The Mixed Blessing of a Deregulatory Endpoint for the Public Switched Telephone Network

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ABSTRACT

Receiving authority to dismantle the wireline public switched telephone network (“PSTN”) will deliver a mixture of financial benefits and costs to incumbent carriers. Even if these carriers continue to provide basic telephone services via wireless facilities, they will benefit from substantial relaxation of common carriage duties, no longer having to serve as the carrier of last resort and having the opportunity to decide whether and where to provide service. On the other hand, incumbent carriers may have underestimated the substantial financial and marketplace advantages they also will likely lose in the deregulatory process.

This paper will identify the potential problems resulting from prospective decisions by National Regulatory Authorities (“NRAs”), such as the United States Federal Communications Commission (“FCC”), to grant authority for telecommunications service providers to discontinue PSTN services. The paper also will consider whether in the absence of common carrier duties, carriers providing telephone services, including Voice over the Internet Protocol (“VoIP”), voluntarily will agree to interconnect their networks. The paper will examine Internet peering and other types of network interconnection with an eye toward assessing whether a largely unregulated marketplace can ensure ubiquitous access to PSTN replacement services.

The paper concludes that private carrier interconnection models and information service regulatory oversight may not solve all disputes, or foreclose price discrimination for functionally
the same type of service. Recent Internet interconnection and television program carriage
disputes involving major players such as Comcast, Level3, Fox and Cablevision, point to the
possibility of increasingly contentious negotiations that could result in balkanized
telecommunications networks with reversed or reduced progress in achieving universal service
goals. The paper also concludes that rural access to VoIP and other voice communications
services could end up costing significantly more than what urban residents pay, an efficient, but
politically risky outcome.

I. Introduction

Receiving authority to dismantle the long serving wireline public switched telephone
network ("PSTN") will deliver a mixture of clearly identified benefits, but also underappreciated
costs to incumbent carriers. 1 They will accrue financial and operational gains from the likely
substantial relaxation or elimination of traditional common carriage duties, 2 even if they opt to
offer substitute basic telephone services via wireless facilities and the Internet. Because they no
longer will offer preexisting ("legacy") telecommunications services via installed copper wire

1 To discontinue a regulated telecommunications service in the United States, a carrier
must file a petition with the Federal Communications Commission pursuant to Sec. 214 of the
service is defined as “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.” 47 U.S.C. § 153(43).

2 Title II, of the Communications Act, 47 U.S.C. §201-276, imposes many regulatory
requirements including the duties to provide service on a transparent and nondiscriminatory
manner. A common carrier “hold[s] oneself out indiscriminately to the clientele one is suited to
See also FCC v. Midwest Video Corp., 440 U.S. 689 (1979) (distinguishing between common
carrier access requirements and mandatory carriage of local broadcast television signals by cable
television operators).
lines, incumbent carriers will not have to serve as the carrier of last resort compelled to provide service on nondiscriminatory terms and conditions. As discussed in this paper, if obligated to make an explicit classification of any remaining voice telephone services, the Federal Communications Commission (“FCC”) and other National Regulatory Authorities (“NRAs”) would have to apply an unregulated service category, because software, riding on top of an unregulated broadband link, will serve as the primary future means for making and receiving telephone calls. For example, the FCC classified the underlying broadband traffic delivery medium as an information service, e.g., cable modem and digital subscriber line service

3 The Communications Act, specifies that a “telecommunications carrier shall be treated as a common carrier under this chapter only to the extent that it is engaged in providing telecommunications services.” 47 U.S.C. § 153(44).

4 The FCC has determined that various broadband technologies for accessing the Internet all qualify for limited regulatory oversight. See, e.g., In re Inquiry Concerning High-Speed Access to the Internet over Cable and their Facilities, 17 FCC Rcd. 4798, 4802 (2002) (declaratory ruling and notice of proposed rulemaking), aff’d, Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs., 545 U.S. 967 (2005); In re Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd. 14,853, 14,855 (2005) One of the primary reasons for eliminating PSTN services is the ability of carriers to provide voice telephone service by combining software and the broadband links that will replace legacy copper wire facilities.

5 Information service is defined as “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 any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service.” 47 U.S.C. § 153(20). “Information-service providers, by contrast, are not subject to mandatory common-carrier regulation under Title II, though the Commission has jurisdiction to impose additional regulatory obligations under its Title I ancillary jurisdiction to regulate interstate and foreign communications.” National Cable & Telecomm. Ass’n v. Brand X Internet Servs., 545 U.S. 967, 976, 125 S.Ct. 2688, 2696 (2005). “The Act’s definitions, however, parallel the definitions of enhanced and basic service, not the facilities-based grounds on which that policy choice was based, and the Commission remains free to impose special regulatory duties on facilities-based ISPs under its Title I ancillary jurisdiction. In fact, it has invited comment on whether it can and should do so.” Id. 545 U.S. at 996, 125 S.Ct. at 2708.
(“DSL”). Having classified the underlying broadband traffic delivery medium as an information service, the FCC could not make a credible argument that voice telephone software enhancements to these information services somehow converts everything back to common carrier telecommunications services.

Notwithstanding the significant benefits in qualifying for eliminated or reduced regulation, incumbent carriers may have underestimated the substantial financial and marketplace advantages they will lose in the deregulatory process. They often obscure or dismiss as insignificant the substantial privileges and benefits accruing from their status as telecommunications service providers. Common carrier responsibilities include duties to interconnect with other carriers, provide service on transparent and nondiscriminatory terms and offer some low margin services. But this legal status also guarantees wireline and some wireless

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7 Telecommunications service providers carriers have “[t]he duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of this section and section 252 of this title. An incumbent local exchange carrier shall provide such unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service.” 47 U.S.C. § 251(c)(3) (2006). See also In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, 11 FCC Rcd. 15,499 (Aug. 8, 1996) (first report and order), aff’d in part and rev’d in part, AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366 (1999); In re Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order and Fourth Further Notice of Proposed Rulemaking 15 FCC Rcd. 3696 (1999), rev’d and remanded, United States Telecom Ass’n v. FCC, 290 F.3d 415 (D.C. Cir. 2002); see also In re Review of the Section 251
carriers access to billions of dollars in annual universal service funding, zero or low cost access to rights of way and radio spectrum, accelerated depreciation and other tax benefits, the


8 In 2010, a total of $7.95 billion in subsidies flowed from subscribers of local wireline and wires service to local exchange carriers for providing service in high cost areas ($4.27 billion) and lower priced service to low income subscribers ($1.32 billion), rural health care providers ($86 million) and schools/libraries ($2.28 billion). Universal Service Administrative Company, Universal Service Fund Facts – 2010, available at: http://www.usac.org/about/universal-service/fund-facts/fund-facts.aspx#Totals.


10 The FCC only recently has auctioned spectrum to the highest bidder. For most spectrum uses even today licenses are available without a direct payment. Local exchange carriers hold many licenses for terrestrial microwave radio transmitters that provide transmission links for local and long distance traffic, including the “backhaul” between cellular radio tower and a telephone company switching facility. “The historic excess of demand for spectrum may not connote a shortage as much as it reflects the fact that until recently the Commission gave spectrum away for free. When something is free, the demand for it will usually exceed the supply.” John W. Berresford, Mergers in Mobile Telecommunications Services: A Primer on The Analysis of Their Competitive Effects, 48 FED. COMM. L.J. 247, n. 170 (March, 1996).
ability to vertically integrate throughout the “food chain” of telecommunications services \(^\text{12}\) and leadership in the management of telephone numbers, standard setting and other policy issues.

Incumbents will strive to capture deregulatory benefits while retaining the many benefits previously reserved for common carriers. However, in the worst case scenario these legacy carriers will qualify for the same treatment as carriers providing Voice over the Internet Protocol (“VoIP”) service. \(^\text{13}\) VoIP carriers enjoy none of the privileges of common carriers even as the FCC has imposed significant regulatory burdens previously reserved only for such carriers. \(^\text{14}\)

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\(^\text{11}\) “Direct Government financial support--in the form of subsidies, tax and depreciation incentives, and other instruments-- is a third potential basis for common carriage duties and has been used over the years to aid the deployment of infrastructure. From this perspective, at least, no local communications network can be said to be completely “private” in nature. In any event, the power to impose regulation depends on the state's ability to condition the use of public resources.” Richard S. Whitt, Evolving Broadband Policy: Taking Adaptive Stances to Foster Optimal Internet Platforms, 17 COMMLAW CONSPECTUS 417, 493-94 (2009).


