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Liberating our Digital Future: How the 1996 Telecommunications Act Definitions are Hobbling Change

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LIBERATING OUR DIGITAL FUTURE: HOW THE 1996 TELECOMMUNICATIONS ACT DEFINITIONS ARE HOBBLING CHANGE

Senator Steve Kelley†

I. INTRODUCTION ................................................................. 2137
II. GOALS OF THE TELECOMMUNICATIONS ACT OF 1996 ...... 2139
III. DEFINING THE PROBLEM ................................................. 2140
   A. Telecommunications Services .................................. 2140
   B. Cable Services ...................................................... 2142
   C. Information Services ........................................... 2143
IV. HISTORY BY DEFINITION ............................................. 2147
V. JUDICIAL CONFLICTS IN STATUTORY INTERPRETATION ...... 2152
VI. STATE IMPLEMENTATION ISSUES .................................... 2158
VII. CONCLUSION .................................................................. 2161

I. INTRODUCTION

In 1995, Nicholas Negroponte, founding Director of the Media Lab at the Massachusetts Institute of Technology, wrote Being Digital, a compilation of his thoughts on the transition from a world of atoms to a world of bits. He took for granted the lesser transition from analog representation and transmission of information to its digital representation and transmission. He wrote, "[t]he information superhighway is about the global movement of weightless bits at the speed of light." According to Negroponte, the transformation was inevitable: "The change from atoms to bits is irrevocable and unstoppable."²

Nonetheless, when Congress finally enacted the long-awaited reform of our nation's telecommunications law in 1996, it was

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2. Id. at 4.
caught trying to hold back the tide. Even though the Telecommunications Act of 1996 (hereinafter “the Act”) was hailed as the regulatory reform needed for the digital age, the Act failed to embody fully Negroponte’s assertion that “bits are bits.” The Act’s definitions contain technological and marketplace anachronisms inconsistent with the direction of the telecommunications industry then and now. For example, one of the marketplace consequences of the transition to being digital is the integration of multiple services such as telephone, cable, mobile wireless, Internet access, and long distance. Formerly, these services were offered principally through separate providers for each service; in the future they will be provided as a cluster of integrated services offered by each provider, hopefully in competition with the integrated offerings of one or more other providers. Congress was imperfect in their recognition of our digital and integrated future and this is revealed in those flawed definitions. The flaws create internal conceptual problems, interpretive difficulties for the Federal Communications Commission (hereinafter “FCC”) and the courts, policy-making problems for states, and implementation challenges at multiple levels of government and industry.

While Congress should have foreseen the direction of technological and marketplace change, the focus now should be on what Congress can do to better position the United States for a future in which integrated telecommunications service providers compete with each other to deliver a wide range of digital services to customers.

Local and long distance telephone companies, wireless companies, cable operators and Internet service providers (hereinafter “ISPs”), as well as other types of providers who may come on the scene, should all be defined as telecommunications services providers to the extent they constitute physical links in the transmission or transport of information. While it may be necessary to recognize some of the legacy definitions during a transition to a new, integrated regulatory system, Congress must point the way to an integrated digital future. Congress must also clearly differentiate the provision of content from the provision of transport. The assertion that all telecommunications service providers, including ISPs, should be regulated uniformly is not an assertion that the degree of regulation should be the same as in the past. It will not be possible

3. Id. at 9.
for Congress to accomplish two goals of the Act; more competition, and non-discrimination among telecommunications technologies; unless it changes the definitions to reflect the technological and marketplace integration that continues to occur.

Though the Act's relatively recent passage might deter Congress from revisiting telecommunications reform, Congress ought to act promptly to fix the problems that have arisen from its failure to see how thoroughly our world is being transformed by the "irrevocable and unstoppable" transition to being digital.

II. GOALS OF THE TELECOMMUNICATIONS ACT OF 1996

The Act was intended to "provide for a pro-competitive, deregulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition ...." Congress wanted more competition in telecommunications in order to speed up provision of advanced technologies and impart other benefits. Congress believed that telephone company competition with cable companies in the cable television business would enable consumers to benefit from lower rates, better quality service, improved maintenance and a larger diversity of new information services. Congress also anticipated that cable companies would provide facilities based competition to incumbent telephone companies.

To achieve a competitive marketplace, Congress also had to prevent discrimination among competing providers. The House committee discussed section 243(e), which prohibits a local government from imposing a franchise fee or its equivalent for access to public rights-of-way in any manner that discriminates among providers of telecommunications services. The committee stated:

The purpose of this provision is to create a level playing field for the development of competitive telecommunications networks. Harmonizing the assessment of fees from all providers is one means of creating this parity. It is not

6. Id.
7. Id.
8. Id. at 77, 1996 U.S.C.C.A.N. at 43.
the intent of the Committee to deny local governments their authority to impose franchise fees, but rather simply to require such fees be imposed in a non-discriminatory manner.\textsuperscript{10}

The Congressional goal of preventing discrimination in the new markets appears throughout the Act. The Senate’s section 254(b), which became part of the Act, “preserves a State’s authority to impose, on a competitively neutral basis, requirements to advance universal service and other public goals.”\textsuperscript{11} Inter-connection requirements were intended “to promote non-discriminatory access to telecommunications networks” for users and vendors.\textsuperscript{12}

Congress also expanded the FCC’s authority to regulate the rates at which telecommunications companies obtained rights to attach to utility poles. Section 224(f)(1) mandates that a utility provide a cable system “telecommunications carrier with non-discriminatory access to any pole, duct, conduit or right-of-way owned or controlled by it.”\textsuperscript{13} Competition and non-discrimination were inextricably linked in the Act.

