



# How Title II Harms Consumers and Innovators

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## Key Points

- The Federal Communications Commission's (FCC) 2015 Open Internet Order follows years of advocacy to implement net neutrality rules, which appears to contravene Congress' intention that the internet be free of regulation and the people's will for a free market for broadband.
- The application of the Title II regulatory framework to the internet has harmed consumers and innovators.
- While proponents claim they want competition in the broadband market, the objective of Title II is to create a system of government-owned broadband networks under FCC control and to significantly reduce, if not eliminate, private-sector provision.

A long-running tech policy debate is whether the internet should be shaped by the preferences of regulators and special interests or allowed to evolve through free-market forces driven by consumers and innovators. A seemingly innocuous concept, net neutrality is not officially defined or codified in the US, but its supporters claim that the Federal Communications Commission (FCC) needs to adopt internet regulation to support it. For example, proponents declare, "Net neutrality is the basic principle that protects our free speech on the Internet. 'Title II' of the Communications Act is what provides the legal foundation for net neutrality."<sup>1</sup> In fact, it is the First Amendment of the US Constitution that protects free speech, and the terms "net neutrality," "blocking," "throttling," and "prioritization" are nowhere to be found in the aforementioned Title II.

In 2015 the FCC adopted the Open Internet Order, prohibiting specific internet traffic management techniques, including blocking, throttling, and paid prioritization, and mandating a general "internet

conduct" standard.<sup>2</sup> To promulgate the ruling, the FCC invoked Title II of the Communications Act of 1934 (subsequently updated by the 1996 Telecommunications Act),<sup>3</sup> which requires telecommunications providers to be treated as common carriers. To justify such regulatory expansion, the FCC pronounced that the internet is nothing more than an extension of the circuit-switched telephone network.<sup>4</sup>

The 2015 order marked a stunning reversal of long-standing bipartisan policy in a divisive 3–2 vote. Almost immediately, the order was challenged by nine lawsuits from small and large cable, wireless, and telecom providers, as well as from Daniel Berninger, the coinventor of Voice over Internet Protocol (VoIP), as the order effectively banned his online application of high-definition voice behind a platform.<sup>5</sup> The DC Circuit upheld the order in court, but petitioners continue to appeal.<sup>6</sup> In April 2017, the new FCC Chairman Ajit Pai launched a Notice of Proposed Rulemaking to reverse the order.<sup>7</sup>

Such back-and-forth on classification is counterproductive and suggests that the language from the 1996 Telecommunications Act is not clear for some and that Congress should clarify whether the FCC has the authority to regulate the internet. Section 230 of the Telecommunications Act notes that it is the policy of the United States “to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation.”<sup>8</sup> Incidentally, the vast majority of countries with net neutrality rules have promulgated them through legislation because existing communications laws did not stipulate the appropriate authority within the telecom regulator, and litigation would otherwise ensue.<sup>9</sup>

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The 2015 Open Internet rules and the imposition of Title II are problematic for several reasons,<sup>10</sup> but put plainly, common carrier obligations are meant for natural monopolies—markets in which only one firm provides a good or service. That is not the case for broadband in the US. It would be customary for an economic regulator such as the FCC to assess first whether there was an abuse of market power and to report on it accordingly before applying regulation symmetrically across the nation’s 4,459 broadband providers,<sup>11</sup> but the FCC did not do this.

Even though wireless and wireline technologies have historically been regulated with different statutes, they received the same force of the FCC’s regulation. This might suggest that the technologies are substitutable, but the FCC dismissed that as well.<sup>12</sup> Moreover, the FCC did not investigate whether there was systematic abuse or consumer harm but merely suggested four potential issues: one that it resolved without rules, another that was resolved mutually by the parties’ engineers, and two that did not amount to violations.<sup>13</sup> Indeed the FCC notes only one formal complaint made since 2010. (The second time the FCC tried to institute regulations

on net neutrality, rules were codified but later struck down.)<sup>14</sup> Nor did the commission perform a regulatory impact assessment or cost-benefit analysis, which is de rigueur for major shifts in regulation.

