The Book of Broken Promises

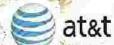
\$400 Billion Broadband Scandal & Free the Net

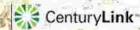












Bruce Kushnick

What others have said about Bruce Kushnick's research and previous books:

David Cay Johnston, Recipient of the Pulitzer Prize, Author of "The Fine Print", 2012¹

"Kushnick's estimate comes from his meticulous analysis of disclosure document filed with the Securities and Exchange Commission and other regulatory agencies... Kushnick's estimate might significantly understate how much extra money people paid for an electronic highway they did not get. It seems very likely that Kushnick's numbers are uncomfortably close to the truth."

Dr. Robert ("Bob") Metcalfe, co-inventor of Ethernet, and creator of "Metcalfe's Law". Foreword for The Unauthorized Bio of the Baby Bells, 1999.

"The part of Kushnick's expose that angers me most is how the Bells have used the Information Superhighway to win concessions on how much money they can extract from their monopolies. Kushnick recounts extravagant Iway promises, shows them to be just a Bell ploy, and documents how they've not been kept. He tracks billions intended for Iway deployment to Bell executives, to their shareholders, and, of course, to almost all of your elected representatives in government."

Bill Moyers' Emmy Nominated, "The Net at Risk", 2006²

"In "The Net at Risk," telecom industry watchers Bruce Kushnick and Tom Allibone of Teletruth a consumer advocacy group which has published an e-book, \$200 Billion Broadband Scandal, fault the telephone companies for not fulfilling the promises they made in the 1990s to provide fiber-optic connections to households. Had their grand plans been implemented, 86 million customers in the United States would have received much faster service than is currently available."

Cover Story, Washington Technology, September 15th, 1994³

"A telecom analyst's report should raise some eyebrows among those who want to build the forthcoming National Information Infrastructure (NII) and do business on solid, honest ground...If telecommunications analyst Bruce Kushnick is talking the truth (and we think he is), systems integrators, content providers, Internet service providers and just about anyone involved with building the forthcoming National Information Infrastructure had better read his report word by word."

Verizon spokesman Lee Gierczynski, The Bergen Record, March 25, 2014⁴

"For nearly two decades, he has made the same, tired baseless allegations over and over again about Verizon and its predecessor companies — not only in New Jersey but in other states as well... His specious arguments are devoid of fact, relying on misinformation and myths to prop up his claims."

I, Cringley, PBS⁵

"The \$200 Billion Rip-Off: Our broadband future was stolen."

Ed McFadden, Verizon Communications, July 2014

"I run media affairs for Verizon public policy, and was wondering which editor has some oversight of Bruce Kushnick. Who reviews his material before it is posted? In his latest, he makes several inaccurate statements, the facts for which were publicly available and where he appears to be making an effort to misdirect your readers."

Front Page, The New York Times, November 1988⁶

"There will be a turf war over what services should be billed for and what services should be free," predicted Bruce Kushnick, an analyst..."

The Players:

- § at&t Southwestern Bell (SBC), Pacific Telesis, Ameritech, BellSouth, SNET (formerly independent), and AT&T
- § Verizon Bell Atlantic, NYNEX, GTE (formerly independent), and MCI

BEFORE



AFTER



Introduction

Imagine if you could say anything or do anything, with the odds of getting caught being almost nil. Even if you are apprehended, there would be little, if any, repercussions.

Welcome to The Book of Broken Promises.

