

CENSUS OF ELECTRICAL INDUSTRIES

TELEGRAPHS

1927

UNITED STATES
DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

U. S. DEPARTMENT OF COMMERCE

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The census of electrical industries has been taken quinquennially, beginning with the inquiry for the year 1902, under provisions of the acts of Congress approved March 6, 1902, and June 7, 1906. The statistics are given in the following reports:

TELEGRAPHS
TELEPHONES
CENTRAL ELECTRIC LIGHT AND POWER STATIONS
ELECTRIC RAILWAYS

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TELEGRAPHS: 1927

INTRODUCTION

General description.—The census of land telegraphs and ocean-cable systems has been taken quinquennially since 1902, and, beginning with the inquiry for 1907, wireless systems have also been canvassed. The only census statistics for the telegraph industry for years prior to 1902 are those compiled and published at the decennial censuses of 1850 and 1880, which related to land systems only.

All the commercial systems in the United States are owned and operated by incorporated companies. The land (wire) and wireless commercial systems covered by this report are those operated in the United States exclusive of outlying possessions, and the commercial cable systems are those operated by companies incorporated in the United States. No statistics are given for press-association or newspaper traffic over private or leased wires.

The figures for railway telegraphs as given in Tables 9 and 11 relate solely to Class I railroads (those having annual operating revenues of \$1,000,000 or more). No data as to railway telegraphs are included in any of the other tables.

Statistics are given in Table 14 for the land and cable systems operated by the Government in outlying possessions, since these systems transacted commercial as well as Government business; and brief statistical and other information in regard to the Weather Bureau telegraph and telephone lines in the United States, some of which did a small amount of commercial business, is given on pages 21 and 23. No data have been compiled, however, in regard to the operations of Government wireless stations in the United States, for the reason that these stations handle little or no commercial business.

Period covered.—The statistics for income, expenses, and traffic relate to the calendar year 1927, except that the figures for Alaska, given in Table 14, refer to the fiscal year ended June 30. The figures for equipment and the balance sheet relate to December 31, 1927; the number of employees was reported by most companies as of June 30.

Financial statistics.—Under the accounting system introduced by the Interstate Commerce Commission for telegraph companies and adopted in considerable measure by the Bureau of the Census, more detailed financial data have been collected for land and ocean-cable telegraph companies for 1917, 1922, and 1927 than for preceding census years. It is not practicable to compile an income statement for wireless-telegraph companies.

An important consideration, so far as the telegraph and cable business is concerned, is the increase in salary and wage scales, for the reason that salaries and wages constitute more than three-fifths of the total expenses. (See Tables 4 and 6.) The total salaries and wages paid by the telegraph and cable systems increased by 74 per cent between 1917 and 1922 and by 30.7 per cent between 1922 and 1927, whereas the corresponding rates of increase in number of employees were only 6 per cent and 18.7 per cent, respectively.

	\$572,938,967	\$459,490,284	\$363,017,223	\$238,288,906	\$291,807,899	24.7	26.6	57.8	21.7	13.9
Liabilities, total.....										
Capital stock.....	\$180,094,887	\$177,203,778	\$167,260,297	\$163,645,810	\$155,089,575	1.6	5.9	7.7	2.2	5.5
Funded debt.....	\$97,037,000	\$71,394,000	\$61,827,649	\$62,741,000	\$55,204,000	35.9	15.5	56.9	-1.5	-3.8
Reserves.....	\$118,080,572	\$90,225,180	\$53,682,948	\$30,803,780	\$8,257,963	30.8	08.1	119.9	157.9	151.9
Accounts payable.....	\$23,375,074	\$14,712,800	\$21,791,729	\$19,765,480	\$19,411,379	58.9	-32.5	7.3	10.3	89.7
Interest, taxes, dividends, and rents, due and accrued, and sundries.....	\$41,182,257	\$35,419,643	\$23,692,625	\$15,492,888	\$2,510,943	16.3	49.5	73.8	52.9	515.0
Not surplus.....	\$113,219,177	\$70,515,784	\$34,782,135	\$15,849,948	\$20,825,989	60.6	102.7	225.5	119.4	-22.0
Number of employees.....	81,498	68,632	64,723	\$ 44,811	28,034	18.7	6.0	25.9	44.4	59.8
Salaries and wages.....	\$99,520,357	\$76,161,926	\$43,764,201	\$24,964,994	\$17,808,249	80.7	74.0	127.4	73.3	40.2

1 Exclusive of pole line owned and operated wholly by railway companies, but including, for 1927, 2,689 miles, and for 1917, 116 miles, of pole line owned by ocean-cable systems.
 2 Exclusive of wire owned and operated wholly by railway companies, as follows: For 1927, 333,888 miles; for 1922, 285,092 miles, and for 1917, 344,110 miles, as reported by railway companies having annual operating revenues of \$1,000,000 or more; for 1912, 314,329 miles, as reported by all railway companies. No data for 1907.

3 Includes payments for depreciation.

4 Includes charges for use of leased lines.

5 Total income less all expenses, including depreciation; for 1927, 1922, and 1917, does not include charges for sinking and other reserve funds.

6 Includes sinking funds and stock and bond discount.

7 Includes floating debt.

8 Includes deferred non-interest-bearing obligations payable only on termination of leases and, for 1912, real-estate mortgages.

9 Number of employees includes 7,516 messengers, but their wages, which were not separately reported, are not included in the figure for salaries and wages.

COMPARISON OF COMMERCIAL LAND AND OCEAN-CABLE TELEGRAPH SYSTEMS

This section presents combined summary statistics for commercial land and ocean-cable telegraph systems, and more detailed statistics for the two classes of systems separately, for 1927 only.

The statistics for equipment, number of employees, and salaries and wages are given separately for land and for ocean-cable companies in Tables 2 and 6. The detailed financial data, however, were not reported separately for the ocean-cable lines operated by the Western Union Telegraph Co., and accordingly it has been necessary, in Tables 3, 4, 5, 7, and 8, to include the financial data for the Western Union cable system with those for land systems.

Balance sheet (Table 5).—The total assets and the total liabilities include some duplication resulting from intercompany holdings of telegraph and cable securities. These intercompany holdings, which are included in the item "Investment and marketable securities and long-term advances," were not reported separately for 1927 and 1922, but the "stocks and bonds of other telegraph and cable companies" as reported for 1917 amounted to \$13,465,582, or approximately one-fourth of the total holdings of stocks and bonds of other companies (\$52,868,238).

Growth between 1907 and 1927.—The growth of the land-telegraph and ocean-cable business during the 20-year period covered by Table 1 (see p. 6) is illustrated by the following percentages of increase:

Plant and equipment.....	103	T otal income.....	255
Number of messages.....	121	T otal expenses.....	280
Number of employees.....	191	N et income.....	145

TABLE 2.—EQUIPMENT AND TRAFFIC—LAND AND OCEAN-CABLE TELEGRAPH SYSTEMS: 1927

[The Western Union Telegraph Co., which operates both land and ocean-cable systems, is counted as two companies]