\(^\text{13}\) VoIP is the real-time carriage and delivery of basis data packets that correspond to voice. VoIP services range in quality, reliability, and price and can link both computers and ordinary telephone handsets. For technical background on how VoIP works, Susan Spradley & Alan Stoddard, Tutorial on Technical Challenges Associated with the Evolution to VoIP, FCC (Sept. 22, 2003), http://www.fcc.gov/events/tutorial-technical-challenges-associated-evolution-voip. See generally, Charles J. Cooper & Brian Stuart Koukoutchos, Federalism and the Telephone: The Case for Preemptive Federal Deregulation in the New World of Intermodal Competition, 6 J. TELECOMM. & HIGH TECH. L. 293 (2008).

This paper will identify the potential problems resulting from prospective decisions by NRAs, such as the FCC, to grant authority for telecommunications service providers to discontinue PSTN services. The paper also will consider whether in the absence of common carrier duties, carriers providing telephone services, including VoIP, voluntarily will agree to interconnect their networks. The paper will examine Internet peering and other types of network interconnection with an eye toward assessing whether a largely unregulated marketplace can ensure ubiquitous access to PSTN replacement services.

The paper concludes that the FCC could decide to treat all legacy telephone companies as information service providers free of common carrier burdens, but no longer entitled to common carrier benefits. Having decided that it lacks direct statutory authority, pursuant to Title II of the Communications Act of 1934, as amended, to impose any common carrier burdens or to offer any benefits, the FCC will have to rely on often questionable ancillary jurisdiction.

inferred from language in Title I of the Communications Act, if it wants to continue applying regulatory burdens and benefits to incumbent carriers. While reviewing courts have supported the FCC’s imposition of interconnection and other common carrier responsibilities on VoIP carriers, the Commission has failed to stretch its jurisdictional wingspan to impose even narrow and well-calibrated oversight of information service providers. With no direct statutory authority, the FCC may lack jurisdiction to resolve any interconnection disputes between VoIP providers and other carriers offering voice telephone service, nor might the Commission have the authority to prevent price discrimination for functionally the same type of service.

Recent Internet interconnection and television program carriage disputes involving major players such as Comcast, Level 3, Fox and Cablevision, point to the possibility of increasingly contentious negotiations that could result in balkanized telecommunications networks with reversed or reduced progress in achieving universal service goals. The paper also concludes that

Ancillary jurisdiction refers to an inference of statutory authority to impose rules and regulations based on indirect statutory authority. For example, the FCC asserted jurisdiction over cable television operators because the importation of distant broadcast television signals could have had an adverse financial impact on directly regulated television broadcasters. United States v. Sw. Cable Co., 392 U.S. 157, 178 (1968); see also FCC v. Midwest Video Corp. (Midwest Video II), 440 U.S. 689, 696-709 (1979); United States v. Midwest Video Corp. (Midwest Video I), 406 U.S. 649, 659-70 (1972).

The FCC relies on a claim of ancillary jurisdiction when the Commission lacks explicit statutory authority. The FCC successfully invoked ancillary jurisdiction to regulate cable television even before the Commission received a statutory mandate to do so. “The FCC needed a hook to assert jurisdiction over cable. To reach that goal, it used a two-step process. First, the Commission found that cable was within its primary statutory grant of authority under section 152(a) of the [Communications] Act, which allows the FCC to regulate ‘all interstate and foreign communication by wire or radio.’ Second, the FCC invoked section 303(r) of the Act, which allows the Commission to issue ‘such rules and regulations and prescribe such restrictions and conditions, not inconsistent with law,’ as ‘public convenience, interest, or necessity requires.’ The FCC also referenced section 154(i), which provides that ‘[t]he Commission may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with [the Communications Act], as may be necessary in the execution of its functions.’” Kevin Werbach, Off the Hook, 95 CORNELL L. REV. 535, 572 (Mar. 2010) (citations omitted).
rural access to VoIP and other voice communications services could end up costing significantly more than what urban residents pay, an efficient, but politically risky outcome in nations where legislators from rural areas have disproportionate clout and consider telecommunications subsidies a priority. 16

II. The Consequences of Deregulation

Incumbent carriers in many nations persistently seek the elimination or relaxation of government regulation, including oversight of their legacy copper wired based, dial up voice telephone service commonly known as the public switched telecommunications network (“PSTN”) 17 service. Perhaps abandonment of PSTN service logically follows in a deregulatory glide path 18 occasioned by technological innovations that make Internet broadband networking

16 Many Senators and Representatives from states have large rural areas strongly endorse universal service funding, because their states are net beneficiaries of significant subsidies. “Policymakers seeking to reform universal service face strong constituencies, such as rural telephone companies, national telephone companies, and consumers. When these forces “favor[] preservation of the existing arrangements,” it is more politically feasible to sustain current policies than to implement reform.” Brian Regan, Ushering Universal Service Reform: Politically Feasible Legislative Principles, 16 COMMLAW CONSPECTUS 471, 478 (2008).

17 PSTN service refers to legacy copper wired based, dial up voice telephone service.

18 See, e.g., Earthlink, Inc. v. FCC, 462 F.3d 1 (D.C. Cir. 2006) (affirming the FCC’s decision to forbear from imposing most local loop unbundling requirements on incumbent carriers); U.S. Telecom Ass’n v. FCC, 359 F.3d 554, 588 (D.C. Cir. 2004) (upholding the FCC’s nationwide decision to refrain from requiring § 251 unbundling fiber broadband elements and reversing the Commission’s decision not to eliminate other unbundling requirements in light if the adverse impact on carrier investment incentives).
a single medium for all sorts of service, including voice communications. If one believes that ample broadband network competition exists, then industry self-regulation should suffice in lieu of government oversight. However, if one believes that ample competition does not exist, then deregulation has the potential for great public harm. A carrier’s ability to use technological innovation to combine services that previously traversed separate, stand alone networks creates the potential for anticompetitive conduct to affect the entire information, communications and entertainment (“ICE”) ecosystem. Marketplace abuses that previously might impact just one segment of the ICE marketplace can adversely affect all market segments served by the carrier combining content and a broadband network and operating in a less than robustly competitive environment.

Technological and marketplace convergence makes it possible for a single broadband link to provide access to a variety of services. ICE carriers offer a bundle of services that combine audio and video content, like that available from broadcasters, satellite operators and cable television systems, as well as services that run the gamut from basic equivalents to common carrier telecommunications services, such as voice telephony, to the value added, advanced information services that configure software for customized applications delivered via basic telecommunications lines.

"The major force shaping the present and future of communications policy is convergence. Digital convergence is generally understood as the elimination of distinctions between analog communications systems such as broadcast television, cable television, and telephone networks. Once encoded in digital form, all information is ultimately interchangeable. This means that networks previously in distinct markets can become direct competitors. The transformation of local telephone and cable television companies into competing providers of ‘triple-play’ bundles of voice telephony, multi-channel video programming, and high-speed internet access is a canonical example. Keven Werbach, Only Connect, 22 BERKELEY TECH. L.J. 1233, 1261-61 (Fall, 2007)."
The FCC has evidenced a preference for applying the least intrusive regulatory classification for ventures that combine common carrier and information services.\textsuperscript{20} The Commission treats all types of broadband Internet access as largely unregulated information services instead of a composite of regulated telecommunications services and unregulated information services. The Commission initially applied the composite model to DSL service, based on the rationale that when upgrading legacy copper wire lines for both voice and data service the separate common carrier telecommunications component did not evaporate. However, after the Supreme Court affirmed the FCC’s determination that cable modem broadband access constituted an information service only, the Commission reclassified DSL as a single information service as well.