- § There is a wire that goes into your home, school or office as everyone in America is entitled to phone service. This wire was put in as part of the state-based utility and most of them are controlled by what are now AT&T, Verizon and Centurylink.
- § Starting in 1993, (though it varies by state) this copper wire was supposed to be replaced with a fiber optic wire and the companies were able to change state laws to charge you to do this upgrade. (Fiber optics can handle much higher download and uploads speeds.) Instead, the companies pulled a bait-and-switch and used the old copper wires for a slow broadband service called ADSL.
- § In 2004, Verizon started rolling out FiOS, which is a fiber optic service, but announced in 2010 it was not going to expand, leaving about 50% or more of their territories' upgrade incomplete.
- § AT&T rolled out U-Verse in 2005, but AT&T never replaced the wire; U-Verse is a 'copper-to-the home' service, that uses the legacy copper wire.
- § In 2012, Verizon and AT&T announced plans to start 'shutting off the wires' in about 25%-50% of the US and force customers onto their wireless service because it makes them more money. Wireless can't compete with wireline services, such as cable TV; it is expensive to use due to 'data caps' (extra fees and restrictions) and is a fraction of the speed of fiber optics.

By the end of 2014, America will have been charged about \$400 billion dollars by the local phone incumbents, Verizon, AT&T and CenturyLink, for a fiber optic future that never showed up. And though it varies by state, counting the taxes, fees and surcharges that you pay every month (many of these fees are actually revenues to the company or taxes on the company that you paid), it comes to about \$4000-\$5000.00 per household, and that's the low number.

You were also charged about nine times to wire the schools and libraries via state and federal plans designed to help the phone and cable companies.

And if that doesn't bother you, by the year-end of 2010 and based on the commitments made by the phone companies in their press statements, filings on the state and federal level, and the state-based 'alternative regulation' plans that were put in place to charge you for broadband upgrades of your home, business, and the schools and libraries — America, should have been the world's first fully fibered, leading edge country.

In fact, in 1992, the speed of broadband, as detailed in state laws, was 45 Mbps in both directions — by 2014, we should have all had gigabit speeds (1000 Mbps).

Instead, America is not Number 1 or 2 or 5 or even 10th in the world in broadband. Net Index by Ookla⁷ pegged America at 27th in the world in download speeds and 47th in upload speeds, as of August 9th, 2014.

And while this book focuses on Bell companies, (now AT&T, Verizon and Centurylink), there is a second wire into most homes from the cable companies. And wouldn't you know it — we found that Time Warner and Comcast had actual agreements with the FCC called the "Social Contract", which allowed the companies to raise rates up to \$5.00 a month to upgrade their networks for Internet and broadband, and to wire the schools in their areas — for free, with high speed cable modem service. These agreements ended in 2000, but we can't find any proof that they lowered the cable rates or that the schools were wired. We estimate that from 1996 through 2014, cable customers paid approximately \$61 billion because of these agreements. Without audits, it is impossible to tell the exact amount. On average, customers paid about \$60 a year or about \$840 extra from 2001 through 2014.

And for those who exclaim — 'But I use wireless, why should I care?' Your wireless service is really a wired service with an invisible extension cord, as every 'hot spot' or cell site is attached to a 'secret' wired network, known as 'special access'. It is a monopoly service and is controlled by the wired phone companies, AT&T, Verizon and Centurylink and it has obscene profits, so all wireless service, including those offered by competitors like T-Mobile or Sprint, have to pay through the nose — which is passed on to you. And instead of Verizon and AT&T's wireless companies actually competing with their wireline companies, they have a sweetheart deal with these secret wires which lets them collude in multiple ways that cost you money; but I'll get to all of this in due time.

Fast Lane, Slow Lane, No Lane, End Game in Telecommunications

Not being Number 1 in the world in broadband or being charged extra by the phone and cable companies is only a small part of just how far America has fallen. We are at the end game in telecommunications. Verizon announced in 2010 that it was no longer going to upgrade areas with 'FIOS', their fiber optic product, leaving about 50% of their territories un-upgraded, while AT&T announced the same thing, but is now claiming it will continue to upgrade, (and even to do fiber-optic based cities), if it is allowed to merge with Direct TV.

And it will get worse — Forget about Net Neutrality's "fast lane" or "slow lane"; we should now be more concerned about the "no lane". Instead of properly upgrading America, AT&T and Verizon plan to just 'shut off the copper' to about 50% of the US, and force-migrate everyone to their wireless services.

