sw/ltc/bm *

ORIGINAL

Decision No. 86191

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

KINGS ALARM SYSTEMS, INC., dba AMERICAN PROTECTION INDUSTRIES-ALARM DIVISION,

Complainant,

v.

PACIFIC TELEPHONE & TELEGRAPH CO., GENERAL TELEPHONE COMPANY OF CALIFORNIA,

Defendants.

Case No. 9914
(Filed May 9, 1975; amended August 22, 1975)

Bodle, Fogel, Julber, Reinhardt and Rothschild, by Joel N. Klevens, Attorney at Law, for complainant. Michael J. Ritter, Attorney at Law, for The Pacific Telephone and Telegraph Company; and Albert M. Hart, by Lorrin H. Albeck, Attorney at Law, for General Telephone Company of California; defendants.

O P I N I O N

Kings Alarm Systems, Inc. (Kings), dba American Protection Industries-Alarm Division, alleges that during December 2, 1968 to August 17, 1974, defendant The Pacific Telephone and Telegraph Company (Pacific) billed it for and it paid $84,950.33 more for the service provided than authorized by Pacific's tariffs. Kings alleges that during April 14 to August 17, 1974 the defendant General Telephone Company of California (General) billed it and it paid $5,202.41 more for the service provided than authorized by

General's tariffs, and it seeks to require the defendants to pay reparation in the above amounts plus interest at the legal rate from the date of each alleged overpayment.

The defendants deny the allegations and allege that there was no overcharge and that no reparation is due. Pacific further alleges that the reparation requested for the period December 2, 1968 to May 9, 1972 is barred by Section 736 of the Public Utilities Code.

A prehearing conference was held on August 11, 1975 and hearings were held on January 7, 8, and 9, and April 5, 1976 in Los Angeles before Examiner James D. Tante. A further hearing was scheduled for June 14, 1976 on the issue of damages only in the event Kings prevailed, but that hearing date was removed from the Commission calendar and the matter was deemed submitted as of the date of filing of briefs, May 6, 1976.

The witnesses for Kings were Vladislav Bevc, an electrical engineer who is a senior engineer and has been in charge of the rates and standards unit for the Commission since 1974; D. Reginald Tibbetts, an electrical engineer who is a consulting communication engineer; and Alan Bryon, a vice president of Kings who is a certified public accountant in charge of its internal audit function. Douglas Mackintosh, an administrative manager of Pacific who is responsible for the administration of private line tariff-related activities for services below voice grade, and Ludwell Sibley, an electrical engineer employed by Pacific as an engineering staff manager, testified for Pacific.

General called no witnesses and offered no evidence. It is conceded herein that Pacific and General provided the same services to Kings and billed at the same rate and that if Pacific is liable to Kings for the periods it billed for service, General is liable for the periods it billed for service.

Exhibits 1 and 3 were marked for identification and not received in evidence. Exhibits 2 and 4 to 34 were received in evidence.

During the period involved herein Kings was, and is now, engaged in the business of installing and maintaining private burglar alarm systems. The burglar alarm systems it utilizes involve transmission on a 30-baud interexchange signal channel of direct current pulses on a single service basis, i.e., the signal is transmitted on a metallic circuit in one direction only from the premises of a Kings customer where the signal may be triggered to a receiving station maintained by Kings. Each single service transmission channel it utilized had a single terminal or termination point.

During the period involved herein Kings contended and Pacific and General agreed that the third revised sheet 7 of Tariff 104-T, effective December 2, 1968 (Exhibit 4) specified the rate applicable to the service provided Kings by the defendants, and that the tariff provided for a rate of 90 cents per interexchange mile per interexchange channel for single service.

Kings contends that, during the period involved herein, the defendants provided it with single service channels at the rate of $1.80 per interexchange mile resulting in the overcharge set forth above in violation of Section 532 of the Public Utilities Code. It further alleges that after May 27, 1972 the defendants added a 5 percent surcharge to the rate they charged Kings for the service provided. Pacific and General admit that they charged $1.80 per interexchange mile, but contend that they provided two single service interexchange channels at 90 cents per interexchange mile per channel for a total of $1.80 per interexchange mile.

The only service in issue in this proceeding is the mileage charge for the interexchange portion of the 0 to 30-baud single service provided under Pacific's Tariff 104-T (Exhibit 4). General had alleged in its answer a different tariff schedule but such schedule is essentially the same as Tariff 104-T and there is no dispute that General charged in the same manner as Pacific during the relevant time period.

At the request of Kings the defendants provided service to enable Kings to operate McCulloh effect burglar alarm circuits and provided one pair of wires, or two wires, between Kings' customer locations and its monitoring station. Kings provided the transmitting equipment at the customer locations, the receiving equipment at the monitoring station, and a ground return wire at each customer location and at the monitoring station to provide a backup mechanism for the two wires provided by the defendants.

The serving arrangement required by Kings was described by witness Sibley of Pacific in conjunction with Exhibits 32, 33, and 34. Essentially, this arrangement consists of the provision of two metallic conductors (which could be and are usually two wires) by the utility between the alarm customer's protected location and the telephone company central office. This metallic facility then proceeds to another telephone company central office and then finally to a location known as the alarm central station where a problem such as a fire, break-in, etc., can be sensed by the equipment of the alarm company. At the alarm customer's location there is a signal transmitter which sends coded pulses along the metallic facility. The same instrument at the alarm customer's premises also connects each of the two metallic conductors to a ground return. The two wires or metallic conductors connected to the ground return form two independent simultaneous signal paths back to the alarm company central station.

The purpose of having this serving arrangement is to give alarm companies, such as Kings, a redundancy of transmission paths. If an alarm company had only a metallic facility, such as a pair of wires connecting the protected locations to the alarm company central station, and if the circuit were interrupted due to a fault condition, then the entire circuit, including all other alarm customer locations, would be inoperative. However, with the use of a ground return, the signal from the protected location is sent along the metallic path and also along each of the two wire-ground combinations so that, in essence, each signal is sent three ways. Then, if the metallic facility is rendered inoperative by virtue of a break or other fault, the protected location can still send a signal to the alarm company central station via one of the two wire-ground combinations so the alarm company can sense a problem occurring at the protected location.