The predisposition to apply the least intrusive regulatory classification accrues public relations and political dividends with some stakeholders. It also supports the FCC’s self-imposed obligation to create a bright line dichotomy even for convergent services that have characteristics representative of both basic telecommunications and enhanced information

\textsuperscript{20} The FCC treats all types of broadband Internet access as largely unregulated information services instead of a composite of regulated telecommunications services and unregulated information service. The Commission initially applied the composite model to Digital Subscriber Line service, based on the rationale that when upgrading legacy copper wire lines for both voice and data service the separate common carrier telecommunications component did not evaporate. However, after the Supreme Court affirmed the FCC’s determination that cable modem broadband access constituted an information service only, the Commission reclassified DSL as a single information service as well. See National Cable & Telecomm. Ass’n v. Brand X Internet Servc., 545 U.S. 967 (2005); Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd. 14853 (2005) \textit{petition for review denied} Time Warner Telecom, Inc. v. FCC, 507 F.3d 205 (3d Cir. 2007).
services. When the FCC grants a petition for discontinuance of common carrier services, pursuant to Sec. 214 of the Communications Act, it has to free the carrier of all, no longer applicable Title II common carrier responsibilities. Should the carrier replace the now discontinued service with something that provides a functional equivalent, e.g., VoIP, the FCC can neither reimpose explicit common carrier responsibilities, nor reinstate common carrier benefits, because it assumes mutual exclusivity between common carrier telecommunications services and private carrier information services.

A. The Information Service Deregulated Safe Harbor

21 “Although the Commission has not been entirely consistent on this point, we agree for the wireline broadband Internet access described in this Order with the past Commission pronouncements that the categories of ‘information service’ and ‘telecommunications service’ are mutually exclusive.” In re Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 FCC Rcd. 14,853, 14,862 n.32 (2005)[hereinafter cited as Wireline Broadband Reclassification Order].

22 “We conclude, as the Commission did in the Universal Service Order, that the categories of ‘telecommunications service’ and ‘information service’ in the 1996 Act are mutually exclusive. Reading the statute closely, with attention to the legislative history, we conclude that Congress intended these new terms to build upon frameworks established prior to the passage of the 1996 Act. Specifically, we find that Congress intended the categories of ‘telecommunications service’ and ‘information service’ to be mutually exclusive, like the definitions of ‘basic service’ and ‘enhanced service’ developed in our Computer II proceeding, and the definitions of ‘telecommunications’ and ‘information service’ developed in the Modification of Final Judgment that divested the Bell Operating Companies from AT&T. In re Federal-State Joint Board on Universal Service, Report to Congress, 13 FCC Rcd. 11,501, 11,507-08 (1998) (citations omitted).

23 A safe harbor constitutes “[a]n area or means of protection [or a] provision (as in a statute or regulation) that affords protection from telecommunications services and largely unregulated information services, ventures possibly can secure a competitive advantage through regulatory arbitrage where ventures seek reduced regulatory oversight by characterizing telecommunications services as information services. The FCC defined regulatory arbitrage as “businesses making decisions based on regulatory classifications rather than on customers’ preferences and innovative and sustainable business plans liability or penalty.” BLACK’S LAW DICTIONARY 1363 (8th ed. 2004). In light of the lack of a bright line distinction between regulated.” In re Inquiry Concerning High-Speed Access to the Internet over Cable and Other
When the FCC grants an incumbent carrier’s petition for discontinuance of PSTN services, it will free the carrier of having to provide telecommunications services on a common carrier basis. Going forward the carrier may want to continue offering telephone services, without common carrier responsibilities. The purest, legally consistent and intellectually honest way to continue participating in the voice communications marketplace would be for both the carrier and the FCC to acknowledge that the carrier will offer information services which cannot trigger common carrier responsibilities and significant FCC regulatory intervention.

Unfortunately the FCC has not operated in a consistent and transparent manner in terms of maintaining a regulatory dichotomy between information services and telecommunications services. The Commission has avoided the issue for most VoIP services by refusing to state for the record into which category they fit. The Commission has refrained from making such a clear cut decision, because it wants VoIP subscribers to contribute to universal service funding and VoIP carriers to incur aspects of common carrier responsibilities. The Commission also wants to avoid having to classify VoIP as an information service, because this classification all but eliminates any direct statutory authority for the Commission to regulate, even to intervene in


24 “To date, the Commission has not classified interconnected VoIP service as either an information service or a telecommunications service. The Commission has, however, extended certain obligations to providers of such service, including local number portability, 911 emergency calling capability, universal service contribution, CPNI protection, disability access and TRS contribution requirements, and section 214 discontinuance obligations.” Connect America Fund, WC Docket No. 10-90, A National Broadband Plan for Our Future, GN Docket No. 09-51, Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, FCC 11-13, 2011 WL 466775, ¶73 (rel. Feb. 9, 2011)(citations omitted).
inter-carrier disputes over interconnection, or instances where the Commission should act to protect subscribers from harm.

The FCC has imposed significant regulatory burdens on VoIP service providers. VoIP carriers that can receive or deliver calls to conventional wired and wireless networks must contribute to universal service funding programs designed to promote affordable dial up telephone service, \(^{25}\) make arrangements to support subscriber access to emergency 911 service, \(^{26}\) cooperate with law enforcement authorities, \(^{27}\) incorporate the technical accommodations for persons with disabilities, \(^{28}\) such as deaf callers, support the ability of existing subscribers to keep

\(^{25}\) In re Universal Service Contribution Methodology, Report and Order and Notice of Proposed Rulemaking 21 FCC Rcd. 7518, 7538 (2006) (extending section 254(d) permissive authority to require interconnected VoIP providers to contribute to the USF), reh’g denied, vacated in part on other grounds, Vonage Holding Corp. v. FCC, 489 F.3d 1232 (D.C. Cir. 2007).


their existing telephone numbers when switching services \(^{29}\) and report service outages to the Commission. \(^{30}\)

Bear in mind that many of these obligations impose significant costs on VoIP carriers, thereby reducing their ability to offer a cheaper alternative to existing wired and wireless services. VoIP arguably constitutes a type of information service, \(^{31}\) because users initiate and receive calls using software carried via broadband links that the FCC deems information services. However, the FCC has managed to avoid having to make that determination even as the Commission requires VoIP operators to incur the same obligations as Title-II-regulated common carrier telephone companies. \(^{32}\)


\(^{31}\) VoIP customers initiate and receive calls via their broadband links, e.g., DSL and cable modem services. The FCC considers broadband access an information service. In re Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities, Declaratory Ruling and Notice of Proposed Rulemaking)17 FCC Rcd. 4798, 4802 (2002), aff’d, Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs., 545 U.S. 967 (2005); Wireline Broadband Reclassification Order, supra n.21 It follows that software and other applications carried via information service links similarly qualify as information services.

\(^{32}\) FCC has managed to avoid making a specific regulatory classification of VoIP, despite having imposed Title II regulatory requirements: “To date, the Commission has not classified interconnected VoIP service as either an information service or a telecommunications service. The Commission has, however, extended certain obligations to providers of such service, including local number portability, 911 emergency calling capability, universal service contribution, CPNI protection, disability access and TRS contribution requirements, and section 214 discontinuance obligations.” In re Connect America Fund, Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking 26 FCC Rcd. 4554, 4582 (2011) (citations omitted).
The FCC can impose consumer-oriented safeguards on VoIP service providers based on a persuasive and well articulated assertion of ancillary jurisdiction that an appellate court can accept. Because VoIP competes with conventional wired and wireless services subject to Title II regulation, the Commission can impose the very same requirements on VoIP carriers despite the lack of specific Title II authority. The FCC justifies its regulation of VoIP services that interconnect with the PSTN primarily on grounds that the service constitutes the functional equivalent of Title II regulated telephone service and therefore the need for regulatory parity justifies selective regulation of VoIP using the flexibility provided by Title I ancillary jurisdiction.

Reviewing courts have affirmed the Commission’s jurisdiction as well as its preemption of the states from imposing a different regulatory regime, or none at all. But success in selectively regulating VoIP service does not extend to other information services, such as broadband Internet access, because a less-direct impact on a regulated service exists and also because of the FCC’s summary conclusion that all information services qualify for deregulation.

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33 The FCC justifies its regulation of VoIP services that interconnect with the PSTN primarily on grounds that the service constitutes the functional equivalent of Title II regulated telephone service and therefore the need for regulatory parity justifies selective regulation of VoIP using the flexibility provided by Title I ancillary jurisdiction: “Indeed, from the end-user perspective, these types of phone-to-phone IP telephony service providers seem virtually identical to traditional circuit-switched carriers.” Federal-State Joint Board on Universal Service, Report to Congress, 13 FCC Rcd. 11,501, 11,550 (1998).