Instead of competing, Verizon has deals with the cable companies to bundle their wireless service with the cable company's 'triple play' of cable TV, phone and high-speed Internet in areas that are not upgraded by the telco — a defacto "do not compete" arrangement.

There are a host of issues that people have noticed:

- "Since deregulation, landline costs skyrocket. The monthly cost of measured AT&T phone service (in California) has soared more than 260% since 2008." Los Angeles Times, Dec 6th, 2013⁸
- "Internet Service Providers Are Now the Most Hated Companies in U.S..." "ISPs received the lowest customer satisfaction ranking of any industry in America. And that's saying something, considering ACSI (American Customer Satisfaction Index) typically surveys nearly 50 industries per year." *Huffington Post*, May 22, 2013⁹
- "Killing Copper? Customers Say They Felt Pressured into FiOS."
 "'Consumers are filing complaints with us alleging that Verizon is engaged in deceptive marketing practices,' said Eric Friedman, Director of Maryland's Montgomery County Office of Consumer Protection." NBC Washington, December 10th, 2013¹⁰

I've been a telecom analyst now for over 32 years, but I knew we were at the end game during a meeting of the East 9th Street Block Association where a distraught group of Verizon customers were explaining how their service had been knocked out by the Super Storm Sandy in October 2012 and Verizon hadn't restored phone service (or DSL) by April 2013, six months later. And East 9th Street is in the middle of one of the centers of the known universe — Manhattan, New York City.

It wasn't supposed to be like this.

The Communications Act of 1934 required the phone companies make sure that everyone in America could get phone service at 'fair and reasonable' prices. Rural, urban and suburban, rich or poor areas alike — everyone was entitled to phone service.

And this was delivered over copper wires that were part of state-based, telecommunication utilities, where the costs of service were averaged throughout the state so that the rural customers paid about what the city folks would pay and the expenses were also averaged out. And it was always quite profitable; if the companies were 'losing money' they could go back and ask for more. Few American companies enjoy guaranteed, stable financial profitability like these telecommunication utilities.

By the 1960's, most of America was wired, but the phone networks, especially in the cities, started way back, before the 'Roaring 20's'.

In 1991, as part of the Clinton-Gore ticket, Al Gore called for an "Information Superhighway", a nationwide plan to replace the old, legacy copper wires with new fancy, shiny, glass, fiber optic wires. This is because fiber optics can offer a lot more bandwidth and higher speeds for video services and new online applications. And the plan was to have America rewired, 100% completed, around the year 2010,

And like fresh blood in shark infested waters, what is now AT&T, Verizon and Centurylink claimed that if they were given more money, they would use it, state-by-state, to wire whole states, not to mention the schools and libraries, or both. (NOTE: At the time, there were seven 'Baby Bells', which were created in 1984, when Ma Bell, the original AT&T, was broken up. These included Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific Telesis, Southwestern Bell and US West. There were also some independent companies, like GTE and SNET (Connecticut). But, by 2007, the companies had all merged to what we have today.)

See the map of the "Baby Bells" territories in the front of the book.

By the 1990's, the 'Era of Say Anything' was in full swing with grandiose plans. In 1993, Pacific Bell, California, said it would spend \$16 billion by 2000 and have 5.5 million homes wired with fiber optics. Bell Atlantic claimed it would spend \$11 billion on 8.75 million homes by 2000, while Ameritech stated it would have 6 million customers by 2000 as well. Some states, like New Jersey, would have 100% of Verizon New Jersey's territory completed by 2010 with 45 Mbps services in both directions, while SNET, (Connecticut) said it would spend \$4.5 billion and have 100% completed by 2007. Ohio Bell, (now AT&T Ohio) claimed that 100% of schools and libraries would be upgraded to fiber by 2000.

And all of this was fiber optics and it would deliver 45 Mbps in both directions, starting around 1993.

