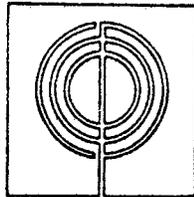


DRAFT: FOR REVIEW AND COMMENT

THE BELL SYSTEM AND COMMUNITY TELEPHONES

by Thomas Brom and Edward Kirshner

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The city of Edmonton, Alberta lies in the heart of the Canadian wheatlands that stretch from Ottawa to the Rockies. Until the discovery of oil in 1947, Edmonton was an agricultural center. Oil changed the provincial economy to an industrial one, leading to development of natural gas fields and huge reserves of high-quality coking coal. Today, Edmonton is a diversified and growing provincial capital with a population of 450,000. But this city, and others like it across western Canada, is a mortal enemy of the giant Bell Telephone system of North America.

The city of Edmonton, Alberta has owned and operated its telephone, power, water and sanitation utilities for 70 years. It does so profitably, efficiently -- and most important for the citizens of Alberta -- cheaply. Edmonton Telephones has among the lowest rates on the North American continent.<sup>1</sup> Its record of performance rates consistently higher than Bell Canada, ranking above the AT&T subsidiary in such categories as Performance of Outside Plant, Traffic Operating Index, and Dictatory Operations. Yet in terms of revenue generated for comparable size areas, Edmonton earns 25% more revenue than the Bell-operated system in Quebec City on a volume of 207,000 telephones.<sup>2</sup>

The citizen-owned Edmonton systems much of its earnings back into the city treasury. Edmonton Telephone pays a 5% franchise tax on its gross revenues, as well as making annual contributions to the city that reached \$5.25 million for 1970.

The installation of modern switching equipment has generally kept pace with developments within the industry. Much of the present Edmonton equipment is of the second-generation "cross-bar" type, with electronic switching scheduled to phase out older equipment beginning in 1974. The telephone system grows at a healthy 9.5% annual rate.

The city of Edmonton recently began construction of a publicly-owned CATV system via coaxial cables operated by the telephone company. Subscriber revenues alone will provide an additional \$250,000 annually to the city.

Edmonton Telephones interconnects with the provincial Alberta Government Telephones for long lines, data transmission and satellite communications. The AGT Crown corporation serves telephone users beyond the boundaries of Alberta's municipal systems.

All of this evolved during 38 years of provincial rule by the conservative, although strongly populist, Social Credit Party. Alberta's policy toward public utilities, like that of the other western provinces, was made locally, consistent with the needs and demands of the people.

Immediately across the Canadian border, telephone service is another matter entirely. More than 83% of U.S. telephones are owned and operated by American Telephone and Telegraph Company, or, the Bell System. AT&T is the largest corporation in the world, with \$60.7 billion in assets that exceed the gross national product of all but a handful of the world's nations.

The sheer bulk of AT&T affords it an air of permanence and inevitability in the United States. The company possesses three times the assets of General Motors, America's first-ranked industrial corporation, and 33% more assets than BankAmerica, the world's first-ranked commercial bank. Over the last decade, AT&T's operating revenues have doubled to \$17 billion. In net income, AT&T's 1973 figure of \$2.99 billion was \$550 million higher than the leading industrial corporation, Standard Oil of New Jersey/Exxon.

AT&T alone accounts for almost 2% of the U.S. gross national product, and 4% of the total productive facilities employed by U.S. business. Its capital spending amounted to \$8.3 billion in 1972 -- 10% of the investment made by the entire nation in that year. Beneath her vast skirts, Ma Bell has 1.1 million employees, making up more than 1% of the entire U.S. labor force.

AT&T is not only huge -- it is also highly diversified. The branching begins with four main divisions: American Telephone and Telegraph, Western Electric, the Bell System operating telephone companies, and Bell Telephone Laboratories. AT&T is the financial holding company, owner of controlling interest in the 25 subsidiary telephone companies, sole owner of Western Electric, and co-owner with Western Electric of the Bell Telephone Laboratories.

Western Electric is the largest manufacturer of telephone equipment in the world, and the 11th largest U.S. industrial corporation. It is also the second leading Department of Defense contractor, while the parent AT&T ranks fourth. In addition to making Princess telephones, Western Electric produces components for guided missiles, nuclear weapons, anti-submarine systems, and the ABM. It has 22 principal plants in 17 states.

Most of AT&T's huge revenues come from the regional telephone companies, ranging from Bell of Canada to Pacific Telephone and Telegraph. AT&T's ownership ranges from 89.1% to 100% for all but four of these subsidiaries.

The parent corporation also has indirect control over subsidiaries of its subsidiaries: some 290 companies are owned, controlled or operated by regional Bell systems. Interlocking financial connections further represent some \$326 billion in revenues as of December 31, 1970 -- approximately one-third of the U.S. gross national product.<sup>3</sup> The interlocking and cross-directorates involve such giant as Chase Manhattan Bank,

Metropolitan Life Insurance, Sears Roebuck, Boston Edison Company, U.S. Steel, IBM, General Motors, and First National City Bank of New York.

In 1962, AT&T acquired 29% controlling interest in COMSAT, the privately-owned Communications Satellite Corporation established to manage a domestic communications satellite system.

Bell Telephone Laboratories is AT&T's fourth great division, the largest corporate research organization in the world. Bell Labs specializes in, but is not limited to, communications research. Defense Department contracts directly or through Western Electric account for nearly 25% of its gross revenues.

Despite all of this vast wealth and power -- and possibly because of it -- a very curious development arose within the Bell System in the late 1960's. The development superficially involved the total collapse of service in the Plaza 8 exchange of AT&T's home subsidiary, the New York Telephone Company. But that was only the first crack. By the time the seismic upheavals were over, Ma Bell emerged from behind her public relations image as a rather incompetent, bigoted old matriarch.

