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ORIGINAL

Decision No. _____

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

California Interstate Telephone Company,
a corporation,

Complainant

vs.

Western Union Telegraph Company,

Defendant.

Case No. 7469

Best, Best & Krieger, by James H. Krieger and
Glen E. Stephens, for California Interstate
 Telephone Company, complainant.
Lawrence Berman and Noel Dyer, for Western Union
 Telegraph Company, defendant.
Orrick, Dahlquist, Herrington and Sutcliffe, by
Warren A. Palmer and Neal C. Hasbrook, for
 California Independent Telephone Association,
 Intervenor.
Maurice D. L. Fuller, Jr., for Witness Charles E.
 Gondak.
J. S. Shields and Richard T. Perry, for the Commission
 staff.

O P I N I O N

On October 23, 1962, complainant California Interstate Telephone Company, hereinafter sometimes called CITCO, filed the complaint herein requesting that the Commission issue its order permanently restraining defendant Western Union Telegraph Company, hereinafter sometimes called Western Union, from constructing, maintaining or operating certain intrastate private line high-speed data and voice transmission communication facilities for the purpose of providing competing intrastate private line service to Jet Propulsion Laboratory, hereinafter sometimes called JPL, between the facilities of JPL at Goldstone, which are within the area

presently being served by complainant, and the facilities of JPL at Pasadena. Defendant filed its answer on December 7, 1962, requesting that the complaint be dismissed. A petition by California Independent Telephone Association, hereinafter called CITA, for leave to intervene was filed January 29, 1963.

The petition for intervention was granted at the commencement of the public hearings which were held before Examiner Cline at San Francisco on February 5, 11, 13, 14 and 15, 1963. The matter was taken under submission upon the filing of the closing briefs on March 12, 1963.

The salient facts of record are the following:

Complainant CITCO is a public utility telephone corporation which, either itself or through its predecessor Interstate Telegraph Company, has been rendering telephone service to the Barstow Exchange in California since 1912. Interstate Telegraph filed its original tariffs under Advice No. 1 on May 22, 1925, and as a part of its Advice No. 1 included the Barstow Exchange map. In 1926 Interstate Telegraph Company further supplemented its tariff in Advice No. 4 by filing Cal. P.U.C. Sheet No. 320-T which was a map of the general service territory of Interstate and included the Barstow area and the site of the present National Aeronautics and Space Administration, hereinafter called NASA, installations at Goldstone. On November 21, 1962 a proposal was submitted by CITCO to this Commission to enlarge the Barstow Exchange to include the Fort Irwin and Goldstone sites.

Fort Irwin is approximately 20 to 22 miles from the edge of the Barstow Exchange. The distances from the edge of the Barstow Exchange to the various JPL tracking sites at Goldstone are approximately as follows: Venus, 15 to 17 miles; Echo, 20 to 22 miles; Goddard, 24 to 25 miles; and Pioneer, 28 to 30 miles.

CITCO through facilities owned by the Federal Government has been providing service to Camp Irwin and Fort Irwin since 1943. As of November 21, 1962, the U.S. Army at Fort Irwin was being provided by CITCO with 15 PBX trunks, one individual business line service, one intrastate private line teletypewriter facility, one intrastate private line telephone facility, one interstate private line telephone facility, and 3 interstate private line teletypewriter facilities. CITCO has also installed for the Sixth Army at Fort Irwin switched circuit automatic network equipment known as SCAN equipment and eleven public pay stations for the use of the personnel on the Fort Irwin reservation.

Since 1958 CITCO has been providing services to JPL. The services provided to JPL at the multiple sites of NASA located at Goldstone on the Fort Irwin Military reservation are as follows: 5 PBX trunks, 6 interstate private line teletypewriter facilities, and 8 interstate private line telephone channels.