	Total	Land	Ocean
Number of companies or systems.....	25	18	7
Miles of pole line, aggregate.....	256,809	254,720	2,089
Owned, total.....	193,578	191,489	2,089
On reporting company's right of way.....	1,958	215	1,643
On highway.....	23,617	23,610	7
On railway right of way.....	168,003	167,564	439
Leased, total.....	63,231	63,231	
On lessor's right of way.....			
On highway.....	2,455	2,455	
On railway right of way.....	60,776	60,776	
Miles of single wire, aggregate.....	2,146,470	2,139,259	7,211
Overhead, aggregate.....	1,940,000	1,926,611	3,468
Owned, total.....	1,082,413	1,081,180	1,233
On reporting company's right of way.....	221	221	
On highway.....	302,237	302,230	7
On railway right of way.....	1,379,955	1,378,729	1,226
Leased, total.....	267,656	255,481	2,225
On lessor's right of way.....	751	751	
On highway.....	5,413	3,191	2,222
On railway right of way.....	251,492	251,489	3
Underground.....	200,811	197,058	3,753
Submarine.....	5,590	5,590	
Nautical miles of ocean cable.....	105,893		105,893
Number of offices or stations, aggregate.....	27,668	27,530	136
Operated solely by the company, exclusive of railway offices.....	5,068	5,963	125
Operated with other telegraph and cable companies.....	39	28	11
Operated with telephone companies.....	3	3	
Railway offices, total.....	21,536	21,536	
Operated solely by telegraph companies.....	87	87	
Operated jointly by telegraph and railway companies.....	21,449	21,449	
Number of messages sent, total.....	229,582,433	215,595,494	13,986,939
Government.....	2,781,982	2,667,412	74,570
Full commercial rate.....	214,164,465	200,380,664	13,783,781
Contract and free.....	12,635,986	12,557,398	123,688

TABLE 3.—INCOME STATEMENT—LAND AND OCEAN-CABLE TELEGRAPH SYSTEMS: 1927

[The financial data for the ocean-cable system operated by the Western Union Telegraph Co. are included with those for land systems, no segregation of the financial data for the cable business of this company having been made]

ACCOUNT	Total	Land	Ocean
<i>1.—Operating income</i>			
Telegraph and cable operating revenues.....	\$177,589,096	\$150,682,410	\$17,906,677
Telegraph and cable operating expenses.....	141,088,544	131,320,555	10,668,989
Net operating revenues.....	36,502,552	28,361,864	7,240,688
Taxes assignable to operation.....	7,064,545	6,181,805	882,740
Operating income.....	28,538,007	22,180,059	6,357,948
<i>2.—Nonoperating income</i>			
Income from lease of plant.....	214,279	214,279	-----
Dividend income.....	1,388,721	1,166,025	222,696
Interest income.....	3,068,612	1,477,979	1,590,638
Miscellaneous nonoperating income.....	736,950	379,050	357,900
Nonoperating income.....	5,408,602	3,177,933	2,230,669
Gross income.....	33,946,609	25,357,992	8,588,617
<i>3.—Deductions from gross income</i>			
Rent for lease of plant.....	3,599,610	3,599,610	-----
Interest accrued.....	4,773,975	4,557,933	216,042
Miscellaneous rentals.....	944,587	513,938	430,649
Miscellaneous deductions.....	784,033	596,896	187,137
Total deductions from gross income.....	10,102,155	9,268,377	833,778
Net income.....	23,844,454	16,089,615	7,754,839
<i>4.—Disposition of net income</i>			
Dividends.....	1 6,218,303	1 210,706	6,007,597
Appropriations for other purposes.....	487,545	487,545	-----
Total appropriations of net income.....	6,705,848	698,251	6,007,597
Balance carried to surplus.....	17,138,606	15,391,364	1,747,242

¹ In addition, dividends amounting to \$7,930,736 were declared from surplus.

TABLE 4.—EXPENSE STATEMENT—LAND AND OCEAN-CABLE TELEGRAPH SYSTEMS: 1927

[The financial data for the ocean-cable system operated by the Western Union Telegraph Co. are included with those for land systems, no segregation of the financial data for the cable business of this company having been made]

ACCOUNT	Total	Land	Ocean
Total.....	\$150,163,244	\$146,770,737	\$12,382,507
Maintenance expenses ¹	85,670,703	32,594,577	3,076,126
Conducting operations ¹	68,641,053	62,840,222	5,792,731
General and miscellaneous operating expenses ¹	7,873,888	5,870,755	1,707,132
Taxes assignable to operations.....	7,064,545	6,181,805	882,740
Rent for lease of plant.....	3,599,610	3,599,610	-----
Interest on funded and floating debt.....	4,773,975	4,557,933	216,042
Rentals of conduits, underground privileges, land, poles, and wires.....	944,587	513,938	430,649
All other expenses.....	784,033	596,896	187,137

¹ Includes supervision of maintenance, repairs and depreciation, and cost of testing and regulating apparatus.

² Includes supervision of operations; salaries of operators, clerks, and messengers; cost of operating power and supplies; office expenses; commissions; etc.

³ Includes salaries of general officers and clerks and expenses for law, accidents, damages, franchises, etc.

TABLE 5.—BALANCE SHEET—LAND AND OCEAN-CABLE TELEGRAPH SYSTEMS: 1927

[The financial data for the ocean-cable system operated by the Western Union Telegraph Co., are included with those for land systems, no segregation of the financial data for the cable business of this company having been made]

ACCOUNT	Total	Land	Ocean
ASSETS			
Total.....	\$572, 938, 967	\$412, 720, 174	\$160, 218, 793
Plant and equipment.....	426, 698, 742	338, 143, 146	88, 555, 596
Investment and marketable securities and long-term advances.....	50, 614, 247	11, 172, 599	39, 441, 648
Miscellaneous investments.....	1, 655, 967	1, 393, 067	262, 900
Materials and supplies.....	9, 543, 484	7, 706, 138	1, 837, 346
Cash and current assets.....	78, 807, 445	50, 046, 817	28, 760, 628
Sinking and other special funds.....	2, 653, 464	2, 230, 530	372, 934
Sundries.....	2, 965, 568	1, 970, 947	988, 611
LIABILITIES			
Total.....	572, 938, 967	412, 720, 174	160, 218, 793
Capital stock.....	180, 094, 887	104, 472, 107	75, 622, 780
Funded and long-term debt.....	97, 037, 000	92, 872, 000	4, 165, 000
Floating debt (loans and notes payable).....	2, 491, 691		2, 491, 691
Reserves (depreciation and other).....	118, 030, 572	64, 606, 438	53, 424, 134
Accounts payable.....	20, 883, 383	18, 896, 482	1, 986, 901
Interest, taxes, dividends, and rents, due and accrued.....	17, 408, 102	15, 314, 144	2, 093, 958
Sundries.....	23, 774, 155	23, 772, 647	1, 608
Net surplus.....	113, 219, 177	92, 786, 356	20, 432, 821

TABLE 6.—EMPLOYEES, SALARIES, AND WAGES—LAND AND OCEAN-CABLE TELEGRAPH SYSTEMS: 1927

[Statistics for Western Union cable employees, having been reported separately, are included with those for ocean systems]

	Total	Land	Ocean
Employees:			
Total number.....	81, 498	74, 903	6, 595
Total salaries and wages.....	\$99, 520, 357	\$89, 983, 975	\$9, 536, 382
Salaried employees:			
Number.....	26, 190	24, 127	2, 063
Salaries.....	\$38, 293, 268	\$34, 378, 670	\$3, 914, 628
Salaried officers—			
Number.....	60	40	50
Salaries.....	\$370, 666	\$408, 195	\$372, 471
Superintendents and managers—			
Number.....	2, 416	2, 156	260
Salaries.....	\$5, 731, 587	\$4, 736, 228	\$995, 361
Clerks, stenographers, and other salaried employees—			
Number.....	23, 684	21, 931	1, 753
Salaries.....	\$31, 691, 045	\$29, 144, 249	\$2, 546, 796
Wage earners:			
Number.....	55, 308	50, 776	4, 532
Wages.....	\$61, 227, 059	\$55, 605, 305	\$5, 621, 754
Operators—			
Number.....	28, 555	24, 900	1, 655
Wages.....	\$39, 010, 551	\$35, 806, 360	\$3, 204, 191
Male—			
Number.....	14, 198	12, 602	1, 596
Wages.....	\$24, 046, 241	\$20, 924, 390	\$3, 121, 901
Female—			
Number.....	12, 357	12, 298	59
Wages.....	\$14, 994, 260	\$14, 881, 970	\$82, 290
Other wage earners—			
Number.....	28, 753	25, 876	2, 877
Wages.....	\$22, 216, 508	\$19, 793, 945	\$2, 417, 563