AT&T was having extreme difficulties holding her wires together. She failed at the basic public service requirements where the industry began -- local telephone communications. She was charged with dismal employee relations, and consumer advocates claimed she bilked millions from the public. On top of that, AT&T was encountering real competition in the telecommunications industry.

AT&T found itself swatting at a swarm of specific public indictments. While Bell's local service was nowhere as bad as in New York City, the list of customer complaints read like a modern plague of locusts: calls that don't go through, operators that can't be reached, unclear and incorrect bills, long waits for connect, disconnect and maintenance service, bureaucratic hostility from customer relations, constant marketing campaigns for additional "extras," hidden equipment and listing charges, monitoring and tapping calls, and most pervasively, constant rate increases.

AT&T Board Chairman John deButts announced again last year that the Bell companies would be seeking broad rate increases for virtually all service. Among his suggestions were a 20 cent charge for pay-phone calls, a 15 cents per call charge for information requests, and installation fees from \$40 to \$65. DeButts claimed that it would be "completely unfair to our shareowners" to scale down Bell rate increase requests. "We have to go to the investment markets every year to raise upwards of \$4 billion of new capital," says he. "People aren't going to be willing to invest unless you can offer them a return that is comparable to what they can get from alternative investment opportunities."<sup>4</sup>

On the switchboard end of the line, complaints were just as persistent. Phone company workers have among the highest turnover rates in the nation, driven from their jobs by boredom, infamous sexism, racism, performance norms, time studies, and constant surveillance by superiors. By the end of 1969, 27% of all operators had less than six months' experience, and Bell's national operator turn-over had skyrocketed to 62% annually, including veteran as well as rookie operators. In the area of new operators alone, in 1969 Bell interviewed a million women, hired 125,000, but by the end of the year was left with a net gain of only 15,000.<sup>5</sup> In 1971, the Equal Employment Opportunity Commission stated flatly, "The Bell monolith is, without doubt, the largest oppressor of women workers in the United States."

Perhaps the most fundamental charge of all is that AT&T brazenly subsidizes its vast economic and political empire with local telephone revenues, primarily from the urban areas. "Home phone rates are increasing because AT&T is concentrating its technology and cost-cutting on long-distance service," says Joseph C. Goulden in Monopoly.<sup>6</sup> The revenue from a volume of 147 billion yearly local calls supports a limited class of affluent business telephone users who make 2.5 billion interstate calls a year.

Today, AT&T appears to be suffering from the ills of gigantism -- service and personnel problems, management stagnation, internal corporate fat acquired over years of monopoly operation, and loss of public confidence. All of this and competition, too.

AT&T is a government without citizens -- only customers, shareholders, employees and a tiny knot of managers. Yet while its wealth is nearly beyond comprehension, the local citizens of Edmonton, Alberta have comparable telephone service at less cost. And they receive a lot more community benefits in the bargain.

Edmonton Telephone by its very existence audaciously offers an alternative to the Bell System. Ten years ago, AT&T would not have cared. Their monopoly of U.S. telecommunications was virtually complete, and their position in the U.S. economy apparently beyond challenge.

But today the Bell System has problems, eroding from within and attacked by consumers and rival corporations from without. Alternative telephone systems in the U.S. are no longer a chimera. Corporations, school districts, and local governments have purchased individually-designed communications systems from the new telephone "interconnect" industry. Publicly-owned electric power, water, and CATV systems across the country show that communities have the managerial skill and the ability to raise capital necessary for locally-operated utilities.

Competition in the specialized carrier and satellite communications fields have shattered AT&T's myth of invincibility.

The spark that remains to be struck is public conviction that communities can fight the Bell System and win. AT&T spends millions each year promoting itself as "the phone company," a timeless, necessary monopoly for which there is no alternative. But at last the means are at hand to build community owned and controlled telephone systems that really are an alternative to the excesses of Ma Bell. A few local victories could provide the impetus for significant changes in the control of U.S. communications.

## PART I. THE U. S. TELEPHONE INDUSTRY

### 1. DOWN THE YELLOW BRICK ROAD WITH ALEXANDER GRAHAM BELL

A little history helps explain how Ma Bell came to control all those telephones, coaxial cables, microwave relays and satellites in the first place. AT&T did not emerge like Athena full-grown from the head of Zeus. The AT&T monopoly began with exclusive control of a controversial, much-litigated patent. The corporation grew by refusing to connect competing companies into regional or national systems, and by blocking their access to capital. In those days no one would have thought to refer to the company as "mother."

The telephone, like the radio and later television, had many nearly simultaneous partial inventors. Original experiments soon took a back seat to patent office procedures and the vagaries of capital investors. On the same day in 1876 that Alexander Graham Bell filed for his patent, Elisha Gray filed a patent caveat to the effect that he, too, was working on a device "to transmit the tones of the human voice and reproduce them at the receiving end of the line."

Bell's financial backers sought to market the device themselves. Elisha Gray sold his patents to Western Union Telegraph Company, then one of the most powerful and feared corporations in America.

In 1879 Bell and Western Union ended two years of furious legal battles with an out-of-court settlement. Western Union agreed to stipulate in writing that Bell was the inventor of the telephone, that Western Union would abandon the telephone business, and that it would sell its 56,000-telephone system to Bell. In return, Bell agreed to pay Western Union 20% of its receipts from telephone rentals of royalties for 17 years -- the life of the Bell patents. The settlement left Bell and Western Union in clear monopoly positions in their respective industries.

For the next 12 years, AT&T grew in the rarefied air of monopoly capital. The company adopted a policy of immediate suit for patent infringement by any challenger, and had gone to court over 600 times by 1894.

In the interim, the Bell group had bought controlling interest in Western Union, and acquired the services of Theodore N. Vail -- who would build a telephone company into an empire.

