

**RATIONALES FOR AND AGAINST REGULATORY INVOLVEMENT IN
RESOLVING INTERNET INTERCONNECTION DISPUTES**

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ABSTRACT

This Article will examine the terms and conditions under which Internet Service Providers (“ISPs”) switch and route traffic for each of several links between a source of content and consumers. The Article concludes that the Federal Communications Commission (“FCC”) may lack direct statutory authority even to resolve disputes based on its determination that Internet access constitutes an unregulated information service. Additionally the FCC may appropriately forebear from regulating, because sufficient competition favors industry self-regulation.

Despite substantial reasons not to intervene, the FCC nevertheless might have to clarify its understanding of what subscribers of retail ISP services can expect to receive. Under truth in billing and other consumer safeguards the Commission might require ISPs to explain what an Internet subscription guarantees not only in terms of transmission speed and downloading capacity, but also what subscribers can expect their ISPs to do when receiving content requiring downstream termination.

The Article concludes that both customers of content services, such as Netflix, and retail ISP subscribers expect their service providers to guarantee delivery of movies and all sorts of Internet traffic respectively. For physical delivery of DVDs Netflix must pay the U.S. Postal Service and for delivery of streaming bits Netflix must pay one or more ISPs. But for Internet traffic involving two or more ISPs, the Article examines whether other retail ISPs providing last mile delivery of content violate their service commitments to subscribers by demanding additional payment from upstream carriers.

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INTRODUCTION

Internet Service Providers (ISPs) provide end users with access to and from the Internet cloud.¹ In addition to providing the first and last mile carriage of traffic,² ISPs secure upstream access to sources of content via lines leased from telecommunications service providers and also via other ISPs typically on a paid (transit), or barter (peering)³ basis. Because a single ISP typically operates in two separate segments of traffic routing, downstream to subscribers and upstream to other carriers, the terms and conditions of network interconnection and the degree of marketplace competition can vary greatly. In this two-sided market,⁴ ISPs

¹ 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. See William Jeremy Robison, *Free at What Cost?: Cloud Computing Privacy Under The Stored Communications Act*, 98 GEO. L.J. 1195, 1199 (2010) (“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.”).

² The first and last mile refers to the link, of any length, provided by a retail ISP to subscribers so they can download and receive content from the Internet cloud and also upload content and instructions. “Telephone and Internet traffic are often carried over the same physical wires and cables—they are simply encoded using different operational protocols. In the classical North American Internet access model of the 1990s, the humble copper loop PSTN line was the predominant type of ‘first mile’ physical layer link connecting the user with the Internet. Craig McTaggart, *A Layered Approach to Internet Legal Analysis*, 48 MCGILL L.J. 571, 583 (2003).

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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 & 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 (2011).

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Informally, a two-sided market can be thought of as a meeting place that brings together two distinct user groups, each of which benefits from the presence of the other. Examples include auctions, credit cards, dating bars, newspapers, video game consoles, and the Yellow Pages. No car auction would be possible without the presence of buyers willing to purchase

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typically have many transit and peering opportunities upstream to content providers, but downstream the ISP may face limited competition from other ventures providing so-called first- and last-mile broadband Internet access. Regardless of the scope of retail Internet access competition, consumers usually select only one ISP to handle all traffic requirements.⁵

The variability of competitiveness in the market for upstream and downstream Internet access has motivated some stakeholders to claim that national regulatory authorities, such as the Federal Communications Commission (FCC),⁶ should intervene to remedy market failures and existing or potential anticompetitive practices. The so-called Network Neutrality⁷ debate has focused largely on the potential for ISPs serving end users to favor affiliates in the delivery of content to subscribers, or

and sellers willing to sell vehicles; thus, auctioneers must set their commissions to make sure there are a sufficient numbers of buyers and sellers at a given auction. In the case of heterosexual “singles” bars, bar owners must attract both men and women and often set different prices for men and women to attract each gender in the desired proportions. Newspapers derive their revenues from both subscribers and advertisers; thus, the prices that newspapers set for subscribers and the prices they set for advertising space must be calibrated due to the fact that advertisers’ willingness to pay will be determined by subscriber-ship.

Dennis L. Weisman and Robert B. Kulick, *Price Discrimination, Two-Sided Markets, and Net Neutrality Regulation*, 13 TUL. J. TECH. & INTELL. PROP. 81, 87-88 (2010); see also Marc Rysman, *The Economics of Two-Sided Markets*, 25 J. ECON. PERSP. 125, 125 (2009).

⁵ *In re* Preserving the Open Internet, 25 F.C.C.R. 17,905, 17,919 (released Dec. 23, 2010) [hereinafter Open Internet Report and Order] (“A broadband provider could force edge providers to pay inefficiently high fees because that broadband provider is typically an edge provider’s only option for reaching a particular end user. Thus broadband providers have the ability to act as gatekeepers.”).

⁶ While the debate over the need for regulatory intervention began in the United States, many nations now consider this issue. See, e.g., Network Neutrality: Challenges and Responses in the E.U. and the U.S., EUR. PARL. DOC. (COM IP/A/IMCO/ST/2011-02) (May, 2011), <http://www.europarl.europa.eu/document/activities/cont/201108/20110825ATT25266/20110825ATT25266EN.pdf>; see also Toshiya Jitsuzumi, *Discussion on Network Neutrality: Japan’s Perspective*, 3 COMM. & CONVERG. REV. 71-89 (2011).

