bodies.

Dr. Wilson testified that he had determined that Pacific's Dimension PBX service offering is priced on a noncompensatory basis and, under the proposed rates and cost allocations, Dimension service would be subsidized by Pacific's other services. He said that this result is, in fact, attributable to internal subsidization within Western, which subsidization underprices Dimension equipment and overprices other telephone equipment, and in part to the two-tier pricing plan.

To illustrate his contention of internal subsidization, Dr. Wilson said that the January 1, 1976 price factor for the customer premises product line (which classification includes Dimension) was only 1.495, as opposed to a much higher price factor of 1.96 for the Dial (Class 14) product line.

Dr. Wilson said that, until 1974, Western assigned PBX equipment to the "Dial" product line. In January of 1974, however, PBX equipment was moved out of the Dial product line and grouped with basic telephones, manual key equipment, and other units in a newly created "Customer Premise" line. Since 1975, when sales of Dimension began, Western has priced Dimension by use of the same price factors that it uses for the other products in the Customer Premise line. A document taken from a Tennessee Public Service Commission docket shows that the Customer Premise product line is now dominated by standard telephones, and that all types of PBX equipment, including Dimension, accounted for about 13 percent of the total 1975 Customer Premise product line sales.

In contending that the grouping together of telephone sets and Dimension PBX in the same product line did not appear to be proper, Dr. Wilson pointed out that in 1975 Western sold 8,200,000 non-key telephones at an average price of $30.85 per set, and 1,300,000 key telephone sets at an average price of $58.46. Telephones, including coin phones, and telephone parts accounted for two-thirds of Customer Premise product line sales. By way of contrast, Dr. Wilson referred to a Western forecast that the average 1976 price for a Dimension PBX would be $21,732, and that 3,195 systems would be sold in 1976.

Again referring to a document from the Tennessee PSC case, Dr. Wilson quoted a Western criterion for grouping equipment into product lines:

> "Homogeneity of products within a product line including present and anticipated physical, functional, and technical characteristics, as well as usage."

He did not believe that placing Dimension PBX in a product line which includes traditional, high volume, low-cost telephone sets is consistent with this standard.

Using data from the Tennessee case as a source, Dr. Wilson said that the sum of the variation and development factors in the Dial product line is 120 percent greater than the sum of the same two factors for the Customer Premise line. He concluded that, by placing Dimension PBX in the Customer Premise line, Western has distributed the recovery burden for R&D expenditure and variations to all of the other dissimilar products in that line.

Comparing Western's Customer Premise product line target rate of return of 7.8 percent to Pacific's claimed equity cost of 15 percent and debt cost of 9 percent, Dr. Wilson said that given the level of risk and uncertainty associated with the development and production of a new high technology product such as Dimension, the target rate of return for the Customer Premise product line would not yield the current market rate of return. He cited another document from the Tennessee case which indicated that Western's overall 1975 goal for rate of return on investment was between 11.5 and 13 percent, and that the upper end of that range is currently being used for capital budgeting purposes.

Noting that sales of Dimension have not been taking place at the 1976 forecast of 3,195 systems, Dr. Wilson, using his own predicted annual sales figure of 1,655, and a 12 percent rate of return to Western, said that a 1.965 price factor should be applied, increasing the typical Dimension system price to $28,553. At the target 7.8 percent rate of return the price would be $25,453. Dr. Wilson then further refined his estimates by assuming that either 25 or 50 percent of Western's 1976 standard cost estimate were fixed costs. This assumption resulted in prices only sufficient to recover costs of $25,703 and $29,828 per average system. He said that, if average Dimension prices were to remain at about $21,732, Western would be likely to lose between 6.6 million and 13.3 million dollars on Dimension business alone in 1976.

Carrying his Western cost determinations over to Pacific's GE-100 type of cost analysis, Dr. Wilson estimated that there would be a revenue deficiency of between 13 to 18 million dollars from 1975 to 1979. He further estimated that the ten-year discounted revenue deficiency for the systems projected by Mr. Parmiter to be installed by Pacific from 1975 to 1979 will have amounted, at a 9 percent interest rate, to 28 million dollars by 1980. Dr. Wilson declared that these are losses which independent competitors could not sustain, and that the only way that Pacific and its affiliate Western could sustain these losses would be by misallocating costs and overcharging for services in noncompetitive telephone utility markets.

The testimony of Dr. Wilson pertaining to Western's costs was expanded upon by Mr. Galligan. After reviewing the testimony of Mr. Thornton in this proceeding and in similar New York and Tennessee cases, Mr. Galligan recommended that a 2.02 price factor be imputed, and should the Commission adopt two-tier tariffs, the Commission should raise the material cost of Dimension at least 9.1 percent to cover prospective cost changes.

Dr. Wilson reviewed Pacific's IMA and reached two conclusions. The first was that cross-elasticity is so high with respect to the principal substitutes for Dimension service that underpricing of Dimension would lead to premature retirements of other equipment. The second was that, should Pacific be allowed to price Dimension below a fully cost compensatory rate, the harmful impact on competitors would be very great. To Dr. Wilson it was clear that, should Pacific be able to establish rates based on elasticity analysis, rather than on a fully cost compensatory basis, it would be able to monopolize the full feature electronic PBX market.

<u>Staff Participation and Positions</u>

As mentioned earlier, staff testimony was confined to an explanation by Mr. Popenoe of the use of Form GE-100. Mr. Popenoe explained that prior to the devising by the staff of the procedure embodied in the GE-100, Pacific used an "equated cost of money" or capital recovery cost approach.8/ The staff was concerned that,

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8/ Known in the Bell System as an "annuity from a present amount", algebraically expressed as $\frac{i(1 + i)^n}{(1 + i)^n - 1}$.
AT&T Engineering Department publication <u>Engineering Economy</u> Second Edition, 1963.

with then rapidly expanding offerings of new services, and the low depreciation reserves actually recorded on Pacific's books, the equal annual charges determined by the capital recovery method, while mathematically correct, would not, during the early years of the equipment's life, generate sufficient revenues relative to the utility's rate base to produce an adequate rate of return, and a deficiency in revenues in early years must be made up by other services.

The standard GE-100 procedure contemplates use of the overall utility depreciation reserve ratio. In the case of Dimension, however, Mr. Popenoe concluded that, based on further review of current trends in the reserve ratio for large PBXs, the proper reserve factor to use would be the reserve ratio specifically attributable to the large PBX account.

According to Mr. Popenoe, current trends indicate a substantial decrease in the straight-line remaining life depreciation reserve for large PBXs. The reserve ratio was low because there have been large write-offs of older PBX plant. While the reserve has declined, gross plant has grown appreciably, reflecting the introduction of more modern PBX's and the obsolescence of older models.

Mr. Popenoe did not, in his testimony at the hearing, propose any specific depreciation reserve ratio but recommended that, for computation of rates for Dimension PBX and other PBX vehicles, one be developed from the gross plant balance in Account 234, Large Private Branch Exchanges, and the corresponding remaining life depreciation reserve. He stated that the use of this approach would assure that the obsolescence created by introduction of new PBX vehicles would be reflected in rates paid by PT&T customers.