The system Vail constructed was built on three major policies. First, Bell would seek out local promoters who were willing to organize phone companies in their towns, enlisting subscribers and selling stock. Bell then sold these entrepreneurs telephone instruments for customer rental, receiving a share of the stock in payment.

Local companies had to agree to have no dealings with independent phone companies or other competitors. Promotion contracts expired within five years, leaving Bell the option to purchase all the equipment at a price not exceeding its original cost. In a handful of larger towns Bell gave permanent contracts, but took in return a stock interest of 30% to 50%. "In addition to stock ownership, Bell demanded the right to representation on boards and executive committees of these licensee companies, restricted them from borrowing money without Bell's consent, and directed that expansion be paid for by capital stock issues -- not from profits."<sup>7</sup> Such agreements became the basis for the General License Contracts that presently exist between AT&T and their subsidiary companies.

Second, Bell absolutely forbade its licensee companies to interconnect with non-Bell franchises for long-distance calls. Commercial long-distance calls were introduced in 1885, but only between Bell cities.

Third, the Bell System vigorously pursued patents on the countless devices necessary for telephone service. Vail organized an engineering department to duplicate or otherwise acquire patents on every minor invention in the field, recognizing that further development might be hampered without complete control of the market.

By the time the original Bell patents expired in 1894-95, very little was left of the telephone industry for independents to fight over. Most of them were relegated to the country and a handful of smaller cities, surviving largely at the sufferance of the Bell System.

The eventual emergence of independent telephone companies did have some effect on the basic Bell monopoly positions. State legislatures began forcing interconnection between Bell and independent systems in 1904, provided the independent was not competing directly with a Bell subsidiary. In 1913 J.E. Kingsbury, an AT&T vice-president, signed an agreement with the U.S. Attorney General that became known as the Kingsbury Commitment. It marked the end of rampant Bell acquisition that had been eating up whatever advances the independents made.

With AT&T thoroughly consolidated in the urban centers and the independents struggling in smaller towns, rural America was totally

abandoned. From 1920 to 1940 the number of rural phones dropped from 2.5 million to 1.5 million, and many of those remaining were so out-dated they were useless.<sup>8</sup>

Congressmen from rural states tried to get the 2% loan provisions of the 1935 Rural Electrification Act extended to telephone service, but Bell strongly lobbied against government interference. Hearings and debate continued into 1949, with General Telephone and the U.S. Independent Telephone Association fighting responsibility for wiring rural America as strongly as the Bell System. That year Alabama Senator Lister Hill pushed through legislation providing REA loans for rural telephone cooperatives, bringing telephone service to large sections of America 80 years after it had become commonplace in the cities.

Ironically the official institutionalization of the Bell monopoly came with the 1934 Communications Act, creating the Federal Communications Commission and ostensible government regulation of the telephone industry. AT&T patiently endured the only significant FCC probe in its history from 1935-38, and that ended with little tangible results. Owning a monopoly not only of telephone service and profits, but of technological, accounting, legal and investment knowledge in the industry as well, AT&T merely made its expansion from 1934 more orderly. An anti-trust suit brought by Attorney General Tom C. Clark in 1949 shocked AT&T more for its audacity than anything else. The suit demanded that AT&T divest ownership of Western Electric, its profitable manufacturing arm. The Eisenhower Administration settled matters amicably in 1956, calling the matter "persecution of business."

Independent equipment producers, however, never really gave up. AT&T went to court in 1957 to halt the sale of Hush-a-Phone for use on its lines, and then again in 1962 concerning the Ericofon. The stakes were high. The rental of telephone equipment yields about \$4 a year; one-sixth of AT&T's total revenues. These entrepreneurs were attempting to sell specially designed receivers outright to Bell customers, who might simply plug them in and pay only the monthly use charges.

AT&T won the first skirmishes, as it had won most previous court cases with the independents. But in the late 1960's, a series of unheralded federal decisions jolted AT&T headquarters to its foundations. Through intercession by the federal government, the Bell System was re-acquainted with the word "competition."

The first shock was the Carterfone decision of 1968. Thomas Carter, developer of a mobile two-way telephone system for use in the oil fields, brought his anti-trust suit all the way to the Supreme Court. For the first time, a federal court held that it was legal to make "foreign attachments" on Bell System lines, provided the equipment was compatible and AT&T installed its own electrical components.

In May, 1971, the FCC brought more bad news for AT&T. In response to a petition by Microwave Communication, Inc., (MCI) the FCC "recognized

a fundamental difference between the 'natural' monopoly of public telephone service, and private customized service." Known as the "specialized carrier" decision, this ruling gave a huge boost to independent microwave relay systems, coaxical interconnect systems, and specialized business communication companies.

In March, 1972, the FCC handed down a second blow for AT&T. Cable television had been growing since the early 1950's as a potential "television of abundance," an alternative to broadcast technology that allowed up to 80 channels via a coaxical cable. Bell had invested heavily, anticipating the future combination broadband communications systems. But on March 31, 1972, the FCC released its Third Report and Order on CATV, requiring divestiture of cable ownership by telephone utilities.

The final blow from federal agencies came in December, 1972, when the COMSAT monopoly was broken by President Nixon's "open skies" policy. Suddenly such competitors as Hughes Aircraft, RCA, Western Union, Fairchild Electronics, MCI, Lockheed Aircraft, Western Telecommunications, and General Telephone and Electronics were entering the domestic satellite field. AT&T's 29% ownership of COMSAT, and its four existing communications satellites certainly gave it leadership in the industry, but competition was an unwelcome surprise.

The recent decisions by the Supreme Court and the Federal Communications Commission, both heavy with Nixon Administration appointees, brought cries of outrage from AT&T. The company had expected better treatment from the business-dominated Republicans.

But from Richard Nixon's early days in Southern California politics, his financial backers have been the "new money" interests of the Southwest, Texas and Florida. These same men, among them Howard Hughes and Jack Cooke, are also the moving forces behind both cable television and domestic satellite communications.