COMMERCIAL AND RAILWAY LAND TELEGRAPH SYSTEMS

Commercial systems.—The following-named commercial telegraph companies reported for 1927:

Canadian Pacific (lines in the United States).
 Central Idaho, of Weiser, Idaho.
 Cleveland, of Chicago, Ill.
 Colorado & Wyoming, of Denver, Colo.
 Continental, of Chicago, Ill.
 Canadian National Telegraphs (lines in the United States).
 Comprising { Grand Trunk Pacific Telegraph Co.
 { Great Northwestern Telegraph Co.
 Louisburg, of Franklinton, N. C.
 Mountain, of Denver, Colo.
 North American, of Minneapolis, Minn.
 Northern, of Bangor, Me.
 Philadelphia, Reading & Pottsville, of Philadelphia, Pa.
 Pittsboro, of Pittsboro, N. C.
 Postal Telegraph-Cable System (land lines only).
 Put-in-Bay, of Put-in-Bay, Ohio.
 St. Johnsbury & Lake Champlain Railroad Co., of St. Johnsbury, Vt.
 Stock Quotation, of New York, N. Y.
 United Telegram Co., of Boston, Mass.
 Western Union System.

Of the 19 land-telegraph companies reporting for 1922, one, the Marthas Vineyard Telegraph Co., discontinued operations prior to 1927. The Vermont International of St. Johnsbury, Vt., was succeeded by the St. Johnsbury & Lake Champlain Railroad and the Postal Telegraph Cable System is now a part of the Mackay Companies.

Line and wire mileage.—The following statement shows the line and the wire mileage for land-telegraph companies as reported for 1852 and 1880 (in connection with the decennial censuses of 1850 and 1880, respectively) and for each of the quinquennial census years. (As explained in the introduction, the only statistics for years prior to 1902 are those for 1852 and 1880.)

YEAR	Miles of pole line	Miles of single wire	YEAR	Miles of pole line	Miles of single wire
1852.....	16, 735	28, 281	1912.....	247, 528	1, 814, 196
1880.....	110, 727	291, 213	1917.....	241, 012	1, 888, 793
1902.....	237, 090	1, 307, 046	1922.....	252, 991	1, 840, 312
1907.....	239, 640	1, 577, 901	1927.....	254, 720	2, 139, 259

Increase in business, in number of offices, and in wire mileage (Table 7).—

The amount of business done, measured either by number of messages sent or by income from telegraph traffic, shows a substantial increase for the period 1922-1927. The total number of telegraph offices decreased somewhat between 1917 and 1922, chiefly because of a reduction in the number of railway telegraph offices operated for commercial business, but increased between 1922 and 1927, although the number of railway telegraph offices shows a decrease for the same period. The wire mileage shows a substantial increase over that of former years. The

overhead mileage increased from 1,714,211 to 1,936,611 and the underground increased from 127,475 to 197,058. (See Table 2 for 1927 figures.)

"Plant and equipment" and "Funded debt" (Table 7).—As explained in footnotes 7 and 10, Table 7, these items as reported by ocean-cable companies for 1917 included \$20,000,000 which actually represented land-line plant and equipment owned by one of the cable companies. In compiling the statistics for 1922 and 1927 this amount has been included in the land-line figures and excluded from those for ocean-cable systems.

Long-distance telephone business over telegraph wires.—According to the annual report of the Postal Telegraph-Cable Co. for 1927, as published in "Poor's," there has been a considerable development of long-distance telephone business over telegraph wires in the South and West. This telephone traffic, which does not interfere with the simultaneous transmission of telegraphic messages, may be regarded as a "by-product."

Railway and commercial telegraph lines on railway right of way (Table 9).—The track mileage shown in this table covers the trackage of all railroads of Class I, including six which reported no telegraph lines along their right of way. The reports show an increase amounting to 16,430 miles, or 7.5 per cent, in total pole-line mileage in 1927 as compared with 1922. The wire mileage increased 93,641, or 6.3 per cent.

Telephone wire on railway right of way.—The railroads could not in all cases supply complete data regarding mileage of commercial wire along their lines. Some of the telegraph pole line reported by the Class I railroads carried telephone wire also, and 29,574 miles of additional pole line designated as "telephone" doubtless carried part of the telegraph wire. The total telephone wire mileage on the right of way of Class I railroads was reported as 684,576. Of this amount, the railroads owned 512,836 miles outright and 6,963 miles jointly with telephone and other nonrailway companies; and the mileage of telephone wire operated either solely by the railroads or jointly by the railroads and other companies amounted to 519,849, or more than three-fourths of the total.

Train dispatchers and railroad telegraph operators.—The census inquiry did not call for data regarding railroad operators or their wages; but the following statement relating to train dispatchers and telegraph operators employed by Class I railroads has been prepared from reports of the Interstate Commerce Commission:

TRAIN DISPATCHERS AND TELEGRAPH OPERATORS, CLASS I RAILROADS

	1927	1922	1917	1912
Number.....	58,734	64,704	63,910	41,645
Wages.....	\$120,439,308	\$118,282,579	\$63,718,334	\$34,193,100

The methods of classifying these employees have been such that it is impossible to show separately the exact number of telegraph operators; and, because of changes in classification, it is likely that the figures for 1912 are not strictly comparable with those for 1917, 1922, and 1927. The grouping for 1927 was as follows:

TRAIN DISPATCHERS AND TELEGRAPH OPERATORS, CLASS I RAILROADS: 1927

	Number	Wages
Total.....	58,784	\$120,439,308
Chief train dispatchers.....	5,292	17,287,787
Chief telegraphers and telephoners or wire chiefs.....	883	2,110,999
Telegraphers, telephoners, and towermen.....	20,275	44,403,953
Clerk-telegraphers and clerk-telephoners.....	13,531	23,632,549
Station-agent telegraphers and telephoners.....	18,803	33,004,920

Train dispatching by telegraph and by telephone (Table 11).—A considerable increase is shown between 1922 and 1927 in the use of the telephone and a corresponding decrease in the use of the telegraph for train dispatching. Of the 165 railroads of Class I which reported for 1927, 38 used the telegraph only, 44 used the telephone only, 74 used the telegraph only on parts of their lines and the telephone only on the remainder, and 9 used the telephone and the telegraph jointly or interchangeably over all or parts of their lines. The proportion of the total mileage dispatched by telephone only increased from 46.6 per cent in 1922 to 57.4 per cent in 1927.

The use of "printing telegraphs" by the railroads increased somewhat between 1922 and 1927. Only 8 lines or parts of systems reported this type of telegraph for 1922, but 11 other railroads adopted it within the 5-year period, making a total of 19 which were using the printing telegraph in 1927. These 19 railroads reported 129 circuits, comprising 25,991 miles of wire, in operation with printing telegraph instruments.

No railroad reported the use of radio for train dispatching in 1927.