## III. DEFINING THE PROBLEM

In the Act, Congress subdivided the business of moving bits into three broad categories of defined services: telecommunications services, cable services and information services. Other definition divisions do exist, including “wire communication,” radio communication and “open video system.” However, the focus of this discussion will be the three broad divisions laid out in the Act.

### A. Telecommunications Services

At least in common use, “telecommunications services” is potentially the broadest of the three definitions. Indeed, in some places in the Act, the term “telecommunications” is used to encompass cable\textsuperscript{14} and information services.\textsuperscript{15} “[T]elecommunication services means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available

\textsuperscript{10} Id.


\textsuperscript{12} Id. at 135, 1996 U.S.C.C.A.N. at 147.


\textsuperscript{14} Id. § 522(6)(A) & (B).

\textsuperscript{15} Id. § 153(20).
directly to the public, regardless of the facilities used.”

"[T]elecommunications’ means the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.” It is worthwhile to consider the application of these two definitions to a common transaction.

No one questions that Congress intended the term “telecommunications” to apply to telephones. It does so in a relatively straightforward way. The user or customer picks up a telephone and dials, or punches in, a number. At that point the user has satisfied the first half of the definition; she has specified the points between which the transmission will occur. The first point is the location of the telephone she picked up and the second point is the one defined by the number she dialed. It is not required that she know where in physical terms the second point is located. After the connection is established, the user engages in spoken or other communication, thus defining the “information of the user’s choosing” that is being transmitted.

Obviously, the called user may respond with information of his choosing, though it may not be information specifically chosen by the first user, except in the sense that the first user stimulated the transmission by the other user by initiating the telephone call. Both users sent and received information without changing the form or content of the information. The only qualifier is that although telephone handsets are historically analog, more telephone companies are using digital switches and other devices and may convert the analog signal from that format to digital for transmission and then back to analog for receipt at the other end of the circuit.

To see where conceptual difficulties might arise, consider how an Internet transmission might be conducted. A user sitting at her computer with an active connection to the Internet opens her electronic mail program and types into the address field the email address of another user. She has now specified the points between which the communication will be transmitted. She types in her message and properly sends the message from her computer. When the recipient of the message opens it, the message has the same form and content it had when sent. “Telecommunications”

16.  Id. § 153(46).
17.  Id. § 153(43).
happened, even though the users used no telephone-like device.

Therefore, is Internet service "telecommunications" defined by the Act? Also, which entities in the example transaction provided "telecommunications services?" These questions are discussed later.

B. Cable Services

Under the Act, "cable service" means "the one-way transmission to subscribers of: (i) video programming, or (ii) other programming service, and subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service."18 "Video programming means programming provided by, or generally considered comparable to programming provided by, a television broadcast station."19 "[O]ther programming service means information that a cable operator makes available to all subscribers generally."20

Reading these definitions on the surface one could reasonably ask why America Online (hereinafter "AOL") is not a cable service, to the extent it provides video content or programming transmitted to its subscribers as a result of subscriber interaction to select or use the programming. The reference to programming provided by a television broadcast station may not be a significant limitation since many television stations now have Internet sites with their programming available for viewing over the Internet. Had Congress used the term "broadcast" by a television station instead of "provided," the apparent applicability of the definition of "cable service" to AOL would be harder to defend.

Of course, there is more to statutory interpretation than an observation on the surface. The words used by Congress might have broader application than is commonly thought. At least one court has made the point that the prospect of providing video programming on computers connected through the Internet was not part of Congressional deliberations at the time these definitions were drafted in 1978.21 At that time, companies like AOL did not exist. Consequently, it is hard to argue that Congress intended in

20. Id. § 522(14).
21. Gulf Power Co. v. FCC, 208 F.3d 1263, 1276 (11th Cir. 2000). This court has cautioned against reading too much into this expansion. Id.
TELECOMMUNICATIONS ACT DEFINITIONS

1978 to regulate AOL as a provider of cable service.

Yet in 1996, Congress amended the definition inserting the words “or use” in connection with the role of customer interaction. 22 Although this small change might not provide sufficient leverage to bring AOL within the scope of the definition of cable service or cable operator, a FCC staff working paper did suggest that cable-provided Internet services, when provided by a cable operator over its cable system in its service area, could fall within the definition of “cable services.” 23 As that working paper concluded, it will be increasingly difficult to maintain that particular facilities and services are “cable” as opposed to “telecommunications.” 24

C. Information Services

“Information services” means the “offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing or making available information via telecommunications and includes electronic publishing, but does not include any use of such capability for the management, control or operation of a telecommunications service.” 25

Although the opinion that Internet service providers are “information services” providers within the meaning of the Act appears to be widely held, 26 this opinion raises issues and contains problems that deserve attention here because they relate to the overall theme.