35 See James Speta, A Common Carrier Approach To Internet Interconnection, 54 FED. COMM. L.J. 225 (2002)(linking regulatory obligations for new services to their similarity with an existing regulated service).
Notwithstanding its desire to avoid applying the information service classification to VoIP, the FCC initially wanted to confer that status on any carrier providing broadband access to the Internet. The Commission soon regretted having made such a broad sweeping determination, because it quickly learned that it subsequently lacked direct statutory authority to remedy clear instances of discriminatory and anticompetitive conduct by now unregulated broadband access providers, such as Comcast. The Commission failed to convince an appellate court that it had sufficient ancillary jurisdiction to sanction Comcast for meddling with the Internet traffic of subscribers without a compelling justification such as the need to manage its network. 36 Comcast deliberately prevented subscribers from sharing files of content, not because such sharing would trigger network congestion, 37 but arguably because Comcast might lose revenues in its video on demand delivery of similar or identical content. 38


37 “Although Comcast asserts that its conduct is necessary to ease network congestion, we conclude that the company’s discriminatory and arbitrary practice unduly squelches the dynamic benefits of an open and accessible Internet and does not constitute reasonable network management. Moreover, Comcast’s failure to disclose the company’s practice to its customers has compounded the harm.” Comcast Complaint, 23 FCC Rcd. at 13028.

38 “Peer-to-peer applications, including those relying on BitTorrent, have become a competitive threat to cable operators such as Comcast because Internet users have the opportunity to view high-quality video with BitTorrent that they might otherwise watch (and pay for) on cable television. Such video distribution poses a particular competitive threat to Comcast’s video-on-demand (“VOD”) service.” Id. at 13030.
The FCC lacked statutory authority to sanction Comcast, because previously the Commission had determined that the legislatively crafted information-service classification applies to Internet access provided via cable modems, DSL service, the electrical power grid and wireless networks. By declaring all forms of broadband Internet access to be information services, the Commission accrued short-term political dividends by showing restraint and favoring marketplace self-regulation. Based on its perceived need to make an either/or determination, the Commission opted for the less restrictive information-service classification based on the view that the telecommunications component needed to transmit bits

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39 Information service is defined as 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 any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service. Communications Act of 1934, 47 U.S.C. § 153(20) (2006).


41 Wireline Broadband Reclassification, 20 FCC Rcd. at 14,863.


44 Telecommunications is defined as “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.” 47 U.S.C. § 153(43) (2006).
and packets is so integrated with the content that the two become inseparable.^{45} By treating the telecommunications component as subordinate, the Commission could rationalize a semantic distinction between a carrier providing telecommunications, as a component to an information service, and one offering retail telecommunications services on a standalone basis.^{46} In opting to

To justify its decision to apply the information service classification to services that combine telecommunications transmission and content, the FCC insisted that the telecommunications component could not be singled out:

[W]e reject arguments that companies using their own facilities to provide wireline broadband Internet access service simultaneously provide a telecommunications service to their end user wireline broadband Internet access customers. The record demonstrates that end users of wireline broadband Internet access service receive and pay for a single, functionally integrated service, not two distinct services. This conclusion also is consistent with certain past Commission pronouncements that the categories of ‘information service’ and ‘telecommunications service’ are mutually exclusive. Moreover, the fact that the Commission has, up to now, required facilities-based providers of wireline broadband Internet access service to separate out a telecommunications transmission service and make that service available to competitors on a common carrier basis under the Computer Inquiry regime has no bearing on the nature of the service wireline broadband Internet access service providers offer their end user customers. We conclude now, based on the record before us, that wireline broadband Internet access service is, as discussed above, a functionally integrated, finished product, rather than both an information service and a telecommunications service. Wireline Broadband Classification Order, supra note 21, at 14,911 (citations omitted).

The Supreme Court accepted the FCC’s determination that cable modem Internet access constituted an information service:

Cable modem service is not itself and does not include an offering of telecommunications service to subscribers. We disagree with commenters that urge us to find a telecommunications service inherent in the provision of cable modem service. Consistent with the statutory definition of information service, cable modem service provides the capabilities described above “via telecommunications.” That telecommunications component is not, however, separable from the data-processing capabilities of the service. As provided to the end user the telecommunications is part and parcel of cable modem service and is integral to its other capabilities. In re Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd. 4798, 4823 (2002) aff’d in part and vacated in part, Brand X Internet Servs. v. F.C.C., 345 F.3d 1120 (9th Cir. 2003), rev’d and remanded, National Cable & Telecomms. Ass’n v. Brand X Internet Servs., 545 U.S. 967 (2005). See generally Rob Frieden, Neither Fish nor Fowl: New Strategies for Selective Regulation of Information Services, 6 J. TELECOM. & HIGH TECH. L. 373 (2008); Rob Frieden, What Do Pizza Delivery and Information Services Have in Common? Lessons From Recent
treat the telecommunications function as wholly integrated into an information service composite, the FCC could abandon conventional common carrier regulation required by Title II of the Communications Act as was applied to DSL service before its reclassification as an information service.

By avoiding the classification of VoIP and having failed to convince an appellate court that it had ancillary jurisdiction to remedy a subscriber access dispute with Comcast, the FCC has had to come up with ad hoc legal rationales for selective regulatory intervention. The FCC wrongly concluded that the broadband, Internet access marketplace was so competitive that no provider would try to engage in anticompetitive practices. In reality the broadband marketplace offers limited options to most U.S. consumers who have only two options providing both affordable rates and true broadband delivery speeds, viz., one cable modem service provider and one DSL service provider.


48 See Wireline Broadband Reclassification Order, supra n.21.

49 “Contrary to claims of those who feel the U.S. has “robust broadband competition,” it is clear that half of the states have a duopoly rather than true competitive markets. The only question for these states is how much of a market share the top two providers collectively command. In states such as Ohio and Nevada, where there is a 30+ percentage gap between the top two providers, some will argue this is a monopoly.

The other contention, that consumers and businesses have a wealth of options for providers (one industry executive estimated “everyone has at least four wireless carries, plus cable, satellite” etc.), also has flaws. This is perhaps true when taking in the nation as a whole, but when analyzed at the state and county levels which is where in reality the selection of possible providers actually exists, there are far fewer choices.

Even in the most competitive states, the bottom five competitors have 3% market share or less. These competitors are obviously not offering services throughout their states, so clearly any remaining providers are less than a competitive force. Furthermore, if others are adding dial up
Despite having lost the argument whether it lawfully could impose open access requirements on ISPs, the FCC issued a Report and Order that imposes such requirements now characterized as fundamental public-interest obligations including four principles established in a 2005 policy statement. The FCC requires ISPs to operate with transparency, nondiscrimination, and a commitment not to block lawful traffic, despite their status as private carriers offering information services. The Commission identified exceptions for reasonable service providers to their list of consumer choices, this is disingenuous distraction because consumers know dial-up is Internet access but it isn’t broadband.” Adam Elliott, and Craig Settles, THE STATE OF BROADBAND COMPETITION IN AMERICA – 2010 (April 22, 2010), available at: http://gigaom.files.wordpress.com/2010/04/pdf-broadband-competition-research-report-4-22-10-final.pdf.

Specifically, the FCC imposed rules on the providers of broadband Internet-access service, defined as a mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up Internet access service. This term also encompasses any service that the Commission finds to be providing a functional equivalent of the service described in the previous sentence, or that is used to evade the protections set forth in this Part. In re Preserving the Open Internet, 25 FCC Rcd. 17905, 17932(2010) [hereinafter cited as Open Internet Report and Order].


We adopt three basic rules that are grounded in broadly accepted Internet norms, as well as our own prior decisions:

i. Transparency. Fixed and mobile broadband providers must disclose the network management practices, performance characteristics, and terms and conditions of their broadband services;

ii. No blocking. Fixed broadband providers may not block lawful content, applications, services, or non-harmful devices; mobile broadband providers may not block lawful websites, or block applications that compete with their voice or video telephony services; and

iii. No unreasonable discrimination. Fixed broadband providers may not unreasonably discriminate in transmitting lawful network traffic. Open Internet Report and Order, 25 FCC Rcd. at 17906.
network management, specialized services, and wireless access. Notwithstanding its prior decision to apply the information-service classification that requires the FCC to eschew regulatory oversight, the Commission emphasized that the public interest duty to ensure an open Internet requires it to establish clear and certain rules applicable to both fixed, i.e., wireline and mobile, i.e., wireless, service.

