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Article Summary: Prudent management characterized the early years of the Lincoln Telephone Company. Aggressive advertising, strict financial control, the selection of the new dial telephone and consolidation with Western Telephone's toll lines contributed to the success of the home-owned company.

Cataloging Information:

Names: Frank H Woods, Mark Woods, George Woods, Allen W Field, Charles J Bills, Frank Bills, A O Faulkner, W E Sharp, Almon B Strowger

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Photographs / Images: crank-type phone on the office wall of Professor C W Roush at Broken Bow Business College, 1889; slogan and design of an early dial used by the Lincoln company in early advertisements and on the cover of its telephone directories; Table I: Wage Scale of the Lincoln Telephone Company, 1904; patrons grouped around the switchboard at the Stella exchange; cartoon captioned "The automatic arm will always work"; Table II: Annual Data of the Lincoln Telephone Company, 1905-1908; Table III: Financial Ratios of the Lincoln Telephone Company, 1905-1908

GREAT INDEPENDENT: THE LINCOLN TELEPHONE COMPANY, 1903-1908

It was not in the nature of the local American entrepreneur to concede to monopolistic power. Technical competence, good controls, and appeals to local pride were potent weapons in the struggle of a small company to succeed in the face of competition with the giant Bell system.

By WILLIAM D. TORRENCE

WITH THE EXPIRATION of the fundamental Bell telephone patents in 1893 and 1894, independent manufacturers began making telephone equipment and local entrepreneurs established independent exchanges throughout the United States. The Bell system had concentrated its operations primarily in the larger cities. Connections between many of those cities as well as telephone development in smaller places were undertaken by local companies, either by reaching into areas not served or by establishing competing exchanges. The present Lincoln Telephone and Telegraph Company in Lincoln, Nebraska, began in 1903 as a local dial exchange competing with the giant Bell system which had had a manual exchange in Lincoln since 1880. Eventually, the Lincoln company was able to make a profit, satisfy the growing communication needs of the local community, and, later, extend its service to a large segment of Nebraska and replace the service of the Bell exchange,¹ becoming one of the largest independent operators in the nation. In this article, we see the successful launching of a small competitor and the means whereby it established itself as a formidable rival to the Bell system in Lincoln and the nearby area.

The incorporators of the new Lincoln telephone company believed they could compete with the local Bell exchange in a successful manner. One of

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the founders offered three reasons for success. First, the automatic exchange would provide the latest, improved telephones operated from central energy, thus doing away with batteries necessary in individual telephone installations. Secondly, he implied that the rates to be charged would be lower than those charged by the Bell exchange. Finally, the new firm would be a home-owned company.² Also, news articles of the day show that there was some sentiment in Lincoln for competition with the Bell exchange in order to upgrade and extend the service being offered. Moreover, it was fashionable in those days to denounce big business, monopoly, and trusts, and this appeal was likewise made to the public in the Lincoln venture. In addition, the new firm was aided by the Nebraska Independent Telephone Association, organized about 1900 to unite the independent telephone companies against the Bell system.³ The Association acted as a propaganda agency and advertised its cause throughout the state. These, then, were the basic reasons why the incorporators of the new telephone exchange felt they could successfully compete with the already established Bell exchange.

STATE OF THE TELEPHONE IN THE UNITED STATES, 1903

At the time the Lincoln Telephone Company penetrated the field in 1903, there were 9,136 commercial, mutual, and farmer (or rural) systems and lines in the United States. The "commercial systems" included all those operated by individuals, firms, or corporations for revenue. The mutual systems comprised all those operated through a mutual agreement among persons benefiting from the service, and revenue was incidental to the operation. The farmer or "rural" lines contained all lines having no centralized office or regular exchange. The latter group was not considered in the category of commercial telephony. Of the total number of systems and lines, 4,151 were considered as commercial and mutual systems and 4,985 were classed as farmer or rural lines. A breakdown of the commercial and mutual figures show that 44 systems, or 1.1 per cent, were operated by the American Telephone and Telegraph Company and 4,107, or 98.9 per cent, were independent companies. However, these figures do not by themselves, reflect the true picture of the time. AT&T, or the Bell system as it is commonly called, served 1,317,178 telephones, compared to 998,119 telephones served by the independents. In addition, the farmer or rural lines accounted for 55,747 telephones. This was a total of 2,371,044 telephones. At the beginning of 1903, this aggregate of 9,136 systems and lines represented assets of \$466,421,553 and provided employment for approximately 80,000 telephone company employees.⁴

It is of interest to note that a geographic breakdown of the United States shows that the North Central Division, of which Nebraska is a member, contained, at the beginning of 1903, 6,739 telephone systems and lines or approximately 74 per cent of all the telephone systems and lines in existence in the United States at that time.⁵ These North Central systems and lines served 1,139,914 telephones or 48 per cent of all telephones in the United States in January, 1903. One of these systems was the Bell exchange in Lincoln, Nebraska, servicing about 1,500 telephones. This was the national, state, and local picture facing the Lincoln Telephone Company as it began its venture.