TABLE 7.—SUMMARY—LAND TELEGRAPH SYSTEMS: 1917-1927

[Includes financial data for the ocean-cable system operated by the Western Union Telegraph Co., no segregation of the financial data for the cable business of this company having been made]

	1927	1922	1917	PER CENT OF INCREASE OR DECREASE (-)		
				1922- 1927	1917- 1922	1917- 1927
Number of companies or systems.....	18	19	21			
Miles of pole line ¹	254,720	252,991	241,012	0.7	5.0	5.7
Miles of single wire, owned and leased ²	2,139,259	1,845,237	1,888,793	15.9	-2.3	13.3
Number of messages ³	215,595,494	181,613,774	151,725,228	18.8	19.6	42.1
Number of telegraph offices.....	27,530	27,214	28,826	1.2	-5.6	-4.5
Income, total.....	\$102,860,352	\$130,638,660	\$92,954,370	24.8	40.4	75.2
Telegraph traffic.....	\$169,082,419	\$128,630,859	\$91,312,567	24.1	40.9	74.9
All other sources.....	\$3,177,933	\$1,907,801	\$1,641,803	66.6	16.2	98.6
Expenses, total.....	\$146,770,737	\$114,863,901	\$80,828,970	27.8	42.1	81.6
General operation and main- tenance, including salaries and wages and legal ex- penses ⁴	\$131,320,555	\$102,010,773	\$66,959,295	28.7	52.3	94.1
Interest and taxes.....	\$10,739,738	\$8,712,011	\$5,511,747	23.2	58.1	94.9
All other expenses ⁵	\$4,710,444	\$4,140,217	\$8,357,928	13.8	-50.5	-43.6
Net income ⁶	\$18,089,615	\$15,674,759	\$12,125,400	2.6	29.3	32.7
Dividends.....	\$8,191,492	\$7,142,771	\$7,155,514	14.7	-0.3	14.3
Balance sheet:						
Assets, total.....	\$412,720,174	\$321,912,658	\$228,406,952	28.2	42.2	82.3
Plant and equipment.....	\$338,143,146	\$264,029,938	\$163,487,637	33.1	55.4	106.8
Investment and market- able securities, long- term advances, and miscellaneous invest- ments.....	\$12,566,596	\$31,874,833	\$29,564,702	-60.6	7.8	-57.5
Cash and current assets, including supplies and sundries ⁷	\$62,010,432	\$36,007,892	\$33,354,613	72.2	8.0	85.9
Liabilities, total.....	\$412,720,174	\$321,912,658	\$228,406,952	28.2	42.2	82.3
Capital stock.....	\$104,472,107	\$104,485,778	\$103,360,237	(⁸)	-1.8	-1.8
Funded debt.....	\$92,872,000	\$67,394,000	\$33,827,549	37.8	99.2	174.5
Reserves.....	\$64,606,438	\$45,773,260	\$20,627,340	38.1	126.8	213.2
Accounts payable ¹¹	\$18,896,432	\$10,661,564	\$18,829,137	76.7	-20.5	12.3
Interest, taxes, dividends, and rents, due and ac- rued, and sundries ¹²	\$39,086,791	\$29,738,826	\$20,194,729	31.4	47.3	93.5
Net surplus.....	\$92,786,358	\$62,849,230	\$28,567,960	47.6	120.0	224.8
Number of employees.....	74,903	62,299	60,376	20.2	3.2	24.1
Salaries and wages.....	\$89,983,975	\$68,736,763	\$40,512,430	30.9	69.7	122.1

¹ Exclusive of pole line owned and operated wholly by railway companies, and of pole line owned by ocean-cable systems, the latter amounting to 2,089 miles for 1927, and 116 miles for 1917.

² Exclusive of the following items: Ocean cable operated by Western Union Telegraph Co.—1927, 25,944 nautical miles; 1922, 24,281 nautical miles; 1917, 24,301 nautical miles. Wire owned and operated wholly by railway companies having annual operating incomes of \$1,000,000 or more—1927, 333,868 miles; 1922, 285,002 miles; 1917, 344,110 miles. Land wire of cable companies reporting separately—1927, 7,211 miles; 1922, 8,013 miles; 1917, 1,452 miles.

³ Does not include ocean-cable messages nor land messages sent over leased land wire by a wireless company in 1927 and 1922.

⁴ Includes charges for depreciation; does not include payments for use of leased lines.

⁵ Includes payment for use of leased lines.

⁶ Total income less all expenses, including depreciation; does not include charges for sinking and other reserve funds.

⁷ Not including data for land-line-system plant and equipment, to the value of \$20,000,000, reported as cable system plant and equipment for 1917. (See "Plant and equipment and funded debt," p. 13.)

⁸ Includes sinking funds and stock and bond discount.

⁹ Less than one-tenth of 1 per cent.

¹⁰ Not including data for land-line-system funded debt to the amount of \$20,000,000, reported as cable-system indebtedness for 1917. (See "Plant and equipment and funded debt," p. 13.)

¹¹ Includes floating debt.

¹² Includes deferred non-interest-bearing obligations payable only on termination of leases.

TABLE 8.—CONDENSED INCOME STATEMENT—LAND TELEGRAPH SYSTEMS: 1917-1927

[Includes financial data for the ocean-cable system operated by the Western Union Telegraph Co., no segregation of the financial data for the cable business of this company having been made]

ACCOUNT	1927	1922	1917	PER CENT OF INCREASE OR DECREASE (-)		
				1922-1927	1917-1922	1917-1927
Telegraph and other operating revenues.....	\$159,682,410	\$128,639,074	\$91,312,567	24.1	40.9	74.9
Telegraph and other operating expenses.....	131,320,555	102,016,076	70,514,697	28.7	44.7	80.2
Net operating revenues.....	28,361,864	26,622,998	20,797,870	6.5	28.0	36.4
Taxes assignable to operation.....	6,181,805	5,572,704	4,091,687	10.9	36.2	51.2
Operating income.....	22,180,059	21,050,294	16,706,183	5.4	26.0	32.8
Nonoperating income.....	3,177,933	1,899,586	1,641,803	67.3	15.7	93.6
Income from lease of plant.....	214,279	-----	134,501	-----	-----	59.3
Dividends and interest on stocks and bonds of other companies.....	2,584,004	1,609,045	1,474,571	60.6	9.1	75.2
Miscellaneous.....	379,650	290,541	32,731	30.7	737.7	(1)
Gross income.....	25,357,992	22,049,880	18,347,986	10.5	25.1	38.2
Deductions from gross income, total.....	9,268,377	7,275,121	6,222,586	27.4	16.9	48.9
Rent of leased lines.....	3,599,610	3,081,922	3,575,252	16.8	-13.8	0.7
Interest.....	4,557,933	3,140,207	1,420,060	45.1	121.1	221.0
Miscellaneous rentals and deductions.....	1,110,834	1,052,992	1,227,274	5.5	-14.2	-9.5
Net income.....	16,089,615	15,674,750	12,125,400	2.6	29.3	32.7
Disposition of net income:						
Dividends.....	\$ 210,706	\$ 160,077	\$ 183,216	31.6	-12.6	15.0
Appropriations for construction and other purposes.....	487,545	3,508,583	-----	-36.1	-----	-----
Surplus, including appropriations for sinking and other reserve funds.....	15,391,364	12,006,090	11,942,184	28.2	0.5	28.9

¹ Per cent not shown when increase is greater than 1,000.

² Not including interest on \$20,000,000 funded debt of land-line systems carried in statistics for ocean-cable systems. (See "Plant and equipment and funded debt," p. 13.)

³ In addition, dividends amounting to \$7,980,786 for 1927, \$6,982,694 for 1922, and \$6,982,293 for 1917, were declared from surplus.