Advocates assert that Title II is necessary because the broadband market is not competitive,<sup>15</sup> but as this paper demonstrates, Title II’s objective is not to create a competitive market—that is, a market in which multiple firms compete with different broadband technologies. The objective of Title II advocates is to create a government monopoly of broadband provision with a single technology, *specifically municipally owned networks offering the uniform technology of fiber to the premises (FTTX)*. Title II is essential because it authorizes the FCC to regulate the day-to-day activities of broadband networks similar to Ma Bell, thereby empowering regulators to realize advocates’ utopian constructs of a “neutral network,” “open network,” or “free culture commons,”<sup>16</sup> as if there is no bias to government-provisioned broadband.

When deconstructed, the Open Internet Order and Title II reveal the means and methods to reduce the profitability of privately owned network assets. They do this through controls on prices and data traffic and the intention to levy taxes and fees on top of existing broadband subscriptions to create funding for government-owned networks, ideally using universal service provisions. The Open Internet rules against blocking and throttling, although seemingly consumer-centric, are powerful price controls and legal tools to compel broadband providers to deliver traffic regardless of the marginal cost to networks and frequently at zero price.<sup>17</sup> Moreover, the catchall internet conduct standard can be used to limit any attempt by a broadband provider to offer a new product or service that does not pass muster by advocates’ “open” standards, however they define them—for example, the undue scrutiny of free or zero-rated offers.<sup>18</sup>

Such regulation dampens broadband providers’ ability to compete, innovate, and deploy new infrastructure<sup>19</sup> and endeavors to create a “dumb pipe” commoditization of broadband—that is, networks that provide pure transmission without intelligence. This is helped by Title II advocates’ proposition that financial institutions be created, which would change the incentive structure for

municipal broadband investment such that private provision becomes less attractive.

This paper shows that a free market, or the free exchange between broadband providers and their customers, as well as third-party content and service providers, has been systematically disintermediated by the FCC through Open Internet regulation. Title II hurts consumers by denying them freedom of choice and forcing them to pay for content, data, and features they do not necessarily recognize or value. This paper describes how the market is shaped by regulators' preference to focus on speed, rather than to allow consumers to select and contract for their preferred features such as flexible pricing, quality, service, safety, and durability.

This paper further describes from a historical context how innovators have been harmed by the FCC banning technologies and regulating startups. The FCC thus emerges as a textbook example of the abuse of the administrative state,<sup>20</sup> in which regulators push and exceed the bounds of their delegated authority to realize “social” and “progressive” outcomes that may be inapposite to the will of the people.

## Why Title II Is Problematic

The following section deconstructs the political assumptions of regulation and the goals of Title II.

**Limited or Perpetual Regulation?** *The Telecom Regulations Handbook*,<sup>21</sup> a publication from the International Telecommunications Union in collaboration with InfoDev and the World Bank, describes the need for regulation and its ideal evolution.<sup>22</sup> Taking the genesis of telecommunications as the national telephony company, the handbook describes how telecom regulation should support the market's evolution through a linear process from public monopoly (the first stage) to full competition (the fourth and final stage).

In the second or private monopoly stage, the regulator provides oversight to ensure the operator fulfills its obligations. In the third or partial competition stage, regulators monitor the market for anticompetitive practices, provide licensing frameworks, and ensure universal service. Finally, in the full competition stage, regulation is greatly decreased, if not removed, as the market transitions

to ex post competition law. The regulatory objective is thus to end ex ante sector-specific regulation. The handbook's authors observe, “No matter how capable and well-intentioned regulators are, they will never be able to produce outcomes as efficient as a well-functioning market.”<sup>23</sup>

The academic literature describes the value of deregulation and regulatory modernization and why competition brings about superior outcomes for consumers and innovation. Briefly put, competition is preferable because it offers lower prices, higher efficiency and output, easier market entry and exit, and reduced regulatory capture.<sup>24</sup> For example, the partial deregulation of the airline industry with the sunset of the Civil Aeronautics Board and its outdated regulation is associated with a 45 percent decline in consumer airline ticket prices from 1978 to 2008, a major increase in productivity, and the emergence of low-cost carriers.<sup>25</sup>

However, the Open Internet regulation has no conception of realizing a competitive market and removing ex ante regulation. Instead, the notion is for the regulation to exist in perpetuity with the telecom authority at the helm.<sup>26</sup> Some regulatory advocates have described the 2015 incarnation of Title II as “modern” and “narrowly-tailored,”<sup>27</sup> as the FCC imposed Title II and then forbore, or declined to enforce, 30 statutory provisions and some 700 associated rules. It would seem that if the agency needed to “dump the morass of Title II on the Internet,” as Democratic FCC Chairman Bill Kennard described in the late 1990s,<sup>28</sup> just to establish a few bright-line rules, then the legal instrument is not fit for purpose.