Accordingly, there are three means by which the signals can be received by the alarm company central station, two of which are provided by the telephone company and one of which is derived by the customer through the use of its equipment. Tariff 104-T provides that a customer may derive a channel for its own use from telephone company-provided channels (Exhibit 31).

Kings makes several contentions regarding the utilities' serving arrangements which can be summarized as follows:

1. The provision of a single wire (or single metallic conductor) without a ground return provided by the utility, does not constitute a "channel" as defined in Tariff 44-T.

2. The provision of a pair of wires (or two metallic conductors) constitutes only one "channel" under Tariff 44-T. The ground return aspect of the circuit is not a channel for which a charge can be made.

3. The tariffs are ambiguous since a pair of wires would be charged for as one single service channel when provided on an intraexchange basis and because the filing of a new tariff offering, effective August 17, 1974, provided for a single channel which performs the same function for which the utilities had charged Kings for two single service channels.

The question is: Did the defendants, in providing a pair of wires between Kings' customer locations and its monitoring station, provide one or two interexchange channels? If two such channels were provided, then the proper charge was made and the defendants must prevail; however, if only one such interexchange channel was provided, then Kings must prevail and is entitled to reparation for any period of time not barred by the statute of limitations set forth in Section 736 of the Public Utilities Code.

Tariff 104-T (Exhibit 4) provides in part as follows:

"II. Interexchange and Interdistrict Area Channels

A. Channels suitable for transmission of direct current mark-space signals at a rate up to 30 bauds

1. Channels

	Rate Per Month	
	Single Service	Duplex Service
Per Mile or fraction thereof, airline measurement	$.90(I)	$1.10(I)"

In connection with this foregoing tariff provision, all parties concede that duplex service is inapplicable in this case.

Tariff 44-T (Exhibit 5) defines a channel as follows:

> "...a path (or paths) for electrical communications, between two or more stations or Utility offices, furnished in such manner as the Utility may elect, whether by wire, radio or a combination thereof and whether or not by means of a single physical facility or route."

Kings' Evidence

The senior engineer testifying for King Alarm, Dr. Bevc, was employed by the Commission and was in charge of the Rates and Standards Unit from January 1, 1974 until January 1, 1976 during which time his title was Associate Utilities Engineer. His duties included the review of tariffs applicable to telephone company services.[1/]

He testified that if a utility provides a pair of wires to a burglar alarm company for transmission of direct current signals between the alarm company monitoring station and the alarm company's customers, it would be providing one channel within the meaning of Tariff 44-T (Exhibit 5) and that the proper rate for such service would be 90 cents per interexchange mile. He testified that a customer can create one single service channel out of one wire if he uses ground return ("ground return" is the use of the earth as a conductor to return the signaling current to its source whereas "metallic return" utilizes a second metallic conductor to return the signaling current to its source). He testified that under Pacific's tariffs a single service channel cannot be provided with one wire. He stated he did not know whether Pacific's tariffs prohibit Pacific from providing one single service channel by using one wire.

1/ Dr. Bevc testified pursuant to subpoena by complainant. A motion to quash the subpoena was denied. As the Commission staff did not plan to participate in this proceeding, Dr. Bevc made no special preparation in connection with his testimony.

He testified that if Pacific provided one wire and ground it would have been able to charge for one single service channel under its tariffs. When asked whether there would be a single channel under the tariff when a wire was provided by the utility and the ground was provided by the customer, he stated that he had an opinion, and upon being asked what that opinion was, he could not answer. He stated that a single wire between two points with a customer-provided ground is not a channel within Tariff 44-T, but that a single wire including a ground would, electrically, be a channel and would be a path or paths for electrical communication. He further stated that Pacific's tariffs do not specify how many wires are required for a channel but that a single service channel cannot be provided with one wire.

This witness testified that Pacific could charge for two single service channels where the customer asked for a service which could be provided only by the provision of two single service channels but did not specifically ask for two single service channels and in such case could charge at the rate of $1.80 per interexchange mile.

Dr. Bevc later testified that he could not answer the question of whether a single wire with a customer-provided ground would constitute a channel and admitted that he did not know whether Pacific's tariffs prohibit the provision of one single service channel with the use of one wire. He testified that Pacific's tariffs do not specify how many wires are required for a single service channel. His opinions appear to be based on whether the utility or the customer provides the ground since he did express the opinion that the utility has no authority to charge for a single service interexchange channel where the facility consists of one wire and a ground supplied by the customer.

All that he had done in connection with this case was to perform a preliminary inquiry involving no research and leading to no conclusion. Dr. Bevc did not know what time period the tariff sheets covered and he had not examined old and new tariffs concerning the subject at issue. He could not venture an opinion as to whether the billing practice in question was within tariff authority. He did not participate with the Commission's staff in the development of private line tariffs. He was unable to define single service and could not advise whether a cost support exhibit would have been filed on a tariff of this nature. He said that he did not have all of the facts necessary to render an opinion of whether Pacific had properly applied its tariffs. He said that tariff wording in effect at the relevant time, Pacific's history of practices related to the application of this tariff, and engineering input would be needed in order to render such opinion. Accordingly, the opinion of this witness on whether or not the defendant utilities properly charged for two single service channels may not be considered as having much probative value.

Kings' second witness was D. Reginald Tibbetts, a consulting electrical engineer with forty years of experience in the communications field. His experience included supplying communications equipment to clients and installing, operating, and maintaining that equipment. Mr. Tibbetts is qualified as an expert pursuant to Public Utilities Commission General Order No. 138 for the purpose of certifying ancillary equipment for connection directly with the telecommunications network. In that capacity, Mr. Tibbetts has certified approximately 130 pieces of equipment, including burglar alarm equipment. As a consulting electrical engineer, Mr. Tibbetts maintains a copy of hundreds

of applicable tariffs pertaining to the provision of telephone company services, including copies of Tariffs 104-T and 44-T, and he frequently advises his clients respecting authorized charges for various telephone company services. Some of his clients retain him for the purpose of examining their telephone company billings and determining their accuracy and correctness under the applicable tariffs.