⁷ Network neutrality refers to the imposition of nondiscrimination, transparency and other requirements on ISPs designed to foster a level competitive playing field among content providers and to establish consumer safeguards so that Internet users have unrestricted access limited only by legitimate concerns such as ISP network management and national security. See Rob Frieden, *A Primer on Network Neutrality*, 43 INTERECONOMICS: REV. EUR ECON. POL’Y 4, 4-5 (Jan./Feb. 2008).

to offer priority content delivery to any content provider, subscriber, or both willing to pay a surcharge.⁸

The Network Neutrality debate primarily addresses the potential for anticompetitive practices to harm consumers, but the debate occasionally also addresses the potential for ISPs to favor or disadvantage specific content sources.⁹ Advocates for regulatory intervention note that end users have limited broadband access options,¹⁰ but generally the marketplace for long-haul carriage of

⁸ See Marvin Ammori, *Beyond Content Neutrality: Understanding Content-Based Promotion of Democratic Speech*, 61 FED. COMM. L.J. 273 (2009); Dan G. Barry, *The Effect of Video Franchising Reform on Net Neutrality: Does the Beginning of IP Convergence Mean That It Is Time for Net Neutrality Regulation*, 24 SANTA CLARA COMPUTER & HIGH TECH. L.J. 421 (2008); T. Randolph Beard, *Network Neutrality and Industry Structure*, 29 HASTINGS COMM. & ENT. L.J. 149 (2007); Jerry Brito, *A Tale of Two Commissions: Net Neutrality and Regulatory Analysis*, 16 COMMLAW CONSPECTUS (2007); Rob Frieden, *Assessing the Merits of Network Neutrality Obligations at Low, Medium and High Network Layers*, 115 PENN ST. L. REV. 49 (2010); Rob Frieden, *Internet 3.0: Identifying Problems and Solutions to the Network Neutrality Debate*, 1 INT'L J. COMM. 461 (2007); Rob Frieden, *Network Neutrality or Bias?—Handicapping the Odds for a Tiered and Branded Internet*, 29 HASTINGS COMM. & ENT. L.J. 171 (2007); Brett Frischmann & Barbara van Schewick, *Yoo's Frame and What It Ignores: Network Neutrality and the Economics of an Information Superhighway*, 47 JURIMETRICS J. 383 (2007); Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925 (2001); Sascha D. Meinrath & Victor W. Pickard, *Transcending Net Neutrality: Ten Steps Toward an Open Internet*, 12 J. INTERNET L. 1 (Dec. 2008); Jennifer L. Newman, *Keeping the Internet Neutral: Net Neutrality and Its Role in Protecting Political Expression on the Internet*, 31 HASTINGS COMM. & ENT. L.J. 153 (2008); Tim Wu & Christopher S. Yoo, *Keeping the Internet Neutral? Tim Wu and Christopher Yoo Debate*, 59 FED. COMM. L.J. 575 (2007); Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOMM. & HIGH TECH. L. 141 (2005); Christopher S. Yoo, *Beyond Network Neutrality*, 19 HARVARD J. L. & TECH. 1 (2005); Christopher S. Yoo, *Would Mandating Broadband Network Neutrality Help or Hurt Competition? A Comment on the End-to-End Debate*, 3 J. ON TELECOMM. & HIGH TECH. L. 23 (2004).

⁹ See Dirk Grunwald, *The Internet Ecosystem: The Potential for Discrimination*, 63 FED. COMM. L.J. 411 (2011).

¹⁰

As of December 2009, nearly 70 percent of households lived in census tracts where only one or two wireline or fixed wireless firms provided advertised download speeds of at least 3 Mbps and upload speeds of at least 768 Kbps—the closest observable benchmark to the minimum download speed of 4 Mbps and upload speed of 1 Mbps that the Commission has used to assess broadband deployment. About 20 percent of households are in census tracts with only one provider advertising at least 3 Mbps down and 768 Kbps up. For Internet service with advertised download speeds of at least 10 Mbps down and upload speeds of at least 1.5 Mbps up, nearly 60 percent of households lived in census tracts served by only one wireline or fixed wireless broadband provider, while

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Internet traffic operates more competitively. Notwithstanding such upstream competition, content and software applications eventually route through a single retail ISP to end users.

Recently a long-haul carrier, Level 3, sought FCC intervention to resolve a traffic dispute with Comcast.¹¹ Level 3 had contracted with Netflix to serve as a primary distributor of online movies, thereby substantially increasing the volume of traffic that Level 3 needs retail ISPs like Comcast to deliver to their subscribers.¹² In response to the increase in terminating traffic generated by Level 3, Comcast imposed a surcharge. Level 3 objected to being singled out for a surcharge, asserting that Comcast had installed an Internet tollbooth for only certain traffic that happens to compete with Comcast's pay-per-view cable television service.

Another interconnection dispute raising Network Neutrality questions occurred when Cablevision, a provider of both broadband Internet access and cable television services, could not meet a deadline for extending a retransmission consent agreement with the Fox Broadcasting Company to continue carrying content on Cablevision's New York systems.¹³ For a brief period, Fox used techniques to identify inbound traffic coming from Cablevision subscribers via the Hulu Internet site. To secure additional leverage in its cable television retransmission consent negotiations with

nearly 80 percent lived in census tracts served by no more than two wireline or fixed wireless broadband providers.

Open Internet Report and Order, *supra* note 5, at 17923-24 (footnotes omitted).

¹¹ *Level 3 Communications Issues Statement Concerning Comcast's Actions*, LEVEL 3 (Nov. 29, 2010), <http://www.level3.com/en/About-Us/Newsroom/Press-Release-Archive/2010/2010-11-29-level3-statement-comcast.aspx>.