Once Title II is invoked, the agency can exercise other provisions of the statute at some point in the future, if not today. It appears that this open door prompted leading Title II advocate Susan Crawford to assure that FCC Chairman Tom Wheeler was not “proposing to ‘regulate the Internet’” but only asserting the “solid legal authority over the physical wires, tubes and towers.”<sup>29</sup> It stands to reason why the agency would need such authority if it does not want to regulate the internet.

To further downplay the issue, another Title II advocate claimed that internet providers are not part of the internet. Gigi Sohn, former special counsel to Chairman Wheeler, observes, “the rules do not ‘regulate the Internet.’ As powerful as these companies

are, they are not ‘the Internet’—they provide access to the Internet.”<sup>30</sup> Sohn’s statement is patently false because end users are part of the internet, as they have a device, router, or other equipment. In fact, it is inaccurate even to say that internet service providers (ISPs) provide “access,” as they too are part and parcel of the internet.<sup>31</sup> So by definition, broadband providers are part of the internet, which the US Code defines as the “international computer switched network of both Federal and non-Federal interoperable packet switched data networks.”<sup>32</sup>

To understand what Title II will do to the internet in the future, one can review what it did to the telephone network in the past. Title II perpetuated a government-sanctioned AT&T “Ma Bell” monopoly so egregious that it required antitrust action to dissolve. Because of the industrial regulation stipulated by Title II in 1934, AT&T was able to generate excess profits on its equipment sales with its subsidiary Western Electric. Title II rate-of-return regulation allowed AT&T to earn revenue on top of its “padded” rate base.

It took the Department of Justice eight years to prosecute the company and settle a consent decree and then a few more years to divest Ma Bell of its operating companies.<sup>33</sup> Not only did consumers suffer for decades in the Ma Bell era from a lack of competition in the markets for devices and long-distance service, but innovators also suffered from being unable to attach devices to the network and experiment with telecommunications technologies.

The Ma Bell monopoly’s unintended consequences illustrate one of the key observations of Nobel Prize-winning economist George Stigler, who asserted that regulation exists not to protect consumers, but to protect industry.<sup>34</sup> He observed that regulation is created by industry and operated for its benefit. In the same way that AT&T worked with the government to create the Kingsbury Commitment in 1913 under the guise of “universal service,”<sup>35</sup> thereby cementing the AT&T monopoly subsequently perpetuated by Title II, powerful internet companies such as Netflix and Amazon collude with regulatory actors today to win a “free and open” internet under net neutrality rules, which is an artificial subsidy for the delivery of their services. A free market would allow the negotiation for the price and delivery of such services, naturally subject to antitrust enforcement.

Streaming video services such as Netflix, YouTube, and Amazon Video can account for two-thirds of all internet traffic,<sup>36</sup> but under net neutrality, they are not obligated to pay the marginal cost of their traffic in broadband networks. The entire network cost is thus passed on to consumers, regardless of whether they access those particular services. This means under mandated flat-rate or so-called “neutral” pricing, consumers unwittingly pay for content they might never see and capacity they never use.

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**Title II: National Broadband Utopia.** It is understandable why Title II is attractive to regulatory advocates. Title II empowers the FCC with a multitude of provisions, including the ability to set prices, impose traffic management standards, unbundle network elements, censor content, levy universal service fees, and tax subscriptions. It defines the markets in which telecommunications providers can and cannot engage.

“Title II is only a beginning,”<sup>37</sup> declared Susan Crawford. The “beginning” presumably means ensuring the legal foundation to begin eliminating private cable, telephone, and media companies and replacing them with “neutral” and “open” networks and media provided by the government. Free Press founder Robert McChesney declared, “At the moment, the battle over network neutrality is not to completely eliminate the telephone and cable companies. We are not at that point yet. But the ultimate goal is to get rid of the media capitalists in the phone and cable companies and to divest them from control.”<sup>38</sup> While such a scheme sounds extreme, it can also be observed that there is no need to eliminate such companies if they can be so highly regulated that they are de facto government owned.