Mr. Tibbetts proceeded to explain the operation of the McCulloh effect used by Kings in serving its customers. The telephone company supplies one pair of wires (two wires) between the Kings monitoring station and its customers. The alarm company supplies receiving equipment and a wire to ground at the monitoring station, a sensor sending equipment, and a wire to ground at each customer location. When an alarm condition occurs at a customer location, it is detected by the sensor and a signal is sent to the monitoring station on the two wires by a process of interruption by opening the pair of wires. Immediately thereafter the same signal is sent from one or both of the wires to ground by means of the customer's ground wire. The ground wire thus provides a backup system to the two wires by producing a redundant signal. Consequently, if one of the two wires should become broken or otherwise incapacitated so that the initial signal could not pass to the monitoring station by interruption between the two wires, the alarm signal could still be sent from the other wire to ground.

Referring to Tariff 104-T (Exhibit 4), Mr. Tibbetts explained that the Kings service during the period of the complaint constituted single service for which charges could be assessed under the tariff at the rate of 90 cents per interexchange mile per channel. Referring to a diagram of a sample telephone company circuit (Exhibit 8) consisting of a pair of wires from the Kings

monitoring station (M), through various telephone company central offices (CO), to various Kings customers (C), Mr. Tibbetts explained that Tariff 104-T would authorize a charge of 90 cents for each interexchange mile -- each mile between the various telephone company central offices which crossed telephone exchange boundary lines. The circuit diagrammed would justify a charge of 90 cents multiplied by 23 miles, or $20.70. To that amount would be added $5 and $10 charges for "channel terminals" at each customer location and at the monitoring station.

Next, referring to the definition of a "channel" in Tariff 44-T (Exhibit 5), Mr. Tibbetts was asked how many channels Pacific was providing to Kings when it supplied two wires for use in McCulloh effect burglar alarm service. He answered, "One." Mr. Tibbetts explained that direct current, by its nature, must flow and return to its source, and that it cannot so flow on a single wire without more. Therefore, such a single wire could not constitute a channel under the definition in Tariff 44-T, which requires that a channel be a path for the communication of electricity. A single wire with a ground return could constitute such a channel, but if the ground wire were supplied by the customer the telephone company would not be supplying the channel.

In actual operation, Mr. Tibbetts explained, the pair of wires supplied by the telephone company constitutes a single channel on which an alarm signal passes by interruption between the two wires. A second nonsimultaneous channel is derived by the customer through the use of the customer-supplied wire to ground at each customer location and at the monitoring station and the redundant alarm signal passes on this second channel.

Referring again to the diagram admitted as Exhibit 8, Mr. Tibbetts testified that, assuming that the diagram represented a McCulloh effect burglar alarm circuit, that the solid line represented a pair of wires between the alarm company monitoring station and its customers, and that the alarm company supplied the ground connections at each customer location and at the monitoring station, Pacific was authorized to charge only 90 cents for each interexchange mile and not $1.80, since only one interexchange channel was provided by Pacific. If Pacific, in fact, provided two channels, as it contended, it would have had to charge for two channel terminals at each customer location and at the monitoring station. The actual channel terminal charges for McCulloh service corresponded to the $5 and $10 charges shown on the diagram and were assessed for only one channel terminal at each customer location and at the monitoring station. Thus, the channel terminal charge was consistent only with the provision by Pacific of one interexchange channel and not two.

Mr. Tibbetts explained the application of the revised version of Tariff 104-T as it applied from and after August 17, 1974 (Exhibit 9). Referring to the Fourth Revised Sheet 8, paragraph 7(b), and the column marked "Type 1009 HDX", he testified that the revised tariff authorized a charge of $2 per interexchange mile per channel for interexchange channels of 15 miles or less. The rate declined on a sliding scale as the number of interexchange miles increased. "HDX" corresponds to single service under the superseded tariff (Exhibit 4), and the Type 1009 service refers to a service offering which corresponds with that provided by Pacific to Kings during the period of the complaint. Mr. Tibbetts stated that if the pair of wires supplied by Pacific between the alarm company monitoring station and the alarm company customers for McCulloh effect service were billed under the

new tariff, the tariff would authorize a charge of $2 per interexchange mile per channel for the first 15 miles. If the interexchange mileage were 15 miles or less the tariff would authorize a charge of $2 per interexchange mile for one channel and $4 per interexchange mile for two channels. The definition of a "channel" in Tariff 44-T (Exhibit 5) remained unchanged under the revised tariff.

Additional charges applicable to McCulloh effect service under the revised tariff, Mr. Tibbetts explained, are set forth on the Third Revised Sheet 5A, paragraph 3(a)(1), and provide for $3 for each local loop -- each pair of wires from the telephone company central office to each customer location. (Local loops are shown on the diagram admitted into evidence as Exhibit 8 as the lines between locations marked "C.O." and locations marked "C".) Local loops were billed as channel terminals under the version of Tariff 104-T in effect during the period of the complaint and a charge is assessed for channel terminals defined under the revised tariff as the termination of a local loop in a telephone company central office in the amount of $2 per channel terminal, as shown on the Fourth Revised Sheet 8, paragraph 7(a).

Mr. Tibbetts testified further that in general the tariffs do not specify the number of wires that a telephone company must supply in providing a particular service, Type 1009 service under the current version of Tariff 104-T being an exception in that it specifies the provision of two or more wires. He testified that Pacific would be authorized to charge for one channel if it provided a single wire and the ground return and two channels if it provided two channels to fulfill the needs of a customer. Neither a single wire without the ground nor the

ground without the wire could constitute a channel under Tariff 44-T. With respect to the revised version of Tariff 104-T (Exhibit 9), Mr. Tibbetts explained that the two wires provided by Pacific for McCulloh effect service were identical to the physical facility provided prior to August 17, 1974 under the earlier version of Tariff 104-T, Exhibit 4.