¹² See Letter from Joseph W. Waz, Jr., Senior Vice President, External Affairs and Public Policy Counsel, & Lynn R. Charytan, Vice President, Legal Regulatory Affairs, Comcast Corp., to Sharon Gillett, Chief, Wireline Competition Bureau (Nov. 30, 2010), <http://www.comcast.com/MediaLibrary/1/1/About/PressRoom/Documents/Comcastexparte1130.pdf>; see also Comcast Corp., *20 Q's—with Accurate A's—About Level 3's Peering Dispute*, COMCAST VOICES BLOG, (Dec. 7, 2010), <http://blog.comcast.com/2010/12/20-qs---with-accurate-as---about-level-3s-peering-dispute.html>; Level 3, *Level 3 Releases Statement to Clarify Issues in Comcast/Level3 Interconnection Dispute*, LEVEL 3 (Dec. 3, 2010), <http://www.level3.com/About-Us/Newsroom/Press-Release-Archive/2010/2010-12-03-statement-interconnection-dispute.aspx>.

¹³ See Brian Stelter, *Internet Is a Weapon in Cable Fight*, N.Y. TIMES, Oct. 19, 2010, <http://www.nytimes.com/2010/10/20/business/media/20hulu.html>; Peter Kafka, *News Corp. Shuts Off Hulu Access to Cablevision Customers—And Turns It Back On*, WALL ST. J.: ALL THINGS DIGITAL, Oct. 16, 2010, <http://mediamemo.allthingsd.com/20101016/news-corp-shuts-off-hulu-access-to-cablevision-subs/>.

Cablevision, Fox blocked Cablevision subscribers, including broadband-access-only customers, from accessing video programming that the company otherwise made available to anyone else accessing the Hulu Web site.

The Cablevision-Fox dispute identifies another beachhead in the Network Neutrality debate in light of the fact that blocked or discriminatory access occurred not at the last mile operated by a retail ISP, but far upstream. In this instance the fact that upstream, long-haul carriers operate in a competitive marketplace did nothing to help subscribers of a particular retail ISP secure access to content available to everyone else. Fox could use techniques to identify and target Cablevision subscribers for discriminatory treatment based on nothing more than the fact that they took service from a company with which Fox had a commercial dispute.

Under ordinary circumstances, when the volume of traffic between Internet peers changes and becomes unbalanced, the carrier generating more traffic than it receives bears the financial obligation to compensate the terminating carrier. However, peering ISPs typically seek to balance out the traffic if possible in lieu of resorting to a monetary settlement. For ISPs that concentrate on the downstream delivery of content, an offsetting upstream flow of traffic may not be available to forestall a surcharge. However, in the dispute between Level 3 and Comcast, Level 3 operates a large transcontinental network that could have handled more upstream traffic from Comcast had Comcast elected to offset the Netflix downstream traffic volume. In the case of the Cablevision-Fox dispute, absolute blockage occurred because of a broadcast television content carriage dispute, which had nothing to do with Internet traffic imbalances.

Level 3 appears to want the FCC to resolve the traffic dispute by prohibiting Comcast from imposing any additional surcharge, on top of the Internet access charges Comcast's subscribers pay. Comcast frames the issue narrowly as a peering matter between an upstream ISP and the ISP providing last-mile termination. The Cablevision-Fox dispute was resolved before Cablevision could frame the issue as a Network Neutrality violation, an unfair trade practice, or some type of unlawful and anticompetitive act.

This Article will examine the terms and conditions under which Internet carriers switch and route traffic for each of several links between a source of content, such as Netflix, and the delivery of that content to consumers via a retail ISP. The Article concludes that commercial terms and conditions should apply for each networking element and that the FCC may lack direct statutory authority to intervene based on its determination that the services in question qualify as largely unregulated information services.

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Additionally, the FCC may appropriately forebear from regulating disputes regarding long-haul telecommunications capacity, such as the capacity offered by carriers like Level 3, because sufficient competition favors industry self-regulation. Similarly, for peering disputes upstream from a retail ISP, the marketplace appears sufficiently competitive for ISPs to pursue remedies free of regulatory intervention.

Despite substantial reasons not to intervene, the FCC nevertheless might have to clarify its understanding of what subscribers of retail ISP services can expect to receive. Under truth in billing and other consumer safeguards, the Commission might require ISPs to explain what a subscription guarantees. In addition to specifying terms of transmission speed and downloading capacity, subscribers should also expect their ISPs to outline the procedures they use when receiving content requiring downstream termination or when an upstream source of content becomes blocked by the actions of a specific party, such as the owner of content. This Article concludes that both Netflix customers and retail ISP subscribers expect their service providers to guarantee delivery of movies and all sorts of Internet traffic respectively. For physical delivery of DVDs, Netflix must pay the U.S. Postal Service, and for delivery of streaming bits, Netflix must pay Level 3. However, for Internet traffic involving two or more carriers, the paper examines whether other retail ISPs providing last mile delivery of content violate their service commitments to subscribers by demanding additional payment from upstream carriers.

**I. FOUR PHASES IN THE DEVELOPMENT OF THE
INTERNET ECOSYSTEM**

Over its short history, the Internet has significantly changed from a government financed network with limited availability to a diversified, commercial “network of networks,”¹⁴ increasingly available to provide a variety of information, communications, and entertainment (ICE) services. Throughout its evolution, the Internet has achieved connectivity between and among various networks based on government underwriting, or commercial terms.

¹⁴ *History of the Internet*, WIKIPEDIA, http://en.wikipedia.org/wiki/History_of_the_Internet(last visited April 24, 2012) (“The idea of a computer network intended to allow general communication between users of various computers has developed through a large number of stages. The melting pot of developments brought together the network of networks that we know as the Internet.”).