The classical definition of competition suggests a contest between two or more actors for superiority of scarce resources. For example, the technological development of digital subscriber line (DSL) and cable networks in the US led to a fierce conquest



for the broadband market. This resulted in greater distribution of broadband technologies compared to the European Union, where more than two-thirds of fixed-line broadband is delivered by DSL from partially government-owned networks.<sup>39</sup>

For Crawford, “competition” is not created by the market but the government. She desires that the government create the underlying broadband platform and then lease access to broadband providers. However, she does not acknowledge the competition for the provision of the underlying platform and the contest for scarce resources, which the government can take by fiat, if not force.

Crawford has long called for the imposition of Title II and celebrates the subsequent DC Circuit decision that “legally sanctioned the FCC to make rules about the internet. It’s now possible that the FCC will follow up by unleashing a regulatory structure to enforce the ideal that telecommunications transport should create opportunity for everyone, at a reasonable price. . . . But it’s only a beginning, and stopping here would be a mistake.” She describes her vision in *Wired*:

Now that the courts have given the FCC authority to regulate internet access, it’s time to exercise that authority. The optimal U.S. approach: put in place city-owned (and, ultimately, federally-regulated) conduits that reach all houses and businesses, or at least get very close to them, and fill them with city-owned dark fiber. (Even insisting on “dark air,” or conduits with lots of space running everywhere, will help a lot.) Require dark fiber assets to be shared with competitors at reasonable prices. Require new construction, apartment buildings, and business buildings to have neutral points in their basements where any network operator can connect to this dark fiber. Then we’ll see competition and unlimited choice.<sup>40</sup>

Crawford also advocates for creating two new federal institutions to oversee an influx of money to municipalities.<sup>41</sup> This is Crawford’s idea of a level playing field, which sounds utopian on the surface, but its problems include risk, cost, governance, and accountability.

For one, the project is neither neutral nor risk-free. Crawford states that people should stop

investing in satellite and wireless technologies because fiber is the “only” supportable option.<sup>42</sup> She says that FTTX is the only way to deliver broadband and that it is even “future-proof.”<sup>43</sup> Just like any investment portfolio, diversification in technologies is the key to managing risk. To be sure, finding a winning technology is great, but a nation should want competition and experimentation in different kinds of broadband networks, not just for efficiency of delivering broadband to people with different needs and in different places, but for continuous improvement in broadband through technological competition.

Interestingly, some 800 million Chinese 4G/LTE smartphone users see the future of internet differently than Crawford does.<sup>44</sup> Many are mobile-first and mobile-only internet users. China makes a range of internet platforms and applications that already rival those used in the US.<sup>45</sup> This is not to say that there are no FTTX deployments in China (there are), but the Chinese do not appear to assert the primacy of any one broadband technology.

Cost is a significant barrier to realizing Crawford’s vision. Roughly 95 percent of the cost for fiber to the home is upfront in digging the trenches for conduits.<sup>46</sup> The return on investment varies widely depending on the location and population density. For example, the cost of deployment can vary from \$100,000 per home in rural Alaska to perhaps \$1,000 in an urban area. The provider must also expend for marketing, customer acquisition, and general operating costs. Before the network even earns a profit, the provider needs to recover these costs through upfront fees and monthly subscriptions (which can take years), which must be competitive with existing sources of broadband, which are separate privately owned infrastructures that also compete for customers and innovate to improve. A recent and definitive study of 88 municipal broadband facilities in the US concluded that the average time needed to pay back a project is 318 years.<sup>47</sup> Given that digging to lay fiber is the largest cost, municipalities could examine how to lower the costs for private or government providers.<sup>48</sup>

As broadband investment is a multiyear proposition, the shift to Title II is a marked change that contradicts investors’ expectations and assumptions for private-sector competition. One reason investment has continued is that private

providers consistently challenge the legality of Open Internet regulation in court. It is in this way that private providers protect shareholder value. Otherwise the shareholders themselves would likely sue the regulators for taking private property without compensation. Interestingly, when the National Broadband Network (NBN) was launched in Australia, the government compensated private providers for their losses. Indeed, nearly a quarter of the original budget for the NBN constituted compensation paid to copper incumbent Telstra and cable network operator Optus for revenues foregone from the premature decommissioning of fixed-line infrastructure made obsolete by the nationwide fiber network.<sup>49</sup>