With reference to the definition of a channel in Tariff 44-T, Mr. Tibbetts explained that a channel can be provided by means of a single facility or route, but that a channel must at the minimum consist of a path for electrical communication, and such a path must enable electricity to pass in one direction and to return to its source in the other. Therefore, a single wire between two points being used for the transmission of direct current for the McCulloh effect cannot constitute either a path or a channel. Also, pursuant to Sixth Revised Sheet 13 of Tariff 104-T (Exhibit 11), a channel must be continuously available 24 hours per day and seven days per week in order to be billed as such by Pacific. Therefore, even if Pacific were to provide the ground return in addition to the pair of wires for McCulloh effect service it could not charge for two interexchange channels since the two channels are not simultaneously available -- the pair of wires cannot signal simultaneously with the channel consisting of one or both of the wires to ground.

Mr. Tibbetts testified that McCulloh effect operation requires two wires and a customer-provided ground which is comprised of a short piece of wire attached to a grounded structure. He stated that the alarm company would be "very foolish and negligent to use a utility-provided ground". He described the McCulloh effect operation as using nonsimultaneous channels where the signals travel alternately, first between the two wires

by interruption and second from one or both wires to ground. He testified that in the event of an alarm condition at an alarm customer station the alarm central station would receive the grounded signal over each of the two wires provided by Pacific.

He testified that, in providing two wires for McCulloh effect operation, one channel is provided by Pacific in accordance with Tariff 44-T. He testified that if the telephone company provided one wire and the customer provided the ground, the telephone company would not have provided a channel in accordance with Tariff 44-T. However, he testified that one piece of wire would be considered a path for electrical communication and that the term "channel", as defined in Tariff 44-T, does not define a "channel" in terms of numbers of wires.

Witness Tibbetts also testified that when a combination of channels is necessary to provide a channel for a single customer-required purpose, the telephone company can lawfully charge the customer an amount based upon the type and numbers of channels required for that purpose. He testified that the tariff charges for any of the services provided under Pacific's tariffs are based upon the use to be made by the customer of the facilities provided.

After August 17, 1974, the effective date of Pacific's revised private line tariffs which provide a Type 1009 channel for McCulloh effect operation, Kings Alarm utilized Type 1009 channels instead of the single service channels previously utilized (Exhibit 9). Mr. Tibbetts testified that Pacific does not provide the ground return for a Type 1009 channel utilized for McCulloh effect. He testified that Pacific provides two wires for Type 1009 channels and they do not differ in any way, from an electrical standpoint, from the two wires provided by Pacific for single

service channels before August 17, 1974, which were charged as two single service channels. He further testified that "half duplex", which is provided in Pacific's tariffs effective August 17, 1974 (Exhibit 9), is the same as one single service channel.

Witness Tibbetts stated that he considers it part of his professional knowledge to be current on Pacific's tariffs and to know intimately what is contained therein. He testified that he reviewed each and every page of Pacific's tariffs relevant to the instant complaint. However, he testified that the definition of "half duplex service" is contained in Tariff 44-T, but when shown the tariff, admitted that he was incorrect and that he did not know where it could be found. He further testified that the current Tariff 104-T which provides for Type 1009 channels specifically states that a pair of wires will be provided in connection therewith. However, when shown the applicable tariff sheet (Exhibit 10) and asked whether the tariff sheet states that two wires or a pair of wires must be provided, this witness pointed to a portion of the tariff under "Type 1009" which states, "Such channels require the use of interoffice metallic channels." He then testified that "two or more was my answer". He further testified that in reviewing his client's telephone bills, he could not determine whether his interpretation of the tariffs was correct.

He testified that if the telephone company provided a 30-baud single service channel using one wire and the telephone company provided the ground, the telephone company could not charge 90 cents per interexchange mile in accordance with Tariff 104-T. This testimony is in direct opposition to the testimony of the senior engineer from the Commission who testified on behalf of Kings that if Pacific provided the wire and ground

it would have been able to charge for one single service channel under its tariffs. Witness Tibbetts, in his later testimony, stated that if the telephone company provided a 30-baud single service channel on an interexchange basis using one wire and the telephone company provided the ground, it could charge for this channel at the rate of 90 cents per interexchange mile in accordance with Tariff 104-T.

This witness stated that a piece of wire by itself can be a path but it does not constitute a path for electrical communications. However, upon examination by the examiner he said that a piece of wire not connected to anything is a path for electrical communications. He testified to the effect that such a single wire alone can be a channel by tariff definition.

Mr. Tibbetts testified that a single wire is not a channel in accordance with Tariff 44-T even if the customer provided the ground, yet he admitted that a single wire is a path for electrical communications. He further testified that the McCulloh effect uses nonsimultaneous channels, yet stated that when an alarm condition occurs, the alarm central station would receive separate ground signals simultaneously over each of two wires provided by the utility. He appeared to be confusing electrical circuits with channels as defined by the tariffs.

Kings' third and final witness was Alan Byron, vice president of accounting and systems for Kings and a certified public accountant. He identified telephone bills received by Kings from Pacific for the months of June and July 1974 for a circuit identified as 28KS325. The amount of each bill was $45.57 (Exhibit 12). Mr. Byron testified that as part of his duties he conducted an audit to determine the basis on which Kings was being billed by Pacific for circuits connecting Kings' monitoring station with its customers. One of the circuits he

audited was 28KS325 and the results of that study were summarized on Exhibit 13 under the column headed "Old Way". Kings was billed for that circuit $1.80 per interexchange mile for 13 interexchange miles in June and July 1974.