FORMATION AND INITIAL FINANCING

The present Lincoln Telephone and Telegraph Company was incorporated in Nebraska on March 7, 1903, under the name of The Western Union Independent Telephone Company and organized by Frank H. Woods, Allen W. Field, and Charles J. Bills. Woods, a thirty-five-year-old attorney in Lincoln, had moved to Nebraska from Illinois with his family when only a lad. He attended the University of Nebraska, receiving his law degree and admission to the bar in 1892. For several years he was connected with the firm of Harwood, Ames, and Kelly in Lincoln. Later, he helped to organize the law firm of Hall, Woods, and Pound. Mr. Woods retained his connection with this firm from 1904 to 1910. Bills, thirty-eight years old, likewise was born in Illinois. He attended the University of Illinois before moving to Nebraska in 1881. He organized banks in Endicott and Fairbury, Nebraska. Field, forty years old, also came to Nebraska from Illinois when a boy. After attending the University of Nebraska and studying law with a Lincoln firm, he was admitted to the bar in 1878. Besides practicing law he held positions as a state legislator and district judge during 1883-1892.⁶

The original idea for the formation of an independent telephone exchange in Lincoln apparently came from Charles J. Bills and his brother Frank, promoters of small telephone companies. When attending school in Illinois, the Bills brothers had been students of Colonel F. M. Woods, father of Frank H. Woods. As they sought to promote the independent telephone business in Lincoln it was natural for them to seek the legal aid of the son of their former school teacher.

On March 9, 1903, the city council of Lincoln granted a fifty-year franchise to the new firm, and the promoters immediately concentrated on the problem of financing the new telephone company. The articles of



In 1889 Professor C. W. Roush (center) served as principal of the Broken Bow Business College. Mabel Holcomb was his stenographer. A pupil sits behind the glass partition. Note the crank-type phone on the wall.

incorporation authorized a capital stock of \$1,000,000, divided into 10,000 shares of \$100 par common. The seven men who formed the first board of directors immediately subscribed for \$300,000. Charles Bills, Frank Bills, and their father, Fred G. Bills, agreed to furnish most of that amount. It appears that Charles Bills was the financier of this family. In 1881, he had organized the Bills and Hodges Bank in Endicott, Nebraska, and the next year, the Bank of Diller at Diller, Nebraska. Several years later, in 1886, he sold these interests and moved to Fairbury, Nebraska, where he concentrated on investment banking, particularly the investment of farm loans for eastern capitalists. Bills' business was said to be "highly prosperous and . . . the largest of its kind in southern Nebraska, Mr. Bills having continuously loaned out (his own and eastern venture capital) on first class farm security more than two and a half million dollars."⁷ Allen W. Field, the three Woods brothers, Frank, George, and Mark, subscribed only for 10 shares each. Fred G. Bills became secretary-treasurer at a salary of \$150 per month with the proviso that he devoted his entire time and services to the work of the company. Charles J. Bills was elected president of the firm and Allen W. Field vice president, both unpaid positions.⁸

In June, 1903, the firm's name was changed to the Lincoln Telephone Company and the Bills brothers obtained a contract to construct the Lincoln exchange and obtain 3,000 subscribers in return for 9,000 shares of paid-up capital stock and \$400,000 of 6 per cent, twenty-year bonds. The Bills brothers also agreed to use the telephones, switches, and equipment manufactured by the Automatic Electric Company of Chicago, which the Lincoln promoters felt had certain advantages over the manual system used by the local Bell exchange.

The automatic telephone had been invented in 1889 by Almon B. Strowger, a Kansas City undertaker. He used an electrical switch which was driven by electro-magnets and controlled by the subscriber so as to connect him with the desired telephone. The entire design was intended to do away with the delays and mistakes of manual operation. The device was successful to a large degree and the first automatic exchange was installed at La Porte, Indiana, in 1892. Although the automatic exchange at Lincoln, Nebraska, installed in 1903-1904, was not the first in the United States, it was one of the first. As nearly as can be determined, the Lincoln automatic exchange was among the first ten to be established in this country. One record shows installations at Albuquerque, New Mexico, and at Trinidad, Colorado, and Amsterdam, New York, prior to 1900. Others were installed prior to 1910 at Dayton and Columbus, Ohio; Los Angeles, California; Grand Rapids, Michigan; Tampa and Jacksonville, Florida; St.

