
DISS-CONNECTED
How America's Big Telecoms Stole Billions from the Public and Created the Digital Divide
David Rosen
with Bruce Kushnick

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Preface

This is a companion book to ***Violations & Egregious Acts**: **Trillion Dollar Broadband Scandal*** by telecom analyst Bruce Kushnick. As Bruce writes,

> This book analyzes the grift, the overcharging, and the diversion of funds that the [telecom] companies have perpetrated on the American public for several decades.

It provides much of the financial analysis and documented history of the giant telecom companies that are referred to in this work.

Violations & Egregious Acts can be found at Amazon Books.

In addition to Bruce, special thanks to Chuck Sherwood and Ken Levy for all their help, and to Doug Wood and George Klabin for their support.

Introduction:

An Over-Priced & Second-Rate Telecom Country

In the U.S. every need can be turned into a scam. The weight-loss industry capitalizes on eating disorders; the pharmaceutical industry exploits widespread addiction; and the cosmetics industry takes advantage of women's discomfort with their appearance. The same can be said about the telecom industry that capitalizes on people's "need" to communicate, be informed and entertain themselves.

A century ago, American Telephone and Telegraph (AT&T) Company introduced the first nationwide telephone system. A century later, telecom services have become necessities, and like water and electricity services, most Americans take their telecom connectivity for granted. If it works – however poorly and over-priced – we use it. We complain about bad reception, high fees and bad customer service, but we pay our bill ever month; sometimes, we shop around for a better deal only to end up with a similarly failing, over-priced service.

Sadly, most Americans have little understanding of how the telecom industry overcharges them and has been doing so for decades. We estimate that since 1992 the overcharges have totaled more than $1,000,000,000 – that's one trillion dollars! The overcharges involve not only simple rigged service fees (e.g., "Ramming," Cramming," "Slamming" and other scams) and a host of miscellaneous fees (e.g., "Call Waiting," "Caller ID" and "Call Forwarding"), but more hidden fees like "Subscriber Line Charges" and "Inside Wire Charges."

Far graver forms of overcharging are a consequence of accounting schemes and what Sen. Elizabeth Warren (D-MA) identified as "regulatory capture." The leading telecom holding companies have used and manipulated the accounting rules to allocate a disproportionate share of corporate expenses on to traditional local telephone service, resulting in rate hikes for customers of that declining service. These companies want an all-wireless future and are doing whatever they can to achieve it.

More troubling, the Federal Communications Commission (FCC) and state public utilities commissions (PUCs) across the country have allowed the industry to divert the local telecom utility construction budgets to expand their wireless networks (e.g., 5G) and not to building out fiber-optic networks. Government complicity with the industry agenda, whether or not it is in the public interest, is what is meant by "regulatory capture."

The consequence of overcharging is that the U.S. has become a second-tier telecom country, falling behind advanced industrial countries in Europe and Asia who are providing citizens with high-quality and more-affordable digital telecom services. Of the 38 members of the Organization for Economic Cooperation and Development (OECD), the U.S. ranks 17th in terms of broadband access service usage – right between Luxembourg and the Czech Republic.[1]

Few Americans are aware that telecom companies track every call, email, web search, Zoom session, social networking connection, streaming session or download, thus turning the postmodern user into a digital commodity whose personal data is being sold to marketers or third parties whose interests and purposes are unknown to them. And perhaps most troubling, over the last few decades the telecom industry has consolidated into a postmodern "trust" dominated by five giant holding companies – AT&T, Verizon, Comcast, Charter/Spectrum and Lumen Technologies (formerly Qwest/CenturyLink) whose combined political power dominates and shapes the communications landscape.

Making matters worse, digital inequality/redlining is a living reality for millions of Americans who lack even basic connections to broadband and the internet. In 2020, the FCC conservatively estimated that 21.3 million Americans didn't have home access to broadband services of voice, video and data; of these, 5.1 million homes were in rural areas while 15.3 million homes were in non-rural (urban) areas.[2] This failure to buildout the telecom infrastructure is known as the Digital Divide and it has resulted in millions of school children lacking adequate internet access or broadband-enabled learning devices, while their parents are deprived of advanced employment opportunities, digital medical services and entertainment experiences.

Holding the big telecom trusts accountable for their over-pricing, poor service and creation of the digital divide are enormous challenges. As a major first step, we urge consumers to demand greater responsiveness to their communications needs by state and federal legislators and regulatory officials, as well as state attorneys general and the U.S. Department of Justice.

In addition, we urge state officials and political leaders to assess how much money their state-based telecom companies have misappropriated through overcharges and other schemes. We also urge responsible government officials to stop doling out more money to the

companies that repeatedly have reneged on their fiber buildout commitments. Congress recently authorized tens of billions of dollars of taxpayer money for broadband deployment and these monies should go to fiber deployment and not inferior wireless services. The pattern of subsidizing Big Telecom for buildouts they never deliver -- and without any regulatory accountability by a passive government -- must stop.

If the U.S. is to survive and thrive in the digital future, the public must find a way to bring the giant telecom trust under meaningful public supervision and see to it that every American gets high-speed access to communications infrastructure and the digital technology they need and, in most cases, have already paid for. To accomplish this, we believe the longer-term solution to the telecom overcharges and poor service is the break-up the telecom trust. This involves requiring the large holding companies to divest either their utility wireline local services that use fiber optic and copper lines (the "wireline companies") from their wireless operations. This will force U.S. telecom companies to provide their competitors with meaningful open access to their communications networks.

Finally, this book provides a broad overview of the nation’s deepening telecom crisis and offers a series of concluding actions that political officials and individuals can take to pressure federal, state and local governments to begin to address this critical situation.

It won't be easy, but it must be done.

Chapter 1

The Challenge

Postmodern America is a telecom-enabled nation. In the U.S., there are more telecom customers -- 518 million subscriber to wireless, wireline and cable services – than there are people.[3] Tele-connectivity mediates, *electronically facilitates*, nearly every aspect of contemporary life -- whether personal, educational, business, health or governmental; whether voice, internet, social media or streaming; whether online retail, distance learning or Zoom meeting; and whatever the content, be it the latest news headline, a presidential address, a promotional offering, a posted article, a dating service listing or a porn flick. And our global telecommunications infrastructure makes almost every place and person on the globe nearly instantaneously accessible.

Like turning on the tap, flicking on the light switch or driving on a highway, most Americans take their telecom connectivity for granted. If it works – however poorly and over-priced – we use it. We complain about bad reception, high fees and bad service, but we pay our bill every month; sometimes, we shop for a better deal but end-up with the same failing service. Telecom service has long been and – in the wake of the Covid pandemic -- even more so a 21st century necessary utility, just like public water and electricity services.

The telecom industry has, for all effect, gained significant influence over a large swarth of the U.S. Congress, the FCC, state legislatures and public utility commissions (PUCs) through a process often referred to as "regulatory capture." To accomplish this, the telecoms fund corporate-corrupted research, support think tanks, fund armies of non-profit groups, made-up so called "astroturf" fake consumer groups, lobbyists and trade/business associations to do their bidding. The consequence of this decades long all-out campaign is serious: it has turned the U.S. into a second-tier communications nation.

What's even worse, with all the past mergers, the old wireline companies -- AT&T, Verizon and Lumen -- are now the dominant wireless companies and some are even offering cable service in a few places. The cable companies and the phone companies have created a situation where they have stopped competing and have split up the delivery of broadband and

internet. In addition, they formed partnerships for wireless services, so they rarely compete with one another.

AT&T, Verizon and Lumen -- along with Comcast and Spectrum/Charter -- form the Telecom Trust of companies that really don't compete but are partners in a scheme to control all your communications. Verizon, for example bought most of the cable companies' wireless spectrum assets and has announced potential Verizon-cable marketing of all services. At the same time, AT&T and Verizon no longer upgrade their "advanced" TV services, U-Verse and Fios, but promote the wildly overhyped "5G" (Fifth Generation) fixed and mobile wireless services.

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The U.S.'s current economic -- and, by extension, political -- crisis is a tale of the return of the corporate trusts of a century ago. It involves not only the financial institutions deemed too-big-to-fail, but the health-insurance combines, the energy conglomerates, the pharmaceutical giants, Big Tech companies – i.e., Alphabet (Google), Amazon, Apple, Meta (Facebook) and Microsoft -- and the telecom oligopoly of telecommunications and cable-entertainment companies. Together, they profoundly influence American life. Each is engaged in the systematic plunder of the American consumer's pocketbook, providing less service at increasingly inflated prices, all to return a hefty profit to their executives and investors. And all done under the willingly blind eyes of federal and state regulators.

American capitalism has come full cycle from the legendary battles waged by Teddy Roosevelt and other Progressives a century ago. Then, they battled the shameless practices of industrial trusts like John D. Rockefeller's Standard Oil and the many other Robber Barons. Today, Rockefeller's corporate descendants – e.g., Amazon's Jeff Bezos and Tesla's Elon Musk – continue to dominate the American economy and as a result the Big Trust model has reemerged, accompanied by rising inequality.

This time, unfortunately, there is no TR to do battle for the public good. Instead, many Democrat and Republican officials, along with a vast infrastructure of lobbyists, lawyers, front groups, nonprofits grateful to their telecom benefactors, phony grassroots groups, shills and corporate media outlets that shamelessly serve the interests of the large corporate sectors on whom they depend for advertising revenues, and themselves are owned by telecom and cable interests. Industry consolidation is rationalized as necessary to combat

the challenge of globalization and to ensure America's competitiveness. Both have proven to be big lies.

While the dominant banking-financial, health-insurance and extraction-energy trusts have come under much public scrutiny during the last few years, little attention has been paid to the mounting power of the Telecom Trust. While Comcast, a cable company, has been successful with its acquisition of NBC-Universal, the giant telcos have not done well and have suffered major losses, with Verizon selling off its acquisitions of Yahoo and AOL, and AT&T's failure with WarnerMedia and DirecTV. These developments capture front-page attention and Americans' awareness but blind the public eye from the deeper crisis refashioning the telecom service in the U.S. – pushing 5G instead of fiber.

Compounding this problem, the leading telecoms failed to maintain the old copper utility networks, didn't replace the old networks with fiber-optic systems and shifted their focus to less expensive wireless services to meet the nation's ever-growing telecommunications needs. So, now they are aggressively pushing 5G, which doesn't work nearly as well as they had hoped. 5G was supposed to offer gigabit speeds, but very rarely achieves that goal.

5G is a marketing ploy to obtain more legislative and regulatory concessions and increase profits. It was supposed to offer Gigabit speeds, but it is 4G with lipstick. 5G requires many more fiber-optic lines to connect its network than previous generations. In recent years most fiber deployments, which are paid for by local phone customers, have been for wireless, rather than fiber to the home and office, leaving the bulk of the "subsidizing" customers with antiquated copper lines. In addition, the telecom companies have misrepresented their actual fiber deployments.[4]

As the popularity of wireless increased, the existing copper-based wired network was allowed to slowly deteriorate. Most of these lines were put in before the 1970's and were never properly maintained or upgraded to fiber-optics as the telecoms promised and for which consumers were paying for.[5] In 2020, AT&T announced it was shutting down DSL (i.e., digital subscriber line) that uses the copper wires in 21 states, leaving millions stranded as it is the only internet access option in most rural areas.[6] Low income urban areas were simply redlined and denied fiber-optic service. These practices help create nationwide digital inequality, now known as the "digital divide." The nonprofit New Networks Institute (NNI)

estimates that Americans have paid over $500 billion since 1992 for the upgrades that have yet to be delivered.[7]

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Federal law (47 U.S.C. 219, 220) stipulates that all telecommunications companies use a Uniform System of Accounts (USOA) for their bookkeeping.[8] Adopted in 1986, the USOA was never updated to keep pace with technological developments and has since been largely abandoned by the FCC and the telecom industry. However, over the years, the three dominant telecom companies have used and manipulated the outdated USOA rules to allocate their expenses to the different lines of their business so that one declining service – i.e., local telephone service – ended up paying 60 percent or more of the parent company's corporate operating expenses.

This "dumping" of a grossly overstated share of corporate expenses on to local telephone service produced artificial losses that the telcos used to justify raising local service rates and migrating customers to wireless service. Moreover, the telephone utility budget that was supposed to be used to upgrade copper to fiber, was instead used to build fiber lines for the wireless affiliate. To make matters worse, the wireless affiliates do not pay a fair market price for the many fiber lines that the utility provides for the wireless network.

Using calculated maneuvers over two decades, the former Bell telecoms garnered multiple benefits, but customers suffered. Besides basic phone service over the old copper wires, Verizon and other telecoms offer many other services that use the telecom utility networks. For example, in addition to the fiber-optic wires for Fios, there are the business data services that use the copper or fiber infrastructure, the integrated network. Sometimes referred to as the Public Switched Telephone Network (PSTN), it has been part of a shell game so that these companies can claim there is only the "aging" copper wires offering only phone service.