While governments incubated the Internet and helped shape common operating standards, Internet Service Providers (ISPs) were able to operate without taxpayer subsidies, making it feasible for the privatization, commercialization and diversification phases to occur in quick succession.

The four phases in the development of the Internet ecosystem identify a limited and decreasing role for governments, as either financial underwriters or regulators. However, as the Internet matures and diversifies, legitimate concerns about anticompetitive conduct and market failures have arisen. In light of the positive benefits accruing from a largely libertarian environment, advocates for government intervention should identify instances where market self-regulation cannot work.

The Internet commenced operations as a neutral, non-discriminating medium. However, commercialization, technological development, increased diversity among users, and proliferating service options collectively create the ability and incentive for ISPs to pursue price and service discrimination based on mixed motivations.¹⁵ ISPs now face financial incentives to diversify services and to offer both retail subscribers and sources of content and software applications attractive alternatives to “plain vanilla” or “one-size-fits-all” Internet access. The owners of many ISPs have vertically and horizontally integrated into many different types of Internet services, thereby creating incentives for ISPs to pursue price and quality of service discrimination that serves diversifying user interests and may also favor the content and applications of corporate affiliates and unaffiliated ventures willing to pay for priority treatment of their traffic.

The migration from government ownership to government subsidization and finally to privatization and commercialization has motivated ISPs to find new ways to generate more revenue. Technological innovations provide the means for ISPs to differentiate how they manage traffic flows, including the ability to prioritize specific bitstreams and to delay or even block delivery of “standard” traffic. As the nature and type of Internet user diversifies, ISPs seek to offer different service tiers with different prices on the basis of user requirements and intensity of need, such as offering premium rates for “power” users who need high bandwidth and timely delivery of packets. The techniques that can provide priority and preferential services to paying customers can

¹⁵ See Christopher S. Yoo, *Innovations in the Internet's Architecture that Challenge the Status Quo*, 8 J. TELECOMM. & HIGH TECH. L. 79 (2010) [hereinafter Yoo, *Internet Innovations*] (outlining new ISP interconnection variations of peering and transiting).

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also provide ways for vertically integrated¹⁶ ventures to use delivery prioritization techniques to favor affiliates or handicap competitors. Similarly, Fox used techniques to identify the ISP used by persons seeking access to Fox content via the Hulu Internet site. Armed with this information, Fox blocked access to its content only to Cablevision subscribers.

Although no government or private forum comprehensively regulates the Internet, government and private operator decisions, primarily in North America and Europe, have had a substantial impact on the Internet's development and governance.¹⁷ The United States government helped create the Internet through research and development support and by serving as an "anchor tenant." The decision to abandon public financing of the major U.S. backbone network in 1995 created the opportunity for former government contractors to become Tier-1¹⁸ ISP operators of the major backbone networks providing transcontinental and transoceanic links. For the most part, largely unregulated private parties have the power to make sweeping decisions affecting the terms and conditions for network access. However, privatization has also created an environment where absent market power

¹⁶ Vertical integration refers to the combination of separate market activities by a single enterprise. See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, 12th Annual Report, 21 F.C.C.R. 2503, 2575 (2006).

¹⁷ For background on the history of Internet development, see Barry M. Leiner *et al.*, *A Brief History of the Internet*, INTERNET SOCIETY (2003), <http://www.isoc.org/internet/history/brief.shtml>; see also William B. Norton, *The Evolution of the U.S. Internet Peering Ecosystem, Draft 1.1* (Nov. 19, 2003), <http://www.equinix.com/pdf/whitepapers/PeeringEcosystem.pdf>.

¹⁸

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, *supra* note 15, at 84.

possessed individually or collectively, competition and consumer sovereignty dominate.

The industrial structure of the Internet has tracked four phases:

- 1) Incubation: government administration, first through the United States Defense Department and later through the United States National Science Foundation and universities and research institutes throughout the world (1980s-1995);
- 2) Privatization: governments eliminate financial subsidies obligating contractors to assess whether and how to operate commercially (1995-1998);
- 3) Commercialization: private networks and ventures proliferate, creating software applications and content that traverse the Internet. The “dotcom boom” triggers irrational, excessive investment and overcapacity (1998-2001); and
- 4) Diversification: after the dotcom bust and market re-entrenchment, Internet survivors and market entrants expand the array of available services and ISPs offer diversified terms, conditions and rates, including price and quality of service discrimination needed by “mission critical” traffic having high bandwidth requirements, e.g., full motion video content.

A. Phase 1: Incubation

Until 1995, the United States government, through the Defense Department and later the National Science Foundation (NSF), underwrote development and maintenance of the core Internet backbone (NSFnet). National governments in other parts of the world pursued similar network projects. The Internet began as specialized, closed networks between specific operators and users. Governments incubated what became the Internet through financial subsidies and by being the first major, “anchor tenant” of newly created networks.

Government stewardship helped expedite the research and development of the technologies and the uniform operating standards needed to achieve broadly accessible and interconnected networking. The engineering necessary to support self-healing, redundant, and reliable networks for the military and other government users also supported seamless connectivity among the many different networks operating throughout the world using

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different vintages of equipment manufactured by many different companies.

After incubating the Internet as a medium for traffic associated with research and education, NSF concluded that it could abandon its public financing and a commercial, privatized Internet could evolve. NSF's 1993 public solicitation document¹⁹ anticipated a privatized Internet with a structure much like what we have today: a hierarchy of many small ISPs serving localities and regions, fewer inter-regional Tier-2 ISPs and even fewer Tier-1 ISPs serving entire nations with the highest capacity backbone networks.