In 1996, Telecommunications Act was passed and these old legacy wires (as well as any upgrades) were all opened to direct competition for all services — Internet, broadband, phone and even cable TV. It became apparent before the Telecom Act that these companies controlled 'the last mile' or 'first 100 feet', and that created a bottleneck to offer the customers new services, such as broadband for Internet, as well as cable TV and local and long distance service.

The Bell incumbent phone companies that controlled the wires weren't opening the networks as a 'favor'; The Telecom Act allowed them to enter all of these other markets, especially long distance service, which was offered, prior to the Telecom Act, by AT&T, MCI and Sprint, among others.

Around the same time, some new thing called the "Internet" and "World Wide Web" had exploded onto the scene. And it was the small, independent Internet Service Providers, "ISPs" that brought America online. All of this was in its infancy and it required hand-holding customers to get their 'dial-up' Internet services to work. It was not the Bell companies, the incumbent phone companies that drove this new industry; it was the tech entrepreneurs who made this work.

By 2001, there were 9,500 small, independent ISPs that handled over 50% of all Internet customers.

At the same time, AT&T and MCI became the two largest competitors to the local phone companies, with over 15 million local and long distance customers.

And finally, starting in 1996, the Bell companies started to marry their siblings, which we would argue was an act against nature and customers, as larger proved to be worse, not better.

The Rise and Fall of Competition in America.

Briefly, with the advent of Michael Powell becoming the FCC Chairman in 2001, (who is currently the CEO of the NCTA, (the National Cable Telecommunications Association)), Powell began working with the phone and cable providers to have the FCC erase the Telecom Act laws and obligations on the incumbents that allowed the competitors to use the customer-funded wires to deliver competing services. In a series of decisions, by 2005, AT&T and MCI were put up for sale and bought by what are now-at&t (small letters) and Verizon. And these actions killed off 7000 small ISPs in just a few years.

Ironically, today when we hear the term "ISP", most people think of the incumbent phone and cable companies — and 'the most hated companies in America', according to the ACSI surveys. And more interesting is the fact that many of the 'net heads' are too young to remember a time when there was freedom of Internet choice.

So, what we now call Net Neutrality was caused, then, by this blatant act of the government (FCC) to protect the monopoly providers who controlled the wires and returned us to the last mile bottleneck.

Competition guarantees that if a customer's service is blocked or degraded, the customer can simply go to another provider.

The Net Neutrality rules showed up after the companies were able to 'vertically integrate', i.e. have their services as the only choice for broadband for Internet, cable TV and phone services (as part of the bundle).

Of course, the impacts aren't simply choice of services; competition is supposed to lower prices, and everyone reading this knows that something is broken and must be fixed.

How did this happen?

"Kushnick's Law"

"A regulated company will always renege on promises to provide public benefits tomorrow in exchange for regulatory and financial benefits today."

The Book of Broken Promises supplies all of the gory details of the promises, and the broken promises, from 1992 through 2014, from the bait-and-switch — promise them fiber optics but give them DSL over copper, to the 'say anything' merger condition commitments, without any regard to what has to be delivered or deployed, or the creation of made up statistics and manipulated data used to make public policies.

Here's the road-map for our ride on the Info highway, and our discussion of what should happen next.

And get ready for the surprise ending.

The Book of Broken Promises Is Divided into 10 Parts.

Part I Broadband Scandal, 1991-2004 — Here is a blow by blow of what was promised by most of the phone companies and what actually was deployed — which was virtually nothing. We also delve into the changes in regulations that were able to charge you for network upgrades that mostly didn't happen.

Part II Acts Against Nature: The Bells Married Their Siblings — The new "at&t" was formed by the mergers of the Southwestern Bell, (SBC), Pacific Telesis, SNET, Ameritech, AT&T and BellSouth, while the creation of Verizon was the mergers of Bell Atlantic, NYNEX, GTE and MCI. As you will read, the mergers that made the current AT&T and Verizon essentially gamed the regulatory system, failed to fulfill basic commitments, and killed off all fiber-based broadband projects that had started in every state they controlled — AT&T alone, now controls 22 states.