Based on their manipulations of the financial data using the outdated USOA accounting rules, telecom companies created artificial losses, claiming that the local telephone networks were unprofitable. As a result, they were granted continual rate increases by state utility commissions, while cutting staff and neglecting maintenance as well as upgrades. (AT&T has cut almost 67,000 staffers, going from 281,000 in 2015 to 215,000 in 2021.) In addition, the telecom's wireless division's payments to the wired division for the use of the wired networks did not actually cover the cost of construction and other functions. As a result,

U.S. local phone service appeared on the books to be unprofitable, and rate increases were permitted, and those increased rates were never changed. That's why prices for basic phone service in the U.S. are 5 to 20 times more expensive than the equivalent service in other industrial countries.

Digital inequality is reflected in the availability of affordable wireline broadband services. The FCC's most basic broadband baseline speeds are specified at 25 Mbps/downstream and 3 Mbps/upstream. In terms of mobile broadband speeds, the U.S. ranks 27th and 8th in terms of fixed wireless broadband.[9] Today's most advanced – and expensive – broadband services offer up to 1,000 Mbps/downstream.[10]

But that's only if you have broadband service in your area. In 2019, the FCC estimated that 24.7 million Americans didn't have home access to broadband. However, John Kahan, Microsoft chief data analytics officer, warned that the FCC was vastly undercounting the actual number.[11] He noted that Microsoft data indicate that almost 162.8 million people "are not using the internet at broadband speeds."[12]

Kahan drew attention to what he identified as flaws in the FCC's assessment method. He argued that FCC data was based on census blocks, which can be large areas within which there is a significant population. If a single customer within a census block has broadband access, the entire block was counted as having service. In addition, and most troubling, he warned there is little verification regarding whether a service provider offers services at the advertised speeds.[13]

Two academic researchers, Roberto Gallardo (Purdue) and Brian Whitacre (Oklahoma State), identify an additional factor that is often overlooked, asserting that "quality of service is becoming more important than mere [broadband] access. … Therefore, it is important to shift the conversation from having access to internet to 'Is your internet technology giving you the quality of service you expect and need?'"[14]

This is the challenge of our time - one that must be taken up by government leaders and consumers alike if we are to stop the bleeding and put ourselves on track to a full digital future for all Americans. The challenge has four parts:

- **Require AT&T and Verizon to make good on their broken promises.** This needs to happen in almost every state to provide universal fiber to the home and office. The telecoms collected hundreds of billions of dollars from local telephone service utility

customers, which they siphoned off to expand their wireless networks. 5G is only the latest version of the diversion of utility assets for a shiny new service that fall far short of its hype. AT&T and Verizon must not be given a penny of the billions of dollars the government is handing out for broadband in unserved and underserved areas, lest they again fool us with the same shell game.

- **Break up the AT&T and Verizon monopolies**. Require AT&T and Verizon Wireless to divest their wireline businesses. This will increase competition, improve service and reduce costs. This is the only way to ensure that the nation's critical telecom infrastructure is properly upgraded.
- **Separate the cable operators from their content companies**. This will keep programming free from the demands of networks. This is the only way to ensure that programming is further opened to real competition, thus furthering democratic values.
- **Account for the money.** Make whole those consumers who paid the extra fees on their phone bills, month after month, but who never received the fiber-optic service they were promised by either returning the money or providing the upgrade.

Sound radical? Two landmark precedents set the stage for this effort -- the breakup of AT&T, the old Ma Bell in 1984 and the 1948 Paramount decision that ended the Hollywood studios control over theatrical movie distribution and the theaters. We can do it again.

Chapter 2

How We Got into Today's Mess:

Part 1: Ma Bell

"What hath God wrought." With these four words transmitted in coded symbols over an electrified wire from Washington, D.C., to Baltimore in 1843, Samuel Morse launched the modern era with his telegraph service. Eight years earlier, in 1837, he had invented the first workable telegraph that used dots and dashes to represent letters and numbers – i.e., Morse code. By 1851, 50 companies were using Morse patents to operate telegraph services in the U.S. By 1856, the Atlantic cable was laid, and the telegraph networks of the U.S. and Europe were interconnected, thus creating the Victorian Internet.

Alexander Graham Bell was another son of the modern era. Born in Edinburgh, Scotland, in 1847, his father, Alexander Melville Bell, was an oralist, a noted "scientist" who studied and taught "elocution" to the deaf; Bell's mother became deaf at 12 years of age and her husband pioneered a process known as "Visual Speech" to teach deaf people to hear and speak.

As a youth, Alexander assisted his father at exhibitions of the Visual Speech technique in London. Following the deaths of Bell's two brothers from tuberculosis and his own ill health, Melville Bell relocated the family to Ontario in 1870 in the hope that the Canadian climate would be healthier. A year later, at age 24, Alexander moved to Boston and became a professor of vocal physiology at Boston College, teaching his father's Visual Speech method during the day and, at night, working on an invention he dubbed a "harmonic" or "musical" telegraph that he believed could help deaf people hear and speak.

Familiar with acoustics, Bell thought he could send several telegraph messages at once by varying their musical pitch and not just Morse's dots-and-dashes. Ultimately, he believed that the human voice itself could be transmitted over a wire.

On June 2, 1875, while experimenting with his harmonic telegraph, Bell and his assistant, Thomas A. Watson, discovered that sound could indeed be transmitted over a wire. Bell, not unlike Morse, is remembered for one famous line – "Mr. Watson – Come here – I want to see you" – considered the first words spoken over the telephone. Bell showed his invention at the 1876 Centennial Exhibition in Philadelphia. One of those who saw it was Dom Pedro II, the Emperor of Brazil, who exclaimed, "My God, it talks!" In 1877, Bell

exhibited his invention at New York's Old John St. M. E. Church's Sunday School, where a poster announced, "Prof. Bell's Speaking and Singing Telephone." Admission was 25 cents.[15]

On July 9, 1877, the Bell Telephone Company was formally organized, with Emperor Dom Pedro II being the first person to buy shares. One of the first telephones in a private residence was installed in Dom Pedro's Rio de Janeiro, Petrópolis palace. In January 1878, the first telephone exchange – where different phone lines could be connected to each other -- opened in New Haven, CT.[16] That same year, Thomas Edison suggested using the word "Hello" as a telephone greeting.[17]

Over the following decades, Bell Telephone grew aggressively and swiftly. In 1882, it acquired the Western Electric Company**,** a manufacturer of telephones, that subsequently produced products exclusively for the Bell system. Four decades later, in 1925, Bell Telephone Laboratories was formally spun out of Western Electric and AT&T. In 1885, the American Telephone & Telegraph Company (AT&T) was formally incorporated as a subsidiary of Bell Telephone to build and operate the first long-distance telephone network. In 1909 the Bell company gained control of Western Union, the telegraph company, by acquiring a 30 percent share of the company.

Nevertheless, during this period, Bell and its AT&T faced considerable competition, including, as one report claims, "at least 1,730 telephone companies organized and operated in the 17 years Bell's patent was supposed to be protected."[18] This flood of new market entrants lasted from 1894 to about 1912, a period in which "the Bell system was forced to compete with independent telephone companies in thousands of cities."[19] To compete, Bell adopted a cream-skimming strategy, targeting up-market urban customers.

In 1899, the AT&T subsidiary acquired the Bell company's assets and became the parent company of the entire Bell system. Alexander Graham Bell retired and spent the rest of his life seeking to address the needs of the deaf. The new company was subsequently recapitalized and became the parent company of AT&T Long Lines, Western Electric (manufacturing), Bell Laboratories (research and development) and the regional Bell operating companies.

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The first decade of the new century saw 6,000 independent phone companies spring up across country and telephone ownership explode. In New York, for example, there were

7,322 commercial customers compared to 1,442 residential customers, including the homes of doctors and business owners.[20] In addition, there were "public" phones in drug stores and saloons spread throughout cities because, as Milton Mueller, author of *Universal Service: Competition, Interconnection and Monopoly in the Making of the American Telephone System,* found, "they were customarily telephones that could be used for free by the people in a neighborhood."

During the early 20th century, AT&T became a *de facto* "monopoly," controlling over four-fifths (83%) of all American telephone service. The company employed a handful of tactics to beat out its competitors. It acquired some; it undercut pricing for local exchanges against some; it blocked franchising options for others; and, as Mueller notes, it spread "unfavorable publicity about independent companies in order to scare away customers and financiers."[21] And these strategies succeeded.

In 1910, under the new leadership of Theodore Vail, AT&T adopted a strategy dubbed "universal service." Mueller argues that "universal service meant consolidating the competing telephone exchanges into a local monopoly so that all telephone users could be interconnected." He adds, "'universal service" became a competitive strategy, a political slogan, and a catchy advertising term rolled into one." The goal was clear and decisive: "In a series of full-page ads which began to appear in 1912, AT&T presented itself as a nationwide system linking every community in the United States, even though it was years away from achieving that goal."[22]

During the *fin de siècle* and the early-20th century, AT&T was not alone in using predatory pricing, exclusivity deals and other anti-competitive practices to undercut smaller local businesses. According to one source, by 1904, some 318 companies controlled nearly 40 percent of the nation's manufacturing output.[23] Popular outrage led to adoption of the Sherman Act of 1890. It outlawed "every contract, combination in the form of trust or otherwise, or conspiracy in restraint of trade."[24] The Act also made it a crime "to combine or conspire . . . to monopolize any part of the trade or commerce among the several states." While of limited effect, it did establish the federal government's legal authority to control corporate consolidation and power.

On a second front, between 1909-1913, 28 states established regulatory commissions or gave existing railroad commissions jurisdiction over telephone companies; the US

telegraph networks were in the local, regional and intercontinental railroad rights of way. In 1910 the Interstate Commerce Commission (ICC) was given the authority to regulate telephone companies as common carriers with standard rates and services.

AT&T's aggressive competitive strategy against independents proved very effective. By 1912, it purchased 136,000 telephone stations and sold only 42,650, thus helping consolidate its hold on the growing telephone market. It used a variety of tactics to gain market dominance, including "spying, sabotage, secret purchases of competitors, bribery of city officials, financial subversion and other 'dirty tricks.'"[25]

During the First World War, the Post Office took operational control of the telephone system for one year. Sociologist Claude Fischer points out, "the wartime experience of coordination between AT&T and the independents accelerated the unification of the industry."[26] In the postwar period, speakers at hearings in the U.S. Senate and House stressed that the telephone was a "natural monopoly," and industry competition was "an endless annoyance." AT&T gobbled up 223 of the 234 available companies. Thus, by 1930, the time the Great Depression started to settle over the country, AT&T controlled 80 percent of all U.S. telephones and 98 percent of all phones connected to the AT&T network.[27]

In 1934, the Congressional Investigative Committee examined AT&T's business practices and reported that "at the present time there is little, if any, Federal regulation of the rates, practices, and charges of the several branches of the communications industry." This led to adoption of the Communications Act of 1934 that established the legal framework under which today's telecom services are regulated.

The Act mandated that "communications" services would be available to everyone at "just and reasonable prices."[28] It distinguished between Title I, less-regulated "information" or private services, and more regulated Title II, "common carrier" or public telecom services. It also divided regulatory jurisdiction between the FCC for interstate service, and state PUCs for intrastate service.

For decades the FCC interpreted the Act to treat AT&T, which by then controlled most of the nation's communications services, as a monopoly holding company. Apart from independent telephone companies, primarily in rural areas, AT&T was the only long-distance carrier, and its local "Bell" companies were in control of the state-based public

telecommunications utilities. The company was given regulated rights and privileges – e.g., use of the rights of way -- in every state for "communications."

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With the end of WW-II, telecom usage increased significantly. A combination of a pent-up backlog due to war-time scarcity and postwar income growth led to a jump in telephone subscriptions. By 1950, residential subscriptions hit 62 percent and, by 1960, it jumped to 80 percent of U.S. households.[29] The period also saw AT&T aggressively pursue its efforts to dominate the nation's phone services; it had assembled a vertical and horizontal integration of telecom services, equipment manufacturing and a research lab. This precipitated a growing number of antitrust challenges.