The opinion that ISPs fall in the category of providing “information services” is too simplistic. It fails to account for the variety in business models of ISPs and the reality of changes in Internet service and basic telephone service. One court has recognized that one entity, a cable operator, could be providing both a “telecommunications service” and “information services” without very clearly identifying where one role ends and the other begins. 27

24. Id.
26. AT&T Corp. v. City of Portland, 216 F.3d 871, 877 (9th Cir. 2000) (stating that the FCC considers the ISP as providing “information services” under the Act); Gulf Power Co., 208 F.3d at 1277; ESBIN, supra note 23.
27. AT&T Corp., 216 F.3d at 878 (analyzing the express terms of 47 U.S.C. § 541(b)(3)).
Think of Internet access as occurring through the provision of multiple layers of services: the physical layer that transports an electronic signal; the operational layer that depends on control software like the TCP/IP protocols and information directories that cross reference uniform resource locators ("URLs") and IP addresses; the application layer that uses software that formats information such as hypertext markup language and Java; and the content layer that contains Yahoo maps, online magazines and an almost infinite array of subject matter. A case can and should be made that the application and content layers fit the definition of "information services" while the physical and operational layers behave much more like "telecommunications services."

At the physical and operational layer, an Internet transaction might happen as follows: The user at her computer opens a browser, types in a URL (domain name), and hits Enter. The computer's central processor sends a digital bundle of information electronically to a modem which converts the data to the analog format required by the local transmission facility, most commonly a local telephone company. The bundle is transported to the local telephone central office where it passes through a switch and is routed to a circuit, probably copper wire, connected (directly or indirectly) to the office of the Internet service provider. The telephone company uses software and information that is specifically defined as "telecommunications services" to route the bundle.

At the premises of the ISP, a wire owned by the ISP picks up the bundle from the telephone company and transports it to an electronic device that may be a switch, a router or a server that then routes it through another transmission medium, which might be copper or optical fiber, to another server in the networked system of computers that is the Internet. The ISP does not change the form or content of the bundle except possibly by converting the analog signal from the telephone company to a digital signal using its own modems. If the user sent the signal using a digital subscriber line or another digital service, no transformation was necessary.

The ISP does apply software and information at the operational layer to identify the Internet protocol address of the desired host computer in order to route the bundle correctly. When the bundle arrives at the host computer sought by the user, a bundle containing the hypertext markup language code or other formatting code for the Internet site designated by the URL is sent back
by a similar process to the user’s computer.

The entity operating the host computer is clearly providing an “information service” since it is offering a capability for storing and retrieving information available via telecommunications. What is less clear is whether the ISP in this transaction engaged in anything that could be characterized as an “information service.” The ISP used its capability to store, process and retrieve information only for the control or operation of the service of transmitting a bundle of bits. This service looks a lot like a telecommunications service, especially since there was no change in the form or content of the information being transmitted. Thanks to hypertext markup language and its cousins, the Web page the user received looked just the way its designer had designed it to look.

Another angle for thinking about the definition and policy issues on this topic is found in the definition and exclusions for “electronic publishing.” The term “information services” specifically includes “electronic publishing” which is defined to mean:

The dissemination, provision, publication, or sale to an unaffiliated entity or person, of any one or more of the following: news (including sports); entertainment (other than interactive games); business, financial, legal, consumer or credit materials; editorials, columns, or features; advertising; photos or images; archival or research material; legal notices or public records; scientific, educational, instructional, technical, professional, trade, or other literary materials; or other like or similar information.  

Congress defined the term in order to control the ability of Bell operating companies to extend their monopoly service in telephone to gain leverage in electronic publishing. Like other definitions at issue in this discussion, it was a relic of the modification of Final Judgment which broke up AT&T. From the definition, it appears that every Internet site (except ones providing interactive games) is engaged in electronic publishing. The term “electronic publishing,” as defined, excludes “the transmission of information as a common carrier,” data processing or transaction processing services that do not involve the generation or alteration of the content of information, or any other network services that do not in-

30. Id. § 274(h)(2)(B).
31. Id. at (h)(2)(E).
volve the generation or alteration of the content, among numerous specific exclusions. The common element among many of the exclusions points to the conclusion that if a service does not involve the generation or alteration of content, it is not electronic publishing and would not, on that ground alone, be an information service.

One of the exceptions to the definition of electronic publishing deserves special mention. "Electronic publishing" does not include a gateway to an information service that does not involve the generation or alteration of the content of information, including data transmission, address translation, protocol conversion, billing management, introductory content, and navigational systems that enable users to access electronic publishing services, which do not affect the presentation of such electronic publishing services to users. Since ISPs provide a gateway that does not involve generating or altering information content, and they do it through data transmission, address translation, protocol conversion and navigational systems, they are not electronic publishers. This exclusion is in the same exclusion list as "the provision of information necessary for management, control, or operation of a telephone company telecommunications system."