Having faced instances where it saw the need to intervene and resolve complaints about unfair and anticompetitive practices of a major national ISP, the FCC presented compelling arguments to reimpose public interest safeguards. But in concluding that retail ISPs operate as information service providers, the Commission acted on the assumption that an ISP like Comcast

53 “A network management practice is reasonable if it is appropriate and tailored to achieving a legitimate network management purpose, taking into account the particular network architecture and technology of the broadband Internet access service.” Id. at 17,952 (differentiating between reasonable network management practices that could affect how subscribers access content and unreasonable discriminatory practices).

54 “[S]pecialized services,’ such as some broadband providers’ existing facilities-based VoIP and Internet Protocol-video offerings, differ from broadband Internet access service . . .” Id. at 17,965. “We will closely monitor the robustness and affordability of broadband Internet access services, with a particular focus on any signs that specialized services are in any way retarding the growth of or constricting capacity available for broadband Internet access service. We fully expect that broadband providers will increase capacity offered for broadband Internet access service if they expand network capacity to accommodate specialized services. We would be concerned if capacity for broadband Internet access service did not keep pace. We also expect broadband providers to disclose information about specialized services’ impact, if any, on last-mile capacity available for, and the performance of, broadband Internet access service. We may consider additional disclosure requirements in this area in our related proceeding regarding consumer transparency and disclosure.” Id. at 17,966.

55 Despite the likelihood that wireless network access will grow and perhaps become the primary way people access the Internet, the FCC established relaxed anti-blocking rules based on spectrum and operational limitations not applicable to wire-based networks. A person engaged in the provision of mobile broadband Internet access service, insofar as such person is so engaged, shall not block consumers from accessing lawful websites, subject to reasonable network management; nor shall such person block applications that compete with the provider’s voice or video telephony services, subject to reasonable network management. Id. at 17,959.
would never engage in such practices. The FCC no longer concludes that consumers could punish such self-serving conduct by migrating to alternative carriers promising not to interfere with customers’ broadband traffic. 56

B. Incumbent Carriers Obscure the Substantial Financial and Marketplace Benefits Available to Common Carriers

The upside benefits of incumbent carrier deregulation are well understood: with the reduction or elimination of government oversight, carriers have greater freedom to generate revenues and profits. Additionally carriers no longer have to incur costs that reduce revenues and prevent efficiency gains.

On the other hand, deregulated incumbents will incur new costs, or lose opportunities to avoid incurring costs as the FCC eliminates all or some of the benefits and preferences it has conferred over the years. Whether by statutory mandate, or on its own initiative, the FCC has lavished substantial privileges and entitlements to incumbent common carriers. These benefits translate into substantial additional revenues, cost and tax savings and insulation from

56 “[B]roadband is not being deployed in a reasonable and timely fashion to all Americans.” Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, Seventh Broadband Progress Report and Order on Reconsideration, GN Docket No. 10-159, 26 FCC Rcd. 8008, 8009 (2011)(reporting that 26 million residents, representing 9.2 million households living in 782,267 out of the 4.5 million census blocks, lack access to any broadband option). “Furthermore, notwithstanding the substantial benefits of broadband, approximately one-third of Americans do not subscribe to any form of high-speed Internet access service, citing barriers such as lack of affordability, lack of digital literacy, and a perception that the Internet is not relevant or useful to them. In addition, as many as 80 percent of E-rate funded schools and libraries say their broadband connections do not fully meet their needs. And the available international broadband data, though not perfectly comparable to U.S. data, suggest that the availability and deployment of broadband in the United States may lag behind a number of other developed countries in certain respects, although we also compare favorably to some developed countries in certain respects.” Id. at 8010.
competition. As common carriers, telecommunications service providers qualify for compulsory access to the facilities of other common carriers. The Telecommunications Act of 1996 specified the nature and scope of this obligation on all common carriers, with additional requirements imposed on local exchange carriers, formerly affiliated with AT&T. 57

Incumbent local exchange carriers have received most of the financial subsidies earmarked for achieving universal service goals. 58 While the FCC strives to reform and revise

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57  Bell Operating Company Entry Into InterLATA Services. 47 U.S.C. § 271 (2010) (This section contains a fourteen-point checklist to which BOCs must adhere before being allowed into the interLATA long distance telephone service markets. See id. § 153. The 14 point competitive checklist requires the Bell Operating Companies to provide: 1) full and fair interconnection with competitive local exchange carriers in accordance with the requirements of sections 251(c)(2) and 252(d)(1); 2) nondiscriminatory and “à la carte” access to network elements in accordance with the requirements of sections 251(c)(3) and 252(d)(1); 3) nondiscriminatory access to the poles, ducts, conduits, and rights-of-way owned or controlled by the Bell Operating Company at just and reasonable rates in accordance with the requirements of section 224; 4) local loop transmission from the central office to a customer’s premises, unbundled from local switching or other services; 5) local transport from the trunk side of a wire line local exchange carrier’s switch unbundled from switching or other services; 6) local switching unbundled from transport, local loop transmission, or other services; 7) nondiscriminatory access to 911 emergency services, directory assistance services to allow the other carriers’ customers to obtain telephone numbers and operator call completion services; 8) white pages directory listings for customers of other carriers’ telephone exchange services; 9) nondiscriminatory access to telephone numbers for assignment to the other carriers’ telephone exchange service customers, nondiscriminatory access to databases and associated signaling necessary for call routing and completion; 10) nondiscriminatory access to databases and associated signaling necessary for call routing and completion; 11) number portability, i.e., the ability of a former BOC customer to retain use of a preexisting telephone number after having subscribed to telephone service from another carrier; 12) nondiscriminatory access to such services or information as are necessary to allow requesting carriers to implement local dialing parity in accordance with the requirements of section 251(b)(3), i.e., the same number of digits dialed for either BOC or alternative service; 13) reciprocal compensation; and 14) resale Id. § 271(c)(2)(B)); see also, Federal Communications Commission, Telecommunications Act of 1996, Section 271 Long Distance Application, Summary of 14 Point Competitive Checklist, available at: http://transition.fcc.gov/Bureaus/Common_Carrier/News_Releases/1999/nrc9101b.html.

58  In response to a Congressional query the FCC disclosed the top recipients of the Universal Service Fund subsidy for high cost service areas from 2008 to 2010:
the universal service mission, the Commission has relied on incumbent carriers to help shape policy, and identify the cost of providing service. Similarly incumbent carriers have benefitted from priority access to rights of way and sites for transmission towers in terms of their early to market, “first mover” advantage, their status as the equivalent to a public utility with the right of eminent domain and the preferences available to them in the Telecommunications Act of 1996.


60 “Many [local governments] . . . have recognized that communications are a beneficial service and crucial for economic development, and, thus, they have allowed carriers to occupy the [public rights of way] . . . in return for one-time permit charges or similar fees that are limited to recovering the cost of PROW management and maintenance.” Thomas W. Snyder and William Fitzsimmons, Putting a Price on Dirt: The Need for Better-Defined Limits on Government Fees for use of the Public Right-of-Way Under Section 253 of the Telecommunications Act of 1996, 64 FED. COMM. L.J. at 139. As more and more local government units perceived rights of way grants as a source for recurring revenues, the financial burden has increased for carriers, particularly for later market entrants who have fewer if any rights of way granted for free, or for only a onetime fee. While incumbent carriers have had to provide access to their rights of way to later market entrants, arguably incumbents have incurred a lower total financial burden in light of the likelihood that these type carriers have a greater percentage of rights of way grants received for free or upon payment of a onetime fees than the financial burden incurred by later market entrants.
Congress has conferred substantial tax benefits to incumbent carriers particularly in terms of accelerated depreciation of investment in physical plant. Incumbent carriers serve as the dominant players in advising the FCC on proposed changes in rules and in standard setting, including the administration of telephone numbers. More broadly incumbent carriers help the FCC frame law, policy and regulation. When they do not like how the FCC has acted, incumbent carriers readily litigate the matter and have deep pockets to retain experts whose sponsored research supports the incumbent carriers’ reasoning.  