TABLE 9.—RAILWAY AND COMMERCIAL TELEGRAPH LINE AND WIRE ON RIGHT OF WAY OF CLASS I RAILROADS: ¹ 1927

	Number		Number
Number of systems or lines reporting.....	165	Miles of single wire owned, total.....	1,568,668
Miles of single track.....	238,874	By railway companies.....	374,852
Miles of pole line owned, total.....	230,186	Jointly by railway and telegraph companies.....	55,137
By railway companies.....	84,719	By telegraph and other nonrailway companies.....	1,138,679
Jointly by railway and telegraph companies.....	25,486	Miles of single wire operated, total.....	1,568,668
By telegraph and other nonrailway companies.....	125,981	By railway companies.....	545,730
Miles of pole line operated, total.....	230,186	Jointly by railway and telegraph companies.....	13,378
By railway companies.....	101,467	By telegraph and other nonrailway companies.....	1,009,560
Jointly by railway and telegraph companies.....	37,875	Miles of single wire owned wholly and operated wholly by railway companies.....	383,898
By telegraph and other nonrailway companies.....	90,844		

¹ Railroads having annual operating incomes of \$1,000,000 or more.

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TABLE 10.—COMMERCIAL TELEGRAPH LINE AND WIRE ON RAILWAY RIGHT OF WAY, BY COMPANIES: 1927

[The statistics in this table relate to line and wire mileage along rights of way of railroads of all classes]

COMPANY	MILES OF POLE LINE			MILES OF WIRE		
	Total	Owned	Leased or controlled	Total	Owned	Leased or controlled
Total.....	228,340	167,564	60,776	1,630,218	1,378,729	251,489
Western Union.....	209,001	152,930	56,071	1,494,550	1,262,591	231,959
Postal Telegraph-Cable.....	12,132	12,132		98,337	98,337	
North American.....	1,684	628	1,056	11,356	6,402	4,954
Continental.....	2,723		2,723	14,321		14,321
Philadelphia, Reading, & Pottsville.....	937	937		4,878	4,878	
Other telegraph companies.....	1,863	937	926	6,776	6,521	255

TABLE 11.—TRAIN DISPATCHING BY TELEGRAPH AND TELEPHONE, FOR CLASS I RAILROADS: 1927, 1922, AND 1917

METHOD	NUMBER OF SYSTEMS OR LINES REPORTING			MILES OF ROAD DISPATCHED		
	1927	1922	1917	1927	1922	1917
Total.....	165	166	137	228,896	222,664	220,143
Telegraph.....	¹ 114	² 132	120	93,842	114,215	124,875
Telephone.....	³ 119	³ 111	100	131,301	108,835	95,268
Joint telegraph and telephone.....	⁴ 9	⁴ 26	(⁵)	3,753	4,613	(⁵)

¹ Railroads having annual operating incomes of \$1,000,000 or more.² Telegraph only over entire line, 38 in 1927 and 43 in 1922; telegraph only over part of line and telephone only over remainder, 74 in 1927 and 72 in 1922; telegraph and telephone jointly or interchangeably over part of line and telegraph over all or part of remainder, 2 in 1927 and 17 in 1922.³ Telephone only over entire line, 44 in 1927 and 25 in 1922; telephone only over part of line and telegraph only over remainder, 74 in 1927 and 72 in 1922; telegraph and telephone jointly or interchangeably over part of line and telephone only over all or part of remainder, 1 in 1927 and 14 in 1922.⁴ Telegraph and telephone jointly or interchangeably over entire line, 3 in 1927 and 4 in 1922; telegraph and telephone jointly or interchangeably over part of line and either telegraph only or telephone only over remainder, or telegraph only and telephone only over separate parts of remainder, 6 in 1927 and 22 in 1922.⁵ No data.

COMMERCIAL CABLE SYSTEMS

The statistics presented under this head relate only to commercial cable companies incorporated in the United States. These are—

All American Cables (Inc.).
Commercial Cable Co. of Cuba.
Commercial Cable Co. of New York.
Commercial Pacific Cable Co.
Mexican Telegraph Co.
United States & Haiti Telegraph & Cable Co.

The Commercial Cable Co. of Cuba, the Commercial Cable Co. of New York, the Commercial Pacific Cable Co., and the Postal-Telegraph Cable Co. (land-line system only) together constitute the Mackay Companies.

As already explained (p. 8), the Western Union Cable System financial statistics are included with those for land systems.

Comparability of statistics for 1917 with those for 1922 and 1927.—The figures for 1917, as given in Table 12, are not strictly comparable with those for 1922 and 1927, for the reason that they do not include the number of local messages handled wholly outside the United States for one company which operated in connection with another in dispatching through traffic to and from the United States, and also do not include the number of foreign employees of that company nor the amount of their salaries and wages. Between 1917 and 1922, however, these two companies combined, and their reports for 1922 and 1927 covered all messages handled, including local messages in foreign countries, all employees, and all salary and wage payments. For 1917 the omitted data for messages, employees, and salaries and wages were equal to 3.7 per cent, 1 per cent, and 1.5 per cent of the respective totals for all companies.

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TABLE 12.—SUMMARY—OCEAN-CABLE TELEGRAPH SYSTEMS: 1917—1927

[Does not include financial data for the ocean-cable system operated by the Western Union Telegraph Co., no segregation of the financial data for the cable business of this company having been made, but data are included for number of companies or systems, nautical miles of ocean-cable, number of messages, number of cable offices, number of employees, and salaries and wages.]

	1927	1922	1917	PER CENT OF INCREASE OR DECREASE (—)		
				1922- 1927	1917- 1922	1917- 1927
Number of companies or systems.....	7	6	7			
Nautical miles of ocean cable ¹	105,892	76,711	71,251	35.0	7.7	43.6
Number of messages.....	13,986,939	9,602,559	6,451,228	45.7	48.8	116.8
Number of cable offices.....	136	140	114	-2.9	22.8	19.3
Income, total.....	\$20,137,346	\$21,319,420	\$16,749,058	-5.5	27.3	20.2
Telegraph traffic.....	\$17,906,677	\$18,174,356	\$15,677,176	-1.5	15.9	14.2
All other sources.....	\$2,230,669	\$3,145,070	\$1,071,882	-25.1	193.4	106.1
Expenses, total.....	\$12,382,507	\$13,126,714	\$11,042,189	-5.7	18.9	12.1
General operation and maintenance, including salaries and wages and legal expenses.....	\$10,665,989	\$11,129,052	\$7,975,458	-4.2	39.5	33.7
Interest and taxes.....	\$1,998,782	\$1,482,125	\$2,470,039	-25.9	-40.0	-55.5
All other expenses.....	\$617,736	\$515,537	\$596,692	19.8	-13.6	3.5
Net income.....	\$7,754,839	\$8,192,712	\$5,706,869	-5.3	43.6	35.9
Dividends.....	\$6,007,597	\$3,572,806	\$2,661,697	68.1	34.7	126.6
Balance sheet:						
Assets, total.....	\$160,218,793	\$137,556,626	\$136,610,271	16.5	0.7	17.3
Plant and equipment.....	\$89,556,896	\$72,631,927	\$79,870,795	21.9	-9.1	10.9
Investment and marketable securities and long-term advances and miscellaneous investments.....	\$39,703,648	\$46,963,941	\$26,470,295	-15.5	77.4	50.0
Cash and current assets, including supplies and sundries ²	\$31,956,549	\$17,960,758	\$30,269,181	77.9	-40.7	5.6
Liabilities, total.....	\$160,218,793	\$137,556,626	\$136,610,271	16.5	0.7	17.3
Capital stock.....	\$75,622,780	\$72,738,000	\$60,900,000	4.0	19.4	24.2
Funded debt.....	\$4,165,000	\$4,000,000	\$28,000,000	4.1	-85.7	-85.1
Reserves.....	\$53,424,134	\$43,448,929	\$33,035,608	23.0	31.5	61.7
Accounts payable ³	\$4,478,592	\$4,021,326	\$4,962,592	11.4	-19.0	-9.8
Interest, taxes, dividends, and rents, due and accrued, and sundries.....	\$2,095,466	\$5,680,817	\$3,497,896	-63.1	62.4	-40.1
Net surplus.....	\$20,432,821	\$7,667,554	\$6,214,175	166.5	23.4	228.8
Number of employees.....	6,595	6,333	4,347	4.1	45.7	51.7
Salaries and wages.....	\$9,636,382	\$7,425,163	\$3,251,771	28.4	128.3	193.3

¹ In addition, the cable companies reported 7,211 miles of single wire on land and underground for 1927, 8,013 miles of such wire for 1922, and 1,452 miles for 1917. (Miles of pole line owned by ocean-cable systems, 1927, 2,089 and 1917, 118.)

