CATO HANDBOOK FOR CONGRESS

Policy Recommendations for the 108th Congress

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41. Telecommunications and Broadband Policy

Congress should

- end regulatory asymmetry by placing all carriers on an equal legal footing and comprehensively deregulate all carriers to accomplish this goal,
- end the open-access crusade at the FCC,
- reform and devolve universal service subsidies and the ''E-Rate'' program,
- enact comprehensive spectrum reform and privatization,
- end the failed HDTV transition and reallocate that spectrum for other uses,
- end arbitrary regulatory ''public interest standard'' decision-making, and
- clean up the telecom industry tax mess.

The American telecommunications sector went into freefall in 2002. Telecom stocks tanked as once-proud industry giants and smaller carriers alike were financially decimated. Numerous providers were forced to declare bankruptcy. And the reverberations were felt well beyond the boundaries of the telecom sector as upstream and downstream industries took a hit as well.

There are many obvious business reasons for this market meltdown. Excessive debt loads, overcapacity, lack of consumer demand, and even accounting scandals have all contributed to the current downturn. But public policy has had an equally important impact on this sector. While markets and technologies have evolved rapidly, the communications policy landscape remains encumbered with outdated rules and regulations.

This is largely due to the fact that when Congress last attempted to address these matters seven years ago by implementing the Telecommuni-

cations Act of 1996, legislators intentionally avoided providing clear deregulatory objectives to the Federal Communications Commission and instead delegated broad and remarkably ambiguous authority to the agency. That left the most important deregulatory decisions to the FCC and, not surprisingly, the agency did a very poor job of following through with a serious liberalization agenda.

The Failed Promise and Premise of the Telecom Act

The Telecom Act's most serious flaw was its backward-looking focus on correcting the market problems of a bygone era. Instead of thoroughly cleaning out the regulatory deadwood of the past, legislators and regulators decided to instead rework archaic legal paradigms and policies that were outmoded decades ago. It kept in place increasingly unnatural legal distinctions, such as the artificial separation of local and long-distance wireline telephone services even though these two services can be bundled and sold as one service as they are by wireless cellular providers.

The Telecom Act did not address the underlying regulatory asymmetry that governs formerly distinct industry sectors. That is, regulators have traditionally grouped providers into categories such as common carriers, cable services, wireless, and mass media and broadcasting. But the increasing reality of technological convergence means these formerly distinct industry sectors and companies are now integrating and searching for ways to offer consumers a bundled set of communications services under a single brand name. Increasingly, providers are referring to themselves as information services providers, broadband providers, or network services providers. Yet the Telecom Act endorsed the paradigms of the past and allowed increasingly interchangeable services to be regulated under different legal standards.

The first step Congress must take to begin seriously reforming communications policy is to end this asymmetry, not by ''regulating up'' to put everyone on an equal footing, but rather by ''deregulating down.'' Placing everyone on the same *deregulated* level playing field should be at the heart of telecommunications policy to ensure nondiscriminatory regulatory treatment of competing providers and technologies by all levels of government.

Two controversial bills were proposed in the 107th Congress to clarify the law in this regard. One bill, the Internet Freedom and Broadband Deployment Act of 2001 (H.R. 1542), was sponsored by House Committee on Energy and Commerce chairman Billy Tauzin (R-La.) and ranking

member John Dingell, (D-Mich.). The hotly debated Tauzin-Dingell bill would allow incumbent local telephone exchange carriers, or ''Baby Bells,'' to provide customers with broadband services the same way cable and satellite companies are currently allowed to, largely free of the infrastructure-sharing mandates. On February 27, 2002, after months of acrimonious debate, the House of Representatives finally passed a watered-down version of the bill and passed it along to the mostly unsympathetic Senate Commerce Committee, chaired by longtime Baby Bell critic Ernest Hollings (D-S.C.). Hollings and a number of his colleagues denounced the Tauzin-Dingell bill and vowed to kill the measure or to go further and introduce legislation to actually impose new regulations on telecom and broadband markets.