## How Title II Harms Consumers

Title II deprives consumers of a free market for broadband by disintermediating consumers' ability to contract for broadband guided by their preferences. Instead consumers are forced by regulators to buy broadband by the metric of speed, a less important input for user experience.<sup>50</sup>

**Denying a Free Market for Broadband.** In "Antitrust over Net Neutrality: Why We Should Take Competition in Broadband Seriously," Federal Trade Commission Acting Chairman Maureen Ohlhausen makes a compelling case for the free market.<sup>51</sup> She recalls key Supreme Court decisions that affirm the importance of the free market and suggest why economic principles apply to broadband just as they do to other sectors of the economy. She discusses *Standard Oil Company of California v. Federal Trade Commission*, which affirmed that the "heart of our national economic policy has been faith in the value of competition,"<sup>52</sup> and *National Society of Professional Engineers v. United States*, which upheld that "price is the central nervous system of the economy. . . . The assumption that competition is the best method of allocating resources in a free market recognizes that all elements of a bargain—quality, service, safety, and durability—and not just the immediate cost, are favorably affected by the free opportunity to select among alternative offers."<sup>53</sup> Ohlhausen argues that the requirement to treat and value all data equally violates consumer

sovereignty and individual choice and prohibits consumers from revealing their preferences.

Net neutrality policy asserts that homogenous transmission delivers homogenous fidelity of applications. Nothing could be further from the truth. The total quality of a user experience is related to a number of factors, including a few significant ones that are outside the network operator's control—namely, the terminal device and the application's configuration both by the user and the application's publisher.<sup>54</sup>

At a minimum, price, quality, service, safety, and durability are a few of the many possible elements that a consumer could optimize to improve experience, but the FCC wrongly regulates broadband by focusing on speed. Indeed, the FCC and advocates mislead consumers by communicating that speed is the appropriate metric to measure broadband. In fact, speed may be the least important metric when it comes to a quality user experience.<sup>55</sup>

The FCC's Open Internet rules deter consumers from pursuing the arrangement that could help them improve their broadband experience. For example, broadband providers are willing to offer free or sponsored broadband access at reduced cost; the Wheeler FCC challenged consumers' freedom to try such options by scrutinizing the offers and threatening providers.<sup>56</sup> Quality guarantees could be enabled through prioritization and service-level agreements if such contracting were not banned by the Open Internet rules.<sup>57</sup> Safety is an increasingly important area that requires new internet architecture and more active blocking of malicious data; that too can violate Open Internet principles.<sup>58</sup>

**Regulatory Elites, Not Consumers, Define Broadband.** The focus on speed, while less important to a given application, is important for regulatory advocates to create a narrative that a government-owned FTTX network is the preferred objective. This is coupled with an abuse of international speed tests to create the appearance that the US is somehow falling behind because it has not embraced the progressive vision of a centrally planned broadband network.<sup>59</sup>

Just before the FCC adopted the 2015 Open Internet Order, Chairman Wheeler twice raised the required broadband threshold in just two months.<sup>60</sup> The US defines broadband speed as

25 megabits per second (Mbps) when most of the world's countries define it at 256 kbit per second,<sup>61</sup> less than 1 Mbps. Ostensibly, decisions to change technical definitions would be deliberated by engineers, but the FCC's haste suggests that it wanted a political cover to impose common carrier rules without taking the necessary steps to conduct the market and engineering analysis.

The FCC's focus on speed is problematic because it prevents consumers from improving their user experience by consuming broadband based on a range of parameters (price, quality, service, safety, durability, and so forth). Imagine consumers could define their preferences for broadband the way they can for Uber. They might request different levels of quality given the type of application they use (currently banned by rules that prohibit throttling and paid prioritization); they could request to share the connection's cost with the content provider (Open Internet rules protect the online advertising industry from competition from broadband providers<sup>62</sup>); or they would consume more broadband that was bundled and prepaid with devices (currently deployed in Tesla's cars, which are shipped with a sim card that zero-rates the music-streaming services Slacker and Spotify). This kind of bundling makes a lot of sense for the use of connected devices, but it does not register on the regulatory radar screen, which is calibrated to measure just one metric.