In its brief[9] the staff urged the Commission to disregard the Pacific's IMA and retain the fully allocated cost study methodology as embodied in the basic GE-100 type computation. According to the staff, the GE-100 approach is equally applicable to two-tier rates as to conventional tariffs.

The staff agreed with the observations of the protestants that the introduction of a new highly sophisticated and option-packed PBX may cause premature retirements of older, less sophisticated mechanical switches. The staff believes that the key to this problem lies in the remaining life depreciation method. The remaining life method provides, in situations where premature obsolescence results in early retirement of plant, for any deficiency in the depreciation reserve to be recovered over the service life of the replacement plant. This procedure permits the assessment of capital costs against the particular class of customers responsible for such costs rather than transferring such costs to the general body of ratepayers. Since Dimension PBX is a replacement for all existing large PBX vehicles, the staff again recommended the use of the remaining life depreciation reserve ratio for Account 234. At the end of 1975 this ratio was approximately 9 percent and the staff therefore recommended a net plant factor of 91 percent as appropriate to use in making rate calculations for Dimension PBX.

Applying the large PBX reserve ratio to Dimension would initially only reflect obsolescence created by predecessors of Dimension. Should the rates for Dimension be revised periodically, however, and adjusted for the current state of the remaining life depreciation reserve, the obsolescence factor would be properly reflected over the long haul.

9/ The staff filed an opening brief only and did not reply to the briefs of the other parties.

The staff believes that, for future years the two-tier contract provisions would, by assuring full capital recovery, reduce the obsolescence problem.

Concerning the proper rate of return to be used for the making of Dimension cost computations, the staff concurs with Pacific that a 12 percent rate of return is appropriate. This rate is considerably higher than the most recently authorized 8.85 percent rate of return for Pacific authorized by Decision No. 83162 dated July 23, 1974 in Application No. 53587.[10/] The staff normally, in order to consider the speculative nature of new service offerings, and the higher incremental cost of new capital, suggests a rate of return for new offerings of specialized equipment in a range of from 1.5 to 2 percent higher than the last authorized rate of return. In this instance, however, considering Pacific's large investment in current PBX vehicles, and the low depreciation reserve, the staff believes that it is desirable that customers desiring to switch to Dimension PBX pay a premium to do so. Such a premium would help reduce obsolescence of existing PBX offerings.

Regarding the Western catalog prices for Dimension equipment, the staff concurs with protestants that Western has understated Dimension costs by placing Dimension in the Customer Premise product line. The staff notes that Mr. Thornton of Western identified an amount of approximately 42 million dollars expended by Western in association with the development of Dimension but spread to the entire Customer Premise product line.

10/ This Commission has long taken the position that, for general ratemaking purposes Western's prices should provide a return no greater than that found reasonable for Pacific. (PT&T v CPUC (1965) 62 Cal 2d 634, 659-662.)

The staff also notes that Dr. Wilson addressed the issue of product homogeneity in pointing out that Dimension PBX and the far more traditional telephone equipment are dissimilar in terms of technological complexity and ultimate customer usage.

The staff believes that it is significant that the price factor of 1.495 relates to a target rate of return of only 7.8 percent whereas Western's overall goal for rate of return on investment is between 11.5 and 13 percent and the upper end of that range is currently being used for capital budgeting purposes.

As support for its agreement with the protestants' analyses of Western's pricing of Dimension PBX, the staff cites a decision of the Massachusetts Department of Public Utilities (D.P.U. 18403, pg. 25-27 mimeo.) and the New York Public Service Commission (Order issued September 29, 1976, in Case 27006, pg. 4-5 mimeo.).

The staff concludes that use of the Western dial product line price factor is appropriate for a short-term establishment of Dimension PBX. For the long range, the staff believes that Western should be required to develop PBX as a separate product line. This proposition would be entirely feasible since PBX production is centered at Western's Denver, Colorado, manufacturing facilities. In order to induce Western to supply separate cost analyses for the PBX product line, the staff proposes that any rates for Dimension PBX in this proceeding be established for a limited term of three years. After three years the rates would expire unless Western had prepared, and Pacific furnished to the Commission, separate cost analyses for the PBX product line.

The staff brief states that the need for interim authorization of Dimension service highlights the importance for the Commission to endorse a procedure for future PBX filings which will accelerate and maximize the production of supporting cost evidence under Pacific's control, and thereby speed the Commission's decision-making process for these service offerings. Such a procedure should be responsive to the Western costing issue discussed herein as well as the competitive effects of the PBX proposal.

Based on the extensive record in this proceeding, the staff urges the Commission to order Pacific to compute and present the rates for any new PBX vehicle in accordance with staff recommendations in this proceeding.

Also, according to the staff brief, Pacific should be placed on notice that it should prepare and develop a full cost showing in connection with any future PBX rate filings. Since the Commission's Rules of Practice and Procedure provide that advice letters be given wide distribution to competitors and other utilities, the staff sees no reason why the advice letter procedure cannot be used rather than formal application. If the advice letter procedure is used, however, the staff says that there must be a full disclosure of rate and cost development attached to the advice letter. Such disclosure should include a development of Western's basis for pricing the equipment in Pacific's proposal. Based upon the advice letter and supporting data, interested parties will have an opportunity to alert the Commission to deficiencies in the filing. Depending on reaction to the filing, the Commission could suspend it and order hearing on the proposed tariff. The staff recommends that a 60-day review period accompany the advice letter procedure.

While concurring with the concept of the two-tier pricing plan the staff, referring to the data from Pacific's Exhibit 11 as tabulated earlier in this opinion, concludes that the rates computed by the GE-100 methodology are understated. The staff also believes that the relationships, in many instances, between the computed rates and those determined from the IMA, are improper. As an example, the staff's brief notes that the 10-year two-tier rate for a thermal control cabinet (2TN) of $15 is more than twice the computed monthly charge of $6.17. The proposed 2TN companion rate of $23.45 is almost four times the computed cost of $5.90.

The staff was particularly concerned about the disparity between the computed and proposed companion rates. Whereas the proposed two-tier 10-year monthly rates for common equipment (2CZ) were identical to those computed, the proposed companion monthly rate is 68 percent higher. (As the comparison tabulation set out earlier in this opinion shows, in all cases the proposed companion rates are considerably higher than the computed rates.)

In its brief the staff concurs with Pacific's proposal that the installation charge under the companion tariff be designed to recover 100 percent of the nonrecurring costs. The staff brief also urges that the eight-year total service life used by Pacific in its companion computations be reduced to six years. The staff cites no reference in the record for this reduction in service life and it was not a topic of staff expert testimony.

Framework for Discussion

Were it not for the Carterfone and Northern California Power Agency decisions, our inquiry into the reasonableness of the proposed Dimension rates would be confined to the questions of whether the rates were so low as not to be compensatory or so high as to be an unreasonable charge to the utility's customers. We must now, however, recognize that subsequent to the Carterfone decision, nonutility entrepreneurs have been able to offer customer-owned telephone equipment in competition with the utility-owned equipment provided by the telephone companies. We must, as well, after the California Supreme Court's admonitions in the Northern California Power Agency case, consider the effect of the proposed rates, or any rates that we may establish herein, on the purveyors of equipment that may compete with Dimension PBX. We shall therefore review the traditional American ratemaking concepts that have developed over the past one hundred years in response to various pronouncements of the Supreme Court of the United States and embodied in statutes similar to this State's Public Utilities Code, and dovetail them to the more recent regulatory concepts embodied in Carterfone and Northern California Power Agency.