CITCO owns, operates and maintains the pay stations located on the army base at Fort Irwin and the SCAN equipment referred to above. The open wire and carrier facilities used to provide the other services at the Goldstone-Fort Irwin area are owned by the United States Government but are operated by CITCO. CITCO provides all the common carrier communication services presently provided to the Goldstone-Fort Irwin area. At San Bernardino CITCO connects with The Pacific Telephone Company, and communications for JPL are handled by The Pacific Telephone Company from San Bernardino to JPL's facilities in Pasadena. JPL has a radio communications link from Goldstone and Pasadena to back up the public communication services provided by CITCO and The Pacific Telephone Company. The total monthly billing for services rendered by CITCO to the Fort Irwin military reservation, including the Sixth Army, JPL at Goldstone, and contractors, for the year ended September 1962 was \$53,379.

CITCO presently furnishes 18,636 circuit units of private line communication facilities in its service area including a variety of services to national defense operations as well as industrial customers. CITCO is licensed to operate 17 microwave stations, all of which are utilized in whole or in part to provide its private line communication services. The private line services furnished to the Sixth Army at Fort Irwin and to JPL at the NASA Goldstone sites utilize CITCO's existing microwave facilities between its Barstow Exchange and San Bernardino. All of the communications via Echo II, a space satellite, between Goldstone and other points and all of the communications via the Mariner II space probe between Goldstone and other points were transmitted over facilities of CITCO.

CITCO provides SAGE (Semi-Automatic Ground Environment) communication services to the Air Force which enables the Air Force to transmit data received at its radar stations to a direction center where it is coordinated with other information and retransmitted to the radar station or other Air Force installations so that interceptor planes may be dispatched to intercept targets. This service includes voice and high-speed data transmission requiring extremely high reliability and complex engineering. CITCO also provides microwave and data terminal facilities for North American Aviation's high-speed broad band data system between the Rocket Engine site at Edwards Air Force Base and Canoga Park, and it has constructed a complex communications network for air-ground communications demanding a high degree of reliability. This was done for FAA (Federal Aviation Agency) and connects George Air Force Base, Barstow, NOTS (Naval Ordnance Testing Station) and Edwards Air Force Base.

Formerly CITCO provided public message telegraph service but in 1962 it withdrew its tariff and ceased providing that type of service to the public. It does, however, provide leased facilities to Western Union for the use of Western Union at their agency offices for the transmission of message telegraph and money order service. CITCO also leases lines under its tariffs to Western Union for private line service.

Western Union has performed general communication services throughout California during the past 21 years and in San Bernardino County since 1894. At the request of The Pacific Telephone Company and Western Union, this Commission on December 21, 1951 issued its order effective on February 1, 1952, authorizing Western Union to cancel its tariffs "covering public message toll, private line and program telephone business and the business of providing public voice transmission facilities and service." (See Exhibit No. 24.)

Western Union has determined that if it is to survive it must be able to offer a broad range of services in the private wire service field including particularly the broad band data transmission service with associated voice coordination.

Exhibit No. 26 shows that in the year 1952 Western Union's public message volume was 130,174,504 and that there has been a continuing downtrend in this volume which by 1962 had decreased to 90,272,442 messages. As a result of Western Union's concentration on the expansion of private wire service, however, revenues from this service have increased from approximately \$8,000,000 in 1946 to approximately \$60,000,000 in 1962.

Western Union holds itself out to provide private line service on a nationwide basis. In recent years a large part of the circuit facilities being used by Western Union are leased facilities.

Western Union has private line services extending into the area served by CITCO. The facilities used by Western Union are furnished by CITCO under ten leases involving an aggregate of approximately 440 miles of intercity circuitry for which Western Union pays CITCO \$2,250 per month.

Private line record service is the only private line service offered by Western Union in CITCO's territory. However, Western Union operates two straight voice and one combination voice-record private line service in California intrastate service. The voice circuits are handled on facilities of Western Union.