Incumbent carriers also can accrue operational and financial benefits, such as economies

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of scale and scope, through vertical and horizontal integration and by leveraging sunk investments in plant that can accruethe universal service subsidies and tax credits. Lax merger review and antitrust enforcement support the accrual of market power. While obligated to

62 Economies of scale refer to the ability of a single firm to offer goods and services at the lowest cost by increasing its size. “[A]n increase in inputs leads to a proportionally greater increase in outputs (for example, a doubling of inputs would lead to more than a doubling of outputs).” Kevin G. Wilson, *Deregulating Telecommunications and the Problem of Natural Monopoly; A Critique of Economics in Telecommunications Policy*, 14 MEDIA CULTURE & SOC. 343, 345 (1992). “Scale economies refer to lower average costs from producing a larger quantity of output. A more technical definition is that economies of scale exist at a particular range of output when the long run average total cost decreases as output expands. Scale economies can be a barrier to entry if entrants are likely to acquire fewer customers and sell less output than the incumbent, and the resulting higher average cost for the entrants makes it difficult for them to compete with the incumbent, particularly if retail prices are close to the incumbent’s average cost.” Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd. 16978, 17028, n.245 (2003) (citations omitted), *Judgment Vacated in Part, Review Dismissed in Part*, U.S. Telecom Ass’n v. F.C.C., 359 F.3d 554 (D.C. Cir. 2004), on recon., 19 FCC Rcd. 15,856, on further recon., 19 FCC Rcd., 20,293 (2004).

63 “Economies of scope exist when one firm can produce two or more products at a lower total cost than if each product were produced separately by different firms. Scope economies can be a barrier to entry if entrants are unable to produce and sell all of the products the incumbent produces, and the resulting higher cost makes it unprofitable to enter the market.” *Id.* 18 FCC Rcd, 16978, 17029, n.246.

64 With rare exception, the FCC grants, with conditions, the mergers and acquisitions presented to it for approval. For example, the FCC reports that in the wireless mobile radio service marketplace AT&T and Verizon that now control over 60% of the total market with four national carriers controlling over 91% of the market. Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, Fourteenth Report, WT Docket No. 09-66, FCC 10-81, Table 3, Chart 1 at p. 31 (2010). In a rare exception to its record of approving mergers, the FCC rejected AT&T’s proposed acquisition of T-Mobile, because an already highly concentrated market would risk becoming dominated by and AT&T-Verizon duopoly. *See Applications of AT&T Inc. and Deutsche Telekom Ag for Consent to Assign or Transfer Control of Licenses and Authorizations, DA 11-1955 (order) (Nov. 29, 2011)(finding that it would not serve the public interest for AT&T to acquire T-Mobile’s 14% market share resulting in a boost of AT&T’s share to over 40% which combined with Verizon’s share would result in two companies controlling over 80% of the market).
compete for radio spectrum in recent years, incumbent carriers previously benefitted by having free spectrum authorized by the FCC. For example, the FCC created a wireline carrier radio spectrum “set aside” for incumbent carriers 65 thereby expediting their early market entry in the mobile telephone service market while other applicants had to compete for spectrum in costly and time consuming comparative hearings.

C. Incumbent Carriers Will Strive to Retain Upside Benefits

Having qualified for the elimination of common carrier status, incumbent carriers nevertheless will insist that they continue to qualify for all or some common carrier benefits. Without having to abandon their information service, private carrier status, incumbent carriers probably will suggest the need for an extensive transition to deregulation obligating the FCC to come up with a strategy that retains public interest safeguards by offering former common carrier benefits to ventures that volunteer to continue serving as the carrier of last resort. However, the FCC will lack direct statutory authority to enforce safeguards and possibly even to monitor and remedy flaws in an incumbent carrier’s voluntary service commitment. One can anticipate ongoing and possibly frequent disputes about the scope of a carrier’s public interest commitments as well as the ability of an unregulated marketplace to ensure ubiquitous access to PSTN alternative services through voluntary interconnection agreements.

65 “[W]e affirm the concept of a separate allocation for wireline carriers. We remain convinced that a separate allocation constitutes the most practical, and quite possibly the only, way to achieve the Commission’s twin goals of making quality mobile telephone service available to the public as rapidly as possible while promoting competition whenever feasible.” In re An Inquiry Into the Use of the Bands 825–845 MHz and 870–890 MHz for Cellular Communications Systems; and Amendment of Parts 2 and 22 of the Commission’s Rules Relative to Cellular Communications Systems, Memorandum Opinion and Order on Reconsideration, 89 F.C.C.2d 58, 70 (1982).
III. Risks That an Unregulated Information Service Marketplace Will Not Ensure Ubiquitous Access and Voluntary Interconnection

Whether classified as VoIP or a pure information service, incumbent carrier replacement voice telephone service will not trigger mandatory rights of interconnection. Perhaps the shared interest in network interconnection will promote ubiquitous subscriber access absent a mandate to do so. Voluntary interconnections in the Internet cloud provide such access, with only the occasional controversy and risk of disconnection. However ISP interconnection disputes appear to have increased and one cannot dismiss the potential for more disputes, particularly as the Internet matures and diversifies. Two recent interconnection disputes provide examples of how carriers have increased incentives to use interconnection and facilities access as leverage for extracting possibly anticompetitive and discriminatory terms.

A. The Level 3-Comcast Dispute

In late 2010 Comcast sought to impose a surcharge on traffic volumes generated by Level 3 in light of a significant increase in downstream traffic generated by Level 3 after having secured the opportunity to serve as the primary carrier for delivering Netflix full motion video content to subscribers. While Level 3 agreed to pay the surcharge, the company sought regulatory relief at the FCC. Level 3 also launched a public relations campaign to frame the

66 The Internet cloud refers to the vast array of interconnected networks that make up the Internet and provide users with seamless connectivity to these networks and the content available via these networks. “The increasing functionality of the Internet is decreasing the role of the personal computer. This shift is being led by the growth of “cloud computing”–the ability to run applications and store data on a service provider's computers over the Internet, rather than on a person's desktop computer.” William Jeremy Robison, Free at What Cost?: Cloud Computing Privacy Under The Stored Communications Act, 98 GEO. L.J. 1195, 1199 (April, 2010).

67 See Level 3 Communications Issues Statement Concerning Comcast’s Actions, BUSINESSWIRE (Nov. 29, 2010, 4:38 PM), http://www.businesswire.com/news/home/20101129006456/en/Level-3-Communications-Issues-
dispute in terms of Comcast imposing a “toll booth” on the Internet and singling out Level 3 and Netflix traffic for a surcharge to raise the cost of a major alternative to Comcast’s pay per view movie services. 68 Comcast responded with an equally forceful campaign to explain that the dispute simply addressed a commercial interconnection (“peering”) matter. 69 Comcast claimed that Level 3’s increased traffic triggered the right to demand more compensation in light of the higher volume of traffic Comcast delivered to its subscribers. 70


68 “By taking this action, Comcast is effectively putting up a toll booth at the borders of its broadband Internet access network, enabling it to unilaterally decide how much to charge for content which competes with its own cable TV and Xfinity delivered content.” Level 3, Press Release, Level 3 Communications Issues Statement Concerning Comcast’s Actions (Nov. 29, 2010); available at: http://www.level3.com/About-Us/Newsroom/Press-Release-Archive/2010/2010-11-29-level3-statement-comcast.aspx.


70 “Comcast has long established and mutually acceptable commercial arrangements with Level 3’s Content Delivery Network (CDN) competitors in delivering the same types of traffic to our customers. Comcast offered Level 3 the same terms it offers to Level 3’s CDN competitors for the same traffic. But Level 3 is trying to gain an unfair business advantage over its CDN competitors by claiming it’s entitled to be treated differently and trying to force Comcast to give Level 3 unlimited and highly imbalanced traffic and shift all the cost onto Comcast and its customers.” Comcast Corp, Comcast Voices Blog Site (Nov. 29, 2010); available at: http://blog.comcast.com/2010/11/comcast-comments-on-level-3.html.
This dispute provides a high profile example of how a compensation disagreement in one traffic routing segment can impact all other segments that combine to provide a complete link from content source to end users. Comcast correctly stated that Level 3 and it had executed a peering agreement for reciprocal and zero cost treatment of traffic, provided the flows remain nearly symmetrical. Because Level 3 now generates more traffic for Comcast to deliver than it receives from Comcast, the typical peering agreement would require Level 3 to compensate Comcast if the traffic flows cannot return to near parity. Unless the parties can find a way for Level 3 to receive more traffic from Comcast, Level 3 contractually bears a financial obligation to compensate Comcast.