Paul, Minnesota; Sioux City, Iowa; Buffalo, New York; and Omaha, Nebraska.⁹ The recommendation for the installation of Strowger equipment by the Lincoln company apparently came from Jones and Winters, a Chicago firm, who were advisers to the Bills brothers. The automatic was a dial type of telephone, and it is interesting to note that the original automatic telephone worked, for the householder, much like the dial telephone of today.¹⁰

The Bills brothers contract also provided that they would loan 6,000 shares of their stock to the company to be used by the corporation as collateral for credit. The board of directors then voted to issue \$25,000 of paid-up capital stock each to Allen W. Field and Frank, Mark, and George Woods for services rendered to May, 1903. The Bills brothers received the \$400,000 in bonds, secured by trust deed upon all of the property of the company. The bonds and stock were delivered to them in installments as the work progressed. In addition, the Bills received all the income from the operation of the exchange until it was accepted by the Lincoln Telephone Company. Acceptance of the exchange was based on the complete connection of 3,000 phones with a total capacity of 10,000 connections.¹¹

The impetus for speedy construction of physical facilities and in-service operation of the exchange came from a provision in the franchise which provided that rentals for telephone service could be charged only when 1,500 telephones were connected and properly operating.¹² When that number of telephones became operative, the franchise further stipulated that \$36 per year could be charged for business telephones and \$24 per year for residence telephones.

The Bills brothers did not perform the construction themselves. They arranged contracts with other firms, each contract being drawn in the name of the Lincoln Telephone Company and approved by the building committee of the corporation, consisting of Frank H. Woods, Allen W. Field, Mark W. Woods and George Woods.¹³

Three contracts were drawn by the Bills brothers and accepted between June and October, 1903. The General Engineering Company of Chicago furnished and installed the outside equipment, including poles, wire, cable, and underground conduit for \$133,000. The Automatic Electric Company of Chicago furnished and installed the switchboard, central office equipment, telephones, and a variety of allied equipment for \$90,000. The Campbell Brothers Construction Company of Lincoln erected the telephone building on Fourteenth Street between N and M for \$15,575.¹⁴



This slogan and design of an early dial was used by the Lincoln company in early advertisements and also appeared on the cover of its telephone directories.

In November, 1903, the stockholders authorized the board of directors, essentially the same seven persons, to borrow \$650,000, the limit of bonded indebtedness allowed by the articles of incorporation, and to secure the debt by a mortgage or deed of trust of all the corporate property. This was to include all the property held at the time as well as that acquired in the future. Contact was made with the Central Trust Company of Chicago and the mortgage was drawn up. A stipulation was included to the effect that \$400,000 of the bonds were to be certified at once and issued to "such person or corporation as the president and secretary may . . . designate."¹⁵ As far as can be logically determined, this \$400,000 was the bond portion of the contractual amount to be paid to the Bills brothers for putting the telephone exchange in operation. The remaining \$250,000 of the issue was to be used from time to time for buying or building enlargements or extensions and betterments of the new company's automatic telephone exchange system.¹⁶

The Bills brothers worked diligently, and on October 24, 1904, the Lincoln Telephone Company exchange was officially accepted with 2,434 telephones in operation and with plant capacity available for the eventual hook-up of 10,000 telephones. In addition to the Lincoln exchange, a line was constructed to University Place, Havelock, Normal, College View, and Belmont, communities at that time outside the city of Lincoln. All stocks and bonds due the Bills brothers were now delivered to them. At the time of acceptance, monthly income amounted to \$5,033 and expenses were estimated at \$4,350.¹⁷

Operating organization of the company became of prime importance to the directors and stockholders now that the physical plant was in operation, although financial problems were by no means at an end. Immediately upon acceptance of the newly constructed telephone exchange, arrangements were made to employ a full-time general manager, a cashier, and a bookkeeper. Provision was made for the keeping of books and records and the directors called for a continual summarizing of all business transacted by the company, especially the total number of telephones working, list of phones taken out, number of new subscribers received, number of new telephones installed, employees hired and discharged, and a report as to income and expense.¹⁸ The 28 jobs listed in Table I give an idea of the variety of work skills needed even in the early years of the automatic telephone.