AT&T is the classic Eastern, "old money" corporation, disdainful of economic or political competition. Ironically, the pious sentiments of Nixon appointees on the virtues of capitalism became the instruments for making the most significant chips in AT&T's armor in 40 years.

2. INDEPENDENT SYSTEMS -- BEEN DOWN SO LONG IT LOOKS LIKE UP

Independent telephone systems once dotted the nation. Corporate or public, small systems proved then as now that they can provide service and earn a profit. But in the U.S., the fate of the independent telephone systems varied inversely to the health and power of AT&T.

Rural cooperatives, mutual telephone companies, and private independents first banded together in 1897, shortly after they had legal access to the Bell patents. The association did them little good. Bell operating companies were able to operate at a loss for long periods of time in order to undercut and drive out competitors. Bell lawyers specialized in patent infringement suits, whether for nuisance value or to seriously challenge a rival's hardware. Finally, telephone interconnect battles raged into the 1920's, with the Bell System companies dragging their heels for years before permitting many independents access to their long-distance lines.

The Kingsbury Commitment of 1913 saved the hardiest from extinction, and many more rural cooperative systems were added with the extension of REA loans in 1953. The U.S. Independent Telephone Association presently consists of 1,760 companies owning 22 million telephones -- or about 17% of the market.<sup>9</sup>

The current fact of USITA survival is even more modest a victory than these figures imply. In 1940, there were more than 6,000 independent in the association. System mergers and purchase by 12 major holding companies reached a level of 150-200 per year in the 1960's, leveling off now to 30-50 per year.

General Telephone and Electronics dominates the USITA, controlling 46% of the independent stations, and 8% of the entire U.S. telephone industry. GTE and the other 11 holding companies own 273 of the 1,760 independent systems for a whopping 74% of the non-Bell Market. More than 1,500 of the USITA member companies are so small they collectively share a mere 3.4% of the total telephone market.<sup>10</sup>

The independents serve about one-third of the U.S. land area. Bell serves another third; the final third is too sparsely populated for any telephone service. AT&T's aggressive sweep of the urban area under the direction of Theodore N. Vail was nearly total. The only significant exceptions to the independent's rural profile are Rochester, New York Tampa, Florida, Lincoln, Nebraska, and parts of greater Los Angeles.

The 12 independent holding companies apparently use AT&T as a corporate model. Each has its own equipment manufacturing subsidiary development in part to counter any competition from the business communication companies that emerged in the wake of the Carterfone decision. General Telephone and Continental have their own research laboratories. When GTE acquired the Hawaiian Telephone Company in 1967, International Telephone and

Telegraph brazenly initiated a successful anti-trust suit to force divestiture. And General's service has been so erratic in the Los Angeles area that the state PUC penalized the corporation \$4.4 million in the first such action in California history.

None of this would tend to inspire confidence in the future of the independent telephone industry. But the counter-vailing forces working against AT&T are operating to open a window in the market precisely in the independent field.

As national growth and development continued to broaden the limits of urban areas, more and more independent telephone systems found themselves in the middle of unprecedented new service requirements. The migration of business, industry and population to the suburbs meant profits for the USITA, for once in the right place at the right time. Business Week calls the independent telephone industry a "major growth" area, citing substantial profits generated by even the smallest systems.<sup>11</sup>

### 3. UTILITY ACCOUNTING PRACTICES IN THE BELL SYSTEM

The spectre of market competition in both equipment and telephone systems would have been bad enough news for the Bell System. The service collapse in urban areas added more concern and recent successful court cases charging anti-minority and anti-sex bias have left their mark on harried AT&T management.

But the biggest bundle of bad news has been the rash of Nader-spawned investigations of giant U.S. corporations, with AT&T sitting front and center. The internal economics of the telephone business were once a cherished secret, not even shared with government regulators and elected officials. To have them spilled before the public has not only been humiliating and costly, it has also shown consumers what they have suspected for a long time -- that Ma Bell is a thief.

Even a cursory analysis of AT&T's internal economics involves a frightening trip into the labyrinthian world of telephone utility accounting. The Bell System hires entire armies of accountants, usually able to outflank and encircle the FCC and the most audacious Public Utility Commission. The questionable procedures that AT&T has evolved since ostensible federal regulation could fill volumes. First, some understanding of the rules of this very unusual financial game are a prerequisite.

The phrase "rate of return" in investment analysis refers to return to stockholders equity. When regulatory agencies talk about rate of return, however, they mean something else. A utility's regulated rate of return approximates return to the entire investment, both debt and equity. Since Bell System companies are usually financed by 55% equity

and retained earnings and 45% debt, the rate of return figure should be considered as nearly twice the stated amount.

The current FCC rate of return for AT&T interstate operations is approximately 10%, with state Public Utility Commissions allowing somewhat higher rates for intrastate communications. These figures are several percentage points above those of regulated private power companies -- an indication of the relative political power of AT&T.

AT&T's profitability looks much different when the categories are more comparable to industrial corporations. On the basis of profit margin, or net income as a percentage of gross sales, AT&T hit 12.1% in 1972. The composite profit margin of the nation's 500 largest industrial corporations in 1972 was only 5%.

In addition to guaranteeing exorbitant profits, utility "regulation" causes some strange side effects. A utility's total investment is called the "rate base." It includes the cost of land, buildings, equipment, and capitalized labor. All other expenses to the utility are in effect reimbursed on an annual basis -- that is, salaries, gasoline, legal fees, advertising expenses, lobbying costs, charitable donations, taxes, paper cups, and the cost of rate hearings. They are deducted from the gross income before a regulatory agency arrives at the rate of return. The procedure encourages inefficiency, inflated bureaucracy, and overspending.