He performed a similar analysis of two telephone bills received in December 1974 and January 1975 after the revised Tariff 104-T (Exhibit 9) had gone into effect. (The two bills were marked Exhibit 14.) These bills pertained to the same circuit as the bills admitted as Exhibit 12 and they were audited under the column "New Way" on Exhibit 13. The audit disclosed that each interexchange mile was billed at the rate of $2.

Mr. Byron stated that under the "Old Way" column both the mileage figure and the billing rate figure were obtained from Pacific. The "New Way" computation used the same mileage figure and the $2 rate was obtained from the tariff (Exhibit 9) pursuant to the sliding scale shown on the Fourth Revised Sheet 8.

Pacific's and General's Evidence

Witness Douglas Mackintosh, Pacific's administrative manager responsible for administration of private line tariffs, testified on behalf of Pacific and General that Tariff Schedule Cal. P.U.C. 104-T, Third Revised Sheet 7 (Exhibit 4), and Schedule Cal. P.U.C. 44-T, Tenth Revised Sheet 19 (Exchange 20), authorized the provision of alarm circuits to Kings and are the subjects of this complaint. He testified that Pacific's tariffs provide that a channel may be furnished in any way electrically possible. He testified that Pacific's tariffs make no reference to whether Pacific or the customer is to provide the ground return for single service channels using ground return and that Pacific did provide such channels using ground return during the period in dispute.

He testified that where the customer requires a metallic single service channel using ground return, Pacific normally provides the wire and the customer normally provides the ground. He testified that page 5 of Pacific's Marketing Practice 750.05 (Exhibit 19) indicates that one of the reasons Pacific has not provided the ground return is that it sometimes causes damage through electrolysis to the metallic components used for the ground return. If either Pacific or the customer provided a ground, a single service channel would exist. Pacific's tariffs would authorize it to charge for a single service channel where Pacific provides the wire and the customer provides the ground as the tariff does not specify who connects the wire to the earth return and Pacific has provided the facilities necessary for the customer to complete the channel. Mr. Mackintosh testified that it was his understanding that some ground return was necessary to complete the path for electrical communication and that if Pacific provided only the wire and not the ground return, it would not be providing a "channel" under Tariff 44-T. He testified further that assuming Pacific supplied two channels to Kings, neither of the channels was complete without the customer-supplied ground. Mr. Mackintosh stated that if Pacific supplied a single wire to a McCulloh effect customer and if that wire did not constitute a channel under Tariff 44-T, Pacific could not charge for a channel under that tariff. He later testified that a single wire without ground could be a channel and explained that this contradiction from his earlier testimony resulted from his nervousness when he was first called as a witness.

He testified that during the time in question Kings required two single service channels provided by wire facilities for each of its interexchange alarm systems because each system required the ability to transmit simultaneous signals over two channels in one direction. Since one single service channel would provide the transmission of only one signal, two channels were needed.

He further testified that the provision of two single service interexchange channels for McCulloh effect operation is consistent with treatment given other alarm company customers since December 1940. In accordance with the specific provisions of Private Line Guide Schedule No. 1091, effective July 1, 1942 (Exhibit 22) and with FCC Tariff No. 91 (Exhibit 21), Pacific charged for one channel using metallic return at the rate of $3 per channel per mile which was twice the rate charged for one channel with ground return, and that one metallic channel was treated as the equivalent of two ground return channels. This witness testified that the specific tariff offering of a metallic return channel was eliminated from Pacific's tariffs and private line guide schedules in 1953 because of its concern for its inability to offer metallic service under all conditions and due to changes in serving technology which made it more economical to provide service using nonmetallic facilities.

The equivalent of metallic return channels provided under Pacific's tariff offering, effective June 20, 1953 (Exhibits 23 and 24), was charged for at the rate of two single service channels as described in a memorandum dated April 30, 1953 (Exhibit 25). Additional memos from Pacific's files, dated April 6, 1959 and July 24, 1969, showed this interpretation of Pacific's tariffs to be consistent for many years (Exhibits 26 and 27). Further, Exhibit 28 was introduced by Pacific as portions

of the official transcript in hearings before the Commission on Application No. 49142. It contains the testimony of Mr. William H. Parker, one of Pacific's rate witnesses involved in these hearings, in response to questions being asked by Mr. Lessing Gold, an attorney for the Western Burglar and Fire Alarm Association of which Kings was a member. Mr. Parker's testimony is that "The reason for Mr. Gold's query on this is that his industry takes two channels for most of their circuits, so they are acquainted with the $1.50 rate for that service as opposed to the $1...." The $1 is with reference to duplex service (Exhibit 28).

Page 8 of Pacific's Marketing Practice (Exhibit 19) also describes consistent application of Pacific's tariffs wherein it states that:

> "Where the channel will be used for 'Metallic Return' operation (the signal returns to its source by Telephone Company-provided wire facilities), the rates for two single service channels apply with one channel terminal (or additional channel terminal) at each station connected (usually a multi-point channel). A customer is billed for two single service channels when:
>
> > He specifies he wants a metallic pair; or
> >
> > He specifies he wants the 'McCulloh Effect' (same as metallic); or
> >
> > He uses other language to describe a 30 baud channel that can only be satisfied with a metallic facility."

An exhibit attached to Pacific's application to the Commission which resulted in the revision of Pacific's private line tariffs effective August 17, 1974 to provide, among other things, for the Type 1009 channel for use in the McCulloh effect operation stated:

> "Note: Channels for three levels of signals (Type 1009 under proposed) are presently furnished as a special arrangement when requested by customers and when suitable facilities are available at the rate for two interexchange or interdistrict area channels; i.e., $1.80 per air line mile per month, plus monthly rate for half duplex channel terminals." (Exhibit 29, p. 103.)

Pacific's proposed rates and tariff revisions for private line services were approved; the Commission staff had no objection thereto (Exhibit 30).

This witness also testified that if a utility was not applying its tariff correctly, its misapplication would be evident when a rate application is filed. This is because a revenue effect study is submitted with the rate application reflecting the application of a tariff and showing whether a charge is made for one or two channels.