We will commence our review by recognizing that an enterprise supplying ordinary telephone service meets the general tests of a public utility. Such an enterprise supplies an essential service. It is a natural monopoly; that is, the number of enterprises engaged in supplying the service is limited by the physical conditions under which the enterprise is conducted. The enterprise requires the power of eminent domain; it needs the right to take private property for public use. The enterprise cannot operate without a franchise, a permit to install its facilities in public streets and roadways.[11/]

11/ Dissenting opinion of Justice Vinson in Davies Warehouse v Brown (1943) 137 F 2d 201.

As a business affected by the public interest[12/] telephone companies are subjected to regulation by various governmental agencies. As a regulated public utility, a telephone company's rates must be just and reasonable[13/] and may not be discriminatory.[14/]

Rates are just and reasonable if they enable a utility to operate successfully, maintain its financial integrity, attract capital, and compensate investors for risks assumed. The use of actual legitimate cost as a test of reasonableness is not improper.[15/]

Until 1968 telephone companies, both those of the Bell System and the independents, acting under the natural monopoly concept, maintained and enforced tariff provisions similar to the following:

> "No equipment, apparatus, circuit or device not furnished by the telephone company shall be attached to or connected with the facilities furnished by the telephone company, whether physically, by induction or otherwise."[16/]

By the Carterfone decision, the FCC held that this tariff provision was unreasonable in that it prohibited the use of connecting devices which do not adversely affect the telephone system, and the FCC ordered the tariff language prohibiting interconnections be stricken.

12/ Munn v Illinois (1877) 94 US 113 24 L ed 77.

13/ Public Utilities Code Sec.451.

14/ Public Utilities Code Sec.453.

15/ Federal Power Commission v Hope Natural Gas Co. (1944) 320 US 591, 88 L ed 333.

16/ AT&T Tariff FCC No. 132, filed April 16, 1957.

The Carterfone decision thus opened the theretofore closed customer equipment market to other manufacturers. If the other manufacturers could offer more efficient or lower priced equipment, they would be successful in competing with equipment developed and manufactured by the Bell System (and to lesser extent, by the other telephone systems, such as General Telephone and Electronics Corporation). The opening of the customer equipment market to outsiders also removed a powerful impediment to technological progress, the real tendency of a monopoly not to be innovative.

We see our regulatory role in this competitive situation as our traditional function of prescribing rates that are just and reasonable, using conventional regulatory concepts that consider the cost to provide the service. If, at the just and reasonable rate levels we establish for utility service, the public utility's competitors can provide more attractive equipment, or can charge a lower price, or both, they will carve out a share of, or perhaps capture entirely, the market for that equipment. As we understand our duty, under the Northern California Power Agency decision, it is to explore the anticompetitive aspects of a proposed utility service offering. If the rates that we establish are just and reasonable, and fully recover the cost of the service offering, yet are not excessively profitable to the utility, we feel that we have complied with the directions of the California Supreme Court in considering "the important public policy in favor of free competition in the scale along with the other rights and interests of the general public." (Northern California Power Agency v PUC (1971) 5 C 3d 370, 379.)

In analyzing the cost of a product or service offered by a manufacturer or supplier which furnishes several such products or services, a choice must be made whether to consider the incremental (marginal) cost or the fully allocated cost. It is generally accepted economic theory that an enterprise considering the price of a new product considers its incremental cost in order to determine whether the new offering will increase the overall profitability of the firm.

For the pricing of utility products or services, the choice is not so clear, particularly when the product or commodity is in relatively scarce supply or where the capacity of the utility system to accommodate additional demands is approaching a limit. The literature produced by public utility theoreticians on this pricing controversy is vast and rapidly expanding and we will not attempt to supply references here.

Protestants Rolm and Compath, in their reply brief, cite a number of cases involving public utilities and transportation companies to support the concept of basing utility rates on fully allocated costs. Doubtless an equally impressive number affirming the use of incremental costs could be found.

Where a public utility and a nonregulated enterprise are competing for the same market, and scarcity of product or service is not a factor, the proper choice becomes quite clear. The use of the incremental cost concept to justify the price of an offering by a utility in such a competitive situation would allow the utility to allocate its overhead and fixed costs to its monopoly services. Leaving the effects of such an allocation on the utility's competitors aside, incremental cost pricing would obviously be unfair to the utility's monopoly customers in that they would bear all costs except the incremental costs associated with competitive markets.

The unfairness of the incremental cost method on the utility's monopoly customers would alone be sufficient to rule out its use. The requirement that we must consider the anticompetitive aspects of a utility's offering upon suppliers who have no monopoly service to bear the overhead and fixed costs further militates against incremental cost pricing. Still another consideration is, as protestants remind us, the California Unfair Trade Practices Act, California Business and Professions Code Sections 17026 et seq. which defines cost as including all costs of doing business.

In determining the proper tariff rates for Dimension we shall therefore consider the fully allocated costs, on a public utility ratemaking basis, of the service offering. In making this determination, we must necessarily reject the IMA approach. The IMA concept has the further difficulty that it is based on subjective speculative assumptions and conclusions that are, as a practical matter, impossible of objective testing and verification.

We share the concern of the staff that some of Pacific's proposed rates, derived from the IMA, are as much as four times the indicated GE-100 rates. We also are concerned about the large overall disparity between the indicated and proposed companion rates. As the staff points out, the indicated and proposed two-tier rates for the basic common equipment are identical but the proposed companion rate for the identical equipment is 68 percent higher than the indicated rates. Such a disparity, under Pacific's own cost figures, would virtually force a customer whose needs would be better served by a cost-based companion rate to enter into a two-tier contract.

As we see it, insofar as utility ratemaking is concerned, an IMA, accepting that it is capable of verification, is appropriate for the measuring of the value of service, the ceiling price at which a service can be offered. Under utility regulatory concepts, the use of value of service as a criterion either results in a subsidized rate or a rate subsidizing other service (unless the value should, by coincidence, equal the cost of service). In ordinary circumstances, neither subsidized or subsidizing rates are appropriate, unless social considerations, usually mandated by scarcity of supply or by legislation, dictate otherwise.

In their reply brief, filed concurrently with that of Pacific, and before their December 28 motion to strike, protestants Rolm and Compath "request that all extra-record material contained in Pacific's brief be stricken; or in the alternative be carefully disregarded." Rather than undertaking the tedious task of sorting through Pacific's briefs and verifying whether the statements are actually supported by the record, we shall take the second alternative suggested by the protestants and base our decision only on specific facts and expert opinion as contained in the record and we shall discuss each such fact or expert opinion upon which we rely in this decision.