Despite the generally hostile reception that the Tauzin-Dingell measure received in the Senate, a second measure, S. 2430, the Broadband Regulatory Parity Act of 2002, was introduced by Sens. John Breaux (D-La.) and Don Nickles (R-Okla.); that measure would require the FCC to ensure regulatory parity among the various providers of broadband services. The Breaux-Nickles bill would achieve this parity not by ''regulating up'' but by ''deregulating down.'' The bill states that ''all providers of broadband service, and all providers of broadband access services, are subject to the same regulatory requirements, or no regulatory requirements'' and requires that those provisions be ''implemented without increasing the regulatory requirements applicable to any provider of broadband services.'' Through those provisions, the bill establishes a simple legal standard to help level the playing field in the broadband marketplace. Both of these bills provide a refreshing break from the past and represent the simplest path to communications policy symmetry.

The Open-Access Crisis

The second serious problem with the Telecom Act was its fundamentally flawed premise that competition could be micromanaged into existence through ''open-access'' mandates. The act included provisions that required incumbent local telephone companies to share elements of their networks with rivals at a regulated rate. The theory behind these interconnection and unbundling rules was that smaller carriers needed a chance to get their feet wet in this market before they could invest in facilities of their own to serve consumers. To encourage entry by smaller carriers, Congress delegated broad and undefined authority to the FCC to create rules that would allow independent carriers to lease capacity from incum-

bent network owners at a regulated (and very low) price so that the new rivals could resell that capacity to customers and still earn a profit.

The danger inherent in this scheme should have been apparent from the start: If regulators went to the extreme and set the regulated rate for leased capacity too low, then new rivals would come to rely on infrastructure sharing as their core business model and avoid making the facilities-based investments necessary for true competition to develop. That is essentially what happened in the wake of the Telecom Act's passage as the FCC overzealously implemented the act's network-sharing provisions. This encouraged new entrants to engage in a crude form of regulatory arbitrage as they pushed for regulators to constantly suppress the regulated price of access to existing telephone networks. Meanwhile, they largely ignored investment in new networks of their own through which legitimate competition could have developed.

Despite the consistent and tireless efforts of federal and state regulators to prop up this regulatory house of cards, this system essentially collapsed under its own weight in 2001. Regulators pushed the rules as far as they possibly could until it became painfully obvious that industry investment was being seriously discouraged. Moreover, litigation by incumbents tied the hands of regulators somewhat. More important, markets and investors came to realize that business models that are heavily dependent on a forced-access regulatory regime are not sustainable in the long run. Consequently, the stocks of pure resale carriers tanked and most were forced to declare bankruptcy. Carriers that had made some facilities-based infrastructure investments fared better.

What this experience suggests is that genuine head-to-head, facilities-based competition will not develop so long as regulators are proposing technology sharing or network sharing as the cure-all for America's communications woes. While the authors of the Telecom Act generally believed that open-access rules were to be transitional in character and were to be narrowly applied during the transition period, those sentiments were not explicitly written into law. As a result, the FCC, which was eager to produce numerical results to satisfy its competition mandate, decided to sacrifice long-term industry innovation and investment for increased short-term entry by resellers. The danger now is that this regulatory system will be extended to other industry sectors (such as cable networks) or applied to emerging technologies (such as broadband Internet access).

Although infrastructure sharing continues to have great appeal for regulators, it is hardly the path to true telecommunications freedom or competi-

tion. In fact, it is really just communications socialism: collective control of the underlying means of production. Worse yet, forced access demands the continuation of a regime of price controls within the communications sector since someone must set the interconnection or lease price and that someone will end up being regulatory officials.

If forced access has a future in the communications industry, then true industry competition, innovation, and investment do not. Congress must abandon the use of this insidious industrial policy technique by making sure it is not applied to emerging technologies and then taking steps to sunset forced-access provisions that cover the provision of local telephone service.

Ending Universal Service Entitlements

Universal service subsidies are relics of a bygone age that continue to distort market pricing and competitive entry. The system has been riddled with inefficient cross-subsidies, artificially inflated prices, geographic rate averaging, and hidden phone bill charges for average Americans. While some reform efforts have been entertained in recent years, they have been quite limited and mostly cosmetic in nature.