He testified that while Pacific had no specific tariff provision for a metallic return interexchange channel, this did not mean that Pacific had no tariff authority to charge for two single service channels when the equivalent of a metallic return channel is required by the customer. Pacific takes the customer's requirements and uses a combination of services provided for in its tariffs in order to satisfy the customer's request. Authority to use a combination of channels to satisfy a customer's requirement is contained in Tariff 44-T, Sheet 19 (Exhibit 20). Witness

Mackintosh testified that in order to obtain service necessary to satisfy the McCulloh effect operation, the customer would order two single service metallic channels specifically provided for in Pacific's tariffs effective prior to 1953.

After August 17, 1974, Pacific again had in its tariffs a specific service offering which would satisfy McCulloh effect requirements which did not require Pacific to utilize a combination of available tariff service offerings for McCulloh operation. He testified that single service channels continue to be offered even after the availability of Type 1009 channels, and Kings utilizes and is charged for the Type 1009 service; yet, there was no change in the manner in which facilities were provided to Kings for McCulloh operation before and after August 17, 1974.

The utility's second witness, Mr. Sibley, engineering staff manager for Pacific, is responsible for technical aspects of alarm channels and for reviewing existing private line tariffs from an engineering standpoint in order to give advice on engineering aspects of proposed tariff changes, and for reviewing customer requests for unusual service arrangements in order to help determine whether such requests fall within the parameters of existing tariff offerings.

He testified that during the period of the complaint there was no provision in Pacific's tariffs for a 30-baud interexchange channel using metallic return. Neither one single service interexchange channel nor one duplex interexchange channel would satisfy the needs of McCulloh effect operation since it requires simultaneous transmission of two signals in one direction. He testified that, therefore, Pacific provided two single service interexchange channels with ground return as two independent channels for electrical communication, where the customer could

connect these two single service channels together to derive a third channel using metallic return which would provide the redundancy required for McCulloh operation by obtaining the equivalent of three channels for the required backup.

He testified that signaling over the two interexchange single service channels provided by Pacific consists of using the two wires individually with ground return which forms two distinct paths back to the alarm central station and a third path for signalling by connecting the two wires together. The alarm central station need receive only one of the three signals to register an alarm (Exhibit 33). In the event of a fault at any point in the system, alarm locations on either side of the fault continue to have one path over which to transmit an alarm signal to the central station (Exhibit 34). He testified that one single service interexchange channel would not satisfy the requirements for McCulloh operation because it would provide no redundancy since a fault at one protected location could render the entire circuit inoperative.

He testified that McCulloh effect operation requires the ability to transmit simultaneous signals in the same direction because the signals generated when an alarm condition exists travel by each of the two wires from the protected location to the alarm central station. He testified that the two ground return signals operate simultaneously because one pair of electrical contacts located at the alarm location sends both signals which are available separately at the alarm central station because they originate separately over the two separate wire conductors.

Mr. Sibley testified that where one single service channel was provided, the telephone company normally provided the ground from its central office as part of the channel terminal. However, where two single service channels were provided for McCulloh operation, the alarm company furnished the ground. He stated that this was because the channel terminal could furnish either one signaling wire and ground or two signaling wires. Since the second channel terminal would be required to provide telephone company ground in connection with the two metallic conductors required for McCulloh operation at its tariff rates, it was more economical for alarm companies to furnish the ground than to pay for a second channel terminal in order to get a telephone company ground. In addition to the fact that use of a local ground by the alarm company gave them a more simple and more reliable system, he testified that the system functions in the same manner no matter who provides the ground.

However, even without Pacific's providing the ground, he testified that where Pacific provided a pair of wires for McCulloh operation it would charge for two single service channels since there are two single service channels ready and waiting to be used upon the application of ground. Even where the customer has no use for a ground and does not intend to provide a ground, where he requests and Pacific provides a pair of wires for a burglar alarm system, Pacific would deem this to be a request for a metallic return channel for which it has no tariff offering and would, therefore, charge for two single service channels.

He testified that one wire provided by Pacific for each single service channel provides a path for electrical communication as set forth in Pacific's tariff definition of a channel (Exhibit 6) even if the customer provides the ground. He explained that if

Pacific provided the ground it would be provided as part of the channel terminal and not as part of the interexchange channel facilities which are the subject of this complaint. A path does not presume the ability of electricity to go and return, but denotes a means of passing current.

Referring to Exhibit 32, this witness testified that the one wire between two telephone company central offices would constitute a path for electrical communication between two or more utility offices in accordance with Pacific's tariff definition of a channel and, therefore, would constitute a channel even if no ground is applied. Likewise, he testified that each of the two wires provided between two telephone company central offices necessary for McCulloh operation as depicted in Exhibit 33 would constitute a channel in accordance with Pacific's tariff definition of a channel.

He went on to testify that while current does not flow electrically without the presence of a return path, metallic or ground, a single wire without ground return would provide a path for electrical communication. This path would not be a circuit. Pacific distinguishes between a path and a circuit and between a channel and a circuit. He testified that a circuit is a slang expression for a completed electrical path in which current is flowing from a source back to the source, whereas a path is a device such as a wire which can be activated and used to send information. It need not be a complete path to be a path nor does Pacific's tariff definition of a channel require that the path be complete. Thus, a path can constitute a channel yet may not constitute a complete circuit.

He stated that where a customer requests that Pacific provide two wires and where the customer was not going to use any ground, Pacific would charge for two channels because Pacific would, in effect, say to the customer, "You can accomplish the same results here with one wire and the ground as you can with two wires and, therefore, we will supply you with one wire and you can ground it, and we will charge you for one channel. But if you want to have two wires and work it out as a circuit that way, instead of working it out in the most economical manner, we will have to view this as being two different circuits, each being capable of being grounded."