Part III The Awakenings: 1996-2005 — In 1996, Congress passed the Telecommunications Act which allowed thousands of ISPs and Competitive Local Exchange Companies, "CLEC", the use of the wires to your home and office. But, with the help the FCC and former chairman Michael Powell, the now-AT&T and Verizon got the government (the FCC) to kill off the competitors.

Part IV Alternative Paths Leading to the Same Conclusion — After the 1984 break up of the original Ma Bell, the new AT&T (1984-2005) took over the original long distance and equipment markets, and by the end of the 1990's was the largest local-long distance competitor. This abruptly ended by 2005, when SBC was able to get the FCC to close down competition, which put AT&T out of the local service market, and then SBC bought AT&T and renamed itself — "at&t" (small letters). We also track the rise of municipalities that wanted to offer broadband connectivity and services because the incumbents failed to show up. We also cover the passage of 'Barriers to Entry' legislation in state legislatures, where AT&T and Verizon, along with the cable companies, did their best to block or even outlaw muni-builds. And finally, we look at what made Centurylink, the third big telco provider, and its past as Qwest (US West), including the questionable business practices and its ties to Enron.

Part V Deception is the Phone Companies' Strongest Trait — From fake consumer groups, biased research from coin-operated think tanks, lots of lobbyists, campaign financed and paid-off politicians, and co-opted non profits, especially minority, disabled and senior groups, we take you behind the broadband curtain; we expose the skunkworks and groups like the American Legislative Exchange Council (ALEC) where model legislation is designed by AT&T, Verizon and the cable companies to remove regulation and obligations or use the government to harm you. And here is an inside, front row seat to the regulatory capture of the FCC, including the FCC's Consumer Advisory Committee. We also focus on the statewide cable franchise attack, where AT&T and Verizon wanted to get state-wide franchises to offer cable service, but without obligations to actually do any of the work.

Part VI Mob Bell: The Takeover: 2010-2014 — Merger after merger, that were based on one broken promise after the other, after 2010, Verizon and AT&T announced

they had completed their build out of America and was now going to shut off the copper in areas that they didn't want to serve. At the same time, the FCC created a National Broadband Plan, but with the capture of the FCC, by the end of the process, the new plan was simply a new way to raise rates and taxes, with the recipients being the phone companies. And part of this was the ability to present corrupted or miss-directed sound bytes on every important data point, from misrepresenting the number of lines in service, or 'wireless only' customers. But it is the new campaigns to erase all laws and obligations on the state and federal level that will give them more power to control the wires.

Part VII Overcharging America in the Name of Broadband — How did the companies rack up over \$400 billion charged to America's communications users and how did the companies get us to pay over and over for schools and libraries? And what harms were caused by the lack high speed broadband to our economic growth and the jobs that growth would have provided, as well as the education of our children?

We also expose the Time Warner and Comcast "Social Contract", a real agreement with the FCC to wire the schools and charge customers for the privilege — over \$61 billion may have been charged, with \$53 billion being extra costs to customers.

NEW DATA: But, the real kicker is the newly uncovered financial hanky-panky on the state level, where customers not only got charged again for broadband, but it appears that the wireless companies and all of the companies' affiliates, have been able to create a shell game to help these other lines of business at the expense of the utility networks and customers.

We also cover the special access networks, the 'secret' networks and the FCC's erasure of basic financial data since 2007.