To make matters worse, section 254 of the Telecommunications Act mandated that the FCC take steps to expand the future definition of universal service. It did not take the agency long to follow up on this request. In May 1997 the agency created the ''E-Rate'' program (known among its critics as the ''Gore tax'' since it was heavily promoted by then–vice president Al Gore), which unilaterally established a new government bureaucracy to help wire schools and libraries to the Internet. The FCC then dictated that the American people would pick up the $2.25 billion per year tab for the program by imposing a hidden tax on everyone's phone bills.

Although the constitutionality of the E-Rate program was questioned initially, the program withstood court challenges and early legislative reform efforts. Consequently, the E-Rate threatens to become yet another entrenched Washington entitlement program and further set back needed reform efforts.

In addition, a new crop of federal spending initiatives is now creeping up that covers telecommunications services, the Internet, and the high-technology sector in general. Although not a formally unified effort, the combined effect of federal legislative activity on this front is tantamount to the creation of what might be called a ''Digital New Deal.'' That is,

just as policymakers proposed a litany of ''New Deal'' programs and spending initiatives during the Depression, lawmakers are today devising myriad new federal programs aimed at solving the many supposed emergencies or disasters that will befall industry or consumers without government assistance. The recent troubles of the dot-com and telecommunications sectors have only added fuel to the fire of interventionism.

These new communications-, cyberspace-, and Internet-related spending initiatives that policymakers are considering, or have already implemented, can basically be grouped into four general categories: (1) broadband deployment; (2) digital education, civic participation, and cultural initiatives; (3) cyber security; and (4) research and development. Dozens of new federal programs were proposed in these areas during the 107th Congress. And dozens of other promotional programs already exist.

The dangers of the rising cyber pork should be obvious. Washington subsidy and entitlement programs typically have a never-ending lifespan and often open the door to increased federal regulatory intervention. Political meddling of this variety could also displace private-sector investment efforts or result in technological favoritism by favoring or promoting one set of technologies or providers over another. Moreover, subsidy programs aren't really necessary in an environment characterized by proliferating consumer choices but uncertain market demand for new services. Finally, and most profound, perhaps the leading argument against the creation of a Digital New Deal is that, by inviting the feds to act as a market facilitator, the industry runs the risk of becoming more politicized over time.

Congress should abolish the current system of federal entitlements and devolve to the states responsibility for any subsidy programs that are deemed necessary in the future. A federal telecommunications welfare state is not justified. If schools desire specific technologies or communications connections, they can petition their state or local leaders for funding the same way they would for textbooks or chalkboards: through an accountable, on-budget state appropriation. There is nothing unique or special about communications or computing technologies that justifies a federal entitlement program paid for through hidden telephone taxes while other tools of learning are paid for through state and local budgets.

Spectrum Reform and Privatization

The Telecommunications Act largely ignored the wireless sector and spectrum reform in general. That was a highly unfortunate oversight by Congress, given the ongoing problems associated with centralized

bureaucratic management of the electromagnetic spectrum. For more than seven decades, the FCC has treated the spectrum as a socialized public resource and the results have been predictable: gross misallocation, delayed innovation, and the creation of artificial scarcity.

In recent years, however, the FCC has gradually come to accept the logic of a free market in spectrum allocation and management. The shift to the use of auctions in the early 1990s was a major step forward in this regard. Previously, all spectrum allocations had been made through comparative hearings or random lotteries. While not all new spectrum allocations are made through auctions, many are, meaning that those who value the resource most highly are now obtaining the spectrum.

Moreover, the FCC has recently signaled its interest in allowing spectrum license holders greater flexibility in use to ensure that this valuable resource can be put to its most efficient use. While the agency has not yet followed through on this reform, recent FCC Spectrum Policy Task Force meetings and initiatives suggest that the agency is at least moving in the right direction.

But auctions and flexible use, while important steps, are not enough. The task of spectrum reform will only be complete once policymakers grant property rights in spectrum. Just as America has a full-fledged private property rights regime for real estate, so too should wireless spectrum properties be accorded the full protection of the law. As long as federal regulators parcel out spectrum under a licensing system, the process will be a politicized mess. The alternative—a pure free market for the ownership, control, and trade of spectrum properties—should be a top priority.