A more detailed organization of the top management was effected in late 1904. The board was increased to nine members in October. In

December, 1904, an executive committee was created to act on all company matters needing attention, subject to control of the entire board. Frank H. Woods was elected chairman with Charles J. Bills and A. O. Faulkner completing the committee. At this same board meeting Charles J. Bills was re-elected president with Allen W. Field, A. O. Faulkner, and Frank H. Woods elected vice president, treasurer, and secretary, respectively. The office of general counsel was created by the board and Frank H. Woods was elected to fill the position. The basic duty of this office was to exercise a general supervision of *all* affairs of the company subject to the control of the executive committee and the board of directors. This is the first appearance of what may be considered a chief executive officer in fact even though not in title. The appointment of Frank H. Woods to the chairmanship of the executive committee and his choice as general counsel at the same time imply a recognition of the need for specific and immediate control of the new company's business affairs. However, the choice may very well have come about because of the numerous and complex legal and contractual situations that were facing the firm's organization. Salary for the position of general counsel was later fixed at \$100 per month.¹⁹

TABLE I
WAGE SCALE OF THE LINCOLN TELEPHONE COMPANY, 1904

<i>Job Title</i>	<i>Salary per Month</i>	<i>Job Title</i>	<i>Salary per Month</i>
General Manager	\$200	Rackman	40
Engineer	65	Inspector	50
Wire Chief	75	Switchman	65
Stenographer	35	Check Clerk	25
Contract Clerk	50	Clerk	35
Storekeeper	50	Solicitor	40
Cost Clerk	55	Collector	50
Cashier	75	Bookkeeper	35
City Foreman	85	Cable Splicer	85
Chief Operator	35	Lineman	75
Toll Operator	30	Rodman	30
Relief Operator	27	Clerk	35
Trouble Clerk	35	Night Inspector	40
Night Wire Chief	50	Janitor	40

SOURCE: Letter from General Manager in Minutes of Board of Directors, Oct. 31, 1904.

In May, 1905, election of officers took place for the coming year. Frank H. Woods became president; Allen W. Field, vice president; and W. E. Sharp, secretary-treasurer. This election of officers was the first of the annual elections that have since been held. All other elections had been on an interim basis while the company was starting its organization. Financing of the new telephone exchange continued to be of primary importance and the need to control costs by means of a logical and rather tight organizational structure is reflected in the minutes of the board meeting held in June, 1905. At this meeting, the newly elected officers assumed their duties and immediately proposed and adopted a new set of by-laws which called for the creation of several standing committees of directors like the more progressive corporations of that period. Six committees were created in the following areas: finance, auditing, purchasing, construction, toll line, and employment. The duties and responsibilities of each committee were carefully defined, and rather modest dollar limits on expenditures were imposed, usually \$200. These limits could only be exceeded with board approval. It is also of considerable interest that President Woods retained the right to appoint all standing committees.²⁰ Although there is no specific documentation, the rigidity of control seems to have arisen from two sources: first, the legal background of the new president and, secondly, the need for extreme caution, especially financial, in the formative years of the new company.

The year 1906 was spent primarily in raising funds for equipment and current expenses from various sources both in and out of the state. Also, by this time the work force had grown to 121 employees. In early 1907, the president's salary was increased to \$200 per month to equal that of the general manager. The directors and secretary were paid \$5.00 for each board meeting they attended. In April, 1907, at a special stockholders meeting, it was voted to amend the articles of incorporation and increase the capital stock from \$1,000,000 to \$1,200,000. The additional \$200,000 was to be preferred stock and was given a cumulative dividend. After approval by the stockholders, a special board meeting was held giving authority to the president and secretary to sell \$50,000 of the preferred. Apparently the need to issue a preferred stock came about due to a need for more working capital. The records show that as of April, 1907, there were only 4,000 shares outstanding of the original authorization of 10,000 shares of the common. To make the preferred as attractive as possible the following rights were given it: besides preference as to dividends the stock had preference over the common as to distribution of net assets upon dissolution, equal rights with holders of the common stock

in election of officers and in control of the company, and finally, the cumulative dividend mentioned earlier was fixed at 7 per cent. Par value was \$100 per share and by May, 1908, only 190 shares had been issued. The amount apparently did not suffice because the drive to sell the company bonds was intensified. However, by December, 1908, over \$66,000 in preferred stock had been issued.²¹

COMPETITION AND EXPANSION

Expansion needs became apparent early in the history of the new automatic exchange if the company was to hold its ground against the already established Bell system. In August, 1904, the stockholders authorized the board of directors to proceed with a branch exchange at University Place and extend lines to Burnham, Cotner, and Lancaster. The board was further authorized to sell enough company bonds to pay 85 per cent of the cost of construction. However, the University Place exchange was postponed. Construction costs had tightened the finances and it was necessary to search for additional funds. Loans were made from Lincoln banks in amounts ranging from \$3,000 to \$6,000, and \$30,000 in treasury bonds were authorized by the board in October, 1904, to pay for continued construction needs. In April, 1905, the Illinois State Trust Company loaned the Lincoln Telephone Company \$50,000. During the following month the stockholders approved the installation of an exchange at University Place and authorized the directors to borrow an additional \$100,000, pledging the company's bonds as collateral.²² Also the stockholders agreed that surplus earnings for the coming year were to be used in payment for construction and that no dividends were to be paid upon the stock.