In December 1948, the Hush-A-Phone Corporation filed an antitrust suit against AT&T. It charged AT&T with blocking customers from using its "Hush-A-Phone," a rather simple plastic cup that fit over the telephone microphone to increase the privacy of telephone conversations and to reduce extraneous noise. In 1949, Justice Department attorneys with the antitrust division convinced Attorney General Tom Clark to file an antitrust suit against AT&T. Their key concern was separating the manufacturing arm of Western Electric and research arm of Bell Laboratories from the AT&T system.[30]

In the 1960s, AT&T faced yet another challenge regarding third-party attachments to its phones. This case involved what was known as the "Carterfone," a device invented by Thomas Carter that permitted users to attach a two-way radio transmitter/receiver to their phone, thus extending the signal reach; between 1956 and 1966, the Carter Electronics Corporation of Texas sold over 3,000 of these devices. In 1968, the FCC ruled in favor of the Carterfone attachment, thus opening the telephone market to specialized customer-premises equipment.[31]

During WW-II, microwave (wireless) relay technology was developed, and, in the postwar era, long-distance signal transmission emerged as a viable alternative to AT&T's physical wires and cables. The major challenge to AT&T long-distance services was initiated by Microwave Communications, Inc. (MCI), a company founded by John Goeken, owner of a mobile radio business. In 1968, he applied to the FCC for permission to construct a private line microwave radio system between Chicago and St. Louis and, in 1969, the FCC granted the application. Between September 1969 and February 1971, 15 regional carriers were

created, allowing for interconnection between major cities across the country. MCI was providing long distance plain-old-telephone-service (POTS) rather than a point-to-point service. When AT&T and the FCC learned about this, the FCC blocked MCI from doing so. In a series of rulings, known as Execunet decision, the U.S. Court of Appeals for the District of Columbia granted MCI and other common carriers permission to offer unrestricted interconnections.[32]

MCI's second front involved FCC actions against AT&T. In the late 1970s, AT&T was, according to Steve Coll, author of *The Deal of the Century: The Breakup of AT&T*, the "largest corporation in the world."[33] MCI sought to expand its service offering but AT&T's Illinois Bell subsidiary refused to interconnect an MCI long haul interstate circuit to AT&T's long-distance network.

In January 1974, the Justice Department, along with MCI, filed an antitrust lawsuit against AT&T and, in March, MCI filed a civil complaint against AT&T for violation of the Sherman Antitrust Act. It argued that AT&T stifled competition by monopolizing long-distance service and equipment manufacturing through the exclusionary practices of its local operating companies. On June 13, 1980, a jury in Chicago awarded MCI $1.8 billion from AT&T (ultimately reduced $113 million).

In 1974 the Department of Justice sued AT&T under the antitrust laws seeking divestiture of affiliates, such as Western Electric and Bell Laboratories from the parent company. The case was assigned to Judge Harold H. Greene in 1978. The proceedings were not going well for AT&T, and it appeared that Judge Greene would find against the huge company. This set the scene for negotiations between the company and the Reagan administration. On January 4, 1982, the Justice Department and AT&T reported they had concluded a deal that would lead to the break-up or "divestiture" of AT&T effective January 1, 1984.[34] It was the end of an era, and the beginning of a new one.

Chapter 3

How We Got into This Mess:
Part 2: Telecom Trust

Judge Harold H. Greene oversaw what was formally known as the Modification of Final Judgment (MFJ) under which AT&T was reconstituted. In essence, under the MFJ, AT&T was limited to providing long distance service and the Regional Holding Companies were to provide local service and exchange access. The reconstituted AT&T would consist of Western Electric, Bell Labs and long-lines; however, Western Electric's exclusive supply contracts with the RBOCs were terminated. With regard to the Baby Bells, the 23 operating companies were separated from AT&T; they could not provide information services (e.g., cable television) or manufacture equipment as they had to provide equal access to their networks to all interexchange carriers (AT&T, MCI, Sprint, et al.) who wished to interconnect to them.[35] They did, however, retain the rights to the Yellow Pages.

In the wake of the 1984 divestiture, the 23 RHCs consolidated into seven Regional Bell Operating Companies (RBOCs or "Baby Bells"). Looking at the divestiture, Judge Greene noted, "Once it became possible to bypass this [AT&T] network through microwaves, AT&T's monopoly could not survive. What the Bell System did was illegal. It abused its monopoly in local telephone service, also known as the Last Mile, to keep out competitors in other areas. Competition will give this country the most advanced, best, cheapest telephone network."[36]

In 1991, the Clinton-Gore presidential ticket proposed a visionary plan which Sen. Al Gore (D-TN) dubbed the "Information Superhighway." The official title was the "National Information Infrastructure Initiative," and in a 1994 speech Vice President Gore laid out the idea considered one of the critical moments in the development of the national communications system.[37]

In simplest terms, the Information Superhighway was supposed to replace the existing copper-wired networks with fiber-optics infrastructure and new digital switching control technology. More important, it would reach everyone in America, from low-income urban families to rural areas. It would be defined by affordable telecom access connections and digital voice, video and data services that would be open for competitors to use. It would be

capable of competing with cable TV and offer new applications that would spur economic growth.

The Telecommunications Act of 1996 ushered in a new era in communications that furthered industry "deregulation" and created "information" services. Deregulation fueled a wave of mergers and acquisitions that, combined with the lack of enforcement of federal and state antitrust laws, fueled industry consolidation.

- SBC (Southwestern Bell)-Pacific Telesis Merger: In 1993, Pacific Bell had committed to spend $16 billion and rewire 5.5 million homes in California by 2000. After its merger with SBC in 1977, SBC reneged on all previous broadband commitments prematurely, with only a fraction of the money spent and no finished deployment of fiber-to-the-homes (FTTH) completed.

  Outcome: Whole cities in California (e.g., San Diego) had a deal in place for 100 percent fiber-optic wiring, but it never happened. The company had started wiring streets in Sacramento and Orange County. However, instead of completing the job, SBC did a bait-and-switch and offered slow DSL service over old copper wire instead.[38]
- SBC-SNET Merger: SNET, the state-based telecom utility in Connecticut, stated that it would spend $4.5 billion and deploy for fiber optic to the entire state by 2007. SNET had started rolling out cable services using fiber-optics, but after the SBC merger of 1998 the effort was abandoned, and competitors were blocked from using the fiber-optic network.

  Outcome: SBC claimed to regulators that it needed to acquire SNET to obtain a foothold to compete on the East Coast with Verizon. But it never did compete.
- SBC-Ameritech Merger (Illinois, Indiana, Ohio, Wisconsin and Michigan): Ameritech had committed to compete in 30 cities outside its region by 2002 and committed to "Project Pronto" – a plan to spend $6 billion so that "80 percent of SBC's United States wireline customers [were served with fiber optic] in three years" … "moving many customers from the existing copper network to a new fiber network."[39]

  Outcome: There was never any serious competition outside the companies' territories. While Ameritech and SBC told the public there would be fierce competition in city

after city, in the end it was only required by the FCC to have "at least three unaffiliated customers" in a market. Project Pronto was never completed.

- AT&T-BellSouth Merger: The company committed to providing "Internet access service at speeds in excess of 200 kbps in at least one direction) to 100 percent of the residential living units in the AT&T/BellSouth in-region territory by the end of 2007."[40] The company also promised to sell DSL service for $10.00 to new customers. [Note: 200 kbps was the FCC's broadband download standard at the time.]
  Outcome: Most customers were never offered the $10 DSL deal due to distance limitations, and the company never fulfilled its promise to provide coverage in 100 percent of their territories with broadband. AT&T currently controls the state utilities in 21 of those states and many areas remain unserved.

Eventually, SBC swallowed up AT&T for $16 billion in 2005 and kept the AT&T name.[41]

Still other Baby Bell company mergers included: Bell Atlantic (i) merged with NYNEX in a $20 billion deal in 1997 and then (ii) acquired GTE Corp in 2000 for $53 billion.[42] These two mergers created what we now know as Verizon. In addition, Qwest, a regional telecom holding company providing service in 14 western and midwestern states, acquired AT&T Wireless for $41 billion in 2004.[43] Like fresh blood in shark infested waters, deregulation led to a feeding frenzy. The "original" 23 Baby Bells were reduced to seven and now have consolidated to three -- AT&T, Verizon and Lumen.

These corporate giants claimed that if they were given more money – i.e., price deregulation and tax perks -- they would use it, state-by-state, to rewire whole states, including schools and libraries. They also claimed that they would roll out something called "video dialtone" that would allow the companies to offer video services in cities, counties and states.

In addition, the Act codified a prior series of rulings by the FCC that created the category of "information service." In the early 2000s the FCC ruled in favor of the large telecom companies, classifying broadband internet access as an "information service" that would not be regulated as a "common carrier" utility service under Title II (regulated) of the Communications Act. Instead, it would be considered a Title I (unregulated) service.[44] Importantly the FCC allowed the telcos to discontinue their Title II offerings of unbundled

lines, effectively killing off the thousands of small internet service providers that were competing with big telecom.

In the wake of the'96 Act, both the government and the public bought into the big telecom propaganda that telecom service was no longer a public utility, The telecom utility based on aging copper wires was said to be a "legacy" service.

Susan Crawford, a Harvard Law School professor, points out that "utilities are things, physical networks, that public utility commissions regulate: electric, gas, communications, water, and wastewater, mostly."[45] She notes, "these commissions typically ensure that utilities provide reasonably priced, adequate, and efficient services to customers, while allowing the companies involved to recover their costs plus a fair return to their investors."

Crawford adds, "a utility is not a luxury. Utility services can be sold by private or public entities, but they are always subject to public obligations to reach everyone at a reasonable price, with a service meeting a public quality standard".[46] She adds, "services that start off as luxuries can become utilities as their centrality to life becomes clear." Communications service from its early days has been considered a public utility. Sadly, big telecom has erased this concept from public consciousness. The Covid-19 pandemic brought home to many Americans that telecommunications is indeed an essential service that they have a right to obtain at an affordable price.

Chapter 4

Lies, More Lies, and Lying About Lies

Many Americans are not satisfied with their telecom providers. The American Customer Satisfaction Index (ASCI) found that out of 46 industries examined in its 2020 survey, ISPs, cable TV and phone service are at the bottom of the pile.[47] And there's a good reason: they're charging more and more money and they're constantly failing to provide what they promise.

In the nineteen eighties, the old AT&T was formally broken up into seven regional operating companies dubbed the "Baby Bells." Now, nearly four decades later, the seven Baby Bells have been reduced to three -- AT&T, Verizon and Lumen. And over those four decades, these telecoms repeatedly claimed that they could and would roll-out new technologies – like "video-dialtone" – that would transform telecommunications, but only if they could get more money and less regulation. And every time they asked state public service commissions for more money, they were cheered on by an army of compliant politicians, paid off non-profits, subsidized think tanks, and "research firms" as well as a massive underground pro-business conservative political network led by the American Legislative Exchange Council (ALEC). Consumers had little or no say in the matter.

While the telcos kept making their promises, they were pocketing billions of government and consumer dollars. This sad history can be visualized as a series of repeated "Waves" or recurring patterns of false commitments for network upgrades, repeated funding for it and then not delivering. The telecoms got the money, but failed to complete the build-out, creating what is now called the digital divide.

- The Fiber Wave (1992-2015) -- Apparently, no federal or state regulatory agency ever checked to see whether the promised fiber-optic cable was ever deployed or held the companies accountable for hundreds of billions of dollars they received to deliver fiber-to-the-home. In this wave, the Information Superhighway, including video dialtone, should have been available in half of all U.S. homes by 2000.[48]
- Merger Wave (1996-2007) -- This was the period of big mergers when the new AT&T was formed, consisting of the former AT&T, SBC, Pacific Bell, Ameritech and SNET; and Verizon combined GTE, Bell Atlantic, NYNEX and MCI. AT&T and Verizon claimed that each of their multiple mergers would bring fiber-optic broadband and

direct competition to the market. Instead, the merged companies stopped almost all of the fiber-optic network upgrades and they did not compete with one another.

- False Fiber Wave (2005-2011) – Verizon's Fios and AT&T's U-verse turned out to be bait-and-switch gambits to fool regulators, enabling the AT&T-SBC and Verizon-MCI mergers, thus terminating their obligations to offer the independent ISP competitors the use of their networks. The companies successfully shed their obligations to let independent ISP competitors interconnect with their networks.
- Competition Wave (1996-2006) -- Despite the 1996 Act's purpose to promote competition, the FCC, at the behest of the major telecoms, removed broadband internet access from the public utility. The FCC relieved big telecom of its obligation to let independent ISP competitors interconnect with their networks, effectively killing off competition, including some 9,500 internet service providers. The FCC also stood by while the companies delayed service orders and gave inferior connections to competing local exchange carriers. The FCC repeatedly relaxed requirements to allow competing local exchange carriers access to the Bell networks, making it difficult for them to serve customers in the Bell territories.
- Wireless Wave (2011-present) – Starting in 2010, the telecoms began telling investors and admitting to regulators that they were going to substitute wireless services for the fiber-optic services they had promised, even though wireless is more expensive, less reliable and slower than fiber optic. In some cases, like Verizon in NJ, they used their influence to water down their fiber obligations.

Sadly, following these waves of deception and corporate maneuvering, by 2020 and the Covid-19 pandemic, the telecom industry had become a cabal of ultra-powerful companies controlling the nation's critical infrastructure with little accountability. Amazingly, there were no calls to investigate why so many people still had no high-speed internet service, or why billions of additional taxpayer dollars would be used to provide yet more subsidies to the same telecoms who had failed Americans for more than two decades. Meanwhile, telecom fees continued to increase, and digital inequality persists across the country.

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Starting in 1991 and in state after state, the Baby Bells received concessions from public utility commissions based on their stated promises to spend billions and deliver the fiber-optic future. Here are some of the promises they made:

- In 1993 Pacific Bell California said it would spend $16 billion by 2000 and have 5.5 million homes wired with fiber-optics.[49]
- Bell Atlantic, which controlled the East Coast states from New Jersey through Virginia, claimed it would spend $11 billion to bring fiber optic to 8.75 million homes by 2000.[50]
- In 1993, US West (now Lumen) which controls many western states, like Wyoming, Idaho, Colorado or North Dakota, told the public, regulators and investors that it would start a major deployment of fiber-optic services, adding a half-million households a year.[51]

These promises remain unfulfilled today. But they were not the only promises made.