To begin this task, Congress should grant incumbent spectrum holders a property right in their existing or future allocation. This means spectrum holders would no longer lease their allocation from the federal government but instead would own it outright and be able to use it (or sell it) as they saw fit. This also means that all arbitrary federal regulatory oversight of the spectrum would end, including content or speech controls on broadcasters. Federal regulators would be responsible only for dealing with technical trespass (interference) violations and disputes that arose between holders of adjoining spectrum.

For all potential uses of scarce spectrum to which there are competing claims, auctions should be used to allocate the spectrum. Firms would file plans of their bidding proposals with the FCC and then post bonds proving they had enough capital to bid credibly for the given allocation. The commission also could establish competitive bidding rules (as it did

in previous auctions) to ensure that bidding collusion did not take place. These auctions would not be one-time events; they would be ongoing as spectrum claims developed and multiplied.

Policymakers should not rig these auctions in any way, either to favor certain demographic groups or to artificially boost the amount of money raised for the federal Treasury by such auctions. The primary goal of spectrum auctions is to allocate spectrum to its most highly valued use by offering it up for competitive bidding, not to funnel money into the federal coffers.

Under this new system, spectrum owners—better thought of as ''band managers'' for the bands of spectrum they will own and manage—would henceforth have complete freedom to use, sublease, combine, or sell spectrum in any way they saw fit.

Government agencies and public-sector users should purchase the spectrum they need at ongoing auctions. It should be noted that government agencies already control a significant portion of the spectrum, so under this scheme, they would be granted rights to their existing holdings. Congress or state governments should ensure that public-sector spectrum users have money in their budgets for ongoing spectrum acquisition.

Finally, as Table 41.1 shows, regarding spectrum ''commons'' areas—or portions of the electromagnetic spectrum that are less scarce and can be shared by many users without assigning specific rights—the government has three options. (1) It can directly allocate certain bands of spectrum for commons use, much as it purchases large portions of land for public parks, and then open those areas to common use. (2) At the opposite end of the spectrum, so to speak, government could simply rely on private band managers to contract with independent users to create commons areas within their allocation. Practically speaking, however, it might be very difficult for commons areas to develop under this model, given the need for coordination across many bands. The transaction costs would be enormous. (3) A final compromise between these two extremes would be for public officials to designate certain ceilings and floors above and below which certain noninterfering uses of the spectrum would be tolerated. In spectrum parlance, these ceilings and floors are known as ''overlay'' and ''underlay'' rights or areas. This is a quite practical solution, as such ''easements'' already exist today in some bands of the spectrum.

While all three of these options represent practical and legitimate solutions to the need for ongoing spectrum commons areas, one option that should be taken off the table is the adoption of a pure commons regime

Table 41.1
Property Rights vs. a Spectrum Commons: What Are the Options?

	Requires Ongoing Regulatory Oversight	Requires Little Continuing Oversight
Emphasis on Importance of Property Rights	**Ceilings and Floors—Easements Model**: Use auctions and property rights for mutually exclusive uses but impose federal ceiling-floor requirements ("easements") above or below which band managers have no control. So long as they do not meaningfully interfere, allow unlimited overlay or underlay across all private bands. Possible historical models: airline traffic above private property or subsoil mineral or oil drilling rights.	**Pure Property Rights Model**: Grant incumbent spectrum holders property rights in their allocations. Use auctions and property rights for new mutually exclusive uses of spectrum. Grant spectrum owners the absolute right of excludability and flexible use. Rely on private band managers to subdivide and sublease portions of their band to common uses.
Emphasis on Importance of Commons	**Public Parks Model**: Most of spectrum fully privatized but feds (perhaps states and localities or even private associations) purchase large swaths of spectrum and open it up for free use to create a spectrum commons. Or the FCC could just generously expand "Part 15" rules for unlicensed spectrum.	**Pure Commons-Homesteading Model**: No exclusive property rights. Let overlay and underlay users tap into spectrum as they wish and fight about the interference later in the courts or have faith that new devices ("agile radio," or software-defined radios) will allow everyone to work things out voluntarily.

for the spectrum. Some spectrum engineers and academics—infatuated with the exciting technologies emerging today that enable reuse and efficient sharing of the spectrum—have called for adoption of a pure spectrum commons model to govern ongoing spectrum allocations. Those theorists believe that new technologies such as software-defined radios and smart antennas can allow users to infinitely divide the spectrum and shatter the notion of spectrum scarcity in the process.