This concept shall also apply to the documents proposed by Pacific as late-filed Exhibit 72. As noted above, this exhibit was submitted well after the last day of hearing and was permitted by the examiner in order to afford Pacific an opportunity to comment on points made by Dr. Wilson, witness for Rolm and Compath, on the very last day. Proposed Exhibit 72 is not attributed to a specific witness and appears to be more in the nature of argument rather than of evidence. Accordingly, Exhibit 72 will not be admitted as evidence but will be considered part of Pacific's opening brief and the Oregon decision attached to the proposed exhibit will be treated as a citation.

Discussion of Cost Evidence

In our evaluation of the cost evidence we shall commence by accepting Pacific's and the staff's contention that the use of Form GE-100 produces rates that, providing that the depreciation reserve ratio selected is below 50 percent, would be more than sufficient to recover the cost of a proposed service offering over its anticipated service life. The farther the reserve ratio is below 50 percent, the higher the rates will be above the level necessary to be strictly compensatory.

Having accepted this contention we must decide upon a reasonable depreciation reserve ratio. While recognizing that the use of the capital recovery concept and a 50 percent ratio is mathematically correct in the long run and therefore appealing for that reason, we must also recognize that the reserve ratio for Pacific's plant as a whole is 21 percent (resulting in the 0.79 net plant factor) and the ratio for Account 234, Large Private Branch Exchanges, is only 9 percent (for a 0.91 net plant factor).

The use of a 50 percent ratio, while it would produce rates that would be mathematically correct in the long run, would be low compared to the overall level of Pacific's present rates which are tested for reasonableness against a rate base which is determined by use of Pacific's overall 21 percent depreciation reserve ratio. They would be particularly low when compared to PBX rates that would produce a reasonable return on a present day net investment, or rate base, on the large PBX plant alone, with its 9 percent depreciation reserve ratio.

Pacific's rates are under frequent scrutiny, either during formal rate proceedings or by the Commission's earnings monitoring program. It is highly unlikely that rates prescribed by means of the mathematically correct capital recovery method would remain unchanged over the service life of the offering. If the GE-100 method is used, rates would be set higher initially, but the straight-line remaining life method of depreciation that the Commission uses for rate fixing purposes[17/] will insure that no more than the actual cost of the service would be recovered over the service life of the offering.

17/ The advantages of the straight-line remaining life method of depreciation and the mechanics of its application are described in Decision No. 50258, dated July 6, 1954 in Pacific's Application No. 33935. (53 CPUC 275, 292-295.)

The use of the GE-100 method has the further advantage that, for equipment offered in competition with that supplied by other manufacturers, it tends to compensate for any superior financial strength that the utility may have. Pacific, with its high credit rating, and ready access to capital markets, would experience little difficulty with rates that are designed to recover costs and return uniformlyover the life of the offering. An outside manufacturer, with somewhat less favorable sources of financing, would normally be expected to be under pressure to recover as much of his investment and return as possible in the early years of the offering. The GE-100 method, by shifting the recovery of investment and the return to the early years of the offering, promotes competition by producing rates that would be more likely to be attractive to nonutility manufacturers.

Based on these considerations, we shall not use the capital recovery concept, which concept employs a 50 percent depreciation reserve ratio, but will retain the GE-100 method.

In selecting between the overall utility reserve ratio or the PBX account ratio, we are impressed by the fact that the staff has, in this proceeding, abandoned its consistent policy as developed over the past twenty years, of using the overall utility reserve ratio and in its place has adopted the large PBX account ratio.

This change of position by the staff is particularly appropriate when the issue of competition is considered. The manufacturers of equipment that compete with Dimension are competing with the particular Dimension offering, not the entire spectrum of Pacific's service offerings. To use other than the PBX account reserve would have the effect of subsidizing the Dimension offering by Pacific's other services.

The use of the large PBX account will have the further effect that the straight-line remaining life method of depreciation applied to this account will insure the recovery of any losses occasioned by early retirement of other PBX vehicles.

We concur that the use of the GE-100 method, and the depreciation reserve ratio for Account 234, Large Private Branch Exchanges, are reasonable for use in determining Dimension PBX rates. We will use the 9 percent straight-line remaining reserve ratio for Account 234, and the resulting 0.91 net plant factor.

Having reaffirmed our use of the GE-100 method, and selected an appropriate depreciation reserve ratio, we must then select an appropriate rate of return. Noting that Pacific's most recent authorized rate of return is 8.85 percent[18/] a 12 percent rate of return as used by Pacific and the staff appears to be appropriate. The use of a 12 percent return would give recognition to the fact that investments in new equipment are made with new capital raised at a higher cost than that of the embedded capital. It would also allow for the possibility, suggested by protestants, that the Dimension offering may not be as successful as anticipated by Pacific, and tend to prevent a shifting of any revenue deficiency to the user of basic telephone service. It would also reduce the cross-elastic impact that the Dimension PBX would have on existing PBX equipment. Accordingly we shall use a 12 percent rate of return.

A second consideration is the proper rate of return to use in discounting the capital costs under the two-tier plan to determine Tier A rates. In conformance with Pacific's tariff Schedule Cal. P.U.C. No. 147-T, filed pursuant to Decision No. 83958, Pacific used a 9 percent rate of return, the last authorized rate of return rounded to the nearest whole percentage point.

18/ Decision No. 83162 dated July 23, 1974 in Application No. 53587.

Protestants Rolm and Compath challenge this use of the authorized rate of return in determining the fixed monthly two-tier rate.

This use of the last authorized rate of return is an integral part of the two-tier plan as authorized by Decision No. 83958 and formally implemented by Schedule No. 147-T. As with the two-tier plan generally, any challenges to the details of the plan should be made in an application for reconsideration of Decision No. 83958. We will not, therefore, modify the interest rate prescribed by Schedule No. 147-T in this decision.

In its reply brief, Pacific points out that the income tax factor used in the GE-100 does not recognize income tax savings available from accelerated depreciation and investment tax credit. To the extent that these tax savings are not recognized, costs are overstated.

Since we do recognize the tax savings available from investment tax credit and accelerated depreciation in fixing Pacific's overall level of rates, it is equally fitting that they be recognized for our setting of the Dimension PBX rates. Accordingly, our prescribed rates for Dimension will reflect these items in a manner consistent with their handling in our decision in Pacific's last general rate proceeding, Decision No. 53587. The Commission's recent decision in the tax remand matter on Pacific, Decision No. 87838, is presently stayed by petitions for rehearing, and further lengthy appeals are expected. Accordingly, the lower rate levels that would result from applying the policies adopted in Decision No. 87838 are not reflected herein. In its future periodic cost reviews on the Dimension, however, Pacific shall include tax benefits consistent with the Commission's policy on rate fixing on tax matters in effect at the time of the cost review.

The remaining item of Pacific's costs, as distinguished from those of Western, is the proper total service life to be used in determining the companion rate. The staff, in its brief, urges that the life be reduced from eight to six years. The selection of a proper service life is strictly a matter of judgement. To be persuasive, an expert opinion must at least be exposed to the test of cross-examination. The staff witness presented no testimony on the subject of service lives nor does the staff brief cite any evidence on the record that would tend to refute Pacific's choice of eight years. In the absence of evidence to the contrary, we have no reason not to accept Pacific's eight-year life in determining the companion rate.