The events from October, 1904 (the date of acceptance of the exchange from the Bills brothers), to May, 1905, show the following progress. Telephones in operation had increased to 3,025, making a gain of 591 over those in operation on the date of acceptance. Connecting lines with the College View Telephone Company, the Plattsmouth Telephone Company, and a cooperative company in Cheney had increased the telephone network by 318 telephones. Farm lines were under construction on East "O" Street and negotiations were under way with other exchanges in Lancaster County.²³

The earnings and expense statement for October–December of 1904 give a dollar picture of the progress of the firm. Total revenue for the three months was \$14,679. Total expenses were \$8,983. However, interest on



Patrons grouped around the switchboard at the Stella exchange in pre-dial days.

bonded indebtedness during this period was \$6,025. Thus, there was a net loss for the three-months' period of \$329.²⁴ The deficit for this period was attributed to the large expense for advertising and soliciting of new business. The general manager stated that future expenses along this line would be very small "as we have reached a point where we do not feel the competition of the Bell company. It is no longer a fight to see who gets a subscriber, as our service is invariably preferred and our only difficulty has been to install the cable fast enough to furnish the service demanded."²⁵

This optimistic statement had certain validity in news articles of the day. In the *Lincoln Journal* of November 13, 1904, Harpham Brothers stated in an advertisement that they had discontinued the use of the Bell system telephone at their wholesale saddlery house because they felt that the Bell service should be furnished at no higher cost than the automatic service, and they further stated that since most of their customers had the automatic telephone they found it unnecessary to have both. A news story earlier in 1904 also carried the comment that the clerk of the district court had been called before the city commissioners and asked which telephone he desired to retain in his office. He stated that he preferred the automatic telephone because he could reach more people who had business in his office.²⁶ However, these comments do not fully reflect the extensive campaign waged by the Lincoln Telephone Company and the Bell system in the local newspapers.

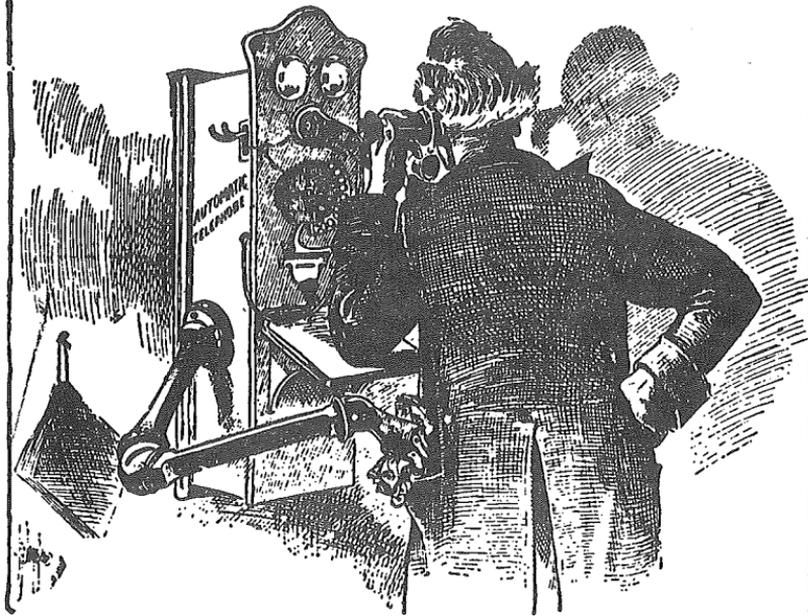
With two exchanges officially in operation in Lincoln in late 1904, the drive was on not only for new business but to obtain as many subscribers as possible by one exchange from the other. Ads were purchased by the Bell system and that firm extolled the virtues of its operations. Considerable news space was devoted to the relative merits of each system and news reporting often became straight editorializing. For example, a news story in a November, 1904, issue carried the headline, "Incomparable Service at the Lincoln Bell Exchange."²⁷ The news item, somewhat romantically, traced the path that a telephone message takes. News stories of this nature were often followed by advertisements telling of the number of telephones a new subscriber could become connected with and the amount of square mileage these connections would cover. By far, the largest amount of straight advertising seems to have been done by the Bell system. This appears understandable in view of the fact that the Bell system was already established and its financial pressure was somewhat less than for the new telephone company.