“Relationships between network providers typically fell into two categories. Tier-1 ISPs entered into peering relationships with one another, in which they exchanged traffic on a settlement-free basis and no money changed hands. The primary justification for foregoing payment is transaction costs. Although the backbones could meter and bill each other for the traffic they exchanged, they could avoid the cost of doing so without suffering any economic harm so long as the traffic they exchanged was roughly symmetrical. Such arrangements would not be economical with when the traffic being exchanged by the two networks was severely imbalanced. Thus tier-1 ISPs will not peer with other networks that are unable to maintain a minimum level of traffic volume. In addition, peering partners typically require that inbound and outbound traffic not exceed a certain ratio. Networks that cannot meet these requirements must enter into transit arrangements in which they pay the backbone to provide connectivity to the rest of the Internet. Yoo, Internet Innovations, Christopher S. Yoo, Innovations in the Internet’s Architecture that Challenge the Status Quo, 8 J. TELECOMM. & HIGH TECH. L. 79, 84 (Winter, 2010)(outlining new ISP interconnection variations of peering and transiting).

“Currently, agreements for the exchange of Internet traffic are unregulated and left solely to commercial negotiation between Internet backbone providers. Agreements for the exchange of traffic between operators are called ‘peering agreements’ and depending on the balance of traffic, it may be either free or paid. Other arrangements provide that one network will carry traffic without exchanging traffic on that network link. This will involve payment, and such service is called ‘transit.’” Daniel L. Brenner and Winston Maxwell, The Network Neutrality and the Netflix Dispute: Upcoming Challenges for Content Providers in Europe and the United States, 23 INTELL. PROP. & TECH. L.J. 3, 5 (March 2011).
On the other hand, Level 3 correctly states that the peering agreement it has negotiated with Comcast cannot be examined in a vacuum, because this agreement covers only one component of a complete routing arrangement that involves more carriers, routing segments and opportunities for Comcast to generate revenues. Comcast generates hefty profits from its retail cable modem service subscriptions 73 that offer access to Internet content without reserving the option to block, degrade or conditionally deliver traffic only if the content source, or a downstream carrier, agree to pay a surcharge. In other words, Comcast’s unilateral actions to demand additional payment from an upstream peer may impact whether the company continues to satisfy all explicit or implicit service commitments established when Comcast contracts with retail subscribers to provide access to and from the Internet cloud. Surely Comcast’s subscribers would not accept the premise that they only have a conditional right to receive timely delivery of Netflix streaming movie bits, if and only if an upstream carrier of those bits agrees to pay additional compensation to Comcast when traffic streams become unbalanced.

What the Level 3-Comcast dispute addresses and which carrier makes the more persuasive argument depends on the geographical scope of analysis. If one solely examines the link between Level 3 and Comcast, then the matter looks like a peering dispute. Also if one interprets the subscription agreement between Comcast and retail subscribers as solely addressing the first and last links to the Internet cloud, then the matter does not necessarily factor in what subscribers expect their monthly Internet access payments to cover. But if the dispute

examines both sides of the traffic Comcast handles, then the matter integrates both what Comcast can properly demand from upstream sources of traffic and what the company must do with that traffic to meet its service commitments to downstream retail subscribers.

The emphasis on a regulatory dichotomy between telecommunications and information services prevents the FCC from having a direct statutory mandate to resolve interconnection disputes of Internet-based carriers, including ISPs and VoIP service providers:

The Comcast-Level 3 dispute thus highlights the sorts of questions the FCC would have to ask to develop appropriate policies for a converged broadband environment. The problem is not that these questions are challenging, but that they are not even on the table. Eight years or more of intensive debate about network neutrality at the FCC have not even touched the proper treatment of network-to-network relationships in the Internet backbone. Perhaps the FCC investigation of the dispute will spur a new effort to expand the scope of the open Internet proceeding, but that seems unlikely. The FCC has treated regulation of data networking as the exception, rather than the rule, for so long that it has become almost impossible for the agency to shift gears.  

B. The Cablevision-Fox Dispute

At first impression one might not see any link between the Level 3-Comcast dispute and the one involving Cablevision and Fox. The latter began as a financial dispute over the level of compensation Cablevision should pay Fox for the right to deliver Fox’s broadcast television content to Cablevision’s cable television subscribers in New York. This retransmission dispute added an Internet access element when Fox used techniques to identify traffic generated

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by Cablevision subscribers in the form of an upstream request for Fox content via the Hulu content aggregation web site. When Hulu forwarded to Fox the request to download Fox broadcast television content, Fox used techniques to identify content specific downloading requests initiated by Cablevision subscribers. Rather than process the content request forwarded to it by Hulu, Fox refused to deliver the content and instead sent a notification to the Cablevision broadband subscriber explaining the reason for denied access.

Cablevision subscribers, including ones only paying for Internet access, received a notification stating that because Cablevision currently had lost the right to retransmit Fox broadcast signals, Cablevision subscribers likewise lost the option to download portions of Fox broadcast content otherwise available to anyone else with a broadband connection to Hulu. Fox blocked traffic flows not at the last mile linking retail ISP and end user, but far upstream at the source. The company sought to maximize its negotiating leverage with Cablevision on the broadcast television carriage matter, by denying Cablevision subscribers the option of receiving portions of the now blocked content via an alternative method.

Fox and Comcast both resorted to tactics designed to enhance their negotiating leverage with a partner in the carriage of Internet delivered content. In the process, end users were denied access to something they believe they were entitled to receive, particularly in light of the fact that they continued to pay for the privilege through subscription fees for Internet access and cable television subscription fees during the dispute. In both instances one commercial venture could exploit a content bottleneck to deny access, either by blocking a request for a video file stored on a server the company controls, or by refusing to deliver that file to paying retail subscribers. Regardless of the merits in their disputes with a traffic routing partner both Comcast and Fox evidence an incentive and technical ability to distort, block and manipulate traffic flows to serve
strategic goals. In both instances consumers are denied access to content as negotiating leverage to resolve a financial dispute in one company’s favor. Likewise in both instances the FCC appears to lack statutory authority to craft a remedy.

C. Questionable Jurisdiction for the FCC to Mandate Interconnection Solutions

The interconnection disputes summarized above provide examples where high stakes and perceived marketplace advantages create incentives for ventures not to cooperate even when interconnection generates revenues and enhances the overall welfare of both the disputing parties and consumers. In the Level 3-Comcast dispute the FCC surely cannot assume it has direct or even indirect statutory authority if the two disputing parties both qualify as information service providers. In the Fox-Cablevision dispute, the FCC can identify a direct statutory link to regulate cable television operators, but on this particular matter Congress directed the Commission to eschew involvement and to rely on the ventures’ shared commercial interests to achieve a mutually acceptable content carriage agreement.76

The arguments against FCC regulation emphasize the assumption that any Internet access service wherever situated constitutes an information service. Additionally the FCC prefers to refrain from intervening in Internet disputes, and the D.C. Circuit Court of Appeals confirmed that the Commission lacks direct statutory authority and cannot stretch ancillary authority even

76 “We do not believe that the Commission has authority to adopt either interim carriage mechanisms or mandatory binding dispute resolution procedures applicable to retransmission consent negotiations.” Amendment of the Commission’s Rules Related to Retransmission Consent, MB Docket No. 10-71, Notice of Proposed Rulemaking, 26 FCC Rcd. 2718, 2728 (2011).
to remedy anticompetitive practices of ISPs. The global application of the information service classification surely would make legally questionable just about any FCC attempt to regulate the Internet, regardless of noble intentions.

Stopping the FCC from intervening requires confirmation that no telecommunications service element exists for any of the links between end users and their retail ISP, between the retail ISP and other upstream ISPs, and between retail ISPs and ventures that lease telecommunications lines used for both Internet traffic and other types of traffic. The FCC recognizes that telecommunications—as opposed to telecommunications services—does constitute a component in the delivery of Internet traffic. However the Commission considers the telecommunications aspects of Internet access to end users as so integrated with information services as to become subordinate and unseverable.

Notwithstanding its prior determination that created an absolute dichotomy between telecommunications and information services, the FCC subsequently has sought to find ways to blur the categories. After its rebuke from the D.C. Circuit Court of Appeals in the Comcast case, the FCC reconsidered the regulatory classification of the “Broadband Internet Access Transmission Component,” i.e., the telecommunications elements heretofore deemed to be

677 Comcast Corp. v. F.C.C., 600 F.3d 642 (D.C. Cir. 2010)(holding that the FCC lacked statutory authority to sanction Comcast for meddling with subscriber traffic in ways that could competitively favor Comcast services).