As discussed below, one reason the FCC defines ISPs as "information services" providers, despite the uncomfortable fit with the statutory definitions, is that this category is the only one that would not subject ISPs to the complex set of regulations attendant to being defined as telecommunications services or cable services. It is reasonable to conclude that Congress did not want ISPs regulated like telephone companies or cable operators. Given that likely intent, Congress did not leave the FCC or the courts any other choices. Instead of recognizing fully the changing telecommunications landscape in front of it, Congress tried to shoehorn the whole industry into three ill-defined boxes. Hence, ISPs are slotted into information services without much analysis of the impact on the viability of the other definitions of including ISPs in that definition. For example, as more and more services such as voice and video transmission are delivered in digital format using Internet protocol or its successors, ISPs could subsume both cable

32. _Id._ § 274(h)(2)(M).
33. _Id._ at (h)(2)(C).
34. _Id._ at (h)(2)(H).
and telephone without being regulated on the same footing as their competitors. The FCC's interpretations may be appropriate as short term policy expedients but they relieve Congress from deciding critical issues and then describing its intent accurately in statute.

IV. HISTORY BY DEFINITION

Although the 1996 Act was intended to be a major change from the previous approach to regulation, it could not entirely shed the effects of history. One of the reasons that the definitions in the Act could not reflect fully a "bits are bits" future was that Congress based the new definitions on those set out in a decade-old court decision. The FCC compounded the anachronistic effect by interpreting the 1996 definitions to fit definitions it had formulated as early as 1980. It is almost no wonder that the Act definitions fit our current conditions so poorly.

The first relevant definitions appeared in an FCC decision, referred to as Computer II, which dealt with the convergence of communication and data processing technologies. In Computer II, the FCC classified all services offered over a telecommunications network as either basic or enhanced. Basic services consisted of the offering, on a common carrier basis, of "transmission capacity for the movement of information." The FCC also described basic service as the offering of "pure transmission capability over a communications path that is virtually transparent in terms of its interaction with customer supplied information."


37. In re Amendment of § 64.702 et. seq. of the Commission's Rules & Regulations, 77 F.C.C.2d at 419.

38. Id. at 420.
Enhanced services, on the other hand, were defined as "any offering over the telecommunications network which is more than a basic transmission service," including, "services offered over common carrier transmission facilities used in interstate communications, which employ computer processing applications that act on the format, content, code, protocol or similar aspects of the subscriber's transmitted information; provide the subscriber additional, different, or restructured information; or involve subscriber interaction with stored information." Since enhanced services were any service that was not basic, these definitions were mutually exclusive. They did not overlap.

Basic services were regulated under Title II of the Communications Act because they involved transmission. Enhanced services were not regulated because they were offered "over common carrier transmission facilities," and because the FCC did not want to impose regulation on a fast-moving and competitive market.

The consent decree entered on August 11, 1982, settling the United States government's antitrust suit against AT&T with the divestiture of the Bell Operating Companies, spelled out the next significant set of definitions. In this consent decree, commonly referred to as the Modification of Final Judgment or MFJ, the court distinguished between "telecommunications" and "information" services, for the purpose of permitting the Bell Operating Companies to provide telecommunications but not information services.

"Telecommunications" was defined to mean the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received, by means of electromagnetic transmission medium, including all instrumentalities, facilities, apparatus, and services (including the collection, storage, forwarding, switching, and delivery of such information) essential to such transmission.

Congress derived its definitions of telecommunications almost verbatim from the MFJ. Congress did delete the reference to "all instrumentalities, facilities apparatus and services" and the accom-
panying parenthetical. One question that will appear later is whether the deletion of the reference to "storage" and "forwarding," was intended to signal that Congress was narrowing the definition of telecommunications from the scope of the MFJ.

The court defined "information service" to mean the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information which may be conveyed via telecommunications, except that such service does not include any use of such capability for the management, control, or operation of a telecommunication system or the management of a telecommunication service.44

Again, these two definitions were intended to be exclusive because the Bell Operating Companies could do telecommunications but not information services. Note, however, that the function of "storage" or "storing" was an element in both definitions.

Although the focus of this analysis is not the FCC's interpretations of Congressional definitions, it is difficult to discuss the current predicament, especially the interpretive efforts of courts, without a brief look at the FCC's approach. It is appropriate to digress briefly here as part of the history of the Act definitions.

The FCC has concluded that its 1980 definition of enhanced services should be interpreted to apply to the same functions as those covered by the Congressional definition of "information services," which was worded differently.45 In several decisions cited in the Report to Congress, the FCC said that entities providing "enhanced or information services," including Internet access services, were not providing "telecommunications."46 The argument was that Internet access involved protocol conversion and interaction with stored data so that it required information services rather than the pure transmission of information.47

It is only fair to recognize that the FCC did not have much in the way of choices. If it concluded that much of what Internet access providers did was pure "telecommunications," it would have had to conclude that Internet access providers were subject to the same regulations as telephone companies, including, potentially, price regulation. The FCC said as much in its report:

44. Id. at 229.
46. Id.
47. Id. at 11,520, ¶ 39.
An approach in which a broad range of information services providers are simultaneously classed as telecommunications carriers, and thus presumptively subject to the broad range of Title II constraints, could seriously curtail the regulatory freedom that the Commission concluded in Computer II was important to the healthy and competitive development of the enhanced-services industry. 48

In the face of arguments that if the FCC determined that Internet access was telecommunications, Congress had specifically authorized the FCC to forbear from regulation, the FCC decided that uncertainty about the lasting nature of such forbearance could chill innovation. The FCC also had on its side the almost complete lack of any clue that Congress had intended Internet access to be included in the definition of “telecommunications,” except for the breadth of the definition itself.