But that is a stretch. There will almost certainly be some scarcity at work within the spectrum, just as there is for all natural resources. If nothing else, the limits of the human imagination create scarcities within the spectrum. More practically, commons areas are likely to encourage overuse and congestion, which will force many parties to search out privately managed bands where they could pay a premium for uninterrupted use. And the commons crowd does not have a useful transitional solution to the issue of spectrum incumbency. Existing users, many of which have controlled a specific swath of spectrum for several decades, would not take lightly the idea of sharing their allocation with newcomers. And a good case can be made that they should not be forced to share that spectrum, given their long-standing control and use of the resource. It would be better to grandfather them into a property rights model by granting them complete ownership and flexible use rights to that spectrum.

Under the property rights regime envisioned above, the FCC would get out of the spectrum management business altogether. Residual regulatory functions, such as the adjudication of interference disputes or international coordination, could be left to some sort of ''spectrum court,'' which would be a set of administrative law judges with particular expertise in resolving technical spectrum disputes.

Ending the HDTV Fiasco

America's 15-year high-definition television (HDTV) industrial policy experiment has been a failure. When industry and government officials began debating what the next generation of television signals would look like in the mid-1980s, prettier pictures and better sound appeared to be just around the corner. But the rollout of digital television (DTV) has stagnated, and many skeptics are wondering if the entire experiment should not be abandoned so that the spectrum allocated for over-the-air (OTA) digital television can be used for other important uses.

One reason for the sluggish pace of change in this sector can be traced back to the scandalous manner in which broadcasters received the spectrum over which digital television transition is supposed to take place. Each broadcaster in America already has a six megahertz (MHz) spectrum allocation that is used to provide consumers old-fashioned analog TV signals. But broadcasters argued that they would need the government to give them an additional 6 MHz of high-quality spectrum to simulcast digital signals alongside analog broadcasts until Americans made the complete transition to DTV sets. Moreover, the broadcasters didn't want

to pay for this spectrum, which was quite valuable ''beach front quality'' spectrum. Amazingly, as part of the Telecom Act of 1996, they convinced policymakers to do exactly that—''loan'' them an additional 6 MHz allocation free of charge even though many other spectrum users were salivating at the prospect of bidding billions to obtain that same spectrum for other uses. Broadcasters would continue to transmit analog signals on their old 6-MHz analog slice of spectrum until 2006, *or until 85 percent of Americans had made the migration to digital television*, and then return the old spectrum to the FCC for auction. Estimates of the value of the new digital spectrum given to the broadcasters to make the transition to DTV ran between $10 billion and $100 billion. The logic behind this giveaway was that local OTA broadcasting remained an important public service that should be continued in the digital age regardless of the cost of doing so.

The problem is, the opportunity costs associated with this giveaway are very high and get higher with each passing year. While Americans wait for the rollout of DTV to occur, countless other service providers are being denied the opportunity to use that same spectrum for alternative uses that the public might actually demand. Nonetheless, policymakers, egged on by the broadcast lobby, continue to go to great lengths to try to make the transition work. For example, in August 2002 the FCC mandated that television set manufacturers include digital tuners in all their new sets by 2006 to help speed the transition even though the tuners will add more than $200 to the cost of each new television. Likewise, Capitol Hill policymakers were rumored to be considering legislation mandating that cable companies carry all local digital TV broadcast signals on their systems without compensation. Cable firms are already strapped with analog ''must carry'' rules that eat up capacity and offer them no compensation in return. Under the so-called dual must carry rules now under consideration, cable operators would be forced to dedicate even more of their capacity to the retransmission of OTA broadcast signals, meaning less room for other cable channels or even Internet access.