The Lincoln Telephone Company was proud of the automatic aspect of its operation. The Bell exchange referred to this automatic principle in a December, 1904, advertisement which said that "This company, the Bell system . . . is one of the largest employers of labor in the city. It does not employ any *iron girls*, but its employees are real flesh and blood. . . ." ²⁸ The Lincoln Telephone Company replied by taking numerous one-line and two-line advertisements in local papers throughout 1904 and 1905 to the effect that the automatic telephone had reduced monthly rental costs, was a phone for the masses and not the classes, had brought in wider coverage and was giving better service than the Bell system. The automatic company's appeals obviously met with some success during this period. A news story in February, 1905, states that a supplemental directory was issued by the Lincoln Telephone Company containing 200 new subscribers added the previous month. Other news stories during 1905 show other increases in subscribers for both firms, however. Unfortunately, unavailability of Bell system statistics do not allow for a comparison.

Along with the gains in local business, the Lincoln Telephone Company was extending into the rural areas in competition with the Bell system. The *Lincoln Star* carried a news story in September, 1905, telling of the "bitter fight" between the two companies to gain connections with the towns of Firth, Cortland, Hickman, Adams, Martel, and Panama. A meeting was held in September in the village of Firth with representatives of the Lincoln Telephone Company and delegations from each of the townships. After a thorough discussion of the question, the delegations in attendance voted to connect with the automatic exchange in Lincoln. ²⁹

Part of the competitive struggle for business took its form in charges and counter-charges concerning the respective rates that were established. The Lincoln Telephone Company had increased rates by 25 cents per month in November, 1906, and later that same month the Bell exchange placed an advertisement in the *Lincoln Star* which stated, in effect, that the one phase of the automatic telephone that was always working was an automatic arm reaching into the customer's pocket. The Lincoln Telephone Company stated its position in a news story later that same month. Its manager charged that the Bell system was furnishing service at less than cost in order to eliminate competition and warned that, if this happened and competition was eliminated, the Bell exchange would then raise its rates. He continued that a rate increase had been necessary in order to set aside a proper amount for depreciation and renewals. ³⁰ Following this newspaper statement, President Woods of the Lincoln Telephone Com-

THE AUTOMATIC ARM WILL ALWAYS WORK



One thing about the automatic telephone that will always work

ADVERTISEMENT

The Bell Exchange pictured dial phones as expensive and pointed out it did not employ any "iron girls" but instead employees who were "real flesh and blood."

pany asked the Lincoln Commercial Club to appoint a committee of local businessmen to investigate the financial affairs of his company. This was done and in December, 1906, the committee reported that they felt the rate increase was necessary to provide a 7 per cent depreciation fund and that under the new rates this fund would be provided.³¹ The conclusion of the committee was based on the financial report made by Mr. E. P. Hovey, a Lincoln accountant. Mr. Hovey's analysis of the company's books showed that surplus earned to October, 1906, had been put back into extensions of the plant and no dividends had been paid on the common stock.³²

Apparently the rate increase proposed and implemented by the automatic exchange did not affect the expansion program. After the newspaper publication of the financial status of the Lincoln Telephone Company, the Bell exchange attempted to capitalize on the former's rate increase by announcing a rate reduction. The reduction was 50 cents per month on individual and two-party residence line telephones and went into effect in December, 1906.³³ Even though Bell system competition

TABLE II

ANNUAL DATA OF THE LINCOLN TELEPHONE COMPANY, 1905-1908

	Dec. 31, 1905	Dec. 31, 1906	Dec. 31, 1907	Dec. 31, 1908
Fixed Capital				
Employed	\$925,478.77	\$1,005,424.78	\$1,066,490.19	\$1,159,137.76
Other Assets	11,156.29	38,762.28	47,551.62	57,748.37
Total Assets	936,635.06	1,044,187.06	1,114,041.81	1,216,886.13
Common Stock	400,000.00	400,000.00	400,000.00	400,000.00
Pfd. Stock			15,600.00	66,400.00
Bonds	459,200.00	550,000.00	575,700.00	586,000.00
Other Liab.	64,565.95	65,797.68	69,737.68	82,240.37
Surplus	12,869.11	28,389.38	53,004.13	82,245.76
Total Liab.	936,635.06	1,044,187.06	1,114,041.81	1,216,886.13
Gross Earnings	77,254.42	105,279.24	120,964.74	134,840.52
Expenses Other Than Taxes and Interest	35,047.60	53,739.28	54,826.22	60,257.27
Taxes	4,594.12	4,785.50	7,161.21	8,137.33
Interest	24,414.67	31,234.19	34,362.56	37,204.29
Net Income	13,198.03	15,520.27	24,614.75	29,241.63
Fixed Capital Employed Per Telephone	264.95	220.83	199.72	189.22
Telephones Bus.	1,028	1,209	1,430	1,502
Res.	2,335	3,138	3,666	4,315
Ext.	130	206	241	309
Total Telephones	3,493	4,553	5,340	6,126