At the same time that the FCC was vigorously defending its interpretations, it also recognized some of the paradoxes it created. It noted the existence of hybrid services in which a provider offered information services and, as an inseparable part of that service transmitted information supplied or requested by the user. 49 The FCC believed that not treating telecommunications and information services as mutually exclusive would lead to the conclusion that all such services were telecommunication services. 50 (It was right.) Hence, the FCC theorized that an ISP that owned transmission facilities was selling telecommunications to itself rather than to the public, and could be classed as a non-common carrier not subject to regulation as a telecommunications carrier. The FCC did not discuss the possibility that, from the customer’s viewpoint, all the services comprised a bundle being sold to her directly.

The FCC’s definitions also caused problems in dealing with Internet protocol (hereinafter “IP”) telephony. 51 IP telephony permits real-time voice transmission using Internet protocols. The FCC distinguished “computer-to-computer” IP telephony, in which the customer uses her own customer premises computer, from “phone-to-phone” IP telephony, in which the customer uses a conventional instrument for making a touch-tone call. One of the factors supporting the distinction was the observation that, in the

48. Id. at 11,5424, ¶ 46.
49. Id. at 11,529, ¶¶ 56-57.
50. Id. at 11,529, ¶ 57.
51. Id. at 11,541-45, ¶¶ 83-93.
"computer-to-computer" case, the Internet provider might not know that a voice transmission was occurring because the content of the packets is indistinguishable. In the "phone-to-phone" case, the provider had to hold itself out as providing voice telephony. Since it is not too hard to imagine an Internet services provider touting the advantages of IP telephony as part of the sales pitch to a customer of the "computer-to-computer" variety, this element of the distinction is disingenuous. Consequently, the key feature that would make "phone-to-phone" IP telephony "telecommunications" was whether the service required the customer to have on her premises a device different from a touch-tone telephone.

Why it matters that the computer, that must be part of any IP telephony transaction, should be at the home of a customer, possibly with an Ethernet handset attached (which in its outward appearance and function is the same as a touch-tone telephone), rather than at the office of the service provider, is a serious question. Earlier in the Report, the FCC approved of analyzing function rather than facilities. It said:

This functional approach is consistent with Congress's direction that the classification of a provider should not depend on the type of facilities used. A telecommunications service is a telecommunication service regardless of whether it is provided using wireline, wireless, cable, satellite, or some other infrastructure. Its classification depends rather on the nature of the service being offered to customers.

By suggesting that the classification of IP telephony depended in any way on the type of customer premises facility being used, the FCC departed without rationale from the sensible approach this quotation described.

The purpose of this discussion has not been to critique the FCC or its decisions. Rather it has been to demonstrate through a brief outline of the FCC's struggles, the anomalies created by the definitions Congress adopted in the Act. The report to Congress noted the comments of several Senators who were urging the FCC to adopt a more expansive interpretation of the definition of tele-

52. Id. at 11,543 ¶ 87.
53. Id. at 11,543-44, ¶ 88.
54. Id. at 11,530 ¶ 59.
55. Id.
communications. They were attempting to persuade the FCC to do something Congress itself had the opportunity to do but had failed to act upon. Instead of fixing the problems by interpretation, Congress should fix the definitions.

V. JUDICIAL CONFLICTS IN STATUTORY INTERPRETATION

The question of where Internet service providers fit in the statutory scheme of the Act has divided two circuit courts of appeal. In April, 2000, the Eleventh Circuit, dealing with the FCC's authority to regulate pole attachments, ruled that Internet service is neither a telecommunications service nor a cable service. If anything, it was an information service as the FCC had suggested in an order relating to universal service. In June, 2000, the Ninth Circuit faced the issue whether a city, acting in the course of approving an acquisition, could require a cable company offering broadband Internet service to open its facilities to competing providers of Internet service. The court held that broadband Internet service provided by a cable operator was a telecommunications service and, therefore, not subject to regulation by a city. The Ninth Circuit ruling did not recognize the earlier Eleventh Circuit ruling. Unless Congress fixes the definitions at issue, the Supreme Court will ultimately have to decide which court was correct.

These two cases provide useful lessons on the difficulty Congress has created and warrant further discussion. Since the Ninth Circuit seemed to have a better grasp of the practical aspects of Internet service, it will be the starting point.

Despite the different conclusions reached, there were some points of agreement in the analysis. The Ninth Circuit agreed with the Eleventh Circuit that Internet service is not "cable service." The two courts also agreed that the typical ISP is an "information service" within the meaning of the Act. In reaching this conclusion, both courts relied on FCC statements contained in proceed-

56. See e.g., id. at 11,517-18, ¶¶ 34-35 and accompanying notes.
58. Id.
59. AT&T Corp. v. City of Portland, 216 F.3d 871, 877-80 (9th Cir. 2000).
60. Id. at 880.
61. Id. at 877.
62. Id.; Gulf Power, 208 F.3d at 1277.
ings involving universal service. The validity of relying on statements made in that context will be discussed later.