At the outset of Internet development government contractors engineered national networks accessible primarily by government, academic, and research users. With few operators, which generally had the same characteristics in terms of user population, bandwidth, traffic-switching capabilities, network management staffing and geographical reach, the parties could agree to simple interconnection and access arrangements. The intelligence behind Internet network routing sought to achieve efficiency and the ability to route around outages and congestion. Because all the ISPs in this phase had roughly the same characteristics and traffic volumes, their routing assignments generated approximately the same financial burdens.

Internet access in this first phase sought primarily to achieve better geographical reach and more users with little regard to the cost of access and who caused an ISP to incur such costs. This promotional phase emphasized the accrual of positive networking externalities,²⁰ so much so that the parties did not seek to monitor traffic flows. Because few ISPs existed, each having the same characteristics and operating with government funding, the parties saw little benefit and significant cost in negotiating interconnection agreements that required carriers to meter traffic.

In this first promotional phase all participating ISPs agreed to network "peering," meaning that they would provide reciprocal access to each other's subscribers in a free exchange of traffic that

¹⁹ NATIONAL SCIENCE FOUNDATION, *Solicitation for Network Access Point Manager, Routing Arbiter, Regional Network Providers, and Very High Speed Backbone Network Services Provider for NSFNET and NREN Program* (May 6, 1993), <http://www.intercom.co.cr/internet/research/1993/0506.htm>.

²⁰ A positive network externality exists when the cost incurred by a user of the Internet does not fully reflect the benefit derived with the addition of new users and points of communications. See John Farrell & Garth Saloner, *Standardization, Compatibility and Innovation*, 16 RAND J. ECON. 70 (1985); Michael L. Katz. & Carl Shapiro, *Network Externalities, Competition and Compatibility*, 75 AM. ECON. REV. 424 (1985); see also Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CALIF. L. REV. 479 (1998).

would take place at a few shared, “public” Network Access Points (NAPs).²¹ The few ISPs operating at this time agreed to receive traffic from the other ISPs for onward delivery to the final intended destination or to another ISP in exchange for the same traffic acceptance and delivery commitment from the other ISPs. This barter interconnection commitment triggered no exchange of funds based on the “rough justice” expectation that an ISP would deliver roughly the same amount of traffic generated by other ISPs that it handed off for delivery by those ISPs.²² In the vernacular of telecommunications carriers this arrangement constituted a “bill and keep” and “sender keep all” arrangement²³ because each ISP

²¹ For helpful background on how peering developed, see Steve Gibbard, *Economics of Peering*, PACKET CLEARING HOUSE (Oct. 2004), <http://www.pch.net/resources/papers/Gibbard-peering-economics.pdf>; Geoff Huston, *Interconnection Peering and Settlements* (Internet Society, INET Presentation, 1999), http://www.isoc.org/inet99/proceedings/1e/1e_1.htm; Scott Marcus, *Global Traffic Exchange among Internet Service Providers*, OECD BRIEFING (2001), <http://www.oecd.org/dataoecd/45/9/1894955.pdf>; Daniel C.H. Mah, *Explaining Internet Connectivity: Voluntary Interconnection Among Commercial Internet Service Providers* (March 26, 2003), http://tprc.org/papers/2003/181/Explaining_Internet_Connectivity_Mar26-03.DOC.pdf; William B. Norton, *Interconnection Strategies for ISPs*, Document v.2.0, <http://pharos.equinix.com/pdf/whitepapers/ISPInterconnectionStrategies2.pdf>; and Bill Woodcock, *White Paper on Transactions and Valuation Associated with Inter-Carrier Routing of Internet Protocol Traffic or BGP for Bankers* (Packet Clearing House, White Paper Version 0.2, Aug. 2000), <http://www.pch.net/resources/papers/bgp-for-bankers/BGP-for-Bankers-v02.doc>. See also Network Startup Resource Network, *Routing, BGP and IXP Resources*, UNIV. OF OREGON, <http://www.nsrc.org/route-bgp-ixp.html>; The North American Network Operators’ Group, *Peering Links*, <http://www.nanog.org/subjects.html#P>.

²² Dirk Grunwald, *The Internet Ecosystem: The Potential for Discrimination*, 63 FED. COMM. L.J. 411, 427 (2011) (“Most . . . peering relationships have been historically ‘settlement free’ because they benefit both parties and because traffic demands were symmetrical.”).

²³

In a bill-and-keep or sender-keeps-all arrangement, each carrier bills its own customers for the origination of traffic and does not pay the other carrier for terminating this traffic. In a settlement arrangement, on the other hand, the carrier on which the traffic originates pays the other carrier to terminate the traffic. If traffic flow between the two networks is balanced, the net settlement that each pays is zero, and therefore a bill-and-keep arrangement may be preferred because the networks do not have to incur costs to measure and track traffic or to develop billing systems. As an example, the Telecommunications Act of 1996 allows for incumbent local exchange carriers to exchange traffic with competitors using a bill-and-keep arrangement.

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retained all revenues it generated from subscriptions for traffic carriage regardless of whether it solely provided the transmission or whether it handed off the traffic for carriage by other ISPs.

B. Phase 2: Privatization

NSF's glide path to privatization largely succeeded with former contractors achieving supremacy in both the ownership and operation of backbone networks and NAPs. MCI, whose assets Verizon now holds, won the solicitation to take over the very high speed backbone network that previously had served NSF-sponsored research institutions including Cornell University, supercomputer centers in Pittsburgh and San Diego, and several government facilities. MCI upgraded its Asynchronous Transfer Mode network from OC-3 (155 megabits per second) to OC-12 (622 megabits per second).