In this financial never-never land, AT&T has developed some ingenious practices. Telephone utilities earn a percentage return on the value of capital investment; hence the higher the value of capital equipment, the higher the allowable rates. AT&T gets virtually 100% of its capital equipment from its wholly-owned subsidiary, Western Electric Company. Western Electric, for its part, is forbidden by contract to sell telephone equipment to anyone but AT&T. So as far as the parent corporation is concerned, the more expensive the equipment, the better. AT&T has complete, unregulated authority to set Western Electric prices at whatever level it wishes. While the percentage profit that AT&T is regulated, Western Electric can earn as much profit as it feels desirable from its own Mother Bell -- a figure consistently higher than AT&T's rate of return.

The net effect is overcapitalization in order to maximize profits under the framework of utility "regulation." The company's construction budget for 1974 is \$10.4 billion, about \$6 billion of which comes from retained earnings and depreciation. The other \$4.4 billion must come from stocks and bonds -- a figure that accounts for 20% of all the new capital raised on the money markets last year by American industry.

With capital expenditures increasing by about \$1 billion per year and its rate of return fixed at about 10%, AT&T virtually insures the necessity of annual rate increases. Customers will be expected to pay the telephone company about 15% interest each year for the year's invest-

ment in order to pay Ma Bell's taxes and leave her with a net profit.

Ironically, the capital expenditures of AT&T are not reflected in improved home equipment or service. The corporation's cash flow is incredibly slow, due to such accounting practices as straight-line depreciation used in rate procedures. Bell takes very long equipment lifetimes -- 38 years for an electronic central office. As an over-all average, AT&T depreciates its plant at a little more than 5% per year.

Slow depreciation discourages utilities from retirement of aging and obsolete equipment, while maintaining a bloated rate base. The FCC Common Carrier Bureau notes that during the period 1966-1968 (which immediately preceded the serious service breakdowns in New York City), AT&T spent less than 10% of its total construction budget on plant improvement. The CCB charged that Bell's twenty-five subsidiary companies were told to deliberately slow down installation of new equipment.

The Bell System continues to support an artificially high rate of return at the cost of holding back new technologies that might improve service. The electronics revolution that grew from Bell Labs' greatest development, the transistor, has almost totally displaced electromechanical equipment in calculators and computers. But it will take another 30 years, according to Bell's plans, for electronic switching systems to displace the older equipment in the telephone network.<sup>12</sup>

If installation of new equipment is slow, what does AT&T spend all that new capital for? The FCC has never conducted an investigation of AT&T research and development or manufacturing expenditures, but the evidence available suggests that AT&T spends extraordinary amounts for Bell System long lines research, development and installation. AT&T has spent billions developing the 14 and 15 telephone cables, microwave relays, millimeter wave-guide cables, satellite interconnections, fiber optics, and laser beam communications. It has also lavished \$1 billion on the Picturephone, an instrument currently costing \$150 per month to lease and \$1,200 apiece to build. Some of this money has come from the federal government in the form of research and development contracts, but much more has flowed from the 25 operating Bell System subsidiaries. Local revenues pay for the long distance development.

Certainly the work of the Bell and General Telephone Labs must be financed, but not necessarily at the expense of the individual home telephone user. The huge increase in long distance communications has been a function of ULS corporate growth, and Bell expenditures for maintaining its share of the business market are likely to continue. Bell Long Lines Division President Richard Hough predicts that sharp competition for "private line" business communications may force Bell to increase charges for other services by as much as \$100 million by 1976.<sup>13</sup>

State Public Utility Commissions are notorious push-overs for AT&T accountants, who use a tried and true method of accumulating precedents from the weakest commissions in the South to apply at rate hearings in the

East and West. But in 1962, a uniquely aggressive California PUC staged an investigation of the rate policies currently in effect at Pacific Telephone and Telegraph (89.1% AT&T). The PUC itemized 14 major padding practices of PT&T, and ordered an \$83 million refund to the California public. That decision was overturned by the California Supreme Court before the money ever left AT&T's bank vault, and the accounting practices remain commonplace among the Bell operating companies. The PUC opinion did, however, provide a unique look into AT&T accounting practices:

- # Speculative property held for future use; included in the rate base as "operating cost"
- # Excessive executive salaries
- # Padded wage expenses; occasional increases applied to entire year
- # 1 % of gross revenues fee charged operating companies by AT&T for "general services," then applied to the rate base ("In effect, AT&T was taking money out of one pocket and putting it into another, but calling it an expense for which the subscriber was responsible.")<sup>14</sup>
- # Political contributions charged as "operating costs"
- # Lobbying expense charged as "operating costs"
- # Inclusion of employee taxes, reserves for corporation taxes, debenture interest, and advance collections from subscribers in the rate base.
- # Padded plant cost, including plants still under construction

Multiply these practices by the 25 operating Bell companies, accounting for about 80% of the nation's 130 million telephones, and then again by the years of AT&T monopoly operation, and the scope of this public fleecing is truly massive.

Most galling of all, AT&T has been using these illicit profits taken under the guise of "rate of return regulation" to finance their entry into the competitive areas of communications. Data transmission along telephone lines has proven the most potentially lucrative, but AT&T has also expanded into facsimile transmission, mixed voice and data transmission, TV signal transmission, satellite communications, and message telegraph service. The public has paid dearly for this growth.

So the threads of development within the U.S. telephone industry come together -- a huge monopoly hobbled by poor service and a grumbling work force, communications conglomerates preoccupied with high profit schemes in data and satellite transmission, catalogues of corrupt practices within the framework of government regulation, and new openings for independent telephone distribution, manufacturing and service companies because of

recent Supreme Court and FCC decision. In the case of local telephone distribution systems, the geographical spread of population to the suburbs and countryside provides the added incentive of high growth and profits.

Taken together these factors represent the greatest opportunity for local, public control of the telephone utility since Alexander Graham Bell first locked up his patents.