² Includes data for land-line-system plant and equipment to the value of \$20,000,000. (See "Plant and equipment and funded debt," p. 13.)

³ Includes sinking and other special funds.

⁴ Includes data for land-line-system indebtedness to the amount of \$20,000,000. (See "Plant and equipment and funded debt," p. 13.)

⁵ Includes floating debt.

TABLE 13.—CONDENSED INCOME STATEMENT—OCEAN-CABLE TELEGRAPH SYSTEMS: 1917-1927

[Does not include *financial data* for the ocean-cable system operated by the Western Union Telegraph Co., no segregation of the financial data for the cable business of this company having been made]

ACCOUNT	1927	1922	1917	PER CENT OF INCREASE OR DECREASE (—)		
				1922-1927	1917-1922	1917-1927
Telegraph and other operating revenues.....	\$17,906,677	\$18,174,356	\$15,077,176	-1.5	15.9	14.2
Telegraph and other operating expenses.....	10,605,989	11,129,052	7,975,458	-4.2	39.5	33.7
Net operating revenue.....	7,240,688	7,045,304	7,701,718	2.8	-8.5	-0.0
Taxes assignable to operation.....	892,740	1,321,200	1,305,664	-33.2	1.2	-32.4
Operating income.....	6,357,948	5,724,014	6,396,054	11.1	-10.5	-.6
Nonoperating income.....	2,230,669	3,145,070	1,071,882	-20.1	193.4	108.1
Dividends and interest on stocks and bonds of other companies.....	1,873,329	2,580,872	1,046,365	27.4	146.7	79.0
Miscellaneous.....	357,340	564,198	25,517	-30.7	(¹)	(¹)
Gross income.....	8,588,617	8,869,084	7,467,930	-3.2	18.8	15.0
Deductions from gross income.....	833,778	676,372	² 1,761,067	23.3	-61.6	-52.7
Interest.....	216,042	160,835	² 1,164,375	34.3	-86.2	-81.4
Miscellaneous rentals and deductions.....	617,736	515,537	596,692	19.8	-13.6	3.5
Net income.....	7,754,839	8,192,712	5,706,869	-5.3	43.6	35.9
Disposition of net income:						
Dividends.....	6,007,567	3,572,800	2,651,697	68.1	34.7	126.6
Appropriations for construction and other purposes.....		232,554	149,611		55.4	
Surplus, including appropriations for sinking and other reserve funds.....	1,747,242	4,387,352	2,905,561	-60.2	51.0	-39.9

¹ Per cent is not shown when increase is greater than 1,000.

² Includes interest on \$20,000,000 land-line-system indebtedness. (See "Plant and equipment and funded debt," p. 13.)

GOVERNMENT TELEGRAPH AND CABLE LINES

This section presents statistics for those Government telegraph and cable lines which, although used mainly in connection with the transaction of Government business, also transmit commercial messages. All such lines, except those operated by the Weather Bureau, are located in or connect with the outlying possessions of the United States. With these Government lines the effort generally has been, with reference to commercial traffic, to provide a public service rather than to make the lines a source of revenue.

Weather Bureau—Report of Chief of Weather Bureau, 1926-27 (pp. 21-24).—The United States Weather Bureau operates four telegraph and telephone lines in localities where no commercial lines are available, primarily for the purpose of transmitting meteorological observations, weather forecasts and warnings, vessel and wreck reports, and general Government business. Following is a list of these lines:

Norfolk, Va.—Hatteras, N. C.—telegraph.
Beaver Island—Charlevoix, Mich.—telephone.
North Head, Wash.—Fort Canby—telegraph.
Tatoosh—Port Angeles, Wash.—telegraph and telephone.

The combined length of these four lines is approximately 287 miles, including about 40 miles of cable. The commercial telegrams transmitted numbered approximately 29,000; the Government telegrams 13,000; and the long-distance telephone calls, both Government and commercial, about 5,000. All the commercial traffic was handled on three lines, which reported a total revenue of nearly \$6,000. These figures relate to the fiscal year 1926-27.

The Coast Guard, Lighthouse Service, and Naval Communication Service cooperate with the Weather Bureau in the maintenance of these lines and make extensive use of some of them.

Because of their location, some of the Weather Bureau lines are of great benefit to logging, shipping, fishing, and other private interests. During the fiscal year 1927, 22,854 vessel reports and 13 wreck reports were transmitted by the Cape Henry, Va., office alone.

Outlying possessions.—In Table 14 are given statistics for the Government telegraph and cable lines located in or connecting with Alaska, the Panama Canal Zone, the Philippine Islands, and Porto Rico, these being the only Government lines which reported commercial business for 1927. Some of the employees reported were engaged in nontelegraphic work during part of their time, and, except in the case of the Philippine lines, the segregation of that portion of their compensation chargeable to the telegraph and cable work was necessarily estimated by the officials who made the reports.

Alaska.—The Washington-Alaska Military Cable & Telegraph System, operated by the Signal Corps of the Army, connects Seattle, Wash., with the most important points in Alaska. Although the mileage of line construction and that of single wire show decreases since 1922, the service has been extended through connection with the Navy Radio Communication Service. The Alaskan Cable System, which is owned by the Government, connects with the telegraph lines of the Government railroad and other railroads in Alaska and with nine privately owned commercial telephone systems in the Territory, all of which handle telegrams. More than 1,600 miles of new cable has been laid since 1922.

In addition, 53 radio stations, 5 telegraph stations, and 10 cable systems are operated in Alaska in connection with the Naval Communication Service. Of the total mileage of telegraph wire (519), 380 miles belongs to the Alaska

Railroad, 127 miles to the Alaska Highway Road Commission, and 12 miles to the Signal Corps.

The number of telephone systems in the Territory is 78 and the number of miles of telephone wire is 909.

The Alaska Cable System maintains 34 stations—22 radio, 1 telegraph, 3 cable, 1 radio and telegraph, 3 cable and radio, 3 telegraph and cable, and 1 cable, radio, and telegraph.

Panama Canal Zone.—The Panama Canal Zone telegraph system is operated by the Panama Railroad Co., which is owned by the United States Government. A complete telephone system covers the Canal Zone and the cities of Panama and Colon. Radio stations handling commercial business are located at each end of the canal. Messages may be sent through Panama Railroad stations.