SOURCE: Compiled from Lincoln Telephone Company balance sheets and income and expense statements, 1904-1908.

continued, the number of automatic telephones of the Lincoln Telephone Company increased at a fairly steady rate from year to year. See Table II.

Further expansion in the face of competitive pressure is reflected in the numerous contracts drawn up with various communities in Lancaster County. In many instances these contracts show not only new connections for the automatic exchange with a community that had never had telephone service but also a displacement of the Bell system. This success may be attributed to a combination of factors: strategic reference to the "telephone trust," the new company's desire to extend service beyond the boundaries of the city of Lincoln, and the convenience of the dial telephone operation as opposed to the Bell exchange's manual operation.

Expansion is further shown in the contract between the Lincoln Telephone Company and the Western Telephone Company of November,

1907. The latter firm was engaged in operating a comprehensive system of toll or long-distance lines radiating from Lincoln. This toll line network extended approximately 100 miles north and 150 miles south of Lincoln as well as 60 miles east and 100 miles west.³⁴ The contract provided that the automatic exchange would grant exclusive toll and booth privileges for automatic telephones in Lincoln to the Western Telephone Company, connect them to the automatic system and furnish certain physical facilities. In return, the Western Telephone Company agreed to pay 10 per cent of all the in and out toll revenue and 50 per cent of all local booth revenue to the Lincoln Telephone Company. A further stipulation was made in the contract that neither party would become connected with the Bell system in any way during the life of the agreement.³⁵ This alliance now gave the automatic system broader telephone coverage as well as some protection from inroads by its rival. It is interesting to note that the toll system acquired in the agreement between the two companies is, roughly, the operating territory of the present Lincoln Telephone firm.³⁶

FINANCIAL PROGRESS

The history of the early years of the Lincoln Telephone Company may be traced in the company's original financial statements presented in Table II. The fixed capital employed each year includes cost of plant, buildings, real estate, furniture, fixtures, construction account, and tools. Other assets include such items as warehouse supplies, stable equipment (the horse and wagon were used to haul men and equipment), bank account, and petty cash. Liabilities include the capital stock, bonded indebtedness, bills payable, accrued interest on bonds, monies due toll lines, various accounts payable, and surplus.³⁷ Examination of the Table will reveal the relative fixed capital employed per telephone and shows how this cost decreased each year even though additional telephones were added. Between the years 1905 and 1908, the total number of telephones increased approximately 80 per cent while fixed capital employed per telephone decreased slightly over 30 per cent. However, it should be remembered that the original exchange had a capacity of 10,000 telephones. Until this capacity was utilized, it would not be necessary to increase plant size to any great degree.

It is also of interest to note in Table III that gross earnings per phone were \$22.12 in 1905 and \$22.01 in 1908 as contrasted with net income per phone in 1905 of \$3.78 and \$4.77 in 1908. Furthermore, no dividends were paid on the company's common stock from the time of incorpo-

TABLE III

FINANCIAL RATIOS OF THE LINCOLN TELEPHONE COMPANY, 1905-1908

	Dec. 31			
	1905	1906	1907	1908
Current Ratio	1:6.0	1:2.2	1:1.8	1:1.8
Quick Ratio	1:7.9	1:4.2	1:3.0	1:3.7
Percent of Net Income to Gross Revenue	17.08	14.74	20.35	21.69
Percent of Net Income to Fixed Capital Employed	1.43	1.54	2.31	2.52
Percent of Net Income to Equity (Common Stock) (Preferred Stock) (Surplus)	3.20	3.62	5.25	5.33
Gross Earnings per Telephone	\$22.12	\$23.12	\$22.65	\$22.01
Net Income per Telephone	\$ 3.78	\$ 3.41	\$ 4.61	\$ 4.77

SOURCE: Computed from Lincoln Telephone Company financial statements, 1905-1908.

ration through 1908. The surplus at the end of each year was carried over and added to the net income of the succeeding year.