## PART II COMMUNITY TELEPHONE SYSTEMS

### 1. THE ECONOMICS OF PUBLICLY-OWNED UTILITIES

In most of the nations of the world, telephone service is regarded as a proper exercise of government responsibility. The U.S. acknowledges this responsibility in businesses that are both public necessities and monopoly-controlled with its system of state and federal regulatory agencies. In theory, the government condones a private monopoly only by special state franchise grants and the appropriate regulation of business practice and rate of financial return. The franchises are revocable at any time, and the agencies purport to represent the public interest and welfare.

With regard to the telephone companies, the pathetic abdication of both state Public Utility Commissions and the FCC is virtually complete. Understaffed, underfinanced, and underwilled, the regulatory commissions are dependent on AT&T, GTE and the USITA for the very surveys and assessments upon which they base their decisions. No FCC investigation of the AT&T rate base has occurred since 1935. When the commission debated such an undertaking in 1971, it declined with painful eloquence by stating that it simply did not have the resources to accomplish the task. AT&T outgrown all attempts to even investigate it.

In the face of such abject surrender, surely it is the public's duty to exercise its clearly defined interest in efficient, inexpensive telephone service. The people of Edmonton, Alberta know that there is an alternative to corporate rip-off. Regardless of the specific service or bureaucratic structure, the concept is called "local control."

Direct community ownership of utilities -- electric, water, sewer and telephone -- has a history of success in the midwestern U.S. and the western provinces of Canada. Heir to the populism that swept the west in the late 1800's, the people of British Columbia, Alberta, Manitoba and Saskatchewan have owned all their public utilities for decades.

Many of the oldest and largest public power systems in the U.S. date back to the turn of the century, among them Jacksonville, Florida, Cleveland, Ohio; Tacoma and Seattle, Washington; and Los Angeles, California. They were built by municipal reform governments pledged to end public exploitation by the utility monopolies. The success of public ownership in these communities has been matched only by the antagonism with which it has been met by the private utilities, expressed in unceasing propaganda and an aggressive acquisition policy.

The American Public Power Association is a national management organization for the more than 2,000 publicly-owned electric utilities, and a major lobbyist for community ownership. Many of its impressively-documented arguments in favor of public power are directly applicable to community telephone ownership.

Chief among the reasons for public ownership is lower rates. In the public industry, the average residential consumer in 1970 paid 12% for 35% more kilowatt hours of electricity than consumers in the private market.<sup>15</sup> Many of the reasons concern private corporate bureaucracy -- high executive salaries, huge expenditures for advertising and public relations, political contributions, lobbying costs in state and federal government, and the large and unwieldy service organizations necessary for national or state operation. APPA figures show consistently higher costs for private power over the last 25 years in the areas of accounting, collections, promotion, advertising, administration and transmission.

Private power companies have long maintained that the uniformly lower rates of public power systems was solely a function of their tax exempt status and access to low-interest capital. A comparison of 1971 Federal Power Commission statistics, however, reveals that public power savings occur in virtually every aspect of operation.<sup>16</sup>

Exclusive of retained earnings, municipal power systems have 30% lower costs per kilowatt-hour (KWH) than Class A and B (the largest and most numerous) private utilities. Of that savings, 40% is due to an absence of dividend payments, 15% to efficiencies in operation, maintenance and power production, and 8% to lower depreciation and amortization because of smaller plant per KWH produced. Fully 63% of the public system savings are exclusive of any privileged tax or financial status.

This comparison probably underestimates the true difference in system efficiencies because of the much larger plant size, capacity and number of customers among the Class A and B private utilities. The private utilities should be enjoying economies of scale that would make them more competitive than the generally smaller public systems.

While publicly-owned utilities are exempt from most federal, state and local taxes, the vast majority make substantial payments in lieu of taxes to the municipal general fund. Payments range from 5% gross revenues from the Los Angeles Department of Water and Power, to 16% of gross revenues paid in accord with the city charter in Pasadena.

The total amount of taxes paid to all government agencies is significantly higher for private utilities, but the municipal government itself receives only a small fraction of those taxes. California public power cities receive about 10 times the tax payments of neighboring cities served by private utilities.

A major advantage of community-owned utilities is local control, expressed both in administrative policy and overall utility growth. A public sense of control and responsiveness is a significant community benefit over and above the economic considerations. Publicly-owned utilities may be just as bureaucratic and willfull as their private counterparts, but mechanisms exist for citizen-inhibited change at the community level.

The quality of utility management and personnel varies only slightly between public and private systems, despite the generally higher management salaries paid by private industry. Independent management audits and FPC statistics indicate that executive competence among all varieties of larger systems is approximately equivalent. The smaller, rural public power operations have received help from their national associations in attracting and training personnel.

## 2. EXISTING PUBLIC TELEPHONE SYSTEMS IN NORTH AMERICA

Establishing a rationale for public telephone ownership and actually building a system of locally-interdependent companies are quite different matters. The U.S. power industry was never swept with a Theodore N. Vail who could see no reason for more than one telephone company, and set about erasing the competition. Today there are only 9 remaining municipal telephone utilities, four of those in Alaska and one in Puerto Rico. The other four systems are rural operations -- Barnesville, Minnesota, Beresford and Brookings, South Dakota, and Fallon, Nevada.

The low number in the continental U.S. doesn't mean publicly owned systems are not feasible. Among the Alaska systems are Fairbanks and Anchorage, well-run municipal urban telephone operations. The Puerto Rican system serves the entire island, with nearly 350,000 telephones in San Juan alone.

Communities in western Canada are even better examples, if only because their native populism is still prevalent in local and provincial politics. The New Democratic Party, a coalition of older socialist and populist factions with the Canadian Labor Congress, currently governs in British Columbia, Manotiba and Saskatchewan.