Philippine Islands.—The report for 1927 of the Governor General of the Philippine Islands states that that year witnessed the establishment of telegraph stations in 13 municipalities and nine radio stations in isolated regions. Sixty-nine municipalities and barrios were provided with facilities for the delivery of telegrams through the telephone. Additional telegraph lines of over 1,056 miles in length were constructed and placed in operation. Eleven new telegraph offices were in process of construction. Nine radio stations were installed and 11 were being built. The Radio Corporation of the Philippines has put into operation a broadcasting plant and can now reach all parts of the archipelago. Transoceanic service was in process of being established. The Government was arranging to obtain a new and more efficient submarine cable to be used in establishing a fast telegraph route between Manila, Iloilo, and Cebu. With this additional route and operation of new radio stations at Davao, Zamboango, Iloilo, Cebu, and Manila, the southern islands will be brought into much closer contact with Manila. At the close of the year 444 telegraph offices (including 40 radio stations) were in operation.

Porto Rico.—The report of the Governor of Porto Rico for 1927 states that the Government owns and operates both telegraph and telephone lines in Porto Rico. Radio service is being added and extended. New lines are being added and new instruments obtained.

TABLE 14.—GOVERNMENT TELEGRAPH AND CABLE SYSTEMS—OUTLYING POSSESSIONS: 1917-1927

	ALASKA			PANAMA CANAL ZONE		
	1927 ¹	1922 ¹	1917 ¹	1927	1922	1917
Miles of pole line.....	12	470	849			10
Miles of single wire.....	12	840	1,219	470	470	212
Miles of submarine cable.....	2,529	2,639	2,676			
Number of employees.....	1,228	1,307	1,261	15	15	29
Salaries and wages.....	\$308,480	\$432,200	\$266,480	\$1,500	\$1,500	\$7,529
Expenses, total, including salaries and wages.....	\$601,995	\$625,133	\$350,000	\$3,361	\$3,147	\$9,242
Income from commercial business.....	\$446,276	\$176,226	\$200,958	\$4,068	\$4,121	\$2,810
Number of messages.....	1,275,473	1,211,337	1,222,343	33,150	33,132	30,810
Government.....	59,483	73,793	65,683			139
Commercial.....	215,990	137,544	156,675	33,150	33,132	30,171

	PHILIPPINE ISLANDS			PORTO RICO		
	1927	1922	1917	1927	1922	1917 ²
Miles of pole line.....	4,793	5,227	4,872	296	195	426
Miles of single wire.....	8,922	6,434	6,828	2,430	911	1,551
Miles of submarine cable.....	696	850	986			
Number of employees.....				265	212	196
Salaries and wages.....	\$421,151	\$423,689	\$294,764	\$161,968	\$102,446	\$68,695
Expenses, total, including salaries and wages.....	\$537,106	\$648,009	\$372,162	\$162,450	\$125,358	\$91,965
Income from commercial business.....	\$666,563	\$610,633	\$418,769	\$134,720	\$82,189	\$104,472
Number of messages.....	1,372,873	1,216,099	913,660	406,129	292,671	277,169
Government.....	86	113,563	127,895	5,421	21,451	11,269
Commercial.....	1,372,787	1,096,536	785,765	400,708	271,420	265,940

¹ Fiscal year ended June 30.

² Of the total Government-owned mileage of telegraph wire (519 miles), 380 miles belong to the Alaska Railroad, 127 miles to the Alaska Highway Road Commission, and 12 miles to the Signal Corps.

³ Includes 169 enlisted men, United States Army.

⁴ Includes 251 enlisted men, United States Army.

⁵ Includes 206 enlisted men, United States Army.

⁶ Not including data for salaries and wages paid for telegraphic services relating directly to railroad transportation.

⁷ For 1927, land messages, 19,372; ocean-cable, 227,422; wireless, 23,673; for 1922, land messages, 35,157; ocean-cable, 156,607; wireless, 19,573; and for 1917, land messages, 44,467; ocean-cable, 166,758; wireless, 11,113.

⁸ Includes data for telephone systems. So far as reported separately, these are as follows: Pole line, 100 miles; single wire, 802 miles; operating revenues, \$36,731; operating expenses, \$30,367; long-distance calls, 90,340.

⁹ Includes, for 1927, 2,923 radio messages to ships; land messages, 1,263,261; and ocean-cable, 6,689; for 1922, 719 radio messages to ships; land and ocean-cable messages not reported separately; for 1917, 35 radio messages to ships; land and ocean-cable messages not reported separately.

COMMERCIAL WIRELESS SYSTEMS

The following-named commercial wireless-telegraph companies reported for 1927:

Mackay Radio & Telegraph Co., formerly Federal Telegraph Co.
Independent Wireless Telegraph Co.
Intercity Radio Telegraph Co.
Radio Corporation of America.
Tropical Radio Telegraph Co.

The earliest census statistics for wireless telegraphs relate to the year 1907. Table 15 presents summary figures for the five census years from 1907 to 1927.

Comparability of statistics for 1917 with those for preceding and following years.—As explained in footnote 1, Table 15, the 1917 figures for number of messages and certain other items do not show the actual amount of business done during the year, for the reason that they represent only the operations of the land stations during the first quarter and of one company during the entire year. No complete record of the number of commercial messages transmitted under Government operation was kept. The report of the Secretary of the Navy for the fiscal year 1917, however, contains the statement that the traffic from April 6 to June 30, 1917, through the stations formerly operated by the commercial companies, aggregated 103,737 messages, of which number 14,797 were official and 88,940 were commercial. The addition of these 88,940 commercial messages to the 122,244 shown in Table 15 gives a total of 211,184 for the first six months of 1917; and if the number of commercial messages sent during the remainder of the year was approximately the same, the total for 1917 would amount, in round figures, to 420,000, representing an increase of nearly 50 per cent as compared with 1912. The number of messages reported for 1922 represents a great increase—approximately 460 per cent—over the estimate for 1917, and the number reported for 1927 represents an increase of nearly 800 per cent for the 10-year period 1917–1927.

The reduction in the number of tower stations from 117 in 1907 to 55 in 1927 was made possible by the development of high-power sending apparatus.

Radio telegraphy and telephony, and particularly the latter, have become established modes of communication for many commercial organizations in the conduct of their business. In regions where it would be difficult or impossible to construct and maintain wire lines, the problem is solved by the use of radio. Among the industries thus benefited are fishing, mining, and lumbering.

Government radio stations.—The Government maintains 141 land radio stations, 63 ship radio stations, and 8 leased-wire telegraph stations in Alaska; and 13 radio stations in the Hawaiian Islands, 7 in the Canal Zone and Panama, 3 in the Virgin Islands, 3 in Samoa, and 1 in Guam. These are units of the Naval Communication Service, with headquarters at Washington, D. C. The War Department at Washington communicates by radio with more than 300 garrisons, posts, camps, and stations.