Discussion

The basic issue in this case is whether Pacific and General, in providing service to Kings for operation of its alarm systems, provided one or two interexchange single service channels. Whether the customer or the utility provides the ground associated with the facilities provided by the utility is irrelevant to the question of whether the utility provided one or more channels. A "path" is provided when one wire (or a single metallic conductor) is provided by the utility. Thus, when one wire or a single metallic conductor is provided by the utility, one channel is provided in accordance with Pacific's tariffs since the definition of a channel provides, in part, that a channel is "...a path (or paths) for electrical communication, between two or more stations or utility offices...."

A channel or a path need not be a complete facility by which electricity can flow. A "circuit" is such a complete facility. However, neither a channel nor a path is the same as a circuit.

Pacific's tariffs did not specifically provide for an interexchange single service channel with metallic return during the period in dispute. However, a combination of services or channels provided for in Pacific's tariffs may be utilized to satisfy a customer's requirements in accordance with Pacific's Tariff 44-T, Sheet 19 (Exhibit 20).

It is undisputed that when Pacific provided Kings with interexchange private line services to satisfy its McCulloh effect requirements, the utility provided two wires (or two metallic conductors) between Kings' alarm central station and its alarm customer locations. Thus, since two paths are provided by virtue of the two wires or metallic conductors, two channels were provided to each of Kings' alarm systems. These two channels are made electrically operative by application of ground. The customer normally provides this ground although the utility could provide the ground at an additional charge for a second channel terminal. Kings argues that there must be a channel terminal for each interexchange channel. Pacific's tariff expert, witness Mackintosh, testified that there is no tariff requirement that a channel terminal be provided for each and every interexchange channel and that the tariff denotes the facility required for terminating stations.

These two channels provide for simultaneous transmission of signals in the same direction (back to the alarm central station). Thus, one duplex channel would not satisfy Kings' requirements nor would one single service interexchange channel because, by tariff definition (Exhibit 6), a single service channel can transmit only alternately in either direction.

A third channel is then derived by the customer in accordance with Tariff 104-T, Sheet 12 (Exhibit 31) by use of the two metallic paths to form the equivalent of a metallic return channel. These three levels of signals are required for the redundancy necessary for McCulloh effect operation.

Kings argues that Pacific and General provided just one interexchange single service channel for each of its alarm systems during the period in dispute. However, in providing the interexchange facility for one interexchange single service channel with metallic facilities, Pacific would normally provide one wire between its utility offices (Exhibit 32). There is no dispute that such service would not satisfy the requirements of McCulloh effect operation. The only service that would satisfy this requirement during the period in dispute is the provision of two single service channels offered as a combination of channels in accordance with Pacific's Tariff 44-T, Sheet 19 (Exhibit 20).

Kings argues that the revision of Pacific's private line tariffs in August 1974 to specifically provide a single channel (Type 1009) which performs the same function for which the utilities had charged Kings for two interexchange single service channels supports its position that the utilities provided only one channel to Kings during the period in dispute. This revision was part of an entire private line tariff restructuring; moreover, Pacific continues to offer the equivalent of one single service interexchange channel under its present tariffs, yet Kings does not use this service for its McCulloh operation but uses the Type 1009 channel.

This fact renders Kings' contention infirm since, if Kings is correct that Pacific and General provided just one interexchange single service channel per alarm system during the period in dispute and that one such channel satisfied the requirements for McCulloh effect operation, there is no reason for Kings to utilize Type 1009 service. It must be concluded, therefore, that Type 1009 service is the equivalent of two single service interexchange channels provided during the period in dispute, particularly since the channel facilities provided Kings for Type 1009 service are identical to that provided during the period in dispute.

Kings suggests that only one channel was being provided during the period in dispute because a pair of wires is charged for as one channel when used as an intraexchange circuit. Intraexchange channels are not in issue and, furthermore, a different tariff provision is applicable. Except for witness Sibley's testimony that he believed the difference in rates for interexchange versus intraexchange channels was due to differences in facility availability and costs, the basis for the rate treatment of intraexchange channels was not discussed in this proceeding. This is not the proper time and place for reviewing the reasonableness of such rate treatment. It cannot be an issue here (Section 1702, California Public Utilities Code).

The weight of evidence in this matter is that Pacific and General did provide two single service interexchange channels to Kings during the period in dispute. Pacific's Tariff 104-T, Sheet 7 (Exhibit 4) authorized the charge of $1.80 per interexchange mile per month for which Kings was billed.

Kings contends that Pacific's relevant tariffs were ambiguous and might permit both a reading that defendant furnished either two interexchange channels or only one. While Kings correctly points out that ambiguities in the meaning of utility tariffs are to be resolved against the utility (Apex Smelting Co. v Southern California Gas Co. (1962) 60 CPUC 74, 75; and Transmix Corp. v Southern Pacific Co. (1960) 187 CA 2d 257, 267, 268), it has failed to show that there was any ambiguity in Pacific's relevant tariffs. Pacific's tariffs specifically set forth the availability of single service interexchange channels (Exhibit 4), specifically define the technical capability of "single service" (Exhibit 6, page 4), and provide that a combination of two or more channels may be used to provide channel facilities for a single purpose and that charges, therefore, are determined upon the basis of the type and number of channels required (Exhibit 20). There is no dispute that the channel facilities which Pacific and General provided Kings during the relevant period satisfied Kings' specific requirements. Thus, the evidence is that Pacific's relevant tariffs were not ambiguous.

That there was no ambiguity is also demonstrated by the consistent historical application of Pacific's tariffs, private line guide schedules, and FCC tariffs since 1940 (Exhibits 21, 22, 23, and 24). It was further demonstrated by the testimony of witness Mackintosh and as described in Pacific's correspondence on this subject (Exhibits 25, 26, and 27), testimony introduced in Commission hearings on Application No. 49142 (Exhibit 28) and an exhibit explaining Pacific's manner of providing and charging for alarm channels attached to Pacific's application to the Commission which resulted in the revision of Pacific's private

line tariffs effective August 17, 1974 (Exhibit 29). Even if there was any ambiguity, Pacific's consistent, long-standing contemporaneous interpretation of its tariffs should be given great weight in removing any doubt as to the interpretation (1 Davis, Administrative Law Treatise, Section 5.06 (1958); see also Norwegian Nitrogen Prod. Co. v United States (1933) 288 US 294, 315, 53 S.Ct. 350, 358; DiGiorgio Fruit Corp. v Dept. of Employment (1951) 56 C 2d 54).