Public enterprise has been a part of the Canadian economy for some time, including the Canadian National Railroad, Air Canada, the Canadian Broadcasting System, and the publicly-owned utilities. The Trudeau government recently established a Canadian Development Corporation to buy up shares in foreign-owned corporations on Canadian soil.

In British Columbia nearly 95% of the land is publicly owned. The right-wing Social Credit government that preceded the NDP established BC Hydro and BC Ferries as public enterprises, and built a provincially owned railroad from Vancouver to the northern frontier.<sup>17</sup>

BC Prime Minister David Barrett is officially committed to buying BC Telephones, a subsidiary of General Telephone and Electronics, either directly or through gradual government acquisition of stock. Plans are also under way for publicly-owned cable television throughout the province.

The establishment of these "Crown corporations" is not necessarily ideal for community control. But the Barrett government has promised to have worker and community representatives on corporation boards, and to give workers some equity participation in corporate policy and operation. The results in terms of community involvement, service, and responsiveness are far superior to the traditional U.S. corporation.

Many of the publicly-owned telephone systems in western Canada are over 75 years old, operated by the federal, provincial, or municipal government. In addition, rural telephone cooperatives serve another 1,000 communities. The largest public systems are Alberta Government Telephones, Edmonton Telephones, Saskatchewan Telecommunications, and the Manitoba Telephone System.<sup>18</sup>

Rapid consolidation within the telecommunications industry has effected both public and private systems in Canada. Municipally-owned systems have dropped from 80 in 1961 to 19 today. But corporate systems decreased from 261 to 67 in the same period; Bell Canada emerged with five times the plant of its next highest competitor. Bell Canada operates primarily in the profitable high-density urban areas of Quebec and Ontario Provinces, owning 63% of all the telephones in Canada.

Still, Edmonton Telephones and other systems like it persist, contributing both substantial revenue and service to their communities.

The 1,500 small private telephone companies in the U.S. offer the best evidence of a continuing financial rationale for community ownership. Operating in a market dominated by a single, gigantic monopoly, these small systems maintain good service, solid growth, and a substantial return for investors. The simple fact is that communities don't NEED the Bell System for local telephone communications.

A typical telephone grid in town or suburb consists of several main switching centers, trunk cables, and house drops. Calls are routed automatically through local political or corporate boundaries to the Bell System long lines for intrastate or national calls. Bell has a monopoly on interstate lines, functioning -- at the public's loss -- as the government telephone service would in most other countries.

The local entity, whether public or private corporation, signs a long distance contract with the Bell System for the privilege of long lines interconnection. The revenue for each call using Bell System equipment is shared according to a specific formula set down in contract form. The contracts are made either on a "cost basis" for the equipment used, or on a "cents per message" basis. Either way, the Bell System is in the

stronger bargaining position. Long lines contracts are not inordinately exploitative, however, as they are governed by FCC policy.

With the exception of urban nightmares like New York City, wiring a community with switching equipment and routing calls beyond local borders is a relatively simple matter. There is no compelling reason to duplicate AT&T's corporate structure, or its employment, service, and financial practices on the local level.

The Edmonton, Alberta telephone system, small by Bell System standards and supposedly undercapitalized because of public resistance to bond issues, includes such services as "Time," the "911 Emergency Telephone Number" service, and the Centrex system for large commercial and institutional switchboards.

Local systems, public or private, have the option of purchasing low-cost equipment from the Asian markets at a considerable saving from Western Electric prices. They might also subscribe to alternative long-distance relay systems now emerging from the specialized carrier industry.

Bureaucracy and service personnel can be kept to a minimum through an association of interconnected community telephone systems. The Bell System has traditionally used its guaranteed profits from high-density urban areas to finance expansion into suburban areas, long lines development, and specialized carrier technology.

Community-owned systems with only one job to do could lower residential telephone rates or contribute system profits to the city treasury in order to reduce local property taxes. Municipal power systems in many communities have contributed to lower utility rates and to lower property taxes than in neighboring cities. In addition, as the municipal bonds are repaid from revenues, there is an increase in the net public equity in the telephone system.

It is clear that home telephone service could be much cheaper without the top-heavy structure of the Bell System telecommunications empire. Small independent telephone systems -- without AT&T's vast capital reserves, fancy laboratories, teams of experts, and Washington lobbyists -- can and do provide better and less costly community telephone service.

### 3. BUILDING ALTERNATIVES TO THE BELL SYSTEM

Reinforcing the existing publicly-owned telephone systems in the U.S. and encouraging the start of others will be difficult but not impossible. The greatest hurdle is overcoming public apathy, and countering the trend toward economic consolidation and monopoly control.

The California state constitution, and those of several other states, includes "communications" as a legitimate municipal responsibility. That authority will have to be fought for and established in many other areas.

The public benefits of community telephones are clear enough without specific feasibility studies for "new town" developments to make policy commitments to public systems at the outset. However, in most areas in the U.S. with sufficient population to support a telephone system, a private franchise has already been granted. For these cities and towns, eminent domain condemnation proceedings must be initiated against the private system.

There have been relatively few condemnations of public utility facilities in the U.S., and none in the telephone industry. But sufficient precedents exist -- again, in the public power industry -- to provide some knowledge of the procedures.

In California, the price paid by a city or municipality for the telephone plant within its political boundaries would be determined by legal and political considerations within a given state.

The jurisdictional board or court will then determine just compensation for the property taken, including the "fair market value" of the property and "severance damages" for the incremental cost of separation and the loss of the property. Since utility property doesn't change hands often enough to have a "fair market value," the price must be determined by a study of such factors as reproduction cost, earnings value, original cost, stock and bond value, tax base and the utility rate base.