Verizon New Jersey claimed it would have 100 percent of its state territory (about 95% of the state) completed by 2010 with 45-Mbps services in both directions. And Ohio Bell (now AT&T Ohio) claimed that 100 percent of schools and libraries would be upgraded to fiber by 2000.[52] Despite the rate hikes that were granted to these companies by state regulators, and even though consumers paid increased fees on their bills every month, none of these promises were fulfilled.

The fiber-optics networks, as proposed by the providers, would deliver broadband with speeds of 45-Mbps in both directions as well as a cornucopia of new services, including interactive video and 500 channels of cable TV, tele-medicine, online learning and tele-commuting (i.e., working from home). Every company committed but, as Exhibit 1 shows, while the rate increases were approved and continue today, some of the projects were abandoned in just a few short years.

The telecoms may have been good at convincing state regulators to grant rate increases (while never checking to see if the work was being done), it turned out they were not so good at running their own companies. From 1999 through 2002, the Baby Bell companies -- including BellSouth, Qwest, SBC and Verizon -- suffered staggering corporate losses and write-offs.[53]

Exhibit 1

Partial List of Video Dialtone Closures, 1995

Date	Company	Location	Homes	Deployment	Canceled	Parent
1/31/1994	Ameritech	Columbus/Cleveland	262,000	ABANDONED	6/27/1995	AT&T
1/31/1994	Ameritech	Chicago, IL	501,000	ABANDONED	6/27/1995	AT&T
6/16/1994	Bell Atlantic	Wash., D.C. LATA	1,000,000	WITHDRAWN	5/24/1995	VERIZON
6/16/1994	Bell Atlantic	Mid-Atlantic	2,000,000	WITHDRAWN	5/24/1995	VERIZON
1/10/1994	U S West	Denver, CO	357,000	SUSPENDED	5/31/1995	CENTURYLINK
1/19/1994	U S West	Minneapolis/ St. Paul,	357,000	SUSPENDED	5/31/1995	CENTURYLINK

More recently, the telecoms expanded by acquiring companies in and outside of their sector. Many of these deals turned out to be poor investments, costing the companies billions. For example, AT&T acquired DirecTV for $67.1 billion in 2015, but later sold it, losing $51 billion in the process. It also acquired TimeWarner for $85 billion in 2018; in 2022, it "spun off" Warner, losing another $42 billion.[54] In 2025, Verizon acquired AOL in 2015 for $4.4 billion and Yahoo! in 2017 for $4.8 billion;[55] however, in 2021, it sold its media assets, losing billions of dollars. (See Exhibit 2.)

Exhibit 2
AT&T Loses from Media Mergers

AT&T Paid & Lost from Mergers of Time Warner and DirecTV, 2015-2021 (000,000)

	Paid	Sold	Lost	Closed	Deal Sold
Time Warner	$85,000	$43,000	$42,000	2017	2021
DirecTV	$67,000	$16,000	$51,000	2015	2021
Merger total	**$152,000**	**$59,000**	**$93,000**		
Impairments			$ 27,000		
Total Losses			`$120 billion		

IRREGULATORS

Other acquisitions may not seem so disastrous turned out. For example, Comcast acquired a controlling stake (51%) in NBC-Universal, a subsidiary of General Electric, and French media conglomerate Vivendi Universal Entertainment for $6.2 billion in 2011.[56] Charter Communications acquires Spectrum (aka Time Warner Cable) for $55 billion and Bright House Networks for $10.4 billion in 2016.[57] And T-Mobile and Sprint, which was valued at $26.5 billion, merged in 2020.[58]

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While the Baby Bell telecoms failed to deliver on their fiber network promises and suffered billions of dollars in losses from bad investments, company executives were richly

rewarded.[59] Between 1999 and 2002, the top executives from the Baby Bell companies received an estimated 54 million shares of stock options with an estimated value of $1.0 to $2.1 billion -- almost 10 percent of all stock options. The top four telecom executives made a combined $160 million dollars in salaries and bonuses, and an additional 25.5 million shares of stock options, estimated at between $404 and $818 million.

The mergers of the former Baby Bell companies have benefited the senior executives with bonuses and rewards worth millions per person. From 1999 to 2002, Ivan Seidenberg, Verizon's CEO, made $54 million in salary, bonus and retirement funds, as well as stock options of 2.6 million shares, estimated value between $83-215 million dollars. His base salary went up 25 percent over the last three years and his bonuses and "awards" were 1,045 percent above salary. In the same period, Edward Whitacre, Jr. of SBC made $115 million in salary and stock options, which is 65 percent of all money paid to SBC top executives. Joseph Nacchio of Qwest made $36 million in salary in the last three years and the stock options were valued from $238 to $603 million. Sweetening the pie, executives often get free personal use of aircraft, apartments, spending money for "club" memberships, and "golden parachutes" worth millions of dollars.

So, while millions of Americans remain without access to high-speed connections, or in some cases any connections at all, telecom executives and shareholders have been lining their pockets with the rewards of government handouts and consumer overcharges. And where are the state regulators who are supposed to be watching? It seems they are asleep at the wheel.

Chapter 5

We're Being Overcharged

If one can bring oneself to peruse a telecom or cable bill, one will find a document truly saturated with irony and consequence. Most customers find the task too unpleasant, allowing the companies to charge for services never ordered or to overcharge for other services. The same goes for trying to reach customer service, being lost in a maze of maddening artificial voices and prompts.

The bill can be for a "stand alone" or single service like phone or a "Triple-Play" or "Bundle" of services for phone, internet access and video. Wireless is often a separate service. Like the game, "Where's Waldo," a representative telecom bill (Exhibit 3) reveals lots of charges hiding in places you might not expect and that most telecom customers just accept and pay. Some charges carry obscure names and are poorly defined if one takes the trouble to hunt them down.

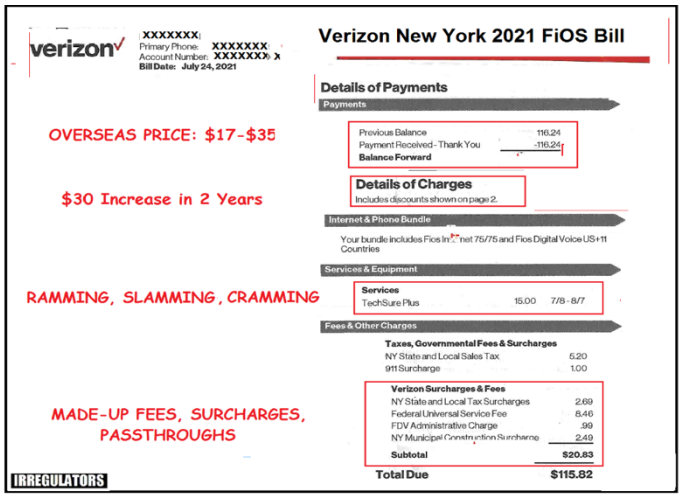
Many of the charges are for services that were never ordered by the customer. Total revenue from miscellaneous and bogus charges: up to $17 billion annually. Here are some of the favorite techniques used by telecoms to grab more of your money.

- "Ramming" -- Your phone company adds a service provided by itself or one of its subsidiaries that you did not order.
- Cramming" -- A service is added by another unaffiliated company that you did not add.
- "Slamming" -- A company switches you to their service without the customer's permission.
- "Harvesting" -- Where the prices have been continually raised over the decade based on spurious claims.
- "Package Stuffing" – Where you are persuaded to purchase a larger, more expensive package based on false or deceptive promotion or advertising.

Telecom bills often include other cryptic and unexplained fees, including:

- The FCC Line Charge (sometimes called the "Subscriber Line Charge" or other names) was added to local phone bills starting in 1985 and now adds an additional $6.42 in New York to local service charges. Adding insult to injury, in New York, this charge is taxed at 33 percent, covering both federal and state taxes.

Exhibit 3
Mark-up of Verizon New York City,
Fios Double Play, 2021



- Inside wiring, sometimes called "inside wire maintenance," used to be included in the cost of local service in 1980 but is now charged separately. This charge has gone up 464 percent over the last three decades. While it's supposed to be optional, over half of those paying for this service didn't order it, and Verizon admits that inside wiring rarely if ever fails.
- Plain Old Made-Up Fees – These are now commonplace and can include "Cost Recovery Fees," "Administrative Fees," "Digital Voice Fees," or various kinds of video package service fees for cable services. These made-up fees are estimated to cost consumers $22.7 billion every year.
- Directory assistance calls now costs almost $1.50 (including taxes) for each inquiry and there are no free inquiries, although many customers believe their service comes with free calls. (New Jersey is one of the few states that has a few free directory calls.)

Still other charges are applied to such features as "Call Waiting," "Caller ID," "Call Forwarding" and "Directory Assistance." Fees for these services can cost $5.00 to $11.00 a month. However, the actual cost to the telecom for "Call Waiting" and "Call Forwarding" is less than a penny per call, according to a 1999 Florida Public Service Commission report. Each is a minefield of hidden fees, questionable surcharges and dubious taxes all designed to enrich the telecom's bottom line without requiring any meaningful improvement in customer

service.

Few are aware that America's communications prices are 5 to 10 times more expensive than in other industrialized countries.[60] One example involves what are known as "double" and "triple play" bundles or packages. In 2019, the price of a cable triple play subscription -- i.e., high speed broadband access, cable TV and voice calling – was estimated by *Consumer Reports* at $217 per month.[61] A report by the European Union Commission found that the average price of the same service would only be on average $25-$47 per month.[62] A New York subscriber pays $116.00 per month for a Verizon NY "double play" (i.e., Fios and voice service); the EU double play package averages $17-$35 per month.

The enormous price differential between U.S. and other countries can be found in every service, especially wireless services. In a 2021 report, Finland-based Rewheel Research reviewed global wireless prices for 4G, 5G and wireless fixed broadband. It found that international services offered 100 Gigs [i.e., gigabytes per second] for a fraction of the costs we pay in the U.S.[63] It noted: "Among the ten operators with the lowest monthly prices for 100 gigabytes were operators from the Israeli, Indian, Malaysian, Romanian, Italian, Chilean and French markets." It added, "In September 2021, the minimum monthly price for 100 gigabytes was $8.45 in Italy and $9.50 in France."

In addition, internationally, **"**truly unlimited" wireless means over 1000-GB for $35. U.S. "unlimited" plans are just deceptive and are capped, usually at 50-GB. On these plans, customers are, on average, overcharged, paying $50-plus a month per line. Weirder still, how can 5G wireless service with a theoretical gigabyte per second capacity be priced at $10 in other advanced countries, while in the U.S. it costs $70 to $90? Often overlooked, the fine print on your contract says that the speeds can slow to 1-Mbps (megabytes per second), a speed that you can't watch a video or even make a Zoom call?

Vice Media details that affordability is a major problem for Americans.[64] It notes that many residents lack broadband because they simply can't afford it.[65] It blames this, in part, on revolving door regulators.[66] It notes that "limited competition, and relentless lobbying, US consumers pay some of the highest prices for broadband in the developed world."[67] And they add: "That's before you factor in the hidden fees and usage surcharges that routinely drive US broadband bills even higher."[68]

The illegal and unethical billing practices of telecom and cable companies is the largest accounting scandal in American history, accomplished right under the noses of regulators. The telecoms secured FCC assistance in manipulating the accounting formulas so that the state utilities turned into a cash machine to fund the companies' other lines of business. For example, they diverted the local telecom utility construction budgets to build out their wireless networks. In this process, they successfully transformed the state utilities into funding mechanisms for their wireless and other non-utility enterprises, while leaving local telephone customers with antiquated service at higher prices. They also transferred a grossly inflated portion of their corporate operations expenses – e.g., executive pay, lobbyists, lawyers and corporate jets -- over to local telephone customers.

This practice is evident in New York State. Verizon's local phone service still has about two million customers, with revenues of about $1 billion in 2020. That same year, local service was charged $1.2 billion in construction and maintenance expenses and $833 million in corporate operations expenses, creating a "loss" of a billion dollars. Local service, which utilized the old copper wires, had about $30 million in actual network maintenance costs and should have paid less than $50 million as its share of corporate operations expenses, as none of the other expenditures had anything to do with local telephone service. And some expenses charged to local service were not even incurred in NY State!

Where are the regulators? Where are the state PUC investigations to halt these overcharges and force telecoms to live up to their commitments? Which politicians will have the guts to stand up for consumers and demand answers? And, yes, which private telecom companies were able build out their wireless networks for almost nothing, and then claim the networks are their own private property? Verizon got valuable rights-of-way and utility construction funds to build out Fios, claiming that it provided a Title II common carrier voice service. Yet the company treats Fios as a totally private service with regulator complicity.