The Ninth Circuit's decision turned on the fact that the @Home Internet service which AT&T would provide was different than conventional ISPs. The court wrote:

[U]nlike other ISPs, @Home controls all of the transmission facilities between its subscribers and the Internet. To the extent @Home is a conventional ISP, its activities are that of an information service. However, to the extent that @Home provides its subscribers Internet transmission over its cable broadband facility, it is providing a telecommunications service as defined in the Communications Act.

The court observed that @Home was like other ISPs in that its service had two elements: a "pipeline" (cable broadband instead of telephone lines) and the Internet service transmitted through that pipeline. The difference was the extent of control over the transmission facilities.

The Ninth Circuit panel did not have to face the question of how much or how little of the "pipeline" a cable broadband ISP would have to control before its conclusion would change. Similarly, it did not have to address whether an ISP that transmitted Internet service over a "pipeline" based on telephone wires that it controlled in whole or in part was a telecommunications service because of that control. The potential for some gradation or variation in how ISPs provide their service was obscured by the court's dichotomy between a "conventional" ISP and @Home's total control of the transmission facilities leading to the intersection with the Internet.

It is doubtful that a meaningful distinction could arise from @Home's ownership of the lines. In "telecommunications services" Congress expressly anticipated an incumbent telephone company leasing or reselling use of its facilities to competitors that would not

64. AT&T Corp., 216 F.3d at 878.
65. Id.
66. Id.
67. Id. at 877-78. The court referred to "conventional" ISPs several times. Id. The court also mentioned a "typical ISP." Id. at 874.
own them. The lessee which then sold transmission services to its customers would be no less in the business of providing "telecommunications services" just because it did not own the lines. Despite that concept, the court described a "typical ISP" as one that "connects with the Internet via leased telecommunication lines, which its consumers access through 'dial-up' connections over ordinary telephone lines." Certainly, there are ISPs that provide service in the manner described by the court. It is not hard to identify variations from this model that call into question the very notion of a "typical" or "conventional" ISP.

For example, assume a company that provides high-speed digital subscriber line (hereinafter "DSL") service in competition with an incumbent Bell operating company like Qwest. To serve a residential customer in Qwest's territory, the ISP provides or sells to the customer a DSL modem. The modem transmits its signal over a portion of a line leased from Qwest. Qwest and the ISP would be engaged in line-sharing, a service Qwest is mandated to provide, at least in Minnesota. The signal goes to a Qwest central office where most likely it would be retransmitted on another leased line to the ISP's own switching facility. If the ISP owns a facility directly connected to the Internet, it controls the remainder of the transmission pipeline to the Internet. This ownership of a direct connection between its own switch and the Internet might differentiate the ISP from many other ISPs. In fact, this ISP could provide an Internet connection for other ISP's. America Online may lease lines from telecommunications carriers to bring its dial-up customer traffic to its server facilities in Virginia but it is itself a direct connection to the Internet. In this respect, the biggest ISP of all is not like a "typical" ISP.

The Ninth Circuit analysis would acknowledge that Qwest's role in enabling service is "classic 'telecommunications." The ISP's role in providing the transmission between the switch and the Internet should in a rational system also be recognized as "telecommunications." The court noted, "[a]s the definition [of "information services"] suggests, ISPs are themselves users of telecommunications when they lease lines to transport data on their own networks and beyond on the Internet backbone." It is diffi-

68. 47 U.S.C. § 541(b)(3).
69. AT&T Corp., 216 F.3d at 874.
70. Id. at 877.
71. Id.
cult to see why the role of the ISP in the example in providing transmission for itself would not be "telecommunications" while transmission on the same facility for others would be so deferred.

One more issue must be considered. The AT&T court said that @Home was providing telecommunications services because it controlled the transmission facilities from a customer’s premises to the Internet. Assume then, the existence of an ISP located in a large office building. One of the attractions of its location is that a big fiber optic “pipeline” that is part of the Internet backbone passes just outside the building. The owner of the “pipeline” has permitted the ISP to connect directly to the backbone from the ISP’s own server. The ISP has a customer in the building so the ISP has installed its own wires to connect the customer to the ISP’s server and then to the Internet backbone. Like @Home this ISP controls all the transmission facilities between its subscriber and the Internet. Even though the facilities are all within one building, except for the minor distance to the Internet backbone, under the Ninth Circuit’s criteria this ISP is providing telecommunications service.

This example leads to a question regarding “typical ISPs.” To the extent they own their own wires and a switch or server facility inside their premises that act as an indispensable link in the transmission facility between the customer and the Internet, are they not providing “telecommunications?” Even if the conclusion is that the server enables some conversion of the information protocol and is thus an information service, the wires connecting the server to the outside world are indistinguishable from the other elements of transmission facilities which the AT&T court concluded could put an ISP in the “telecommunications” business.