The NSF privatization solicitation also created four private NAP locations: 1) Chicago, operated by the Ameritech Bell Operating Company, now owned by AT&T, and Bellcore, the former research arm of AT&T before its acquisition by Southwestern Bell Telephone Company; 2) metropolitan New York/Philadelphia, operated by Sprint; 3) San Francisco, operated by the Bell Operating Company Pacific Telesis, now owned by AT&T, and BellCore, the research and development arm of the local telephone companies spun off from AT&T in 1984, and 4) Washington, D.C., operated by Metropolitan Fiber Systems, a networking firm subsequently acquired by MCI.²⁴

With the privatization of the Internet, a hierarchical industrial structure developed. At the top of the pyramid stood a handful of Tier-1 ISPs whose network size, customer base and operational success qualified them for the direct and cost-free exchange of traffic. While peering used to predominate as the primary mode of the NSF network interconnection, the commercialization of the Internet created opportunities for market

Michael Kende, *The Digital Handshake: Connecting Internet Backbones*, 11 *COMMLAW CONSPECTUS* 45, 51 n.60 (2003) (quoting 47 U.S.C. § 252(d)(2)(B)(i) (2000)); see also Barbara Esbin, *Internet Over Cable: Defining the Future in Terms of the Past* 20 (FCC, Working Paper No. 30, 1998) ("The sharing of traffic over the interconnected networks forming the Internet on a statistical and un-metered 'settlements' (or 'bill & keep') basis was a hallmark of early federal agency involvement in the development of the Internet. This system of traffic carriage free of charge became known as 'peering.'").

²⁴ InetDaemon, *History of the Internet*, <http://www.inetdaemon.com/tutorials/internet/history.shtml>, (last visited April 25, 2012).

entry by more ISPs and new incentives for all ISPs to charge what the market would bear for network access. The composition of ISPs expanded and diversified in terms of available bandwidth, geographical reach, subscribership, types of available content, etc.

In light of this diversification and proliferation of ISPs, universal peering became unsustainable. ISPs lacking sufficient size and importance ultimately became customers of network access provided by the Tier-1 and other ISPs. This meant that smaller ISPs had to pay the larger Tier-1 ISPs for the privilege of accessing the Tier-1 ISP's customers and network connections. The term "transit"—also borrowed from the telecommunications vernacular—refers to a negotiated business relationship in which one ISP sells access to its customers, its network, and its access to other ISP networks it has negotiated.

Clearly, no ISP beneficiary of cost-free peering appreciated the demoted status of having to pay for access as a customer and reseller. Yet this demotion appeared to occur on the basis of sound business judgment made by individual Tier-1 ISPs and not on the basis of collusion or concerted refusals to deal. ISPs in Asia-Pacific and Africa bore the greatest financial burden in having to self-provide lines to and from NAPs in North America and Europe as well as the obligation to pay for transit. But smaller ISPs everywhere incurred a similar, albeit less-expensive burden as well. ISPs in North America generated less telecommunications expense in reaching a Tier-1 ISP's NAP, or Point of Presence, in light of the proliferation of such facilities and their close proximity to most Tier-1 ISPs. ISPs located in more remote areas had to procure at their expense the complete link to Tier-1 ISP facilities, even though once installed these two-way links provided Tier-1 ISPs with a cost-free pathway to the smaller remotely located ISP and its subscribers.

ISPs in remotely located regions objected to having to provide typically well financed Tier-1 ISPs a "free ride" for the delivery of traffic from the Tier-1 ISPs. Certainly, from a telecommunications service orientation, it appeared that the remotely located ISP underwrote the full cost of "return" traffic in light of the bi-directional nature of telecommunications links instead of having to pay half of such cost. However, in the context of Internet service, the free ride attribution breaks down. First, the Internet seamlessly combines telecommunications bit transport conduit function with access to content. Particularly at the time of Phase Two in the Internet's development, ISP subscribers could access most of the content available via the Internet for nothing more than the cost of their ISP subscription. Put another way, when an ISP pays another larger ISP for transit services, the smaller ISP acquires access to the larger ISP's subscribers and the

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content available from these customers as well as the customers of other ISPs with which the larger ISP peers or pays for transit. Smaller ISPs had to pay for access to and from larger ISPs in North America and Europe, but the smaller ISPs could then acquire and deliver content that their subscribers sought. Much of the most desired content resided on servers located in North America and Europe, meaning that remote ISPs had to secure access to be able to deliver the content their subscribers expected to access.

Internet transit access arrangements also do not match the limited geographical scope of a telecommunications transit arrangement. In telecommunications service, transit arrangements typically secure an indirect link for a carrier in one location, primarily because this carrier might not have sufficient traffic volume to secure a direct link. In Internet service, transit arrangements typically provide access to a vast array of networks certainly not limited to one country, or carrier. In its most expansive role, one Internet transit payment arrangement with one major Tier-1 ISP can provide a small, remote ISP with access to the Rest of the World, because the Tier-1 ISP has secured ubiquitous access and therefore can offer (or, advertise, in the Internet vernacular) an extensive list of routing opportunities.

C. Phase 3: Commercialization

The “irrational exuberance” of the dotcom bubble stimulated a gold rush mentality among investors keen on finding “ground floor” stock ownership opportunities. Undocumented and belatedly refuted claims that the Internet doubled in size on a monthly basis encouraged risk taking based on the assumption that a rising tide would raise all ships, i.e., that anyone investing at the onset of the Information Revolution would reap ample returns. Investors sank several hundred billion dollars in incumbent and new telecommunications and ISP networks. The resulting glut in local and long haul transmission capacity had the impact of creating substantial downward pressure on Internet transport cost and precluding any pricing discipline by Tier-1 ISPs individually, or even collectively had they attempted to collude. Similarly, even before the dotcom implosion, several Tier-1 ISPs experienced financial distress, but the infusion of more of investment helped create new aspiring Tier-1 and Tier-2 operators.