This financial shell game is happening in every state, and it has made the nation's wired public telecommunications utilities appear – on paper – to be unprofitable. The telecoms got – and continue to get -- massive rate increases of 150 percent in some states and have increased fees on some services from up to 300 to 500 percent. They use bogus financials to claim that rural areas are unprofitable and demand large government subsidies to

upgrade, usually with inferior wireless alternatives to fiber. And in the process, they've saved billion in state and federal taxes.

These egregious acts have ended up costing every telecom customer thousands of dollars as every service has been impacted. Cable TV and internet access prices are outrageously high due to the lack of serious competition and the willing neglect of municipalities, regulators and legislators. The telecoms control the retail and wholesale rates because they control the guts of the networks – i.e., “backhaul” -- that are used by the other competing service providers, especially wireless companies.

There's a simple word for the underlying cause of our pathetic and inexcusable national situation: greed. The telecoms and cable companies are raking in obscene profits and rewarding themselves and their investors handsomely, while millions of customers remain unserved or under-served and the United States remains a second-tier communications country.

Chapter 6

Digital Inequality

It's midafternoon on a weekday amidst the deepening Covid-19 pandemic and a school bus arrives at Cyliss Castillo's home on the Navajo Nation in Cuba, New Mexico. The bus driver, Kelly Maestas, chats with 18-year-old Cyliss and gives him a bag of food and collects his school assignments, then sets off for another home.[69]

Cyliss, like many others living on tribal land, doesn't have electricity and internet service is unavailable or prohibitively expensive. His school issued him a laptop but he, like many other students, has difficulty charging it. He must use a car battery or go to a relative's house with electricity to charge his computer. One of his fellow students sends her laptop on the bus to be charged at school; others ask for paper assignment packets because of the difficulty in charging laptops. For Cyliss, and other students without home internet, the buses also bring USB drives loaded with assignments and teachers' video lessons.

Cyliss's lack of electricity and internet access service at his home on the Navajo Nation is an example of digital inequality. It is most pronounced in rural communities and in Native American households but defines many inner-city Black and Latinx neighborhoods throughout the country. Mara Tieken, a professor of education at Maine's Bates College and author of *Why Rural Schools Matter*, reminds Americans that "the digital divide existed before the [Covid] pandemic and we knew about it, and we didn't do anything about it. What happened during the pandemic horrified us but shouldn't have surprised anyone."[70]

The "digital divide" is a catch phrase that originally emerged in the 1980s when home computers were just starting to be used. By the mid 1990s, the wired telecom infrastructure and World Wide Web (i.e., "web") emerged as well as the usable graphic interface. In 1994, Vice President Gore spoke at a forum sponsored by the Benton Foundation and called for an "information superhighway."[71] This "highway" would enable Americans to go online supposedly using a fiber-optic service.

In the wake of the adoption of the 1996 Telecommunications Act, which promised competition that never materialized, the telecom and cable TV industries went through a wave of deregulation and massive consolidation. The Bell companies committed to upgrade their entire state utility networks to fiber and offer new services like video-dialtone. For example, New Jersey was expecting to have 100 percent of the Verizon NJ territory to offer broadband

at 45-Mbps in both directions by 2010. The U.S. was supposed to have high speed fiber-optic services to all residential and business customers. It didn't happen and the few legislators and regulators that paid attention gave the Bells a pass.

The Baby Bell companies fostered digital inequality by their failure to honor their fiber commitments and, instead, used the utility construction budgets to finance their wireless networks and other subsidiaries. Their selective avoidance of less-profitable rural and low-income urban areas is particularly egregious and should be considered "redlining." They raised rates for virtually all of their utility customers ostensibly to pay for universal network upgrades, but they cherry-picked areas that were more profitable and ignored – redlined! -- areas that they could get away with. The consolidated holding companies, AT&T and Verizon, helped create the digital divide by shutting down their universal fiber-optic plans, and selectively deploying what fiber they did build.

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"People I've worked with in Arkansas, people don't have an internet connection at home," Mara Tieken recalls. "So, they might spend the day driving many miles and sitting outside a library, post office or McDonald's so their kids can have access to the internet." She adds, "Of course, this is awful for so many reasons – it's a completely inappropriate learning environment, just sitting in their car. This assumes the family has a car and they can take the time from their job. All the ordinary challenges families face are made exponentially greater because of the pandemic."

In a valuable overview study for the National Association of State Boards of Education, Tieken observes that "'Rural America,' then, is actually 'rural Americas,' a loose aggregate of racially separate and unequal places."[72] The U.S. census classifies "rural" places as settlements with less than 2,500 residents. Tieken notes that "the U.S. population swings from 17 to 49 percent rural." Of this population, about 20 percent -- 10.3 million residents -- are people of color, consisting of about 40 percent African Americans, 35 percent Hispanic and the remaining 25 percent Native American, Asian, or Asian Pacific Islander or multi-racial. In the decade from 2000 to 2010, the rural nonwhite population grew from 8.6 million to 10.3 million. Tieken found this was "due to a rapidly expanding rural Hispanic population."

Sascha Meinrath, a Pennsylvania State University professor of telecommunications, shares Tieken's concerns regarding the limitations of broadband in rural American, especially

the promise of 5G wireless to address the problem. "Talk about over-hyping and snake-oil salesmen, 5G rates right up there with WiMax, the 5G of yesteryear," he chuckles. "5G is a very useful technology for hyper-fast communications and it can be great in some areas – richer, more urban and denser areas with fiber infrastructure. The characteristics of the high-band spectrum and frequencies that 5G uses are not good for rural areas with hill or trees," Meinrath observes.

Digital inequality is not limited to rural America. The Covid pandemic's early effect was graphically seen in New York City. In April 2020, the Citizens' Committee for Children of New York (CCC) reported that an estimated 500,000 – of the 3.3 million – city households lacked an internet access service.[73] It estimated that more than 800,000 New Yorkers lived in households without internet access, including over 150,000 school-age kids of the city's 1.1 million school-aged kids. Bronx County is a 42.4 square mile [110 sq km] area and home to 1.4 million people, many among the poorest of the city's five boroughs.[74]

Urban school systems throughout the country faced similar inequities as New York. In Los Angeles, 17 percent of families surveyed in poor neighborhoods -- South LA, Watts and Boyle Heights – reported having no internet at home and 8 percent had expensive mobile internet only.[75] Chase Stafford, of the Partnership for LA Schools, noted, "We know that the digital divide is not unique to these areas, you know that low-income communities across this country lack access. There are real gaps in internet service and access to digital devices." A University of Southern California study reported that 14 percent of those surveyed "never" had a space free of noise or distraction; 18 percent shared online access with other family members which can prevent students from fully engaging in learning activities.

The Digital Divide Council identifies four intertwined social divisions – (i) class or economic divisions, (ii) geographic divisions, (iii) race or ethnic divisions and (iv) gender differences – that anchor digital inequality. The Council finds that "a quarter of the U.S population is starved of broadband connection. Most people cannot afford the expensive monthly data plan charges."[76] Going further, it notes, "the income gap plays a considerable role in magnifying the digital divide. High-income earners ($75,000) are 20 times more likely to access the internet than low-income earners ($30,000)."[77] The economic divide is clearly manifest in the education divide, also known as the "homework gap":

> Education is a significant investment in healing the digital divide. Low literacy levels are widening the digital inequality gap. College degree holders are perceived to be 10 times more likely to tap into the full potential of the internet and computers in their day to day lives compared to individuals with high school education or lower.

Racial and ethnic divisions are most pronounced, with Black, Hispanic and Native American communities significantly underserved. Women and girls – along with those living with physical disabilities – "are often disadvantaged when it comes to accessing the internet. They may have the necessary skills but cannot exploit the available hardware and software."

In a 2019 report, the Benton Institute stated, "Understanding affordability of internet access service and its role in adoption are crucial for developing solutions to close the digital divide."[78] The survey of "low- and lower-middle income households" found:

- 40 percent said they cannot afford to pay anything for a home internet high-speed service subscription.
- 46 percent said it is "very" or "somewhat" difficult to build their monthly internet bill into their budget.

A series of surveys by the Pew Research Center and the Benton Institute for Broadband & Society found that only a little more than half (57%) of low-income households had internet access in 2021 and that adults making less than $30,000 annually are half as likely to report having home internet access as adults making $75,000 or more.[79] Pew also found that during the Covid pandemic, 15 percent of all households with home broadband access reported they had trouble paying their bills and this more than doubled to 34 percent of households making less than $30,000 per year.[80]

On January 1, 2022, the FCC launched the Affordable Connectivity Program (ACP), committing $14.2 billion to help low-income households pay for the cost of their internet subscription.[81] In May, the White House announced a commitment from 20 private-sector broadband providers to offer a $30/month, minimum 100-Mbps download for low-income households across the country through the ACP.[82] However, *MuniNetworks.org* worried that these companies will only cover 80 percent of households, mostly in urban areas. It warned, the program is "a treatment of the symptom rather than the disease." Going further, it added:

"Our analysis shows that even if only a third of eligible households ultimately enroll (ten percent more households than are enrolled today) …."[83]

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Often overlooked when considering the causes and consequences of persistent digital inequality is the role of the telecom companies. Wholesale manipulation and abuse of accounting rules has led to the dismantling of state utilities and that made customers fund the telcos' other national and international lines of business, all the while draining resources from the local utility. Industry and government have enabled digital inequality to persist and even grow. Even for the fortunate population who has service, it is overpriced and inferior in speed and quality to other developed countries.

The telecom companies made the traditional state networks appear unprofitable by dumping an inordinately large share of corporate expenses on to the local utility services. They have used these losses to justify continually raising rates, when their true purpose is to shift customers from "regulated" to "unregulated" networks and services, particularly wireless. They have pursued a strategy for more than a decade to bring about an all-wireless future. What little opposition to this strategy has come from the Communications Workers of America union, fearing the loss of tens of thousands of jobs.

The telecoms used the utility construction costs to build out fiber links to connect their wireless networks, rather than upgrading and maintaining local utility services. They have been gaining federal and state regulatory approval to shut off local copper lines, purposefully driving customers to wireless. They have used their influence effectively to change state laws, regulations and agreements to allow them to substitute wireless for the fiber upgrades they were required to provide.

We believe that Verizon and AT&T wireless services do not pay market rates for the numerous fiber links they use that were paid for by the telecom utility networks. These below market or free intra-holding company transfers are a further drain on the public utility, contributing to accounting losses. Wireless and other non-utility services should pay a fair market price for their use of the utility networks.

Chapter 7

Regulatory Capture

"Regulatory capture is a big deal," declared Sen. Elizabeth Warren (D-MA).[84] "It is one way in which powerful corporations rig the system to work for themselves—and the rest of America pays the price. The tilt in Congress is pretty much out there for everyone to see, but corporate influence works its magic even better in the shadows—and that's where rulemaking occurs." She added, "when it comes to undue industry influence, our rulemaking process is broken from start to finish. At every stage, the process is loaded with opportunities for powerful industry groups to tilt the scales in their favor."

Warren's perception is shared by former FCC chairman, William Kennard. Kennard knows how the game is played, having served as managing director of the Carlyle Group, a leading private equity firm. "Regulatory capitalism is when companies invest in lawyers, lobbyists and politicians, instead of plant, people and customer service .... Regulatory capitalists would rather litigate than innovate."[85] He added, "It's always easier to prowl the halls of Congress than compete in the rough and tumble of the marketplace."

The career paths of recent FCC chairmen – from both parties – illustrates how capture has played out over the last decade. (The current acting chair, Jessica Rosenworcel, a Democrat, has been a commissioner since 2012 and, in 2017, was confirmed for a second term.)

- Ajit Pai -- a Republican appointed by President Donald Trump, is an attorney who served as Verizon's associate general counsel from 2001–2003.
- Thomas Wheeler -- a Democrat appointed by President Obama, was chair from 2013–2017; he was a longtime Obama fundraiser who served as CEO of the wireless industry group CTIA (i.e., the Wireless Association, formally Cellular Telecommunications Industry Association) from 1992-2004 and CEO of the NCTA (i.e., Internet & Television Association, formally National Cable Television Association) from 1979-1984.
- Julius Genachowski -- a Democrat appointed by President Obama, was chair from 2009 to 2013; he served at Barry Diller's IAC, helping create Fox Broadcasting; after the FCC, he joined the Carlyle Group.

- Michael Powell -- General Colin Powell's son, was appointed by the commission by Pres. Bill Clinton and appointed chair by Pres. George W. Bush; served from 2001 to 2005; now heads the cable industry trade association, NCTA.
- Kevin Martin --- was appointed by Pres. George W. Bush as chair; served from 2005 to 2009; and went to Patton Boggs, a leading Washington, DC, law and lobbying firm.

The FCC approved Comcast's acquisition of NBC-Universal in January 2011; a few weeks after the decision, Meredith Attwell Baker, an FCC commissioner, took a job with Comcast.