We will accept the recommendation of Pacific, seconded by the staff, that the companion rate installation charge recover 100 percent of the nonrecurring costs.

Pacific in its original application proposed an installation charge in connection with the two-tier rates that was much lower than the installation charge utilized for the companion rate. In this decision, however, we are utilizing an installation charge for the two-tier rate at the same level as the installation charge for the companion service. We believe a larger installation charge under the two-tier rate structure will help to discourage customers from making too easy a shift from present PBX vehicles to the Dimension PBX. In view of the concern over obsolescence of existing vehicles, we believe this will help minimize the obsolescence. The higher installation charge will also provide protection of the utility's non-recoverable investment in cases of default on the two-tier agreement due to business failure or bankruptcy.

The remaining cost items involve the catalog prices of Western. The testimony of Mr. Thornton, and the unprecedented, as far as we are aware, disclosure of shop costs presented by his Exhibit 48, confirmed the generally held impression that Western is a leader in the field of cost accounting. There is little doubt that, by means of its standard costing techniques, Western can determine the actual manufacturing cost of the various items that it produces with very great precision. In contrast to the precise determination of manufacturing costs, however, the derivation of price factors and the applications of price factors to broad product lines is anything but precise. Certainly the use of a single price factor for an entire line encompassing annual production of millions of conventional telephones and a relatively few complex items that are intended to be installed on customer premises, such as Dimension PBX, shifts development and merchandising expense from any exotic new service offerings to plain old telephone service. Pacific apparently concedes this point when, in discussing price factors in its reply brief, it proposes an override of not in excess of ten percent be added to the final Dimension tariff rates as a safeguard to protect competitors.

For this decision we will use the dial product line price factor as proposed by protestants Rolm and Compath and by the staff. The staff advises us that this factor is currently 1.74. In the absence of specific expert recommending testimony and appropriate references to statutory and case law we will not, however, structure our order to require Pacific to pressure Western to establish a separate PBX product line, nor will we establish

Dimension rates on a three-year experimental basis. The regulation of the relationship between utilities and nonregulated affiliates is a vague field and the Commission has in the past not been consistently successful when it has ventured out onto that field.[19]

This proceeding has been long and complex and subject to delay because of procedural problems relating to the rights and responsibilities of both Pacific and the protestants. A final decision has been long coming because of a heavy case load and transfer in work assignment of the examiner. The case should be resolved on a final basis and the staff has had an ample opportunity to develop, or direct Pacific to develop, under the investigative powers conferred on the Commission by Section 581 of the Public Utilities Code,[20] the information it now wishes us to require by formal order. The staff also had an opportunity, should such studies not have been forthcoming, to recommend suspension or dismissal of the proceeding. The time for investigation of this initial service offering has come and gone and we will bring this proceeding to a close.

19/ Pacific Tel.& Tel. Co. v PUC (1950) 34 Cal 2d 822.

20/ "581. Every public utility shall furnish to the commission in such form and detail as the commission prescribes all tabulations, computations, and all other information required by it to carry into effect any of the provisions of this part, and shall make specific answers to all questions submitted by the commission.

"Every public utility receiving from the commission any blanks with directions to fill them shall answer fully and correctly each question propounded therein, and if it is unable to answer any question, it shall give a good and sufficient reason for such failure."

Regarding the staff's proposals that Pacific be directed, in this proceeding, to prepare future PBX rate filings in accordance with its recommendations in this case, and that future advice letter tariff filings be subjected to a 60-day review procedure, we consider such proposals to be inappropriate. Again we emphasize that the staff already has full and continuing statutory authority to obtain any information that it requires in such form as it desires. The procedures for filing applications or tariffs are set out in our Rules of Practice and Procedure and General Order No. 96-A. Revisions to and expansions of these uniformly applicable Commission documents should not be made in decisions dealing with a single subject. In any event, such proposals should be presented by testimony so that parties may have an opportunity to test or refute them. For instance, the 60-day advice letter proposal appears to be in direct conflict with Section 455 of the Public Utilities Code, which section provides that tariffs not resulting in an increase in any rate become effective, unless previously suspended, on the expiration of 30 days from the time of filing. Although we can deviate from our rules in appropriate cases, this is not one of them.

<u>Bases of Prescribed Rates</u>

The rates that we are prescribing herein, are, as explained in the above discussion, based upon:

1. Cost, without regard to Pacific's IMA.
2. Our long-standing practice of determining costs of new service offerings by means of the procedure used in Pacific's Form GE-100, modified as described herein.
3. A 9 percent depreciation reserve ratio and the resulting net plant factor of 0.91.
4. The straight-line remaining life method of depreciation.
5. A 12 percent rate of return.

6. Pacific's two-tier tariff plan set out in this Commission's Decision No. 83958 and as formalized by Pacific's Tariff Schedule No. 147-T.
7. Tax savings available from use of the investment tax credit and accelerated depreciation.
8. An eight-year service life for determination of the companion rate.
9. Recovery in the companion rate installation charge of 100 percent of the nonrecurring costs associated with service under the companion rate.
10. An installation charge in connection with two-tier rates set at the same level as for the companion rate.
11. A 9 percent two-tier discount factor.
12. Western's prices based on the current dial product line price factor of 1.74 applied to current catalog prices.

We find that Dimension PBX rates based on the above considerations are fully compensatory and are just and reasonable; their implementation will afford Pacific neither a competitive advantage nor a disadvantage with respect to nonregulated competitors.

Rates for selected items Dimension PBX Equipment, consistent with the comparison shown earlier in this decision are as follows:

COMPARISON OF RATES FOR SELECTED
DIMENSION PBX EQUIPMENT UNDER
TWO-TIER PAYMENT PLAN AND COMPANION RATE
AUTHORIZED RATES

			Two-Tier				Companion Rate	
Rate Item #	Eq. USOC	Description	IC	Basic Charge	5-Yr. Mo. Rate	10-Yr. Mo. Rate	IC	Mo. Rate
1	2CZ	Common Equipment						
		Tier A	$4,200	$27,286.67	$561.79	$340.49	$4,200	$545.00
		Tier B			204.33	204.33		
		Total Mo. Chg.			766.12	544.82		
3	2CB	Auxiliary Cabinet						
		Tier A	440	2,804.79	57.75	35.00	440	55.00
		Tier B			19.14	19.14		
		Total Mo. Chg.			76.89	54.14		
5.a.	2TN	Thermal Control						
		Tier A	30	195.45	4.02	2.44	30	6.75
		Tier B			4.21	4.21		
		Total Mo. Chg.			8.23	6.65		
6	2CO	Trunk Carrier						
		Tier A	160	1,698.72	34.97	21.20	160	35.00
		Tier B			13.14	13.14		
		Total Mo. Chg.			48.11	34.34		
7	2CL	Line Carrier						
		Tier A	140	1,590.28	32.74	19.84	140	33.00
		Tier B			12.48	12.48		
		Total Mo. Chg.			45.22	32.32		
8.a.(1)	2TQ	Trunk Card						
		Tier A	8	374.59	7.71	4.67	8	8.25
		Tier B			3.14	3.14		
		Total Mo. Chg.			10.85	7.81		
9	2CN	Line Circuit Pack						
		Tier A	8	360.91	7.43	4.50	8	8.00
		Tier B			3.05	3.05		
		Total Mo. Chg.			10.48	7.55		
10	2CX	4X Memory Card						
		Tier A	8	746.23	15.36	9.31	8	15.75
		Tier B			5.62	5.62		
		Total Mo. Chg.			20.98	14.93		
15	2DA	Console Common Eq.						
		Tier A	8	591.52	12.18	7.38	8	12.50
		Tier B			4.59	4.59		
		Total Mo. Chg.			16.77	11.97		