Part VIII Case Study of One State: New Jersey — A Broadband Failure — Verizon New Jersey is a complete model of how the companies gamed the regulatory

system over and over. By 2010, 100% of Verizon NJ was supposed to be able to offer 45 Mbps services (in both directions) starting in 1996, and it was going to be first 'full-fibered' high-speed state. And this would include the schools. By 2004, nothing had happened and then Verizon announced FiOS, but this time as part of a "system-wide" cable franchise, which only requires the company to complete the build-out to 70 out of the 526 municipalities. In 2012 the law was 'resurrected' as it was still law, and two

small towns forced and were wired in 2013. However, in 2014, there is still a legal challenge as Verizon and the State have attempted to finally erase the commitments. By 2013, Verizon had collected about \$15 billion in excess phone charge and tax perks, customers had rate increases of over 400%, few schools were wired under this plan — and it exposes the state regulators total failure to monitor the company for decades.

Part IX Net Neutrality Is Not The Issue — With over a million electronic comments filed at the FCC¹¹ in the Open Internet proceeding as of this writing, it is now clear that Net Neutrality (NN) has captured the attention of the tech savvy, activists, and the FCC. But, what is not clear to most is that Net Neutrality is simply a feign — it covers over the underlying problems of communications in America. NN doesn't have anything to do with getting America upgraded or more importantly, stopping the "No Lane"— the end game if AT&T, Verizon, Comcast and Time Warner continue on their path.

Part X Aunt Ethel's Revenge: Break Up AT&T and Verizon... Again. — And we end with a surprise. During the writing of this book, we uncovered 'Title Shopping', were the company makes different claims for the same service to game the state and federal regulatory system — and all at your expense.

LEGAL AUTHORITY TO CONSTRUCT FIBER TO THE PREMISES

Verizon New York Inc. ("Verizon"), as a common carrier under Title II of the Communications Act of 1934 (the "Act"), constructed its *Fiber To The Premises* (FTTP) network as an upgrade to its existing telecommunications network.

Example? While Verizon sued the FCC to stop the Net Neutrality Order, claiming it would harm investment, truth be told, Verizon's entire FiOS Fiber-to-the-Premises networks are already Title II in state cable franchise agreements, directly contradicting the companies' years of filings, comments at the FCC and even with the courts.

And don't worry; all of this jargon will be explained.

With new data and uncovering Title Shopping, we outline a series of next steps America should take, as all of the current scenarios of the next three-five years points to a decline in broadband speed, higher prices, no competition, and more erosion of our rights, while the companies erase their obligations and oversight.

First, the FCC needs to acknowledge and deal with the fact that FiOS's fiber networks are already "Title II" and thus there is no need to reclassify.

Second it is time to return competition to all levels which would lower prices, bring in choices for all services, and solve Net Neutrality; if one provider harms your service, you can choose some other company.

Third, based on the financial ties of the companies' affiliates, such as the online, broadband, cable or wireless companies services with the incumbent phone company, it is time to finally start the process of separating the affiliates from the wires and let them pay what other competitor pay and compete for your business.

Fourth, customers have been the major funder of broadband in America, and it is time to move the current networks to an open access, fiber optic, broadband utility network where the customer has choices for their broadband provider and their choice of phone, cable TV, and ISP services — and where everyone gets served.

We're also calling for audits and investigations as America needs to know exactly happened, state by state, to all of the money collected and what was actually built, and how did the companies engage in a massive shell game of the financials to charge customers for the companies' other 'affiliate' businesses.

Fifth, the cable companies need to be investigated about the "Social Contract', returned to the regulation of cable TV prices to customers, as well as have the content separated from the wires and open the customer-funded networks to direct competition.

Bottom Line — Returning to real competition and removing the 'bottleneck'— i.e., the companies ability to control all services over the wires they control, fixes most of the Net Neutrality issues, lower prices and gives the customer choice of who supplies their broadband, Internet, cable TV, phone and wireless services that are delivered over these wires.

Coda:

I hope you enjoy the book. I've attempted to make it readable, but more importantly, it's factual. I let the phone companies' own words, filings, state and federal actions tell the story.