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According to the non-profit watchdog *Open Secrets*, the "telecom services" and equipment industry spent $114.2 million on lobbying in 2021.[86] Equally illuminating, these "services" employed 627 lobbyists and 457 "revolvers" who participated in the "revolving door that shuffles former federal employees into jobs as lobbyists, consultants and strategists just as the door pulls former hired guns into government careers."

The revolving door is manifest in still other complementary ways. One involves the money directly spent by the telecom industry in lobbying of federal agencies and Congresspersons. Another involves the "trade associations" that promote an industry or business sector's interests. Still another involves efforts by numerous "astroturf nonprofits," which are not to be confused with real grassroots organizations, corporate skunkworks and corporate-shill groups that influence the making of public policy. This led former FCC chair Reed Hunt (1993-1997) to suggest that the acronym "FCC" stands for "Firmly Captured by Corporations" and former FCC Chief Economist Tom Hazlett to opine that "FCC" stands for "Forever Captured by Corporations."[87]

In 2016, the FCC adopted privacy rules to give broadband consumers increased power to decide how their personal data was to be collected and shared or sold by ISPs to advertisers and others.[88] The following year, under intense lobbying pressure, Congress voted to overturn the yet-to-take-effect regulation.[89] The campaign brought together companies as diverse as AT&T, Verizon and Comcast along with Google and Facebook as well as Airbnb, Amazon, Etsy, Expedia, LinkedIn, Netflix, Twitter, Yelp and Zynga. In response, the National Conference of State Legislatures (NCSL) reported that about half the states considered some 70 bills to address consumer privacy.[90] But telecom lobbying killed or stalled this legislation, thus enabling ISPs to sell your data.

Trade association play a critical role influencing telecom policy. The key group associations include Telecommunications Industry Association (TIA) that represents nearly 400 companies; Information Technology Industry Council and USTelecom as well as NCTA (formally the National Cable and Telecommunications Association) and CTIA.[91] Compounding the influence of industry associations is the army of private lobbying firms and political action committees (PACs) often staffed by former Congressional and agency personnel – the proverbial revolving door. They include firms like Ogilvy Government Relations, Cassidy & Assoc. and Ballard Partners.

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The American Legislative Exchange Council (ALEC) is one of the most important groups influencing telecom policy. It promotes itself as a "nonpartisan individual membership organization of state legislators that favors federalism and conservative public policy solutions."[92] It claims to "advance the Jeffersonian principles of free markets, limited government, federalism, and individual liberty …."

ALEC is part of the Koch Brothers network of corporate front organizations that lobby for their libertarian free-market agenda at all levels of government. Whether its claims are making Thomas Jefferson spin in his grave is an open question; nevertheless, ALEC's campaign is clear. It seeks to destroy unions and help further shift wealth to corporations and the rich, and insure that American public policy benefits corporate interests rather than public interests.

ALEC is, formally, a non-profit group that drafts model legislation. It has an estimated membership exceeding 2,400 state legislators from both political parties, but most are conservative Republicans. It regularly invites members to all-expense paid private gatherings with corporate executives and lobbyists where they devise model legislation to fulfill their political agenda, many involving telecommunications policy. These legislators, in turn, return to their home states and promote the legislation at state houses throughout the country. Many of their initiatives are enacted.

ALEC has actively supported repealing the minimum wage, privatizing Social Security and replacing guaranteed health benefits with medical savings accounts. It developed template campaigns for states to oppose the new federal healthcare program (e.g., Virginia) and pushed anti-immigration laws (e.g., Arizona). Its principal funding came from large

corporate backers and rightwing foundations. About 300 corporate sponsors paid membership fees ranging from $5,000 to $50,000. Its backers included American Express, American Petroleum Institute, Coors, Wal-Mart, Texaco, GlaxoSmithKline, Philip Morris, Corrections Corporation of America and Koch Industries as well as the National Rifle Association and PhRMA.

Over the last two decades, ALEC was backed by AT&T, Sprint and Verizon and the NCTA in support of telecommunications deregulations and in opposition to net neutrality. *Fortune* reported that during the 2009 legislative session, ALEC developed 826 state bills and 115 of them were made into law.[93] (In 2010, the GOP picked up more than 700 seats in state legislatures and now controls 25 state legislatures, up from 14.) The laws include "Broadband Parity Act" (2002), "Municipal Telecommunications Private Industry Safeguards Act" (2002),[94] Cable and Video Competition Act" (2005) and "Advanced Voice Services Availability Act" (2007) to "ALEC Applauds Congressional Approval of Spectrum Auctions to Promote Broadband" (2012), "A Resolution Regarding the Regulation of Broadband Information Services in Innovative and Expanding Competitive Markets" (2013) and "The States' Broadband Plan" (2014).[95] The "Advanced Voice Services Act" was written to block state PUCs from regulating telephone rates, terms or conditions for interconnected VoIP services like that offered by Vonage.

On August 10, 2018, David Horowitz, a former leftwing ideolog who became a rightwing ideolog, spoke at ALEC's annual conference in New Orleans, LA, and railed against the political system, claiming it was in a "crisis." He declared, "the Democratic Party is now a socialist party. It is driven by identity politics, a form of cultural Marxism, which is racist and collectivist – the antithesis of what the American founding was about."[96] The speech drew wide-spread condemnation for his "racist keynote speech" and even ALEC distanced itself from the speech. It announced, "Horowitz's comments were inconsistent with ALEC messaging and public policy positions and did not comport with speaker guidelines."[97]

In reaction to Horowitz's speech, many ALEC corporate backers quit the organization. Most telling, Comcast exited, capping a list of more than a one hundred companies that left, including Alphabet Inc. (parent company to Google), Amazon, AT&T, Dow Chemical, Microsoft, Johnson & Johnson and Berkshire Hathaway as well as Exxon, Shell and BP.[98]

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During the 2020 presidential campaign, Joe Biden issued a position paper, "Build Back Better," that laid out his infrastructure plan. It stated: "We've seen the need for a more resilient economy for the long-term, and that means investing in a modern, sustainable infrastructure and sustainable engines of growth -- from roads and bridges, to energy grids and schools, to universal broadband."[99]

"Broadband internet is the new electricity," proclaimed President Joe Biden when he introduced "The American Jobs Plan."[100] In March 2021, he signed a $1.2 billion infrastructure bill committing $65 billion to improving the nation's broadband infrastructure that allocated $42.5 billion for infrastructure in rural America; the remainder of $22.5 billion is for digital inclusion programs, advocated for by the National Digital Inclusion Alliance (NDIA).

Sadly, the digital divides will likely continue. Christopher Mitchell, with the Institute for Local Self-Reliance, raises real concerns, "I think this [Biden plan] money can be successfully spent and go a long way to improving both internet access and getting infrastructure to homes that don't have it. It will also help low-income families who just can't afford what's available." However, he warns, "I think the amount of funding that Congress made available could make sure every home has a high-quality internet access available to them. But I don't think it will."

The telecom and cable companies have failed over the last two decades to close the digital divide despite collecting many billions of dollars to do just that. The truly sad part is that Verizon and AT&T reneged on their commitments to upgrade their utility networks in the states they serve, diverting their construction budgets to wireless network expansion. While the programs funded by the infrastructure bill appear to prioritize fiber and other terrestrial technologies, the funding should not go to wireless broadband, much less to the companies that broke their promises in the past and are likely to do so again if they are given the chance.

Chapter 8

Why 5G Won't Solve the Problem

Over the last two decades, the mobile phone market has been transformed, moving steadily from the earliest first generation to today's fifth generation wireless service. Today's 5G or "Fifth Generation" wireless service is ceaselessly promoted by the telecom's wireless divisions as the next new standard, but it has been slow to take hold, partly because consumer benefits are not readily apparent, and partly because it requires new equipment.

Americans already have a lot of wireless smartphones and digital devices in use. According to the CTIA, the wireless industry trade association, in 2021 there were 469 million mobile wireless devices in use and, of these, 190 million were connected devices that included smartphones, laptops, tablets, watches and in cars. The 2020 U.S. Census reports the population at 331 million, that's 1.4 wireless devices per person.[101]

Americans are now being told that 5G is the present and the future is 6G. The industry claims that this wireless technology can compete with or replace a fiber-optic-based network. However, there are two types of wireless service, "fixed" and "mobile"; fixed connect two or more fixed locations and mobile refers to portable devices on the move. Verizon, AT&T and the other wireless carriers do not distinguish the one from the other and are pushing wireless to cover "unwired" parts of many cities – the parts they themselves redlined for fiber-optic connections.

The purveyors of wireless technology claim to be offering 5G technology, but in many cases, it is often just the older 4G-LTE. Recently both T-Mobile and Verizon have begun offering "Home Fixed Wireless Broadband" service that is meant to compete with cable and telecom wired broadband service.

By ending state and federal regulations and obligations, consumer protections were eliminated. AT&T and Verizon's stated goal has been to get rid of their regulated wired networks -- or end requirements to offer unregulated wired services instead. This will allow the companies to reduce their labor forces and make more money.

However, there is a much deeper con at play. For years, Big Telecom, including Verizon and AT&T, have diverted billions of dollars annually from the state wireline utility budgets to finance wireless deployment. These monies should have been used to upgrade the wires connected to homes and businesses in rural areas and inner cities, but, for over a decade,

have been used to build out the fiber that wireless needed to connect cell sites with switching centers.

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Historically, telecom "wire" was a twisted pair of small copper wires inside a plastic or rubber sleeve. Later, coaxial cable followed, which allowed much faster transmission of signals. Finally, in the late-1970s, the first fiber-optic networks were introduced, using light to transmit signals at blazing fast speeds. Fiber optic formed the network to which a wireless antenna could be connected, and practically overnight, a host of wireless systems -- e.g., radio, television, satellite, cellular, microwave and Wi-Fi – augmented traditional telecom signal distribution. But there was a problem. While fiber optic outperforms copper wire, cable's coaxial wireline and wireless transmissions, it is more expensive to deploy.

This presented telecoms with a simple business decision: either build out fast, reliable fiber-optic networks to all customers, as they had promised, and continue doing business under the control of state regulators or do everything possible to get customers to switch to unregulated wireless services, where expenses are much lower and profits much higher. We can safely assume that the discussion in corporate board rooms didn't take long.

And so, over only about a decade, the landscape of communications in the United States was transformed from a primarily wired system to one now dominated by wireless technology. A short review of the history illuminates this transformation:

- 1G – Japan's Nippon Telegraph and Telephone (NTT) launched 1G in 1979 but it was not until March 1983 that Ameritech introduced the Motorola DynaTAC mobile phone – popularly known as "The Brick" – to the U.S.
- 2G – introduced by Nokia in Finland in 1991, it included SMS text messages, digitally encrypted calls, improved sound quality that reduced static and crackling noises, and significantly increased data download speeds.
- 3G – launched by NTT in May 2001, it enhanced to access location-based services, to watch mobile TV, participate in video conferencing and watch videos on demand; in addition, users could access data from anywhere, which allowed international roaming services to begin; with speeds up to 2 Mbps, it enabled improved internet surfing and music streaming on mobile phones. It also saw the introduction of Canada's Blackberry and the American Apple iPhone.

- 4G – Telenor was introduced in Norway in 2009, it provided high- quality video streaming/chat, fast mobile web access, HD videos, and online gaming; it offered speeds up to 12-Mbps, five times faster than the previous generation. The best-selling "smart" phones included the iPhone 6 at 22.4 million units and the Samsung Galaxy S4 at 80 million units worldwide.
- 5G – developed in South Korea in 2008, Samsung announced that it had created a 5G network in 2013; in 2019, Verizon introduced 5G in the U.S.; it cut latency -- the delay between the sending and receiving information - - from 4G's 200 milliseconds to 1 millisecond (1ms); and it expanded bandwidth from 30 GHz and 300 GHz.

Today, 5G is slowly superseding 4G LTE in certain metropolitan areas – and 6G development is underway.

Equally revealing is the development of the wireless market as suggested by the following outline:

- 1995 -- Bell Atlantic, NYNEX and Pacific Bell announced plans to substitute wireless services for fiber-optic deployments in multiple states.
- 2004 -- AT&T and Verizon claimed that they were going to roll out fiber to the home; AT&T announced U-Verse and Verizon Fios. Both companies took over the wireless business with AT&T merging with Cingular (a wireless company owned jointly by BellSouth and SBC) and Verizon consolidating Bell Atlantic Mobile.
- 2007 – Apple's iPhone introduced new applications (e.g., digital streaming) and mobile phone use was "sizzling."
- 2010 -- AT&T and Verizon appear to have started to build their wireless subsidiaries by unlawfully using local telephone subscriber funds from the state telecom utilities they control.
- Since 2010 -- Some state utilities (e.g., Verizon New Jersey and Pennsylvania) had fiber-optic obligations that they failed to deliver on, and instead were granted the right to substitute wireless service by the public utility commissions, with much reduced speed requirements.