These mandates are essentially an attempt to transfer responsibility for the failed transition to other parties. But until the broadcasters make more of their programming available in high definition, such mandates aren't really going to help anything. And, regrettably, very little is being shown in HDTV by broadcasters today and, consequently, only a very small percentage of American households has felt compelled to make the digital transition in their homes. So there is little to no chance that 85 percent

of American households will have made the DTV transition by 2006, meaning that broadcasters will not be able to return their old analog spectrum for auction on time.

So, what can Congress do now? Policymakers should consider taking back the valuable digital spectrum they lent to broadcasters and selling it to other companies that could put it to better use. Alternatively, Congress could just let the broadcasters sell it off themselves and then split the proceeds with the government. These aren't perfect solutions, but they are certainly better than continuing with the current failed industrial policy. The goal now should be to open this squandered broadcast spectrum to other uses as quickly as possible.

It should be noted that the end of this industry policy is not the end of HDTV altogether. Today, well over 80 percent of Americans opt to receive their television programming via satellite or cable systems, meaning broadcast stations have become just another set of channels in the universe of choices for consumers. The vast majority of this subscription-based programming is delivered digitally, and an increasing portion of it is high definition in nature. When consumers demand more HDTV services, they will be able to receive them through satellite and cable carriers. And many broadcasters will air a certain portion of their programming in HDTV or sell it to cable and satellite carriers to retransmit. HDTV can naturally evolve and become a viable option for many households, but it will be on a timetable determined by consumers, not bureaucrats or legislators.

The "Public Interest Standard" Charade

The HDTV fiasco is a fine example of a Washington industrial policy undertaken in the name of serving the ''public interest.'' The history of communications and technology regulation is littered with countless other examples of such ''public interest'' crusades. Although it has spawned innumerable policy directives and spending initiatives over the past seven decades, this amorphous concept has managed to elude definition. Much as they ''know'' pornography, omniscient members of Congress and their brethren at the FCC always seem to know the ''public interest'' when they see it. But since the public interest is whatever they say it is, it's a splendidly convenient (if not a tad bit circular) concept by which to regulate one of the biggest sectors of the U.S. economy.

But what truly is ''in the public interest''? It is whatever the public says it is. How is that determined? By the interaction of millions of diverse interests and actors in a free marketplace. Asking the FCC to define the

public interest for the communications sector is akin to asking a hypothetical Federal Automobile Commission to define what types of cars consumers will demand next year and then determining which firms should be able to supply them and on what terms. Just as the forces of supply and demand are spontaneously calibrated by a free market in cars, computers, corn, or coffee, the public interest in communications can be discovered by the voluntary interaction of companies and consumers in a free market. The FCC's public interest standard should be abandoned immediately.

Cleaning Up the Telecom Industry Tax Mess

Finally, regulation is not the only thing holding back America's increasingly competitive communications and broadband sector. Burdensome and unique tax rules also remain a serious threat. That is largely due to the fact that policymakers at the state and local levels have long treated this sector as a cash cow from which they could draw substantial sums. They justified such heavy levies by arguing that the industry was a natural monopoly. But the telecommunications industry is no longer being treated as a regulated monopoly, so policymakers should stop taxing it as though it were. That is, as competition comes to communications in America, tax policies based on the regulated monopoly model of the past must be comprehensively reformed.

Some of these taxes are federal in nature and can be addressed by Congress or the FCC. A good example is the federal 3 percent excise tax on telecommunications put in place during the Spanish-American War of 1898. This anachronistic tax should be repealed immediately. And the hidden taxes associated with the E-Rate or ''Gore Tax'' program should also be repealed or at least devolved to a lower level of government for administration.

Regrettably, however, the more problematic tax policy issues arise from burdensome state and local mandates. For example, many states impose discriminatory ad valorem taxes on interstate communications services by taxing telecommunications business property at rates higher than other property, driving up costs for consumers. Federal protections against such taxes—already in effect for railroads, airlines, and trucking—should be extended to telecommunications. Many governments impose multiple and extremely high taxes on communications services. Such taxes should be slashed to a single tax per state and locality, and filing and auditing procedures should be radically streamlined. Finally, taxes and tolls on Internet access should be permanently banned since those charges represent

a burdensome levy on the free flow of information and the construction of new interstate broadband networks.

Suggested Readings

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