Also, this book started as the sequel to the popular "\$200 Billion Broadband Scandal", published in 2005, and is the third in the trilogy, which started with "The Unauthorized Bio of the Baby Bells & Info-Scandal", published in 1999. It has morphed over the last two years because of new data and findings, but also because we could hear the roar of the Net Neutralites at the FCC's gates.

How did I end up writing this book? In 1992, I was a senior telecom analyst working for all of the major phone companies for over a decade. And in that year I had few epiphanies that changed me.

First, my colleagues and I were working on cutting edge interactive information services and there were a number of us working on projects related to the roll out of the information superhighway. And we knew that the numbers being presented for the costs to build these networks were essentially made up — under-estimating the costs by thousands of dollars per line so that the new laws to make the companies more money would go through without a hitch. But most didn't want to 'bite the hand that fed them'. Can't blame them.

Second, I had done a report on the incumbent phone companies' lines of business and realized that they would always control the networks because they controlled the price and access to the networks, including what would become the 'special access' networks.

And third, I went to my Aunt Ethel's apartment. She was a legally blind, 87 year old lady who used a walker and was living on a small pension and Social Security. And after she gave me a shoe box of phone bills, I realized that my clients had overcharged her thousands of dollars. She paid over \$1000 for the rotary phone rental (she had two), and another charge cost her \$360.00 for something she didn't order. I ended up ripping the phones off the wall and replacing them myself.

A former 'flapper' who could make a truck driver blush when she was annoyed, after I told her what had happened, shaking her cane in the air she said, "Go get those bastards".

That was 22 years ago. I then started New Networks Institute in 1992 and called for the break up of AT&T... and the other phone and cable companies, otherwise known as 'Divestiture II', as I realized that there was no scenario that these companies would allow competition or lower prices or actually build out the networks as they claimed.

Before we start our journey, I'd have to thank the gang that helped get this book written and out, as well as the independent editors, experts, pundits, auditors and lawyers I work with. First, David Rosen and I have been writing about this stuff for years and he's helped push me through and supported the efforts, with or without margaritas and chips. Dr. Henry Karlin, my long time friend and lyricist extraordinaire, helped me gain my poetic license and added nuance to my prose. Chuck Sherwood, the King of Scoop It, forced me to add more chapters in areas I didn't know well and threw people at me that I needed to know, while Arn Kush, the yin to my yang, made sure I ate my vegetables and had a roof over my head, and was joined by Ms. Lorraine, editor par excellence. And it was Jerry Michalski, my consultant for life, who made sure my psyche was intact, regardless of the location or the plane of existence. I also must never forget my debt to my 10th grade English teacher, Jean Brincko, forcing me to raise my prose above simple cliches. Tom Allibone didn't have anything to do with the book, except we are tied at the hip on all things telecom. And, of course, I need to thank our counsel and friend, Carl Mayer, who has attempted to reign us in when we start talking a foreign language, telecomm-eeze. Also, the gang — Dana Spiegel, Fred Goldstein, Joly MacFie, Art Brodsky, Earl Comstock, Scott McCollough, Dr. Ron Suarez, Joe Plotkin, John Randall, Ken Levy and Alex Goldman all helped in ripping my ideas apart, then gluing them back together with their own expertise, making this a better work than I could have created alone. I add to this my long time 'twisted-pair' former partner and friend, Mark Plakias; we shaped an industry through our ping pong discussions. And more recently, a special thanks to David Bergmann for helping to shape the path with Gerry Norlander of PULP, and both demanded "no adjectives".

Sadly, I must thank and remember my good friend, Eric Lee, who passed away during the closing of the book. He was my tour guide for the last decade through the mysteries of DC, the Bell jar, and who dragged into every conceivable nook and cranny of the corridors of power at FCC and Congress.

Finally, I must acknowledge my sub-conscious, who I don't know very well, but was like that voice you see in the movies of the Devil and the Angel on both shoulders, screaming — *What would Aunt Ethel say?* I believe she'd approve and the fragments of the psyche, pulling me to stop or start, are now at peace.

Endnotes

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