**Denying Consumers Freedom of Choice.** In addition to being denied the ability to define the parameters of broadband, customers have been denied their freedom of choice for broadband offers through the Title II regime. For example, the FCC has heavily scrutinized free and sponsored options for different kinds of content and services. Fortunately the investigation into these programs has been closed as no harm was found. When the FCC closed the investigations, FCC Chairman Ajit Pai explained:

These free-data plans have proven to be popular among consumers, particularly low-income Americans, and have enhanced competition in the wireless marketplace. Going forward, the Federal Communications Commission will not focus on denying Americans free data. Instead, we will concentrate on expanding broadband

deployment and encouraging innovative service offerings.<sup>63</sup>

In any case, the EU's European Commission competition authorities issued the definitive report on free data and zero rating, some 200 pages, showing that the practice is not harmful to competition.<sup>64</sup> The report calls on the empirical and scholarly work of several AEI contributors.

One distressing feature of the current regime is that consumers are forced to value all content equally through regulatory preferences for speed tiers and flat-rate pricing. Aside from the inefficiency this creates for consumers, this is a particular affront to those with moral and religious objections to pornographic, violent, and other offensive material. For instance, adult material is estimated to comprise some 10–12 percent of the internet.<sup>65</sup>

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Another unintended consequence of Title II is that it forces users to subsidize sloppily designed advertising, which devours data.<sup>66</sup> Users have little knowledge of how much of their internet connection is devoted to advertising versus the actual content they want to consume. In the case of mobile, online advertising can consume up to 50 percent of a subscription,<sup>67</sup> and some reports put the number as high as 80 percent.<sup>68</sup> Users are effectively forced to subsidize the delivery of advertising to their mobile devices, which is indistinguishable from the actual content the user wants. It is not surprising that the popularity of ad blocking has grown.

The ad-blocking market is large and growing, as consumers use these tools as a form of digital self-defense.<sup>69</sup> The sheer volume of ads and their poor design create disturbances in network traffic flows, congesting networks and forcing traffic management that would not be needed had ads been designed better.

While blocking unwanted content at the end user's device is one method, it is not ideal. The actual recommended practice of implementing

fine-tuned firewalls and network access lists is to block at network boundaries,<sup>70</sup> as close to the content source as possible.<sup>71</sup> Such configuration saves network capacity used by data that will ultimately be discarded at the user device, so data users are not forced to pay for data they do not use. In wireless networks, saving capacity also saves scarce spectrum for the customers' actual desired use. The resulting efficient use of network capacity makes for a better user experience.

Traffic-flow disturbances can also be security events (such as denial-of-service attacks). Thus, network refusal of misbehaving traffic is most effective close to the source as well. Clearly the most effective data-refusal solutions are implemented at the network level. This is why users appreciate that ISPs block spam, malware, viruses, and other offending data at the network level, even though net neutrality demands that ISPs not block traffic.

Not only are some ads irrelevant and unwanted to users, but a number may be infiltrated with "malvertising," the malicious practice of embedding malware in legitimate advertising (or even running parallel to legitimate advertising<sup>72</sup>), which can infect users' systems without users even clicking on the ads. Such fraudulent and flawed advertising is responsible for \$8.5 billion in lost advertising revenues annually.<sup>73</sup>

## How Title II Harms Innovators

A number of Silicon Valley companies claim that they need Title II to flourish and that without such regulation they would never have come into being.<sup>74</sup> Yet for the vast majority of the internet's life, these rules did not exist. Simply put, while there may be political valence for these views, there is little to no empirical evidence for them.

However, there are powerful and potent reasons to use Title II advocacy as a marketing vehicle to win public sympathy and create "regulate my rival" policy. For example, large internet companies (whose market capitalization is greater than that of most countries) and a range of startups they fund exploit the popular romance that they are but fledgling garage enterprises needing regulatory protection.<sup>75</sup>

**Title II Blocks Innovative Internet Technologies.** The FCC offers no examples of real-world startups

that could not get off the ground because of an ISP violating net neutrality. But the robust development of the internet ecosystem in the years before the Open Internet Order provides a self-evident demonstration for why new rules are not needed.