Public acquisition will be simplest and most feasible where the private system boundaries approximate the city municipal boundaries. Where they do not -- and especially with regard to condemnation of portions of the Bell System -- a separations procedure must be established. With an absence of precedents, a number of creative arguments can be raised here. It has been shown with a number of Bell System operations that high-density inner city areas tend to yield substantial profits, subsidizing Bell's growth in the suburban areas. If the city core wishes to municipalize, it might bring evidence of this subsidization, and demand a discounted fair market value for the past profits produced in excess of the utility's regulated rate of return.

As far as physical severance is concerned, the Bell System has devised dialing and switching mechanisms that are able to delineate municipal boundaries for fire department and police use, as well as for internal accounting. Although the AT&T operating companies generally ignore political boundaries in favor of telephone exchange, district and division lines for their financial and equipment records, such municipal definitions can certainly be made. The physical separation of the lines probably would be unnecessary.

The fact of over 1,500 small but profitable independent telephone systems in the U.S. is eloquent testimony that no great economies of scale exist in the industry. AT&T is surely no model of efficiency and public service.

But there is also no rational justification for continued Balkanization where regional telephone systems or associations would be more appropriate. The Municipal Utility District movement of the 1930's was an attempt to create just such larger bodies for regional coordination and access to capital. Municipal Utility Districts operate publicly-owned power, water and sewage plants throughout the Northwest and California, including the Sacramento MUD and the East Bay MUD near San Francisco.

Where regional government officials are elected, with member cities exercising community control over policies and income allocation, many of the benefits of a local system can be retained. Regional public utilities would offer an increased financial base for system growth, and provide an opportunity for area planning in communications.

Another alternative from the public power industry is cooperative structure patterned after joint electric power generation and transmission facilities. The Northern California Power Association is an example, with the 11 member cities pooling resources only for large capital expenditures, preserving local distribution independence.

Any move for public ownership of telephone service probably will evolve in one community at a time, as the political awareness of community control grows. Most of the regional governments that presently exist are little more than corporate planning boards commissioned through political patronage at the state level. That is political control and economic planning from the top down, and the antithesis of true community control. The concept of regional coordination, however, should be an integral part of the movement toward publicly owned utilities.

Once a condemnation proceeding has been successfully concluded, the system must of course be paid for. Tax-exempt bonding is the most common method of capital accumulation by a public corporation. Although individual state laws determine the precise types and procedures, most cities have the option of issuing general obligation, revenue, or non-profit corporate bonds. A city's debt limit is also a matter for state determination.

The general public must be consulted by local election at every step of this process, although the mechanics differ in each state. Publication of an independent feasibility study commissioned by the city council usually precedes a ballot measure for the issuance of bonds. In most states, bonding measures require more than a simple majority of the voters. Obviously a successful campaign requires a fully-informed and politically aware community. There are no short-cuts to the basic educational process necessary to establish a community-owned utility.

Many of the same forces that are opening spaces in the market for public ownership of utilities are also serving to bring community people with apparently disparate interests together on the issue. Some support will come from the highly political sectors, aware of the abuses of private monopoly ownership and eager to establish community control. But support will also come -- as it has in the battles for public power -- from people who are justifiably angry with consistently shoddy telephone service, consistently higher rates, substandard working conditions, race and sex discrimination, and the openly political uses to which their bill payments are put.

The economic and financial arguments in favor of public ownership will persuade many who would not ordinarily be interested. Property and sales taxes continue to take huge bites from personal income, with never enough to go around for city services. In the long run, revenue from city-owned utilities serves to reduce municipal debt, not expand it. That can be shown from the public power cities, and the public telephone cities in this country and Canada. And efficiency, despite contentions to the contrary, is better on the average than for private corporations.

#### 4. COMMUNITY TELEPHONES AND COMMUNITY POWER

The Bell System is a perfect target for a national movement toward local public ownership of utilities. For years, AT&T has spawned grassroots consumer groups frustrated with monopoly arrogance and high telephone rates. Ma Bell's corporate excesses at home, abroad, and now in space have made her a national symbol to left, liberal, and union activists, equal rights, and corporate watch-dog organizations.

Finally, city managers and councilmembers who have made a fetish of efficiency and maximizing city revenues are beginning to look to their own utilities as a source of income. A modest move in this direction with regard to CATV systems has so frightened the cable tv industry it is presently seeking legislation to forbid municipal ownership.

In a larger strategic sense, national and local campaigns to acquire telephone utilities from the Bell System and the larger independent holding companies serve to show the vulnerability of huge, multinational corporations. Giving the lie to the myths of corporate expertise, efficiency, and invincibility convinces people of their own collective power.

Renewed competition within the U.S. telecommunications industry may speed a fracturing in the AT&T monopoly. So will the efforts of community groups organizing opposition to Bell's rate increases, hiring practices, present working conditions, and corporate financing. But if just more Bell Systems, or reformed Bell Systems, are the only result, a great opportunity will have been lost.

The services currently being offered by competing firms in the telecommunications field are the most diverse ever. Whole urban systems could be built with Japanese equipment, customized interconnections, specialized carrier service via microwave and computer cables, and complementary CATV net-working.

An aggressive, far-sighted community could finance such a total communications resource, and own it for posterity. The chances, the possibilities, exist now as never before.

The outcome might be as mundane as a manageable, low-cost community telephone system. Or it might be as grandiose as a network of total electronic communications.

The public policy implications might be minor, perhaps gaining only local jobs, and retaining a larger share of revenues for home use. Or such systems might herald public ownership in other industries as well, broadening the scope and definition of the terms "utility" and "public service."

The very process itself will be the most important aspect of building community telecommunications systems. Before a more humane, decentralized political economy can emerge, people must move, must work together to create community-based structures that can replace the institutions that now fail them. That process is the key to making public utility reform something far more meaningful within the present social fabric.

The remnants of North American populism transported from the wheatfields of western Canada may yet awaken people in the U.S. to the notion that they can change their own communities and alter their own lives, if they only choose to do it.

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