D. Phase 4: Diversification

The popping of the dotcom bubble triggered substantial losses in the Internet marketplace and a relatively short period of irrational pessimism. The post-dotcom-bubble environment appears to emphasize a shorter transition to profitability, but substantial funds continue to be invested in business plans requiring the use of Internet connections. With less tolerance for financial losses, investors expect to see a realistic timetable for profitability. Throughout the Internet ecosystem, ventures have a greater appreciation for cost control and the need to turn cash flow positive quickly.

ICE ventures in this fourth phase have to pay close attention to costs. This means that the carriers providing traffic delivery services will closely monitor traffic flows and have little patience for instances where a traffic partner has executed a peering agreement but either generates comparatively more downstream traffic or lacks the network capacity upstream to route traffic it receives from a peer. While relatively few in number, perhaps because ISPs generally use Non Disclosure Agreements to shroud peering terms and disputes,²⁵ the onset of peering disputes creates incentives for a partner to force a renegotiation of terms²⁶ quickly, possibly leading to conversion from zero cost peering to a transit payment when a traffic imbalance arises.²⁷

Greater vigilance of traffic volumes and the proliferation of Internet-mediated services have also created incentives for ISPs to diversify the nature, type, terms, and conditions for network interconnection beyond the single peering/transiting dichotomy. NDAs make it difficult to identify the new traffic routing and interconnection arrangements and which carriers have adopted them. However, changing types of traffic and the greater likelihood

²⁵ Philip J. Weiser, *The Future of Internet Regulation*, 43 U.C. DAVIS L. REV. 529, 576 (2009) (The “norms [for a blend of FCC and industry self-regulation of the Internet] might include requirements to provide some level of transparency over the terms of treating a counterpart as a peer deserving of settlement-free interconnection as opposed to a customer required to pay for transit.”); *see also* Frank Pasquale, *Beyond Innovation and Competition: The Need for Qualified Transparency in Internet Intermediaries*, 104 NW. U. L. REV. 105 (2010).

²⁶ “Network providers have also begun to enter into business relationships that go beyond peering and transit relationships that dominated the early Internet.” Christopher S. Yoo, *Innovations in the Internet's Architecture That Challenge the Status Quo*, 8 J. TELECOMM. & HIGH TECH. L. 79, 95 (2010).

²⁷ For example, in 2008, Sprint and Cogent “de-peered” their networks, causing temporary service disruptions between their customers. *See* Om Malik, *Cogent, Sprint Disconnect Networks, May Cause Web Slowdown*, GIGAOM (Oct. 30, 2008, 10:50 PM), <http://gigaom.com/2008/10/30/cogent-sprint-un-peer-may-cause-web-slowdown>.

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that not all carriers will hand off and receive equal traffic volume necessitate new interconnection agreements. For example, the growing market for access to full-motion video content delivered on an instantaneous, “real time basis” has stimulated the creation of a new type of service provider called Content Delivery Network (CDN) that offers guaranteed “better than best efforts” routing of traffic.²⁸ Because many CDNs concentrate on the downstream delivery of traffic, they may have the volume that would stimulate interest in a peering arrangement, but not necessarily the networks capable of handling a commensurate upstream flow.

The ongoing need to upgrade infrastructure to handle increasingly bandwidth intensive applications creates a powerful financial incentive for ISPs to change the terms and conditions for service both upstream and downstream. Many ISPs initially offered retail subscribers an “all you can eat” unmetered service plan based on the correct perception that all but early adopters would need financial inducements to “test drive” the Internet. Now that the Internet marketplace has evolved, many ISPs see unmetered service as conferring an unnecessary windfall on high-volume users to the detriment of the carrier and low-volume users. ISPs perceive Network Neutrality initiatives as foreclosing necessary pricing flexibility.

II. 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 Federal Communications Commission (FCC). Level 3 also launched a public relations campaign to frame the dispute in terms of Comcast imposing a “tollbooth” 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.²⁹ Comcast responded with an equally forceful

²⁸ David D. Clark & Marjory S. Blumenthal, *The End-to-End Argument and Application Design: The Role of Trust*, 63 FED. COMM. L.J. 357, 364-65 (2011) (“Today, much Web content is not delivered to the ultimate recipient directly from the Web server belonging to the original creator, but via a content delivery network (CDN)—a collection of servers that cache the content and deliver it on demand.”).

²⁹ *Level 3 Communications Issues Statement Concerning Comcast’s Actions*, LEVEL 3 (Nov. 29, 2010),

campaign to explain that the dispute simply addressed a commercial peering matter.³⁰ 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.³¹

This dispute provides a high profile example of how a dispute 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 states 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 has 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.

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 subscriptions³² 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, agrees 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 requirements established when Comcast receives compensation from retail subscribers for providing access to and from the Internet cloud. Surely Comcast's subscribers have no

<http://level3.mediaroom.com/index.php?s=23600&item=65045> ("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.").

³⁰ See Joe Waz, *10 Facts About Peering: Comcast and Level 3*, COMCASTVOICES (Nov. 30, 2010), <http://blog.comcast.com/2010/11/10-facts-about-peering-comcast-and-level-3.html> ("The bottom line is that this is a good, old-fashioned commercial peering dispute. It is not about online video, it is not a net neutrality issue, it is not about 'paid prioritization,' and it does not involve putting 'toll booths' on the Internet.").

³¹ See Joe Waz, *Comcast Comments on Level 3*, COMCASTVOICES (Nov. 29, 2010), <http://blog.comcast.com/2010/11/comcast-comments-on-level-3.html>.