Western Union also provides message telegraph service within the operating area of CITCO. CITCO maintains exchanges in 22 communities. At Barstow Western Union has a company operated main office. At five other points Western Union maintains telegraphically operated agency offices, at two points railroad operated agency offices, and at one point a telephone operated agency office. At the remaining 13 points message telegraph service is handled by telephone through a Western Union office or agency located at another point.

NASA has a contract with California Institute of Technology for the management and operation of JPL which is a division of the California Institute of Technology charged with the unmanned exploration of deep space.

Goldstone is an area of some 68 square miles located north of Barstow. It is part of the NASA Deep Space Instrumentation Facility or DSIF. At Goldstone data from spacecraft is processed as necessary and then transmitted to JPL at Pasadena. Goldstone also serves as a transmitting site for transmitting commands to the spacecraft, and it is used as a research site in basically space communications and determination of solar system parameters.

JPL at Pasadena serves as the nerve center for the deep space operations. Data is channeled to JPL at Pasadena, inserted into the computers and analyzed. The mission into deep space is evaluated and conducted from Pasadena.

Goldstone is government land and all the facilities at Goldstone are NASA property as are all the facilities of JPL. Ninety-nine and five-tenths percent of JPL work is for the United States government and 99.5 percent of that government work is for NASA.

As the present open wire and carrier facilities between Barstow and Goldstone are nearly exhausted it is necessary for JPL to arrange for additional communication facilities between Goldstone and Pasadena. JPL determined to request bids rather than to request the additional service from The Pacific Telephone Company and CITCO alone in order to put competitive pressure on the bidders to provide better service than that which is normally offered to subscribers.

JPL drew up specifications for the additional facilities and arranged for a bidders' conference in December of 1961. After that bids or proposals were submitted by two public utilities, The Pacific Telephone Company and Western Union, and by five electrical communications equipment suppliers, Motorola Incorporated, Lenkurt Electric, Collins Radio Company, Raytheon and General Electric. CITCO joined with The Pacific Telephone Company in its bid.

Four team members of JPL each received a copy of all seven proposals for independent evaluation during the following week. Then a meeting of the four team members was held, the proposals in general were discussed and Western Union was unanimously selected as the awardee.

In selecting the successful bidder, the team members evaluated the proposals on technical approach and presentation, the background and experience of the bidder's organization and management, and the cost of the system. The technical quality of the proposed system was definitely paramount. Cost was a secondary factor. Among the technical factors reliability was given by far the heaviest weight.

Western Union proposed a 6 KMC heterodyne microwave system. Its proposal set forth information regarding the technical people who would be concerned with the construction of the system and convinced the JPL evaluating team that they had a very thorough grasp of microwave reliability. Western Union made an early entry into the field of microwave communication and is now heavily engaged in a current microwave system which the Air Force is using.

Over the seven hop system Western Union represented that the system would have a reliability of at least 99.9 percent. The system will not require a shutdown for repairs or maintenance.

The Pacific Telephone Company and CITCO proposed an 11 KMC system which is more subject to outage in the presence of rain and moisture than a 6 KMC system. Their joint proposal did not set forth any information as to the identity of the technical people who would be concerned with the construction of the system but it did contain a statement that the objective for reliability on service over microwave systems is 99.7 percent. This proposal further stated:

"We propose to furnish your service over part of an existing route. That route is 1,012 miles long and was placed in service in 1950. The achieved reliability on it is 99.9%."

JPL accepted Western Union's proposal even though the quoted monthly service charge of \$10,234 was higher than the \$8,830 monthly service charge quoted in The Pacific Telephone Company-CITCO proposal. The Western Union proposal contains a note as follows:

"Monthly Rental will be priced in accordance with tariffs approved by the Federal Communications Commission and in any event will be no higher in price than those which may be offered by other common carriers."

but the Telephone Service request dated May 16, 1962 by which Western Union's proposal was accepted by JPL contains the following note:

"Charges quoted by Western Union are subject to final approval by the Public Utilities Commission of California, and/or the Federal Communications Commission."