As noted above in the discussion of the definition of information services, an ISP is probably providing telecommunications at the physical and operational layers and information services at other layers. As a closing note on this extrapolation from the AT&T court’s holding, it is curious that the court could write the following and still believe that even a “conventional ISP” was only in the “information services” business. The court stated:

[u]nder the Communications Act, this principle of telecommunications common carriage governs cable broadband as it does other means of Internet transmission such

72. Id. at 878.
73. Id. at 877-78.
as telephone service and DSL, 'regardless of the facilities used.' The Internet's protocols themselves manifest a related principle called "end-to-end": meaning control lies at the ends of the network where the users are, leaving a simple network that is neutral with respect to the data it transmits, like any common carrier. On this rule of the Internet, the codes of the legislator and the programmer agree.  

If an ISP is in the middle of a network in which control lies at the ends where the users are and the ISP is neutral with respect to the data it transmits, why is it not doing "telecommunications?"

The Gulf Power case stimulates a different line of analysis. The court's pithiest statement fully describes its holding. "The '96 Act allows the Commission to regulate the rates for cable service and telecommunications service; Internet service is neither." The reasoning leading to the conclusion that Internet service is not "cable service" is similar to the Ninth Circuit panel's. The Gulf Power court did expressly conclude that Congress's addition of "or use" to the "cable service" definition was not significant enough to sweep Internet services into the cable service ambit.

One aspect of the case is particularly noteworthy. The FCC was a party and argued that Internet service provided by a cable system was either "solely cable service" or was subject to regulation under the FCC's power to determine rates for pole attachments that are just and reasonable under section 224(b)(1). The court rejected the second argument on the ground that Congress had unambiguously given the FCC jurisdiction to regulate pole attachment rates only for cable service or telecommunications service. For the FCC to regulate pole attachments for Internet service, it had to show that the Internet was one or the other of these two choices. The FCC chose cable and the court disagreed.

The FCC did not try to argue that Internet service was a telecommunications service. In the court's view it could not have made such an argument because the FCC had specifically said that

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74. *Id.* at 879 (citing 47 U.S.C. § 153(46)).  
75. The rates at issue were the rental rates for pole attachments. *Gulf Power Co. v. FCC*, 208 F.3d 1263, 1266 (11th Cir. 2000).  
76. *Id.* at 1276.  
77. *Id.* at 1276-77.  
78. *Id.*  
79. *Id.* at 1276.  
80. *Id.*
the Internet is not a telecommunications service. The statements it relied on were drawn from FCC proceedings related to telecommunications service. It is important to understand that in the universal service proceedings, one of the questions at issue was whether Internet service was a telecommunications service eligible for support from a universal service fund. The FCC, as well as carriers, were wary of reaching that conclusion because it could add enormously to the costs of such a fund. The FCC might well believe that Internet service is not inherently a telecommunications service. It would still be appropriate for a court to hesitate to draw that conclusion based only on a discussion in the context of universal service.

The interesting thing about the Gulf Power case is the court's failure to even consider the competitive consequences of its decision, so sure was it of the clarity of the statute. Presumably the court understood that a cable system could provide Internet service over its cables attached to the electric utility poles at issue. Similarly, a telecommunications carrier could provide Internet service using DSL technology over the same wire transmitting traditional telecommunications services like telephone service. The rent charged to the telecommunications carrier for both the telephone service and high speed Internet access could be controlled by the FCC. If the FCC could not restrain the rent for cable provided Internet access, the cable competitor would be at a severe competitive disadvantage. The court did not address this issue.

Now suppose that an Internet service provider wants to provide only Internet service using its own wires rather than those rented from a telephone company. It might not be a realistic assumption since any rational carrier would want to put as many services as possible on a transmission facility. Still, this is a matter of congressional intent, not economics. The new Internet provider will be in competition with both the cable-based and telecommunications-based Internet services. Unlike its competitors, the pure Internet services company must pay monopoly rents to the owners of the utility poles; there is no restraint on rents for any aspect of its services. Its rents cannot be controlled by the FCC under the Gulf Power decision. Congress' attempt to achieve non-discriminatory treatment would have been frustrated.

The Eleventh Circuit panel majority was quite clear about the intent of Congress: "Congress wanted to allow telecommunications service providers, like the cable television companies before them,
The court held that the FCC could not regulate wireless attachments to poles because utility poles are not bottleneck facilities for wireless systems. Since utility poles are bottleneck facilities for wireline Internet service providers, just as much as they are for cable systems and telecommunications carriers with whom they might be in competition, it is curious that the court never wondered whether its interpretation of Congressional intent was at odds with the congressional goals of increasing competition and ensuring non-discrimination. The court's decision deters competitive entry in the Internet service market and enables pole owners to discriminate among types of Internet service providers. The irony of the decision is that the court recognized both the increased competition and the non-discrimination goals.

The problem of regulatory or marketplace discrimination that arises from putting Internet service providers generally in the "information services" definition relates back to the AT&T decision. If cable broadband Internet service can be regulated as "telecommunications services" but a "conventional ISP" cannot be regulated because there is no state or FCC regulatory power over "information services," there is potential for regulatory discrimination between entities in competition with each other. Such a situation is neither fair nor consistent with the goal of encouraging competition. The less regulated entity is likely to have a decided competitive edge and the regulatory imbalance may deter new entrants whose business model makes them look more like cable broadband Internet service providers like @Home.