A plaintiff in the Supreme Court challenge to the Open Internet Order illustrates the collateral damage Title II causes to innovators' startup ambitions. Daniel Berninger is part of the team that commercialized VoIP as a technology in the 1990s, created the business model, recruited the CEO for VoIP pioneer Vonage, and cofounded the VON Coalition and ITXC. Berninger's nonprofit Voice Communication Exchange Committee champions high-definition voice and works to speed the internet protocol (IP) transition.

The first commercial deployment of VoIP in 1995 led to the founding of dozens of VoIP providers responsible for collapsing the cost of a telephone call by 90 percent or even zero. To the FCC, however, the successful internet substitute was something to be regulated like the rotary phone invented in 1891. Berninger and other VoIP innovators secured the Pulver Order in 2004 after a 10-year struggle<sup>76</sup> to keep regulators at bay, but that has not stopped the FCC's foray into regulating other startups, including Berninger's most recent, HelloDigital, which seeks to voice enable the ubiquitous process of posting comments on the web. Berninger sued the FCC because the ban on paid prioritization not only keeps his app from working but also makes it illegal. Berninger explains:

As an entrepreneur, Title II hurts in two places. My efforts to pursue a business model, and how the potential funders view people like myself. Title II wipes out both. My new service is putting voice behind websites. It looks a bit like a conferencing service. Currently Title II says telcos have to pay 20 per cent from the top line to the Government to pay for Universal Broadband. Well, that's game over. I have no company there. Also, no funder wants anything to deal with a heavily regulated industry. There's no investment in infrastructure innovation. In the areas I work in, there's no investment at all. Title II reclassification dried up investment funding. Say I have \$1m and I want to invest it somewhere. I need to assess [*sic*] my prospects for success. This will be a



function of the rules I'm facing. If the FCC is in there, then I have no idea what the rules are and it's game over.<sup>77</sup>

Berninger's petition was denied in district court, but Senior Justice Stephen Williams' dissent paves the way for a Supreme Court challenge. The judge notes:

The ultimate irony of the Commission's unreasoned patchwork is that, refusing to inquire into competitive conditions, it shunts broadband service into the legal track suited for natural monopolies. Because that track provides little economic space, for new firms seeking market entry or relatively small firms seeking expansion through innovations in business models or in technology, the Commission's decision has a decent chance of bringing about the conditions under which some (but by no means all) of its actions could be grounded—the prevalence of incurable monopoly. . . . This obvious point explains why Berninger is a petitioner here.<sup>78</sup>

The ban on paid prioritization essentially abridges users' ability to speak on Berninger's platform. His case includes claims on both the First Amendment and the Chevron Doctrine,<sup>79</sup> a process for judicial review to see whether an agency's response to statute is based on a "permissible" interpretation. That agencies have been overzealous in their interpretations and make rules that exceed their authority are key criticisms of the administrative state.<sup>80</sup>

Berninger notes that high-definition voice should be the standard today, but voice quality has remained at 1934 levels because the FCC's Title II rules prohibit network providers from retiring old copper networks in favor of IP and fiber. The upgrade also prevents a step function in energy efficiency, as billions of dollars in electricity is required to sustain the obsolete circuit-switch network.<sup>81</sup>

**Title II Throttles Startups.** Another startup called SendHub, which offers enterprise short message service (SMS), was contacted by the FCC, deemed a common carrier, and ordered to file time-consuming reports to the FCC and state regulatory commissions.<sup>82</sup> Since Title II was enacted, the annual workload of compliance paperwork that must be filed to the FCC is estimated to be \$800 million annually.<sup>83</sup> Fortunately

this has been targeted for reduction under Chairman Pai's tenure.<sup>84</sup>

The imposition of Title II in the US has emboldened some foreign telecom regulators to apply net-neutrality-like provisions to US internet companies, particularly WhatsApp, what they consider a substitute for SMS.<sup>85</sup> Platform neutrality is the rage among a number of telecom regulators, notably Sébastien Soriano, the head of France's telecom regulator and the current head of the Body of European Regulators for Electronic Communications, who has a plan to regulate US internet giants with net-neutrality-type rules.<sup>86</sup>

## The FCC's History of Blocking Innovation

A century ago in the US, hundreds of radio stations flourished without regulation, and a makeshift secondary market emerged to enable the transfer of rights for spectrum and equipment. Governance was provided by an ad hoc ruling of the Department of Commerce. Leading telecom economist and spectrum expert Thomas Hazlett describes this, along with the history of the FCC and its regulation of communications, in his tour de force, *The Political Spectrum*.<sup>87</sup>