Western Union considered its proposal as a competitive bidding proposition. In computing the quoted monthly rental charge it used rates for existing services that were somewhat similar to what was to be provided for JPL and which were in the area which would be competitive with other bids. At the time of submitting its bid Western Union had a general impression that the quoted charges would be sufficient to cover direct expenses and provide for some rate of return, but the general impression was not supported by any statistical study respecting investment, taxes, and costs of maintenance and operation.

The Pacific Telephone Company-CITCO proposal contains the following statement:

"The charges quoted in the Design Specification section of this proposal are firm, subject only to the usual approval by the California Public Utilities Commission."

JPL recognized that this Commission and the Federal Communications Commission, or one or the other, have jurisdiction in this matter and that the charges would have to be authorized by the Commission having jurisdiction.

On February 16, 1962 JPL notified Western Union that it was the successful bidder for the Goldstone-Pasadena microwave system. The JPL Service Authorization No. SA-5560 was accepted by Western Union on June 14, 1962. The fully executed basic termination agreement was returned to JPL by letter dated July 13, 1962. The initial target date for the completion of the microwave broad band facilities from Goldstone to Pasadena was April 30, 1963, but this date has been extended to October 15, 1963. May 27, 1963 is the latest date that Western Union can obtain its construction permits from the Federal Communications Commission without interfering with the scheduled completion date of October 15, 1963.

This scheduled completion date is very important to the JPL and NASA program, because at that time it will be necessary for JPL to commence ground system checkout of a new facility at Pasadena as well as considerably revised facilities at tracking stations. Additionally there is a series of spacecraft coming up in that time frame for which JPL will need the microwave communication facilities to accomplish the ground check out.

The original specifications have been changed. The process of constructing a facility like a jet propulsion laboratory is an iterative process. JPL establishes an operational

philosophy and then attempts to procure equipment to fulfill that philosophy. After JPL finds what equipment is available it revises its philosophy to fit the available equipment. After Western Union's proposal was accepted all of JPL's planning, engineering and procurement have been oriented to utilizing fully the capabilities of that system. The new specifications are (1) the original specifications and (2) the offers made in the Western Union proposal, whichever are more stringent, on an item-by-item basis.

Western Union has already performed a considerable amount of work and ordered equipment in order to be able to furnish the communication services pursuant to its agreement with JPL on the scheduled completion date of October 15, 1963.

At the time JPL requested bids for the proposed microwave communication service between Goldstone and Pasadena, CITCO did not notify JPL of its contention that this service could be provided through its territory only by it without the approval of this Commission if the service were to be provided by a public utility, even though it would be physically possible for such facilities to be utilized in place of the private line facilities CITCO is presently providing JPL.

On February 6, 1962, The Pacific Telephone Company and Western Union filed Application No. 44163 requesting authorization to carry out the terms of certain amendments to their contracts so that, among other things, a Western Union leased voice private line terminating on a Bell Telephone Company FSX switchboard could be connected to the Bell system general toll and exchange network. CITCO and CITA appeared as protestants in that proceeding and urged "that the Commission authorize these amendments only upon the condition that Western Union may not, because of these contracts as amended, extend its lines into any independent telephone company's

territory or duplicate any facilities without first having exhausted the possibility of leasing those circuits, and without having properly noticed the proceeding before this Commission as an extension of facilities by a utility, pursuant to Public Utilities Code Section 1001, into the already served territory of another utility". By Decision No. 64152, issued August 21, 1962, this Commission authorized the amendments without the restrictions and conditions requested by CITCO and CITA.

CITCO itself is now offering to construct for JPL a microwave system from Goldstone to CITCO's Crestline microwave repeater station, via Hill 4400, Kramer Hills and Victorville. This microwave system will consist of two separate radio channels, one providing for the voice and data service requirements and one providing for the broad band video requirements.