(Continued)

Rate Item #	Eq. USOC	Description	Two-Tier IC	Two-Tier Basic Charge	Two-Tier 5-Yr. Mo. Rate	Two-Tier 10-Yr. Mo. Rate	Companion Rate IC	Companion Rate Mo. Rate
16.c.	2CG	Console						
		Tier A	$ 240	$ 2,823.29	$ 58.13	$ 35.23	$240	$ 64.00
		Tier B			26.19	26.19		
		Total Mo. Chg.			84.32	61.42		
17	2TV	Frequency Generator						
		Tier A	Ø	135.39	2.79	1.69	Ø	2.50
		Tier B			.70	.70		
		Total Mo. Chg.			3.49	2.39		
2	2CK	Supp. Common Eq.						
		Tier A	700	6,108.98	125.77	76.23	700	125.00
		Tier B			44.38	44.38		
		Total Mo. Chg.			170.15	120.61		

For a typical 200-line Dimension PBX, these rates would produce the following charges:

Development of Two-Tier and Companion Charges
Payment Plan Charges for a 200 Line
Dimension PBX

Authorized Rates

		Companion		Two-Tier		
Equip. USOC	Number Required	Installation Charge	Monthly Rate	Installation Charge	Monthly Rates 5-yr	10-yr
2CZ	1	$4,200.00	$ 545.00	$4,200.00	$ 766.12	$ 544.82
2CB	1	440.00	55.00	440.00	76.89	54.14
2TN	2	60.00	13.50	60.00	16.46	13.30
2CO	1	160.00	35.00	160.00	48.11	34.34
2CL	3	420.00	99.00	420.00	135.66	96.96
2TQ	17	136.00	140.25	136.00	184.45	132.77
2CN	50	400.00	400.00	400.00	524.00	377.50
2CX	6	48.00	94.50	48.00	125.88	89.58
2DA	1	8.00	12.50	8.00	16.77	11.97
2CG	2	480.00	128.00	480.00	168.64	122.84
2TV	1	-	2.50	-	3.49	2.39
		$6,352.00	$1,525.25	$6,352.00	$2,066.47	$1,480.61

Findings

1. It is in the public interest to authorize Pacific to offer Dimension PBX at the rates established by this decision.

2. The estimated fully allocated costs of providing the service, on a public utility ratemaking basis, is the proper concept upon which to establish rates for Dimension PBX service.

3. An incremental market analysis is not a proper method by which to establish rates for Dimension PBX service.

4. A two-tier rate plan for Pacific has been authorized by Decision No. 83958 and formalized by Pacific's Tariff Schedule No. 147-T.

5. The considerations enumerated above under the heading "Bases of Prescribed Rates" are the proper considerations upon which to base rates for Dimension PBX service.

6. The Dimension PBX rates established herein, designed according to the considerations enumerated under the heading "Bases of Prescribed Rates" are fully compensatory and are just and reasonable; their implementation will afford Pacific neither a competitive advantage nor a disadvantage with respect to non-regulated competitors.

7. All motions in this proceeding which have not previously been disposed of should be denied.

Conclusions

1. The application should be granted to the extent authorized by the following order.

2. The tariff establishing interim provisional rates for Dimension PBX service authorized by Decision No. 86352 should be withdrawn and refunds made according to the provisions of Ordering Paragraph 2 of Decision No. 86352.

O R D E R

IT IS ORDERED that:

1. The Pacific Telephone and Telegraph Company, on or after the effective date hereof, is authorized to file, and place into effect on not less than five days' notice, the schedule of rates for Dimension PBX set forth in Appendix A attached to this decision. Such filing shall be in the form specified in General Order No. 96-A.

2. The 10 percent surcharge for the companion tariff authorized by Decision No. 86352, is withdrawn. As provided by Ordering Paragraph 2.c. of Decision No. 86352, within sixty days of the effective date of this order all customers of record shall be refunded the difference between the charges and rates paid and these authorized charges and rates with 7 percent interest from the date service was first installed.

3. A two-tier rate structure as authorized by Decision No. 83958 and formalized by Tariff Schedule No. 147-T is established for Dimension PBX. Within sixty days of the effective date of this order customers of record may exercise the option, specified in Ordering Paragraph 2.d., of Decision No. 86352, of having their charges and rates recomputed on the two-tier basis, authorized herein, from the time service was first installed; and full charges and rates shall be made under the two-tier rate structure.

4. The Pacific Telephone and Telegraph Company is directed to notify each customer to interim rates of the option set forth in paragraph 3 within fifteen days after the effective date hereof.

5. All motions in this proceeding not previously disposed of are denied.

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

Dated at San Francisco, California, this 12th day of OCTOBER, 1977.

Robert Batinovich
President
William Symons, Jr.
Vernon L. Sturgeon
Richard D. Gravelle
Claire T. Dedrick
Commissioners

DIMENSION PBX SYSTEM SERVICE
AUTHORIZED CHARGES AND RATES
TWO-TIER

	USOC	IC	BASIC CHARGE (1 Month)	MR Contract Payment Plans 36 Months	60 Months	84 Months	120 Months
1. Basic Common Equipment including 1 Trunk Circuit and 1 Line Circuit Carrier, each	2CZ	$4,200.00					
Tier A			$27,286.67	$863.26	$561.79	$434.17	$340.49
Tier B				204.33	204.33	204.33	204.33
2. Supplemental Common Equipment, each	2CK	700.00					
Tier A			6,108.94	193.27	125.77	97.20	76.23
Tier B				44.38	44.38	44.38	44.38
Note: Maximum of 1 per system							
3. Auxiliary Cabinet, each	2CB	440.00					
Tier A			2,804.79	88.73	57.75	44.63	35.00
Tier B				19.14	19.14	19.14	19.14
4. Cabinet Extension, each	2CY						
Tier A			218.04	6.90	4.49	3.47	2.72
Tier B				1.12	1.12	1.12	1.12
5. Thermal Control							
a. For each Basic or Supplemental cabinet	2TN	30.00					
Tier A			195.45	6.18	4.02	3.11	2.44
Tier B				4.21	4.21	4.21	4.21
b. For each Auxiliary cabinet	2TO	22.00					
Tier A			298.64	9.45	6.15	4.75	3.73
Tier B				4.70	4.70	4.70	4.70

DIMENSION PBX SYSTEM SERVICE
AUTHORIZED CHARGES AND RATES

TWO-TIER
(Continued)