79 Wireline Broadband Classification Order, 20 FCC Rcd. at 14909.
integrated within an information service. The Commission directed its attention to the first
broadband link from retail subscriber to an ISP.

The FCC has renewed its efforts to find a direct statutory basis for limited regulatory
intervention should the operators of the telecommunications segment of an information service
engage in anticompetitive practices. The Commission again may fail to uncover the needed
statutory authority. If it were to fail again then arguably the information service classification
should apply—if it does not already--throughout the Internet cloud, including links upstream
from the retail ISP serving end users. Because the Commission explicitly decided not to use its
ancillary jurisdiction to impose regulatory safeguards in the Wireline Internet Access Report and
Order, direct statutory authority to regulate would occur if and only if an ISP or carrier providing
telecommunications lines to an ISP opted to designate some or all of its offerings as a
telecommunications service. In other words, the basis for FCC regulatory intervention would
exist only if one or more carriers “voluntarily undertakes to provide . . . a telecommunications
service,” 80 because the Commission expressly declined to compel “the offering of a
telecommunications service to ISPs.” 81

ISPs have managed to achieve global connectivity through commercial peering and
transit arrangements free of government intrusion. With rare exception, ISPs voluntarily have
entered into these interconnection arrangements and have managed to resolve disputes without
government intervention and with only rare instances of service disruptions. In light of

80 Id. 20 FCC Rcd. at 14910.
81 Id.
apparently effective industry self-regulation, the FCC wisely has shown restraint when addressing claims of Internet market failure.

ISPs have demonstrated the ability to resolve disputes without the need for government intervention, in part because ample alternative routing opportunities exist upstream from the retail ISP. Because the Level 3-Comcast and Cablevision-Fox disputes address routing elements upstream from the retail ISP, traffic routing irregularities are not exacerbated by the lack of alternative routing options. Actual or threatened traffic blockage results from the lack of competition downstream at the retail ISP level, or by the fact that blockage occurred as a result of actions taken by a content source and not any ISP participating in the routing of such content downstream.

Narrowing the focus of the Level 3-Comcast dispute solely to the transmission link between the two carriers, one can assert that a predictable event has triggered the need for a commercial adjustment to a preexisting contract. A significant increase in downstream traffic, not offset by a commensurate increase in upstream traffic results in an imbalance of traffic. When traffic streams become asymmetrical in a peering agreement the carrier generating more traffic bears financial responsibility to compensate the carrier now handling the higher traffic volume. Comcast’s imposition of a financial surcharge appears to be a reasonable and nondiscriminatory response to changed circumstances. Had the routing imbalance occurred the other way, with Comcast generating more traffic than it receives from Level 3, Comcast would have incurred a higher financial burden.

The likelihood of asymmetrical traffic flows between carriers otherwise interested in serving as peers has promoted the parties to negotiate a variation of the peering model. Paid peering involves an arrangement between two ISPs that handle traffic in both directions, but
expect a traffic imbalance. If an ISP’s business plan focuses on becoming a Content Distribution Network (“CDN”) for the delivery of streaming video to end users, that type of ISP is certain to generate more downstream traffic than it will receive upstream. CDNs do not balk at the obligation of compensating ISPs that deliver traffic downstream.

Level 3’s agreement to handle Netflix downstream traffic triggered the traffic imbalance. Level 3 presumably negotiated an agreement that compensates the carrier for the predictable payments it would have to make when its now higher downstream traffic volume results in an imbalance. When Netflix opts to send movie compact disks via conventional postal mail, the company surely expects to compensate the postal service. So too should Netflix and its Internet carrier bear the financial obligation to compensate participating carriers downstream.

On the other hand, it would not take great imagination or creativity to come up with a scenario where an interconnection dispute becomes protracted and harmful to consumers. Video content sources, like Fox, may deliberately stall retransmission consent negotiations particularly if consumers cannot access an upcoming “must see” television event. ISPs affiliated with content sources, e.g., Comcast, might act on their ability and incentive to degrade the traffic of competitors, e.g., Netflix, to tilt the competitive playing field in favor of alternatives provided by an ISP corporate affiliate. Worse yet, when such service degradation occurs consumers cannot easily determine the cause and might blame the content source for the deliberate harm cause by the retail ISP.

IV. Conclusions

It does not appear that the FCC can carve out a standalone telecommunications service element from previously classified information services used to provide broadband Internet access. Even if the Commission could do so, it also would have to refute assertions that
continued commercial negotiations eventually would resolve interconnection disputes between
Internet-based information service providers. The unlikely success in FCC reclassification and
the likelihood of marketplace remedies work against the imposition of common carrier burdens
on information service providers as well as the conferral of common carrier benefits.

Carriers that seek authority to discontinue PSTN service abandon both the costs and
benefits of common carrier-delivered telecommunications services. Should these carriers
provide substitutes, via broadband links, the information service classification should apply.
Even if these services constituted VoIP, the FCC could not resurrect common carriage status and
the commensurate benefits and burdens that apply.

The FCC has learned the hard way that once having attributed the information service
classification to a type of service, it may not readily change the classification, particularly if the
reclassification imposes greater regulatory burdens and expands the Commission’s jurisdiction.
Even if the FCC avoided the telecommunications service/information service dichotomy—as it
has done for VoIP—it could not easily justify returning common carrier benefits to ventures that
sought the complete elimination of common carrier responsibilities.

Accordingly the FCC will face another instance where having abandoned jurisdiction,
whether based on statutory interpretation or an assessment of current and future marketplace
conditions, it cannot readily correct any miscalculation. Unless the unregulated PSTN-substitute
marketplace evidences existing and sustainable future competition, the FCC may find that a
flawed marketplace would benefit from surgical intervention that the Commission cannot
undertake.

The potential exists for carriers to test just how far they can exploit their deregulated
status. Rather than curb such behavior with appropriate sanctions the FCC could end up creating
incentives for more aggressive and potentially anticompetitive behavior based on its inability to act. Under the certainty of the FCC’s inability to act carriers having the incentive and ability to pursue strategies that would trigger sanctions had they remained common carriers. An ISP like Comcast might continually reassess whether it should interconnect with other ISPs and what terms and conditions should apply. While such reassessment might represent timely and appropriate responses to changes in traffic volume and market penetration they might just as easily represent increasingly aggressive tactics to test just how far a venture can act without triggering litigation or scrutiny by agencies other than the FCC.

Under a deregulatory safe harbor, created by their status as information service providers, ISPs may dismantle some of the interconnections and billing arrangements that applied in the telecommunications marketplace. While a migration to Internet-based charging and interconnection models could be appropriate, the potential exists for such a migration to trigger less success in achieving longstanding universal service and public interest goals including strategies to foster parity of access opportunities and cost of service between rural and urban residents and to prevent fragmentation of networks. 82 If incumbent carriers do not have an

82 Section 254 of the Telecommunications Act of 1996, 47 U.S.C. 254 (2010) requires the FCC and representatives of state public utility commissions to promote the following universal service goals: (1) Quality services should be available at just, reasonable, and affordable rates; (2) Access to advanced telecommunications and information services should be provided in all regions of the Nation; (3) Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas; (4) All providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service; (5) There should be specific, predictable, and sufficient Federal and State mechanisms to preserve and advance universal service; and (6) Elementary and secondary schools and classrooms, healthcare providers, and libraries should have access to advanced telecommunications services.
ongoing opportunity to tap into universal service subsidies, then they likely will abandon voluntary efforts that adversely impact their profitability.

Dismissing voice telephone service as nothing more than a software application presupposes that consumers have readily available and affordable opportunities to access broadband networks used to provide VoIP and other substitutes to PSTN services. If even rural residents have ample opportunities to choose from a number of competing wireline and wireless broadband providers, then network balkanization and disconnections probably will not occur, or will not harm consumers if they arise. However any miscalculation in the scope of broadband competition and its sustainability may result in a reduction in progress toward longstanding public interest service goals. A grand endorsement of marketplace resource allocation can become a costly and harmful confirmation that not all telecommunications markets can self-regulate simply because the service travels via the Internet.