A ratio analysis of certain figures also helps us to see more clearly the financial position of the company in its early years.³⁸ In the light of competition presented by the Bell exchange, this position could have been disastrous. It is also interesting to note the small percentage of net income return on fixed capital employed and on equity. In view of these figures, it is not surprising that dividends on the common were passed in the formative years and that all earnings were retained from year to year.

The analysis does not go beyond December, 1908, because the company was consolidated with the Western Telephone Company and completely refinanced in early 1909. This started a new period in the company's history, but the ensuing progress was possible only because of the prudent management of the first six years. The promotion drive of the Bills brothers, the financial acumen and tight control exercised by Frank Woods, the wise selection of the new automatic or dial telephone, and the consolidation with the Western Telephone's toll lines were major factors in the initial success of the Lincoln Telephone Company.

NOTES

1. Joseph Hartley, *The History of LT&T: A Story of Free Enterprise* (Lincoln, Nebraska: Lincoln Telephone and Telegraph Company, c. 1955).
2. *Nebraska State Journal*, March 10, 1903.
3. Harry B. MacMeal, *The Story of Independent Telephony* (Chicago: John F. Cuneo Company, 1934), pp. 271-274.
4. Special Report, U.S. Census, *Telephones and Telegraphs*, 1902; Special Report, U.S. Census, *Telephones: 1907*.
5. The North Central Division (a U.S. Census designation) includes the following 12 states: Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.
6. Hartley, *op. cit.*, Chap. 2.
7. *Lincoln Journal*, July 12, 1920.
8. Western Union Independent Telephone Co., Minutes of Stockholders, May 4, 1903. All records of the Lincoln Telephone and Telegraph Company and its predecessors are deposited in the company's executive offices in Lincoln, Nebraska.
9. MacMeal, *op. cit.*, pp. 271-274.
10. Interview with J. H. Hartley, Editor, Lincoln Telephone News, Sept. 2, 1958.
11. Lincoln Telephone Co., Minutes of Directors, June 22, 1903.
12. Franchise granted to the Lincoln Telephone Company by City of Lincoln, Nebraska, March 9, 1903.
13. Lincoln Telephone Co., Minutes of Stockholders, June 22, 1903.
14. Contracts of Lincoln Telephone Company with General Engineering Company, June 22, 1903; Automatic Electric Company, July 14, 1903; and Campbell Brothers Construction Company, Oct. 6, 1903.
15. Lincoln Telephone Co., Minutes of Directors, Nov. 11, 1903.
16. *Ibid.*
17. *Ibid.*, Minutes of Stockholders, Oct. 3, 1904.
18. *Ibid.*, Minutes of Directors, Oct. 11, 1904.
19. *Ibid.*, April 27, 1905.
20. *Ibid.*, May 30, June 30, July 12, 1905.
21. *Ibid.*, Minutes of Directors, Feb. 15, April 15, 1907; Minutes of Stockholders, Feb. 15, April 15, 1907.
22. *Ibid.*, Minutes of Stockholders, May 1, 1905.
23. Letter to Stockholders from General Manager, May 1, 1905.
24. Lincoln Telephone Co., Earnings and Expense Statement, Jan. 31, 1905.
25. Letter to Stockholders from General Manager, May 1, 1905.
26. *Lincoln Journal*, July 17, 1904.
27. *Lincoln Star*, Nov. 15, 1904.
28. *Ibid.*, Dec. 10, 1904.
29. *Ibid.*, Sept. 3, 1905.
30. *Lincoln Evening News*, Nov. 21, 1906.
31. *Sunday State Journal*, Lincoln, Nebraska, Dec. 2, 1906.
32. Report by E. P. Hovey, Accountant, to C. H. Rudge, J. C. Harpham, and P. L. Hall of Lincoln Commercial Club, Dec. 1, 1906.
33. *Lincoln Star*, Nov. 20, 1906.

34. Toll Circuit Map, Western Telephone Company, Lincoln, Nebraska, Aug. 26, 1907.

35. Contract between Lincoln Telephone Company and the Western Telephone Company, Nov., 1907.

36. Hartley, *op. cit.*, Chap. 3.

37. It was a prevailing practice in the early part of the twentieth century to consider stock equity under the general heading of liabilities.

38. For purposes of this paper we are concerned with three basic ratios: the current ratio, which indicates the number of dollars of current assets available to meet current debt; the quick ratio, which indicates the number of dollars of cash plus receivables available to meet each dollar of current debt; and the ratio of net income to stockholder's equity.