	USOC	IC	BASIC CHARGE (1 Month)	MR Contract Payment Plans 36 Months	60 Months	84 Months	120 Months
6. Additional Trunk Circuit Carrier, each	2CO	$160.00					
Tier A			$1,698.72	$53.74	$34.97	$27.03	$21.20
Tier B				13.14	13.14	13.14	13.14
Note: System capacity dependent upon number of Line Circuit Carriers but not more than 3 additional Trunk Circuit Carriers							
7. Additional Line Circuit Carrier, each	2CL	140.00					
Tier A			1,590.28	50.31	32.74	25.30	19.84
Tier B				12.48	12.48	12.48	12.48
Note: System capacity dependent upon number of Trunk Circuit Carriers, but not more than 6 additional Line Circuit Carriers							

DIMENSION PBX SYSTEM SERVICE
AUTHORIZED CHARGES AND RATES
TWO-TIER
(Continued)

	USOC	IC	BASIC CHARGE (1 Month)	MR Contract Payment Plans 36 Months	60 Months	84 Months	120 Months
8. Trunk Circuit Packs Note: One required for each 2 trunk terminations.							
a. Central Office Trunk Type							
(1) Non DID type, each	2TQ	$8.00					
Tier A			$374.59	$11.85	$7.71	$5.96	$4.67
Tier B				3.14	3.14	3.14	3.14
(2) DID type, each	2TR	8.00					
Tier A			275.66	8.72	5.68	4.39	3.44
Tier B				2.48	2.48	2.48	2.48
b. Tie Trunk Type, each	2TS	8.00					
Tier A			464.75	14.70	9.57	7.39	5.80
Tier B				3.74	3.74	3.74	3.74
9. Line Circuit Pack, each	2CN	8.00					
Tier A			360.91	11.42	7.43	5.74	4.50
Tier B				3.05	3.05	3.05	3.05
Note: One required for each 4 line terminations							

	USOC	IC	BASIC CHARGE (1 Month)	MR Contract Payment Plans 36 Months	60 Months	84 Months	120 Months
10. Memory Circuit Pack, each	2CX	$8.00					
Tier A			$746.23	$23.61	$15.36	$11.87	$9.31
Tier B				5.62	5.62	5.62	5.62
Note: Capacity of 4,096 words of program per card							
11. Auxiliary Trunk Interface Circuit Pack, each	2CU	8.00					
Tier A			298.08	9.43	6.14	4.74	3.72
Tier B				2.63	2.63	2.63	2.63
Note: One required for each 2 circuit terminations							
12. RESERVED FOR FUTURE USE							
13. Touch-Tone Receiver, each	2CW	8.00					
Tier A			636.88	20.15	13.11	10.13	7.95
Tier B				4.89	4.89	4.89	4.89
Note: Maximum of 4 per Trunk Circuit Carrier							

	USOC	IC	BASIC CHARGE (1 Month)	MR Contract Payment Plans 36 Months	60 Months	84 Months	120 Months
14. Identification of Outward Dialed Calls, per System	2AL	$ 8.00					
Tier A			$ 574.63	$18.18	$11.83	$ 9.14	$ 7.17
Tier B				4.48	4.48	4.48	4.48
15. Attendant Console Common Equipment, each	2DA	8.00					
Tier A			591.52	18.71	12.18	9.41	7.38
Tier B				4.59	4.59	4.59	4.59
Note: One required for each two Attendant Consoles							
16. Attendant Consoles							
a. Small Basic Console with Incoming Call Identification, each	2C5	240.00					
Tier A			2,367.51	74.90	48.74	37.67	29.54
Tier B				22.66	22.66	22.66	22.65
b. Small Basic Console with Alphanumeric Call Indicators, each	2D1	240.00					
Tier A			2,657.51	84.07	54.71	42.28	33.16
Tier B				23.62	23.62	23.62	23.62
c. Large Basic Console with Alphanumeric Call Indicators, each	2C6	240.00					
Tier A			2,823.29	89.32	58.13	44.92	35.23
Tier B				26.19	26.19	26.19	26.19

16. Attendant Consoles - Continued

	USOC	IC	BASIC CHARGE (1 Month)	MR Contract Payment Plans 36 Months	60 Months	84 Months	120 Months
d. Small Console with Busy Lamp Field and Incoming Call Identification, each	2D4	$240.00					
Tier A			$2,778.30	$87.90	$57.20	$44.21	$34.67
Tier B				25.81	25.81	25.81	25.81
e. Small Console with Direct Station Selection and Incoming Call Identification, each	2D5	240.00					
Tier A			2,800.70	88.60	57.66	44.56	34.95
Tier B				25.52	25.52	25.52	25.52
f. Small Console with Busy Lamp Field and Alphanumeric Call Indicators, each	2D6	240.00					
Tier A			3,072.86	97.21	63.27	48.89	38.34
Tier B				27.81	27.81	27.81	27.81
g. Small Console with Direct Station Selection and Alphanumeric Call Indicators, each	2D7	240.00					
Tier A			3,094.81	97.91	63.72	49.24	38.62
Tier B				27.52	27.52	27.52	27.52

	USOC	IC	BASIC CHARGE (1 Month)	MR Contract Payment Plans 36 Months	60 Months	84 Months	120 Months
16. Attendant Consoles - Continued							
h. Large Console with Busy Lamp Field and Alphanumeric Call Indicators, each	2D8	$240.00					
Tier A			$3,232.26	$102.26	$66.55	$51.43	$40.33
Tier B				28.88	28.88	28.88	28.88
i. Large Console with Direct Station Selection and Alphanumeric Call Indicators, each	2D9	240.00					
Tier A			3,254.73	102.97	67.01	51.79	40.61
Tier B				28.59	28.59	28.59	28.59
17. Additional Frequency Generator, each	2TV						
Tier A			135.39	4.28	2.79	2.15	1.69
Tier B				.70	.70	.70	.70

Note: Required in a Supplemental Common Equipment Cabinet when it contains more that three Line Circuit Carriers

A.55723

DIMENSION PBX SYSTEM SERVICE
AUTHORIZED CHARGES AND RATES

NON TWO-TIER

	USOC	IC	MR
1. Basic Common Equipment including 1 Trunk Circuit Carrier and 1 Line Circuit Carrier, each	2CZ	$4,200.00	$545.00
2. Supplemental Common Equipment, each Note: Maximum of 1 per system	2CK	700.00	125.00
3. Auxiliary Cabinet, each	2CB	440.00	55.00
4. Cabinet Extension, each	2CY	-	4.10
5. Thermal Control			
a. For each Basic or Supplemental cabinet	2TN	30.00	6.75
b. For each Auxiliary cabinet	2TO	22.00	8.50
6. Additional Trunk Circuit Carrier, each			
Note: System capacity dependend upon number of Line Circuit Carriers, but not more than 3 additional Trunk Circuit Carriers	2CO	160.00	35.00
7. Additional Line Circuit Carrier, each			
Note: System capacity dependent upon number of Trunk Circuit Carriers, but not more than 6 additional Line Circuit Carriers	2CL	140.00	33.00
8. Trunk Circuit Packs			
Note: One required for each 2 trunk terminations			
a. Central Office Trunk Type			
(1) Non-DID Type, each	2TQ	8.00	8.25
(2) DID Type, each	2TR	8.00	6.25