Portions of the complaint are barred by Section 736 of the California Public Utilities Code which provides in pertinent part:

> "All complaints for damages resulting from the violation of any of the provisions of Sections 494 or 532 shall either be filed with the commission, or, where concurrent jurisdiction of the cause of action is vested in the courts of this State, in any court of competent jurisdiction within three years from the time the cause of action accrues, and not after. If claim for the asserted damages has been presented in writing to the public utility concerned within such period of three years, such period shall be extended to include six months from the date notice in writing is given by the public utility to the claimant of the disallowance of the claim, or of any part or parts thereof specified in the notice."

Kings asserts that the alleged overcharges were in violation of Public Utilities Code, Section 532. Where assessed rates and charges are at a variance with filed tariffs in violation of Section 532 as alleged by Kings, this Commission has held that the period of limitations for reparations is three years as prescribed by Section 736 of the Public Utilities Code (Chromcraft Corp. v Davies Warehouse Co. (1960) 57 CPUC 519, 521; see also Walter Edsel White v So. Cal. Edison Co. (1962) 59 CPUC 740, 742).

The Commission has held that the running of the statutes of limitations extinguishes not only the remedy but the right of action and cannot be waived. A defendant cannot be deemed estopped by conduct from pleading such defense (Southern Pacific Co. (1959) 57 CPUC 328, 330; Pac. Mercury Television Mfg. Corp., et al., v Cal. Water & Tel. Co. (1957) 55 CPUC 721, 725; see also California Public Utilities Code Section 735). Permitting the defendant to make reparation after the right thereto has been extinguished would be prohibited discrimination (Southern Pacific Co., supra, at p. 331). Consequently, any causes of action which Kings may have regarding alleged overcharges by Pacific or overpayments by Kings for single service channels provided prior to May 9, 1972 are barred.

The Commission has repeatedly held that it has no jurisdiction to award costs of prosecuting a complaint (McDaniel v Pacific Tel. & Tel. (1965) 64 CPUC 707, 720; Bohan v San Miguel Tel. Co. of Cal. (1967) 66 CPUC 821, Decision No. 72065 (unreported opinion)). In the Bohan case, supra, the Commission held that in an action to recover overcharges by a utility under Public Utilities Code Section 532, the Commission has no authority to award costs, but under Public Utilities Code Section 734, the Commission has authority to make due reparations to the complainant with interest from date of collection. The jurisdiction of the Commission is limited to the granting of monetary awards as provided for in Sections 734, 735, and 736 of the Public Utilities Code which deals with reparations (Marie Quan Mak v Pacific Tel. & Tel. (1971) 72 CPUC 735, 738).

Findings

1. Kings is a company providing alarm services to the public and defendants are public utilities regulated by this Commission and providing certain private line services to Kings pursuant to tariff.

2. As between defendants Pacific and General, General jointly provided certain services in conjunction with defendant Pacific and General billed for said jointly provided services from April 14, 1974 to August 17, 1974; Pacific billed for said jointly provided services from December 2, 1968 to April 14, 1974.

3. The services provided by defendants consisted of interexchange single service channels under Tariff 104-T.

4. The interexchange single service channels provided to Kings normally consisted of a pair of wires arranged physically and electrically to allow the sending of three signals on three separate paths.

5. A path for electrical communication, whether or not communication takes place, is a channel as defined under Tariff 44-T.

6. Tariff 104-T, effective during the period of the complaint, specified a rate of 90 cents per interexchange mile for single service private line channels and $1.10 per interexchange mile for duplex service private line channels.

7. Duplex service is a service allowing transmission in both directions simultaneously, whereas single service is for transmission of a signal in one direction only or transmission alternatively in either direction.

8. An alarm circuit having the McCulloh effect allows the circuit to be operable in the event of a fault and provides redundant paths to the alarm company's central station so that an alarm can be sensed by the alarm company.

9. McCulloh effect operation requires the ability to transmit two signals simultaneously in the same direction.

10. In order for Kings to have the McCulloh effect during the relevant period, single service channels under Tariff 104-T were required.

11. Tariff 104-T allows a customer to derive additional private line channels through the use of the customer's equipment for which there would be no charge by the utility.

12. When the utility provides a single service channel using metallic facilities, it is not obligated to provide two wires where one wire will satisfy the requirements of such service as defined by applicable tariffs.

13. The services provided by Pacific and General consisted of two interexchange single service channels which operated with ground return. Kings derived a third channel by connecting the two wire facilities provided by the utilities.

14. The utilities provided two single service channels pursuant to Tariff 104-T and charged the proper rate of 90 cents per interexchange mile for each single service channel and Kings was not overcharged.

15. Neither utility violated the provisions of Section 532 of the California Public Utilities Code.

16. Kings' right to bring action for alleged overcharges billed by Pacific prior to May 9, 1972 has extinguished.

The Commission concludes that reparation requested by Kings for the period December 2, 1968 to May 9, 1972 is barred by the statute of limitations set forth in Section 736 of the Public Utilities Code; that during the period December 2, 1968 to August 17, 1974 the defendants properly charged Kings for the

services provided in accordance with tariffs approved by and on file with the Commission and did not overcharge Kings; that no reparation is due Kings by the defendants or either of them and that the relief requested by Kings should be denied.

O R D E R

IT IS ORDERED that the relief requested by Kings Alarm Systems, Inc., dba American Protection Industries-Alarm Division, is denied.

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

Dated at San Francisco, California, this 3rd day of AUGUST, 1976.

President

Commissioners

Commissioner Robert Batinovich, being necessarily absent, did not participate in the disposition of this proceeding.