- 2011 -- AT&T and Verizon announced they were now wireless providers and then focused on "shutting down the copper networks." They did not buildout their fiber broadband networks in much of their territories, particularly in rural and low-income areas.
- 2016 -- 5G is announced with claimed speeds of 1-Gbps; deployment was to follow in 2017.
- 2017 – Under the Trump administration Ajit Pai, a former Verizon lawyer, and Republican FCC commissioner took over as chairman and Commissioner Brendan Carr, a former CTIA and Verizon lawyer, used an ALEC bill as the basis of the agency's 5G plans. Multiple consumer protections were removed, including the sacking of Net Neutrality rules.
- Since 2017 – A wave of state-based "model legislation" 5G bills by ALEC – and promoted by AT&T and Verizon – were passed that removed the rights of cities and states to halt small cell deployments.
- 2022 – *The Wall Street Journal* announced what's next, 6G wireless service: "Forget 5G. Let's Talk About 6G."

Sadly, 5G has very little to do with the actual benefits of wireless technology for the public, especially as a "mobile" service that facilitates today's hectic, postmodern digital lifestyle. Rather, 5G is more a marketing term used to signal the wonderful future promised by a new technology and secure deregulation and block any interference with the placement of the numerous small cell antennae used by 5G for their mobile broadband service. Verizon and T-Mobile are now beginning to offer fixed broadband service to the home using large antennae on the cell towers and line-of-sight antennae to the home.

***

The storyline of wireless service is a bait-and-switch con game played out by both Verizon and AT&T. Starting in 2011, Verizon announced that it had completed its deployments of Fios and would be focusing on wireless; AT&T announced that it was going to be a wireless and entertainment company and it, too, was going to slow down the upgrades of the wireline networks.

Verizon Fios is a group of services that ride over fiber-optic wires. The utility construction budget is supposed to be paying for utility network upgrade and maintenance, not for building a cable service, an internet service or even a wireless service. The New York State Attorney General reported in 2011 that Verizon's claim of having spent over $1 billion for capital investment was misleading. "In fact, roughly three-quarters of the money was invested in providing transport facilities to serve wireless cell sites and its Fios offering. Wireless carriers, including Verizon's affiliate Verizon Wireless, directly compete with landline telephone service and the company's Fios is primarily a video and Internet broadband offering."[102]

AT&T joined the "cut the copper off" campaign. In 2011, *DSLReports.com* reported that AT&T's president claimed it would be halting high-speed broadband deployment in many areas. It noted, "During a recent Citibank investor's conference, John Stankey, AT&T's President, said that the service provider is confident it can pass 55-60 percent of the 30 million homes passed in their service region [of 21 states] by end of 2011. … Within the broadband data realm, Stankey said that only 25-30 percent of homes in AT&T's region will be offered ADSL, adding that 20 percent of them are "not a heavy emphasis for investment."[103]

5G wireless cellular signals are transmitted through small cell antennae or call tower-based stations, miniature access points that transmit low radio frequencies. Look up and one is likely to see small cells perched on top of buildings as well as atop streetlights and stop signals. In 2018, the FCC issued "Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment" – aka "Small Cell Orders" – that placed restrictions on the fees that state and/or local governments can charge for access to rights-of-way.[104] *FierceWireless* notes, "The orders require municipalities to approve small cell placements within a fairly short time frame."[105] In 2020, 1,945 5G small cells had been deployed, mostly in dense, urban settings. But by 2027, 1.56 million private 5G small cells are projected to be deployed.[106]

Over the last few years, there have been a number of critical court cases raised challenging the FCC's small cells for the rollout of 5G. In October 2018, a group of U.S. cities and counties, including Seattle, Los Angeles and San Francisco, filed suit in the Nineth Circuit of the U.S. Court of Appeals against the FCC.[107] They objected to the Small

Cell Order restrictions on what they could charge for access to public utility poles by wireless companies.[108] In 2020, the Court ruled in favor of the FCC. Potentially more significant, in August 2021, the Court ruled that the FCC's December 2019 decision to retain its 1996 safety limits for human exposure to wireless radiation was "arbitrary and capricious."[109]

The small cell 5G legislation in the states was pushed by ALEC, as far as we can tell. ALEC is a forum that brings together corporations and free-market legislators to develop legislation that benefits the corporation but not the consumer. It proposed the model legislation that was not only promoted in California and other states, but legislation put forward by Republican FCC Commissioner Brendan Carr in 2018 -- "Carr's 5G Order" – that launched the new-generation of wireless communications.[110]

Carr argued that his 5G plan would cut roughly $2 billion in administrative fees and stimulate additional investments. However, the National Association of Counties warned in 2018 that the FCC legislation "would significantly limit their ability to properly regulate wireless telecommunications infrastructure deployment. By narrowing the window for evaluating 5G deployment applications, the FCC would effectively prevent local governments from overseeing public health, safety and welfare during the construction, modification or installation of (broadcasting) facilities."[111] These concerns, especially regarding electric and magnetic forces (EMFs), are being ignored by the state and federal regulatory agencies and legislatures even though many citizens and local governments have expressed opposition.

At the time, then FCC commissioner -- and now chair -- Rosenworcel warned: "So it comes down to this: three unelected officials on this dais are telling state and local leaders across the country what they can and cannot do in their own backyards. This is extraordinary federal overreach."[112]

Still others have raised concerns about ALEC's role in influencing 5G deployment. Larry Ortega, CEO of Community Union Inc., warned:

> Consumers, telecoms and our legislators are charged with the task of ensuring that all Californians have quality, high-speed, fiber optic access to online resources, be they in the rural cities of Huron, Mendota or Firebaugh or the inner-city MacArthur Park, Huntington Park or Leimert Park neighborhoods of Los Angeles.

He added, "It is time for the governor to call for an investigation into why these ALEC bills keep landing on his desk."[113]

More than 25 state legislatures have enacted legislation enabling the deployment of small cells, including Michigan, Missouri, New York, South Carolina and West Virginia. In addition, 16 states introduced mobile 5G and small cell-related legislation in the 2020. However, California Governor Gavin Newsom vetoed SB 556 on October 4, 2021, a bill to promote the deployment of small cells. Newsom wrote:

> This bill would restrict the ability of local governments and publicly owned electric utilities to regulate the placement of small cell wireless facilities on public infrastructure and limit the compensation that may be collected for use of these public assets.[114]

***

Many have raised concerns as to the effect of wireless technologies on personal health. In 2013, the FCC opened an inquiry into 5G, requesting public comment as to whether it needed to review its 1996 health guidelines for Radio Frequency (RF) radiation emitted by wireless devices and infrastructure. In December 2019, the FCC ruled that there was no evidence that wireless technology causes harm, nor a need to review the guidelines.

Devra Davis, PhD, MPH and president of the non-profit Environmental Health Trust. (EHT), has been one of the strongest critics of 5G technology. "The FCC has ignored our extensive submissions over the years which clearly document harm. As the legacy of lead, asbestos, and tobacco teaches us, this issue deserves the immediate attention of our federal government in order to protect our children's healthy future," she argued.[115] In 2021, EHT won an important decision against the FCC regarding human exposure to wireless radiation.[116]

The challenge raised about the health impacts of 5G technology recall the legendary struggles that scientists and health activists faced in the battle over the role of cigarette smoking and lung cancer. While the link between cigarette smoking as a likely cause of cancer was acknowledged as early as the 1940s, it was not until 1999 that the U.S. Supreme Court upheld a verdict against Philip Morris for the death of Mayola Williams from lung cancer.[117] One can only hope that the case against 5G will not take that long to resolve.

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While Verizon succeeded in getting much of the national media to accept its claims that its 5G was a real service, the Better Business Bureau's (BBB) National Advertising Division (NAD) urged Verizon to revise its 5G promotion and explain to consumers when the services are "more unavailable" than "available." As it noted:

> Further, consumers are not likely to understand the location limitations on Verizon's 5G network when they see Verizon's advertising that it now offers 5G, notwithstanding the disclosure at the end of each commercial which states, '5G Ultra-Wideband available only in parts of select cities…'[118]

NAD noted that it is undisputed that Verizon's 5G service is available in certain neighborhoods of some cities but that even in cities where it is available, its availability is limited.

In a December 2019 analysis, the FCC found major discrepancies in wireless broadband speeds from Verizon and others as compared to the actual coverage maps that were used to document the government subsidies they received. The companies certified that they would be delivering "4G LTE" with a "download speed of at least 5 Mbps" to receive these subsidies.

The FCC's "Mobility Fund Phase II (MFII) coverage maps investigation" found the following:

> Through the investigation, staff discovered that the MF-II coverage maps submitted by Verizon, U.S. Cellular, and T-Mobile likely overstated each provider's actual coverage and did not reflect on-the-ground performance in many instances. Only 62.3% of staff drive tests achieved at least the minimum download speed predicted by the coverage maps — with U.S. Cellular achieving that speed in only 45.0% of such tests, T-Mobile in 63.2% of tests, and Verizon in 64.3% of tests.[119]

It concluded, "Similarly, staff stationary tests showed that each provider achieved sufficient download speeds meeting the minimum cell edge probability in fewer than half of all test locations (20 of 42 locations)."

In 2020, the FCC made $9 billion available through "the 5G Fund for Rural America" to "bridge the digital divide."[120] It asserted that "the 5G Fund will help ensure that rural Americans enjoy the same benefits from our increasingly digital economy as their urban counterparts and would include a special focus on deployments that support precision

agriculture. Unfortunately, the FCC never examined that massive cross-subsidies of the wireless networks and where local phone customers have been charged for the fiber-optic networks used by Verizon and AT&T wireless. The IRREGULATORS, an independent consortium of senior telecom experts, filed for the FCC to investigate these cross-subsidies, including 5G wireless.[121]

Chapter 9

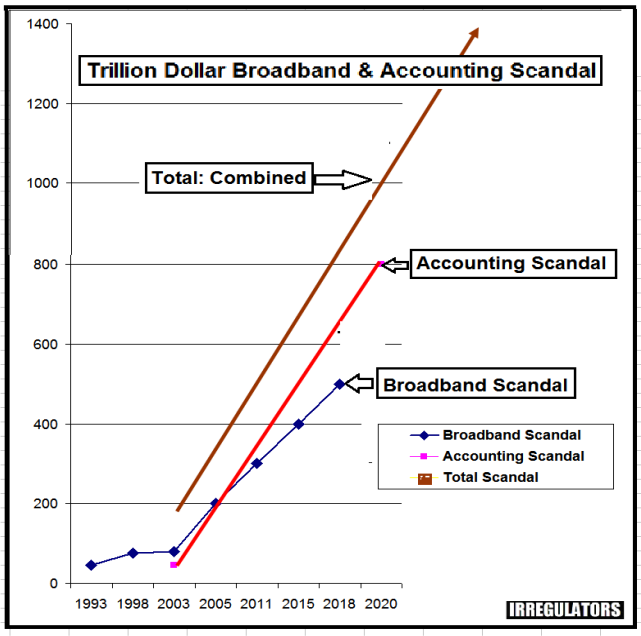
The Great Telecom Rip-Off

In ***The Book of Violations & Egregious Acts: Trillion Dollar Broadband Scandal***, Bruce Kushnick writes, "This book analyses the grift, overcharging, and diversion of funds that the [telecom] companies have perpetrated on the American public for several decades." The book provides much of the financial analysis and documented history of the giant telecom companies that are referred to in this work.

Kushnick's rigorous study focuses on three scandals that define today's telecom industry: (i) a fiber-optic scandal, (ii) an accounting scandal and (ii) a pricing scandal. These scandals involve a trillion of dollars and contributed to the U.S. becoming a second-rate telecom nation. (See Exhibit 4) The scandals are summarized as follows.

Exhibit 4

The Trillion Dollar Accounting Scandal



- <u>The Broadband Scandal</u>

In the 1980s, NNI started tracking a specific bait-and-switch scheme after the breakup of AT&T. The local Bell companies like Verizon New Jersey or AT&T California, which are, in fact holding companies, developed a plan that involved state Bell telecom utilities going to their state utility commissions and saying, in effect, we will bring new technology to the

networks if you just change the laws to give us higher service rates and tax perks for these new services.

NNI investigated some key questions: How much has the price of communications services and excessive charges gone up based on these unfulfilled "commitments"? How much corporate profits were garnered based on changes in state regulations and laws, even though the upgrades were not done? Why didn't utility commissions or state tax collectors ever attempt to go after the money collected or at least half the rate increases going forward? This was the crux of its examination of the broadband scandal of 1992-2018. However, there was another scandal which we did not understand or uncover until 2010. (See Exhibit 5)

Exhibit 5
Broadband Scandal, 1992-2018

	Amount (billions)
Excess Profits - Changes in state laws for the excess profits to be used for fiber-optic broadband**.**	$206.
Tax Write-Offs and Depreciation -- Major write offs for fiber-optic build outs that never occurred.	$103.
Missing Equipment -- FCC audits found network equipment could not be found but was written off or was on the books.	$80.
Cross-Subsidies -- Original findings covered a fraction of the expenses paid by local phone customers for other lines of business.	$50.
Overcharges -- First wave of overcharging (1984-1998)	$75.
Special Items -- Added charges to utility customers for other "non-utility" products or services**.**	$40.
Name Change and Ad Charges -- Charged to the local phone customers and the state utilities.	$9.
BellCore+ -- Expenses, including research, charged to the state utilities.	$20.
Total	$583.