DIMENSION PBX SYSTEM SERVICE AUTHORIZED CHARGES AND RATES

NON TWO-TIER (Continued)

	USOC	IC	MR
8. Trunk Circuit Packs - Continued			
b. Tie Trunk Type, each	2TS	$8.00	$10.00
9. Line Circuit Pack, each Note: One required for each 4 line terminations	2CN	8.00	8.00
10. Memory Circuit Pack, each Note: Capacity of 4,096 words of program per card	2CX	8.00	15.75
11. Auxiliary Trunk Interface Circuit Pack, each Note: One required for each 2 circuit terminations	2CU	8.00	6.75
12. RESERVED FOR FUTURE USE			
13. Touch-Tone Receiver, each Note: Maximum of 4 per Trunk Circuit Carrier	2CW	8.00	13.50
14. Identification of Outward Dialed Calls, per System	2AL	8.00	12.25
15. Attendant Console Common Equipment, each Note: One required for each 2 Attendant Consoles	2DA	8.00	12.50

A.55723

DIMENSION PBX SYSTEM SERVICE
AUTHORIZED CHARGES AND RATES

NON TWO-TIER
(Continued)

	USOC	IC	MR
16. Attendant Consoles			
a. Small Basic Console with Incoming Call Identification, each	2C5	$240.00	$54.00
b. Small Basic Console with Alphanumeric Call Indicators, each	2D1	240.00	59.00
c. Large Basic Console with Alphanumeric Call Indicators, each	2C6	240.00	64.00
d. Small Console with Busy Lamp Field and Incoming Call Identification, each	2D4	240.00	63.00
e. Small Console with Direct Station Selection and Incoming Call Identification, each	2D5	240.00	63.00
f. Small Console with Busy Lamp Field and Alphanumeric Call Indicators, each	2D6	240.00	69.00
g. Small Console with Direct Station Selection and Alphanumeric Call Indicators, each	2D7	240.00	69.00
h. Large Console with Busy Lamp Field and Alphanumeric Call Indicators, each	2D8	240.00	72.00
i. Large Console with Direct Station Selection and Alphanumeric Call Indicators, each	2D9	240.00	72.00

DIMENSION PBX SYSTEM SERVICE
AUTHORIZED CHARGES AND RATES

NON TWO-TIER
(Continued)

	USOC	IC	MR
17. Additional Frequency Generator, each Note: Required in a Supplemental Common Equipment Cabinet when it contains more than 3 Line Circuit Carriers	2TV	$ -	$ 2.50

DIMENSION PBX SYSTEM SERVICE
AUTHORIZED CHARGES AND RATES

CHARGES

The following nonrecurring charges are in addition to service connection, and move and change charges shown in Schedule Cal. P.U.C. No. 28-T, and the charges shown in Schedule Cal. P.U.C. NO. 12-T, Section XV, Subsection A., "GENERAL", unless otherwise specified.

Where unusual conditions are encountered in the installation of a Dimension PBX System and costs, over and above those supporting the above Charges and Rates are incurred by the Utility, the customer will be required to pay a nonrecurring charge to compensate the Utility for those costs, upon completion of the installation.

	USOC	NRC
1. Initial Service Establishment, system charge, each system		
a. Program No. 1 Features		
Two-Tier	( )	$2,766.00
Non Two-Tier	PRM+1	2,096.00
b. Program No. 2 Features		
Two-Tier	( )	2,780.00
Non Two-Tier	PRM+2	2,110.00
2. Feature Package Replacement Charge		Two-Tier & Non Two-Tier
a. Program No. 1 Features replaced with Program No. 2 Features, system charge, each occasion	SCO	521.00
b. Magnetic tape replacement for a program capacity upgrade, system charge, each occasion	SCO	507.00

DIMENSION PBX SYSTEM SERVICE
AUTHORIZED CHARGES AND RATES

	USOC	NRC Two-Tier	NRC Non Two-Tier
3. Equipment Addition Charge			

This charge consists of two components in each case and applies when an addition is made which involves any equipment items, shown above. The first component of the charge is divided into a major and minor charge level, only one of which applies on any given addition. The major charge level applies whenever the addition includes a cabinet, console, or both. A minor charge level applies in all other instances. The first component is a system-related charge, whereas the second component is determined by the quantity and the particular equipment item involved. Identified within the second component by groups are the various levels of charges which apply on a per unit basis to each equipment item listed. The two components of the charge are added together to determine the total Equipment Addition Charge for any equipment addition.

	USOC	NRC Two-Tier	NRC Non Two-Tier
a. System charge, each occasion			
(1) For adding a console and/or supplemental common equipment	SCO	$1,620.00	$1,045.00
(2) For adding any other equipment item	SCO	676.00	436.00

A.55723

DIMENSION PBX SYSTEM SERVICE
AUTHORIZED CHARGES AND RATES

3. Equipment Addition Charge - Continued		USOC	NRC Two-Tier	NRC Non Two-Tier
b. Unit charge, each unit				
(1) Group I	Additional Trunk Circuit Carrier, Additional Line Circuit Carrier, Cabinet Extension, Thermal Control	SCO	$110.00	$71.00
(2) Group II	Supplemental Common Equipment, Auxiliary Cabinet, Console, Memory Circuit Pack, Touch-Tone Receiver, Identification of Outward Dialed Calls	SCO	55.00	36.00
(3) Group III	Auxiliary Trunk Interface Circuit Pack, Contact Interface Circuit Pack, Additional Frequency Generator	SCO	28.00	18.00

DIMENSION PBX SYSTEM SERVICE AUTHORIZED CHARGES AND RATES

	FID	NRC Two-Tier & Non Two-Tier
4. Feature Information Charges		
These charges apply when feature information is entered or changed. These charges also apply in addition to other applicable nonrecurring charges, and one or more may apply on the same occasion		
a. Feature information preparation and entry for new stations, station line charge - Each station line affected		$11.30
b. Feature information preparation and entry for changes on existing stations, station line charge - Each station line affected	NRCC	7.90
c. Feature information preparation and entry for Station Line Restriction and Feature Grouping - Each Station Line Restriction and Feature Grouping	NRCD	4.55
d. Feature information preparation and entry for Console and/or Trunk re-arrangements - Each Occasion	MNR	9.35

DIMENSION PBX SYSTEM SERVICE
AUTHORIZED CHARGES AND RATES

(continued)

SPECIAL CONDITIONS

1. Two-Tier Payment Plan

   a. DIMENSION PBX Systems provided under "CHARGES AND RATES (TWO-TIER)", above, are subject to the provisions for rates and special conditions contained in Schedule Cal. P.U.C. No. 147-T, Two-Tier Payment Plan, in addition to the provisions of this section.

   b. The term of the Tier-One period for the Tier A monthly rates shall not exceed 120 months from the date that service is established and shall be one of the periods shown in "CHARGES AND RATES (TWO-TIER)", above.