Congress then passed the Radio Act of 1927, based on the 19th-century Interstate Commerce Commission. Calling broadcasting a privilege, not a right, it decided that radio spectrum would be awarded based on the "public interest" and an administrative process. The Federal Radio Commission (the forerunner of the FCC) was set up with seven commissioners to decide how to allocate spectrum, and one of the first activities was to liquidate one-fourth of all radio stations in the name of the public interest.<sup>88</sup>

While the superiority of market-based auctions is well-recognized today, it took decades to unhook the FCC's power over radio spectrum, and significant barriers remain. In 1943, the Supreme Court decided in *NBC Inc. v. United States* that there is not enough spectrum for everyone, noting a natural limit of radio stations that can operate without interference.<sup>89</sup> Hazlett describes the primitive techniques the FCC used to allocate spectrum and continues to some extent. The "hidden hands" of the FCC formed a cozy relationship among industry, regulators, and government, ensuring that TV and radio content conformed to the government's expectations.<sup>90</sup>

The deterrence of innovation extends beyond radio spectrum to wireline technologies, and Hazlett offers a witty but blistering account of the government forces that systematically blocked the deployment of cable as it threatened incumbents in over-the-air television. Hazlett observes a pattern of regulatory capture and market liberalization in the history of the FCC:

Here lurks a template for creation of communication policy. Government identified a problem and take measures to address it. The market failure is misdiagnosed and the regulatory “fix” reflects political bargaining with powerful industry incumbents. Barriers to entry are created. “Public interest” is asserted. When the purported solution is finally abandoned, more robust market forces assert themselves. The government proudly claims its policy was a success. The cycle repeats.<sup>91</sup>

To be sure, it is welcome news that the FCC just announced a plan to ease the application process of new devices,<sup>92</sup> but it demonstrates that the FCC and its rules are the bottleneck to innovation, not the broadband providers it maligns.

*The Political Spectrum* offers an eerie parallel to today’s Title II debate and an important history lesson. The internet’s unprecedented success arose following the laissez faire approach of the Telecommunications Act in 1996. Today, however, Title II advocates eschew that policy and declare that the internet must be heavily regulated to be open and free. Similar to the Federal Radio Act of 1927, which allowed regulators to decide who gets to use the airwaves and under what conditions, Title II now empowers the FCC to decide how the internet is priced and managed and who gets to offer it.

## Conclusion

Court challenges continue against the FCC’s Open Internet rules and the imposition of Title II. Should

petitions prevail, the FCC’s attempt to apply Title II could be pronounced unlawful, and the FCC will have little left to regulate, as copper infrastructure is being retired and communications are becoming entirely digital. If in fact Title II advocates believe that Open Internet rules are necessary and that there is a groundswell of support for net neutrality, their actions would be best directed to Congress to update the Communications Act.<sup>93</sup>

Meanwhile, the new FCC Chairman Ajit Pai has launched an effort to restore internet freedom, by returning to the proven, bipartisan framework that governed the internet from 1996 to 2015.<sup>94</sup> The Federal Trade Commission is ready, willing, and able to prosecute any violations that impede competition or harm consumers.<sup>95</sup> This is not to say that the prior framework is itself a utopia, and it is certainly not a perfect free market, as significant regulatory barriers still exist, but it is empirically preferable to the Title II regime.

Going forward, consumers and innovators should be emboldened to direct the development of the broadband market to reflect their preferences. A free market for broadband would mean that consumers’ preferences would be served across a range of factors. Moreover, new technologies to deploy broadband infrastructure and deliver broadband service should emerge.

For the industries it regulates, the FCC has little to no checks and balances on its power. It is the legislator, adjudicator, and judge of its own rules. That the FCC is sued by so many parties—industry, vendors, employees, advocates, and others<sup>96</sup>—suggests that the agency aggressively pushes the boundaries of its authority. With the 2015 Open Internet Order and the imposition of Title II, the FCC arrogantly asserted jurisdiction over the internet, one-sixth of the American economy, and eviscerated its discipline through the free market and its governance by the American people through Congress. That should be cause for alarm for anyone concerned about the lawful exercise of the US Constitution.

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