- The Accounting Scandal

For years, the Bell companies were required to use different sets of accounting rules for different purposes. The financial books used for these state-based bait-and-switch schemes

were known as "regulatory" books, specifically using the FCC's USOA rules as opposed to Generally Accepted Accounting Principles (GAAP) used by most corporations.

Now imagine, if you can, manipulating the accounting formulas so that the majority of all the parent company's corporate expenses end up being charged to local phone subsidiary customers and the state utility while the wireless company, the internet company and even the media and international business divisions all pay a fraction of those expenses. The other lines of business are all profitable while local phone service shows artificial losses, justifying rate increases. This shell game started in 2000 and has been getting worse for two decades.

This shell game created harmful public policies that created the digital divide; it made the entire U.S. wired utility infrastructure appear unprofitable. This served as an excuse for staff cuts, rate increases and tax savings, not to mention claims that it was not profitable to upgrade the state utilities. (See Exhibit 6)

Exhibit 6
Accounting Scandal, 2002-2021

	Amount (billions)
Excess Corporate Operations Expenses -- lawyers, lobbyists, executive pay overallocated to the state utility Local Service category since 2001 using bogus accounting.	$267.
Utility Construction Budgets – monies collected from consumers for fiber upgrades diverted to fiber links for wireless.	$242
Special Access Excess (aka "BDS" for "Business Data Services" or "Backhaul") -- these wires not only do not pay market prices but have prices kept inflated.	$344.
Tax Benefits -- includes the accelerated depreciation (write offs) to the tax benefits from the artificial losses created by the wireless company's failure to pay for use of the networks or the excessive corporate operations expenses**.**	$166.
Wireless Failure to Pay -- the wireless subsidiaries of Verizon and AT&T did not pay for the wireline fiber the state utilities built for them.	$156.
Rights of Way -- wireless companies have been getting "free" rights of way for fiber built by the utility.	$78.
Customer Service, Marketing, Advertising -- extra charges added to Local Service, cross-subsidizing expenses for other lines of business.	$63.
Total	$1,316.

- The Pricing Scandal

The Broadband and Account Scandals allowed for rate increases and harvesting. This is especially evident in the pricing of U.S. communications vs that of other advanced country telecom prices because they helped the Bell companies keep control of the entire telecom system and continually inflate prices.

Conclusion 1:

What Needs to Be Done

Through state and federal actions, the digital inequality can be fixed by stopping Big Telecom from collecting billions of dollars from utility customers to cover contrived losses and for fiber-optic upgrades they never got. Instead, the telecom holding companies plough the money into their wireless and other lines of business to bring about their vision of an all-wireless future. The companies must be held accountable for their misappropriations and made to restore the funds to the state telecommunications utilities and complete the fiber upgrades they promised, thus solving the digital divide without additional government subsidies.

These actions do not rely on government funding but on accountability, enforcement of laws, accurate data and going after the improper financial cross-subsidies uncovered by the IRREGULATORS. However, no serious change can occur until public pressure forces captured legislators and regulators to make uncomfortable decisions that the telecoms do not like and will use all their power and influence to prevent. The telecommunications industry generously funds the campaigns of lawmakers and other politicians who take actions that should serve the public interest rather than corporate interests. These actions may put those campaign contributions at risk, but that is as it should be for our representatives.

To this end we propose 14 critical next steps:

I. CLEAN THE HOUSE

Step 1: Clean Sweep of Corporate Interests at the FCC: No individual with direct ties, financial or otherwise, to the telecom, cable and media industries regulated by the FCC shall serve on any FCC committee, act as chairman or commissioner or have an executive position.[122] The Consumer Advisory Committee should only consist of actual consumers or consumer organizations and not organizations that receive funding from the industry.

Step 2: Lower Rates Immediately: It's time to remove all so-called taxes, fees and surcharges that are not mandated by a government agency. Made-up fees have added 15 to 40 percent to consumer bills.[123] The price of the service should be fully and honestly displayed.

Step 3: Truth-in-Billing, Truth in Advertising, Truthful Statements or Penalties: The telecom,

cable, internet and media industries must make true and verifiable statements or face stiff penalties. This should include customer bills, advertisements, public statements and customer services — i.e., all communications. These should include:

- Remove the word "unlimited" from all advertising for services that are not truly unlimited.[124]
- Explain in any ads for promotions in large type the details of the promotion, the rates to be charged at the end of the promotion, and how the consumer can terminate service at the end of the promotion.
- Require full disclosure of all prices on websites; add a calculator feature for all mandated, legitimate taxes and fees.
- The actual download and upload speed of the service must match the advertised speed.
- Statements about deployments of wireless, broadband, fiber-optic or other services must be factual; claiming a "city" has a service shall require over 75-plus percent coverage.
- Go after all "Whamming," "Slamming," "Cramming" and "Digital Stalking."[125]

Step 4: A "Follow-the-Money" Audit: It's time to investigate and halt the billions in cross-subsidies that have been used to fund wireless, interstate and information services but were supposed to be used for the upgrade of the state public telecom utilities. This impacts many FCC proceedings over the last two decades.[126] Obsolete FCC accounting rules that produce grossly distorted allocations of costs are a leading cause of this travesty.

II. FIX ALL DATA & ANALYSIS

Step 5: Tell the Truth About America's Broadband History: the FCC has re-written history, leaving out all the state-based broadband commitments made by the telecom industry and the serious overcharging of consumers for fiber-optic services that were never delivered.[127] This should be fixed, so that everyone knows what happened.

Step 6: Investigate the "Guts" of the Telecom Networks (i.e., "Backhaul"): At its core, U.S. local telecom service is overcharged because the Bell affiliate, state telecom utility companies that control the physical wires (i.e., "backhaul," "BDS" or "Special Access") control wireline and wireless service pricing. This includes both the retail prices and the wholesale prices charged to competitors to use the networks.[128]

Step 7: Investigate the Manipulation of the Accounting of Access Lines (i.e., Dark Fiber): More than four-fifths (85%) of the nation's Bell company wires go to homes and offices; cell sites or lines used by competitors have been left out of the accounting and this was done to support Big Telecom's business strategies to migrate customers to wireless, cut labor costs and increase profits.[129] Where are the unlit broadband access lines, also known as 'dark fiber'? What areas are not upgraded, despite being "passed" by fiber, and when will they be revealed?

III. FIX THE FCC FOR THE PUBLIC INTEREST, NOT THE BELLS AND CABLE CORPORATE INTERESTS

Step 8: The State and Federal Joint Boards on Universal Service Need to be Redesigned to Represent the Public Interest: They have been dysfunctional and neglected even though they are supposed to balance state and federal issues. It's time to fix them.

Step 9: Create an Independent Advocate for Small business and Consumer Interests: With all of the mergers and consolidation over the last three decades, there is no serious balance from the corporate duopoly to protect the public interest.

Step 10: Reverse all FCC Harmful Decisions Made Under the Previous Republican and Democratic Administrations: There were wave after wave of harmful actions taken by the FCC to remove customer protections and/or to just help the corporate interests of giant telecoms. Every FCC proceeding failed to acknowledge (ignored) that there are state utilities and cross-subsidy issues that have impacted all the financial and data analyses used by the FCC and every rulemaking. We need to create a new starting point.[130] The public needs the wires and radio spectrum we all paid for.

Step 11: Break-up Big Telecom: It's time to start state and federal proceedings for "Divestiture II." In 1984, the old AT&T was broken up because it had too much control over America's communications.[131] Now, again, it is time to:

- Separate the wired and wireless infrastructure from the companies' other content subsidiaries.
- Stop the illegal cross-subsidies of the Bells' wireless infrastructure.
- Use that money to upgrade the state telecom utility to fiber-optics to everyone.
- These networks must be made to provide meaningful Open Access directly to competitors to achieve lower rates and innovative services.

- Maintain the existing copper wires until they are upgraded to fiber.

Step 12: Solving the Net Neutrality & Privacy Issues by Requiring Open Access and Guaranteeing Privacy: Competition will increase, and the Big Telecom's content will be separated from the control of the wires, thus stopping the ability of the incumbent ISPs to give preferential treatment to affiliated content that that harms customers and unaffiliated content creators.

Step 13: Cities Should Light the "Dark Fiber": The majority of fiber-optic wires have never been put into service by AT&T and Verizon.[132] Cities should take the wires back and use them for their own Open Access municipal networks.

Step 14: States Should Initiate a Similar Plan with the Same Goals: Offering fiber-optic infrastructure access and broadband services to everyone that can be paid for by halting the cross-subsidies, thus redirecting the utility construction budgets and removing the dumping of the holding company's corporate expenses can begin immediately.[133]

Conclusion 2:

What You Can Do

The 14 critical next steps detailed in Conclusion 1 outline a long-term strategy to redress the power of the Telecom Trust. This Conclusion outlines several critical actions that individuals can take to address problems they find with their telecom bill(s). These actions fall into five actions and steps:

Action 1 – Go to the IRREGULATORS.ORG/Action website for the latest campaigns and actions.

- http://www.irregulators.org/acction

Action 2 -- Complain to your provider. Drawing from the Better Business Bureau, WikiHow.com, Teletruth and other sources, we suggest the following:

- Step 1: Carefully review your bill each month and check to see if any new, unauthorized or questionable charges have been added.
- Step 2: Contact your service provider with a copy of your bill at hand – and a pen & paper to write down (i) name and title of customer services personal, (ii) time & date of call and (iii) notes as to what is said.
- Step 3: Explain the questionable charge and ask for credit or refund for overcharge.
- Step 4: If service representative says they will get back, you should then ask for her/his direct contact phone number.
- Step 5: In all likelihood, you will have to try again … and again.

Action 3 -- Complain to your local city councilperson or Congressional representative – and send a copy of your correspondence (with a "cc") to telecom provider.

Action 4 -- Write opinion letters to your local news sources, be it a paper, magazine, radio, TV or online outlet – and send a copy to the service provider. Be a pest.

Action 5 – Complain to a regulatory agency regarding your phone, cable, or satellite television provider. These agencies include:

- Federal Communications Commission at:
  - Website: https://consumercomplaints.fcc.gov/hc/en-us
  - 1-888-CALL-FCC (1-888-225-5322)
  - TTY: 1-888-TELL-FCC (1-888-835-5322)
  - ASL: 1-844-432-2275

- Find your state consumer protection office at the following website – https://www.usa.gov/state-consumer
    - For example: New York State Customer Complaints
    - Website: www.dps.ny.gov/complaints.
    - DPS Helpline at 1-800-342-3377 (M-F 8:30a - 4:00p)
    - Office of Consumer Services
      NYS Department of Public Service
      3 Empire State Plaza
      Albany, NY 12223
- A state public utilities commission (PUC)
    - For contact information of individual state PUCs: https://www.puc.pa.gov/about-the-puc/national-list-of-utility-commissions/

Action 6 – Pressure nonprofit organizations such as Public Knowledge to become more active. https://publicknowledge.org

Action 7 -- For more information, check out:

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David Rosen

David is the author of four nonfiction books as well as numerous scholarly articles, book reviews and popular pieces on media-tech, telecom, politics and American life.

He worked with the Sundance Institute where he authored, *Off-Hollywood: The Making & Marketing of Independent Films*. With the support of the Ford and Rockefeller, he organized and was project director of the multiyear, San Francisco conference, "Digital Independence: the Forum on Creativity, Technology and Democracy." He served on the boards of directions/advisors of the Independent Television Service (ITVS-PBS, Treasurer), MoMA-NY Video Collection, Film Arts Foundation and to a U.S. Congressman.

He served as the business-development officer for two media-tech companies that secured private placement offerings. In addition, he has prepared many business plans, strategic plans, marketing plans, private placement memos and business-case analyses for major U.S. and international corporations, non-profit organizations, entrepreneurs and independent media makers.

Bruce Kushnick

Bruce has been a telecom analyst for 40 years and is executive director of New Networks Institute (NNI). If you ever used a touchtone phone, saw the phone number of the caller or listened to a recording over the last three decades, odds are Kushnick had something to do with it. As Senior Telecom Analyst for IDC/Link, a subsidiary of International Data Corp., Kushnick's 1985 report (a best seller) predicted that the addition of new technologies and new networks would change the way America used communications. In 1992, Kushnick helped to invent and deploy the first 3-digit phone service, "511," with Cox Newspapers.

In 1992, Kushnick started NNI and, in 2002, he helped found Teletruth, a telecom advocacy group that was a member of the FCC's Consumer Advisory Committee. Kushnick is the author of a trilogy of books spanning 18 years; the most recent, "The Book of Broken Promises: $400 Billion Broadband Scandal & Free the Net," was released in May 2015. NNI's research was used to help in the investigation of Verizon New York and, working with CWA union, the July 2018 settlement involving an estimated at $300-500 million and requiring 30,000-plus lines of fiber in unserved areas and the maintenance of the copper networks in non-fiber areas.

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"You can fool all
of the people all
of the time …
until they know
the truth."
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