VI. STATE IMPLEMENTATION ISSUES

Many of the implementation problems created by Congress creating an artificial segmentation of telecommunications services are illuminated by considering the imminent prospect that fixed wireless companies will enter certain markets in competition with traditional providers. Fixed wireless services are delivered using a base station antenna and a customer antenna placed on the outside of the customer's premises, whether home or office. Under differ-

81. Id. at 1275.
82. Id.
83. Id. at 1268 (citing the Cable Communications Policy Act of 1984, Pub.L. No. 98-549, 98 Stat. 2779 (1984), and 47 U.S.C. § 224(f)).
ent business models it has a place in delivering services in both metropolitan and rural parts of the country. The limitations on its ability to compete with existing technologies include the requirement that the antennas be within line of sight of each other (flat topographies are good) and weather effects that may degrade the signal. Though different technologies are being developed, they all raise similar policy issues. Most of the technologies enable very high speed transmission of data that could deliver voice, video and Internet services over one set of facilities.

Imagine a hypothetical place, Anytown, a city in which Wireless Co. has constructed a new fixed wireless facility on private property. Unlike a cable system, it is not using public right of way and so is not defined as a cable system under the Act. Nonetheless, it is delivering video programming in competition with the incumbent cable operator. Though the breadth of the offerings may not be as great as the cable operator provides, Wireless Co. does not have to pay a franchise fee to Anytown and does not have the other regulatory burdens of the cable company, including the requirement that it provide free access for public, educational and government programming. Wireless Co.'s system was cheaper to construct because it did not have to lay wire past many homes that would not buy its service, unlike the cable company. For these reasons, Wireless Co. is attracting many customers away from the cable company despite the risks that a snowstorm will occasionally interfere with transmission. It will not be long before the cable company comes to the Anytown and state governments seeking regulatory relief so it can better compete with Wireless Co.

At the same time, Wireless Co. is offering customers high speed Internet access. It also offers its customers equipment and software that enables them to make telephone calls over the Internet. It has arranged for gateway services in most parts of the country, so that a call initiated using Internet protocol at its customer's end can still connect with a regular telephone through the public switched telephone network at the receiving end. Since this Internet service is an information service as that term has been defined, it is not subject to regulation as a telecommunications service. Consequently, the state public utilities commission has no authority to ensure the quality of service provided or regulate prices, as it does with the incumbent telephone company. Wireless Co. did not even seek a certificate of authority to provide service based on its lawyer's advice that it was providing an unregulated information
service. There is no part of Wireless Co.'s system that looks anything like a telephone exchange since no circuit switching occurs, only packet switching. Wireless Co. also offers a mobile wireless telephone as part of its package of services and the aggregate price induces an increasing number of the incumbent telephone company's customers to conclude they do not need an old style telephone or the related services.

The incumbent cannot, however, lower its price to compete because it is subject to price regulation. The telephone company or its customers are also paying a fee or tax to support 911 services, telecommunications services for communications impaired person and a subsidy to ensure telephone access for low income customers. Wireless Co. and its customers are not subject to these charges so Wireless Co. has another competitive advantage over the telephone company, similar to its advantage over the cable company derived from the absence of franchise fees.

When Wireless Co.'s competitors seek relief from city and state officials, they are likely to be told that there is not much that can be done because the state and the city have to abide by the framework Congress established. The government officials might acknowledge that the cable company and telephone company have good arguments about the unfairness of trying to compete against an unregulated company when they are subject to extensive regulation. They might also recognize that the taxation burdens are inequitable since Wireless Co. does not pay a franchise fee or telecommunications related charges. Nonetheless, lawyers for the state and the city have told them that if those governments try to define telecommunications services differently than Congress has, they will be inviting lawsuits from any number of directions and, of course, incurring large legal fees. The city and state officials tell the cable company and telephone company to take their arguments to Congress. Thinking of how long it took Congress to pass the Telecommunications Act of 1996, the cable and telephone company executives despair.

Although some aspects of the above thought experiment may be strained, it is an accurate description of dilemmas state and local governments could face in the near future. The technologies exist and are being deployed. The other potential effect on the incumbent providers relates to their decision whether to upgrade their own systems to provide more services. Although they might decide to accelerate the provision of new services to forestall Wireless Co.
from gaining a foothold, it is also possible that they will not invest in light of the uncertainty and competitive disadvantage they would still face as a result of the disparity in regulatory treatment of the three technologies.

VII. CONCLUSION

All of the issues discussed above illustrate the flaws inherent in the definitions Congress employed in the Act. The definitions are at odds with the practice of telecommunications as it has developed since 1996 in ways foreseeable at that time. In addition, the definitions and their interpretation put the regulatory implementation at cross-purposes with Congressional goals of competition and non-discrimination. The effort to segment telecommunications services, cable services and information services, at least in the way Congress and the FCC have gone about it, increases the problem of discrimination among providers in competition with each other and, consequently, could have the effect of deterring competition.

Congress could move toward fixing these issues by recognizing that every provider in the business of transporting bits is in the telecommunications business. Such providers may also be information services providers in other aspects of their business. As long as they move bits, they should be regulated and taxed alike by the federal as well as state governments. Taking this fairly radical step is essential to ensuring non-discrimination, more competition and more investment in advanced services. These are the goals Congress and the country are trying to achieve.