Frequency diversity will be provided for both channels. The frequencies utilized will be the 10.7 to 11.7 KMC common carrier band. The system will be battery operated. It will be necessary to construct buildings at Goldstone and Hill 4400. The buildings at Kramer Hills, Victorville and Crestline are existing and are of sufficient size to house the equipment to meet these requirements. Antenna and tower construction will be required at all locations.

At Crestline CITCO will provide a microwave RF terminal to interconnect with Western Union Telegraph Company's microwave terminal equipment located at its Sierra Peak repeater location. The equipment provided by CITCO between Crestline and Goldstone will be manufactured and furnished by Collins Radio Company. Collins Radio has informed CITCO that it can meet the scheduled completion date providing CITCO gives them final information as to the equipment requirements on or before May 1, 1963.

The total cost of the facilities at Crestline would be \$168,877.50, the facilities at Victorville \$88,293, the facilities at Kramer Hills \$69,354, at Hill 4400 \$122,330 and at Goldstone \$58,124, producing a total cost of \$506,978.50. Based upon the estimated costs shown for the Western Union system taken from the Western Union applications for construction permits submitted to the FCC, the total estimated cost of the Western Union system is \$878,350 and the total cost of the proposed CITCO system including the Western Union portion between Sierra Peak and Pasadena is \$819,178.50.

The CITCO system is capable of expansion to provide additional facility needs of JPL at Goldstone and it is also capable of expansion to serve the needs of other private line customers or companies with regular message toll requirements at CITCO's Barstow, Victorville, Boron and San Bernardino offices. It would provide private line connection to most of CITCO's offices by Western Union or the Bell system and would also permit expansion of the present message toll facilities interconnected with the Bell system.

The CITCO proposal does not meet the specifications imposed upon Western Union by the JPL service request accepting Western Union's proposal. The 11 KMC system proposed by CITCO is more subject to outage in the presence of rain and moisture than the 6 KMC system proposed by Western Union. Also the reliability of 6 KMC propagation is inherently better than 11 KMC propagation because the range attenuation problem is of lesser importance. In a long haul the IF heterodyne system provides a superior performance to remodulating equipment. A cable is proposed between CITCO's No. 1 site and the JPL terminal at Goldstone, a distance

of about one-half mile. This will require active elements along the cable adversely affecting reliability.

It is not surprising that CITCO's proposal does not meet the present specifications of JPL since they have been changed to include the "extras" proposed by Western Union. CITCO made several requests for Western Union's proposal but the first time it was shown to the representative of CITCO was on January 21, 1963. No specific engineering design documents have been provided to JPL by Western Union.

CITCO has offered to provide JPL with whatever communication services it may require, and represents it can provide such services as a common carrier in conjunction either with Western Union or The Pacific Telephone Company. No complaints have been filed with this Commission in connection with CITCO's service to the Goldstone - JPL laboratory. NASA's attitude is that CITCO is a qualified common carrier to provide communication service to JPL.

If JPL had accepted the proposal of The Pacific Telephone Company, CITCO would have received a rate of return on its investment under the settlement agreement with The Pacific Telephone Company equivalent to Pacific's rate of return on its private line services in California. CITCO made a proposal on the record to Western Union which would contemplate a settlement (1) on the basis of the rate of return Western Union receives on its private line services in California, assuming the accounting procedures of Western Union permit such a computation to be made, or (2) on the basis of the rate of return Western Union develops on its entire private line services within the United States.

The foregoing recited facts, we hereby find to be true.

The record in this case shows competing policies and conveniences. We find that the proposal of Western Union which has been accepted by JPL more adequately meets the additional communication requirements of JPL than do the proposals of The Pacific Telephone Company and CITCO. The issuance of an injunction restraining Western Union from the construction of such microwave communication system may delay the completion of the system beyond the scheduled completion date of October 15, 1963, and may seriously affect JPL's and NASA's deep space probe program which is of vital importance to the United States Government.