TELEGRAPHS

TABLE 15.—SUMMARY—WIRELESS TELEGRAPH SYSTEMS: 1907-1927

	PER CENT OF INCREASE OR DECREASE (-)				
	1922-1927	1917-1922	1912-1917	1907-1912	
Number of companies or systems.....					
Number of messages.....	5 3, 777, 638	4 2, 365, 109	3 1, 122, 244	1907 154, 617	
Number of tower stations.....	55 37	37	63	74	
Income, total.....	\$24, 820, 340	\$8, 111, 102	\$1, 385, 080	\$106, 791	
Revenue from transmission.....	\$6, 226, 188	\$4, 207, 765	(¹)	(¹)	
Other operating revenues.....	\$14, 791, 665	\$3, 644, 201	(¹)	(¹)	
Nonoperating income.....	\$3, 811, 587	\$259, 116	(¹)	(¹)	
Expenses, total.....	\$12, 866, 636	\$5, 111, 574	\$ 775, 534	\$160, 359	314.4
General operation and maintenance, including salaries and wages and legal expenses.....	\$5, 116, 264	\$3, 534, 474	\$1, 540, 891	\$117, 480	401.1
Interest and taxes.....	\$249, 435	\$156, 457	\$ 7, 826	\$5, 562	40.7
All other expenses.....	\$7, 500, 937	\$1, 420, 643	\$1, 186, 837	\$37, 287	82.1
Net income.....	\$11, 962, 704	\$2, 999, 628	\$ 609, 526	392.1	(¹)
Deficit.....					
Balance sheet:					
Assets, total.....	\$31, 147, 612	\$46, 494, 909	\$14, 483, 638	\$32, 988, 897	-68.5
Plant and equipment.....	\$36, 751, 904	\$34, 716, 814	\$9, 276, 261	\$317, 614	279.6
Investment and marketable securities, long-term advances, and miscellaneous investments.....	\$17, 711, 483	\$1, 225, 169	\$2, 040, 504		-40.0
Cash and current assets.....	\$19, 312, 823	\$4, 437, 830	\$1, 479, 337	199.3	
Materials and supplies.....	\$6, 831, 630	\$5, 883, 877	\$1, 395, 971	321.5	
Stores.....	\$1, 387, 342	\$241, 219	\$292, 565	17.6	
Deficit.....	\$162, 430			475.1	-71.5

See footnotes at end of table.

TABLE 15.—SUMMARY—WIRELESS TELEGRAPH SYSTEMS: 1907—1927—Continued

	PER CENT OF INCREASE OR DECREASE (—)				
	1927-1927	1917-1922	1917-1917	1917-1912	1907-1912
Liabilities, total.....					
Capital stock.....	\$81,147,512	\$46,404,009	\$14,483,638	\$10,377,197	\$32,958,897
Funded and long-term debt.....	\$58,174,134	\$36,634,309	\$10,390,500	\$9,002,570	\$32,670,242
Floating debt.....	520,901	325,000	376,318		39,5
Accounts payable.....	\$11,408,628	\$3,254,566	\$612,857	\$287,866	7,0
Reserves (depreciation and other).....	\$17,206,050	\$4,040,280	\$979,103		232,4
Interest, taxes, and rents, due and accrued, and sundries ¹	\$5,746,973	\$1,172,659	\$692,538		453,4
Surplus.....	\$3,262,186	\$808,885	\$1,423,324		390,1
Number of employees.....	1,985	1,268			921,4
Salaries and wages.....	\$2,568,179	\$2,095,506	\$461,402	\$393,609	114,7
					354,2
					38,8
					17,2
					444,3
					381,4

¹ Incomplete. The statistics for 1917 relate only to the first quarter of the year, or until the stations were taken over by the Government for operation during the period of the war, except that the operations of the ship stations of 1 company are covered for the entire year.

² Included 5,013 land messages sent over a leased wire by a wireless company doing a land-telegraph business also.

³ Per cent not given when increase is greater than 1,000.

⁴ Figures not available.

⁵ Includes sinking funds and stock and bond discounts.

⁶ Includes premium on capital stock and funded debt.

APPENDIX

SCHEDULE USED IN SECURING DATA FOR TELEGRAPHS

Each question should be answered. If not applicable, write "None".

Form 3681

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

CENSUS OF TELEGRAPHS, 1927

All commercial telegraph systems (land, ocean cable, and wireless) must be reported on this schedule

NAME OF COMPANY OR SYSTEM _____

STATE _____ CITY _____

ADDRESS OF GENERAL OFFICE: _____ STATE _____

City or town _____

Street and number _____

State _____

1. Does company operate land telegraph? _____ Ocean telegraph? _____ Railway telegraph? _____ Telephone telegraph? _____ Telephone business? _____

2. Character of ownership. (State the form of ownership as it existed on the last day of the year covered by the report, whether individual, firm or partnership, incorporated company, or other form.) _____

3. If a consolidated company, give names and addresses of constituent companies acquired since 1922 and covered by this report: _____

4. If a subsidiary or leased company, give name and address of operating company or lessee: _____

5. MILES OF SINGLE WIRE.—(The answer to this inquiry should show the total number of miles of pole line and wire line for line of poles or in one conduit or cable, round length of each wire separate.)

Miles of pole line	Miles of wire line	Miles of single wire
Aggregate _____	_____	_____
Aerial total _____	_____	_____
Owned: _____	_____	_____
On reporting company's right of way _____	_____	_____
On highway _____	_____	_____
On railway right of way _____	_____	_____
Leased or contracted: _____	_____	_____
On highway _____	_____	_____
On railway right of way _____	_____	_____
Underground _____	_____	_____
Submarine _____	_____	_____

6. NUMBER OF MAIN AND BRANCH OFFICES OR STATIONS.

News
Aggregate _____
Owned solely by reporting company (exclusive of railway offices), total _____
Operated with other telegraph and with cable companies _____
Operated with telephone companies _____
Owned solely by company _____
Operated jointly by reporting and railway company _____
Tower stations for wireless _____

7. ESTIMATED NUMBER OF MESSAGES SENT DURING THE YEAR.—Do not include periodic messages.

Commercial, Government	Contract as free	TOTAL
Messages _____	_____	_____
Land _____	_____	_____
Submarine _____	_____	_____
Wireless _____	_____	_____

(3)

Form 3681

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

CENSUS OF TELEGRAPHS, 1927

All commercial telegraph systems (land, ocean cable, and wireless) must be reported on this schedule

NAME OF COMPANY OR SYSTEM _____

STATE _____ CITY _____

ADDRESS OF GENERAL OFFICE: _____ STATE _____

City or town _____

Street and number _____

State _____

1. Does company operate land telegraph? _____ Ocean telegraph? _____ Railway telegraph? _____ Telephone telegraph? _____ Telephone business? _____

2. Character of ownership. (State the form of ownership as it existed on the last day of the year covered by the report, whether individual, firm or partnership, incorporated company, or other form.) _____

3. If a consolidated company, give names and addresses of constituent companies acquired since 1922 and covered by this report: _____

4. If a subsidiary or leased company, give name and address of operating company or lessee: _____

5. MILES OF SINGLE WIRE.—(The answer to this inquiry should show the total number of miles of pole line and wire line for line of poles or in one conduit or cable, round length of each wire separate.)

Miles of pole line	Miles of wire line	Miles of single wire
Aggregate _____	_____	_____
Aerial total _____	_____	_____
Owned: _____	_____	_____
On reporting company's right of way _____	_____	_____
On highway _____	_____	_____
On railway right of way _____	_____	_____
Leased or contracted: _____	_____	_____
On highway _____	_____	_____
On railway right of way _____	_____	_____
Underground _____	_____	_____
Submarine _____	_____	_____

6. NUMBER OF MAIN AND BRANCH OFFICES OR STATIONS.

News
Aggregate _____
Owned solely by reporting company (exclusive of railway offices), total _____
Operated with other telegraph and with cable companies _____
Operated with telephone companies _____
Owned solely by company _____
Operated jointly by reporting and railway company _____
Tower stations for wireless _____

7. ESTIMATED NUMBER OF MESSAGES SENT DURING THE YEAR.—Do not include periodic messages.

Commercial, Government	Contract as free	TOTAL
Messages _____	_____	_____
Land _____	_____	_____
Submarine _____	_____	_____
Wireless _____	_____	_____

8. CERTIFICATE

I, _____, _____, 1927

Witness my hand and official signature of the person furnishing the information

(Address of person furnishing the information)

Signature of (Special Agent)

(over)

8-2727