On the other hand, we find that CITCO is a public utility telephone corporation which is satisfactorily performing service for its customers and which is ready, able and willing to provide whatever additional service may be required by its customers. It is entitled to be protected from the competition of Western Union, no part of whose existing transcontinental microwave system has heretofore been terminated in territory served by CITCO.

This dilemma will be resolved by ordering Western Union and CITCO jointly to provide the communication service required by JPL pursuant to its agreement heretofore entered into with Western Union. Sections 455, 701, 1001 and 1702 of the Public Utilities Code are the statutory authorization for the order which will be issued herein.

Western Union is hereby placed on notice that under Section 1001 of the Public Utilities Code the construction of voice transmission facilities by Western Union within the serving area of a telephone corporation requires a certificate from this Commission that the present or future public convenience and necessity require or will require such construction. Any proposed duplication by Western Union of telephone corporation

voice transmission facilities which exist or can be constructed within the filed serving area of such telephone corporation should be properly noticed and made the subject of hearings before this Commission.

In this proceeding Western Union has requested this Commission to issue any certificate which the Commission may determine necessary for the construction of the proposed microwave communication facilities.

The Commission finds that public convenience and necessity require Western Union to construct the microwave communication system between Sierra Peak and Pasadena described in JPL Service Authorization No. SA-5560 accepted by Western Union on June 14, 1962. No certificate of public convenience and necessity for the construction of the portion of said microwave communications between Sierra Peak and Goldstone will be issued to Western Union pending negotiations between Western Union and CITCO pursuant to the order herein.

There is insufficient evidence in the record upon which to base a finding that the proposed service will be compensatory at the rates set forth in said JPL Service Authorization No. SA-5560.

O R D E R

1. IT IS HEREBY ORDERED that effective upon the payment of the \$50 fee required by law Western Union Telegraph Company is granted a certificate of public convenience and necessity to construct the microwave communication system between Sierra Peak and Pasadena described in Jet Propulsion Laboratory Service Authorization No. SA-5560 accepted by Western Union Telegraph

Company on June 14, 1962, and Western Union Telegraph Company within ten days after said facilities are first placed in operation shall notify this Commission of the date said facilities are placed in operation.

2. IT IS HEREBY FURTHER ORDERED that Western Union Telegraph Company and California Interstate Telephone Company shall jointly furnish and lease to Jet Propulsion Laboratory the communication facilities between Goldstone and Pasadena required by Jet Propulsion Laboratory pursuant to the Jet Propulsion Laboratory Service Authorization No. SA-5560 accepted by Western Union on June 14, 1962, and the fully executed basic termination agreement returned to Jet Propulsion Laboratory by letter dated July 18, 1962.

3. IT IS FURTHER ORDERED that on or before August 1, 1963, (1) Western Union Telegraph Company and California Interstate Telephone Company shall file a joint application requesting the authorization of this Commission to execute an agreement by which said parties intend to effectuate said ordering paragraph 2, or (2) in the event said parties cannot agree upon the terms and conditions of such an agreement said parties shall so notify this Commission so that further hearings may be held herein for the purpose of settling the terms and conditions of such an agreement, or so that this Commission may make such further order herein as public convenience and necessity may require.

4. IT IS FURTHER ORDERED that Western Union Telegraph Company and California Interstate Telephone Company shall maintain

separated plant costs and expenses applicable to their respective parts of this project and jointly apply to this Commission to adjust rates therefor after one year's operating experience.

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

Dated at San Francisco, California, this 11th day of June, 1963.

President

Everett W. Roy

William W. Bennett

Commissioners

I concur in the findings and order.

Fredrick B. Hobluff

I dissent. In my opinion Western Union is entitled, as a matter of law, to provide this service.

George E. Grover
President

Commissioner Peter E. Mitchell, being necessarily absent, did not participate in the disposition of this proceeding.