³² *Wireline Costs and Caps: A Few Facts*, DSL PRIME (Mar. 6, 2011, 8:27 PM), <http://www.dslprime.com/dslprime/42-d/4148-costs-and-caps>.

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understanding that the company has conferred 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 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.

III. 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 carry and 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 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 could use technology 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.³³

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

³³ Peter Kafka, *News Corp. Shuts Off Hulu Access to Cablevision Customers—And Turns It Back On*, WALL ST. J.: ALL THINGS DIGITAL (Oct. 16, 2010, 2:18 PM), <http://allthingsd.com/20101016/news-corp-shuts-off-hulu-access-to-cablevision-subs/>.

signals, Cablevision subscribers likewise lost the option to download portions of Fox broadcast content that was otherwise available to anyone else with a broadband connection to Hulu. Fox did not block traffic flows at the last mile linking retail ISP and end user; instead, it blocked traffic flows 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 have 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 believed they were entitled to receive, particularly in light of the fact that they continued to pay for the privilege through Internet access and cable television subscription fees during the dispute. In both instances, one commercial venture can 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, the tactics of both Comcast and Fox show that the incentive and technical ability exist to distort, block and manipulate traffic flows to serve strategic goals. In both instances, consumers were denied access to content as negotiating leverage to resolve a financial dispute in one company's favor.

IV. DOES THE FCC HAVE JURISDICTION TO RESOLVE INTERNET CLOUD DISPUTES?

The Level 3-Comcast and Cablevision-Fox disputes involve Internet traffic links other than the first and last mile provided by retail ISPs. Nevertheless, these disputes directly affect consumers when they cannot view content that would ordinarily be available to them. The potential for direct and adverse impact on Internet consumers refutes the view that both disputes involve only commercial transactions among unregulated ventures for which the FCC has no basis to monitor or possibly sanction. On the other hand, the potential to harm consumers does not by itself provide the basis under which the FCC can assume jurisdiction to impose a remedy. Set out below are rationales for and against regulatory intervention by the FCC.

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A. Rationales Favoring FCC Intervention

The traffic-routing segments that combine to provide a complete Internet link from content source to end user include the services of one or more carriers that deliver packets and files. Reasonable people can disagree whether any portion of the link between content provider and retail delivery to end users constitutes a basic telecommunication service,³⁴ instead of an information service,³⁵ the category applicable to Internet access. This threshold determination matters because if the entire link from end users to sources of content constitutes an information service, then the FCC and other NRAs typically lack direct and specific regulatory authority even to remedy clear instances of anticompetitive practices.

While retail ISPs might fully qualify for a largely unregulated information services “safe harbor”³⁶ created by Congress in the Telecommunications Act of 1996,³⁷ carriers

³⁴ The Communications Act of 1934, as amended, defines “telecommunications service” as “the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.” 47 U.S.C. § 153(53) (2010). “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(50).

³⁵ “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(24). These services qualify for a largely unregulated status.

³⁶ A safe harbor constitutes “[a]n area or means of protection [or a] provision (as in a statute or regulation) that affords protection from liability or penalty.” BLACK’S LAW DICTIONARY 1363 (8th ed. 2004). In light of the lack of a bright line distinction between regulated telecommunications services and largely unregulated information services, a service provider possibly can secure a competitive advantage through regulatory arbitrage where it seeks 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.” *In re Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities*, 17 F.C.C.R. 4798 ¶ 90, at 4846 (released Mar. 15, 2002); see also Rob Frieden, *Regulatory Arbitrage Strategies and Tactics in Telecommunications*, 5 N.C. J. L. & TECH. 227 (2004) (identifying strategies used to secure a competitive advantage by exploiting differences in the cost of doing business created by regulatory classifications).

³⁷ 110 Stat. 56 (1996) (codified in scattered sections of 47 U.S.C.).

operating upstream arguably do not fully and completely shoehorn their services into this category. To qualify for the largely unregulated information service classifications, service providers must use information-processing techniques to enhance and add value to the basic “building blocks” of telecommunications transmission. The FCC expressly notes that packet switched networks, like those providing Internet bit transmission, do not automatically qualify: “The Commission has for many years recognized that packet switched interstate transmission services may appropriately be classified as telecommunications services.”³⁸ When it first addressed the regulatory classification issue, the Commission emphasized the retail link provided by ISPs to end users and acknowledged that upstream service might not operate in the same manner.³⁹ Final rules determining the applicability of the information service classification explicitly focus on Internet access provided on a retail basis to end users:

Wireline broadband Internet access service, for purposes of this proceeding, is a service that uses existing or future wireline facilities of the telephone network to provide subscribers with Internet access capabilities. The term “Internet access service” refers to a service that always and necessarily combines computer processing, information provision, and computer interactivity with data transport, enabling end users to run a variety of applications such as e-mail, and access web pages and newsgroups. Wireline broadband Internet access service, like cable modem service, is a functionally integrated, finished service that inextricably intertwines information-processing

³⁸ *In re* Compass Global, Inc., 23 F.C.C.R. 6125, 6135 (adopted Apr. 8, 2008) (citing *Deployment of Wireline Services Offering Advanced Telecommunications Capacity*, 13 F.C.C.R. 24,012 (released Aug. 7, 1998)).

³⁹ “The Commission recognized, however, that its analysis focused on ISPs as entities procuring inputs from telecommunications service providers. Thus, classifying Internet access as an information service in this context left open significant questions regarding the treatment of Internet (and information) service providers that own their own transmission facilities and that engage in data transport over those facilities to provide an information service.” *In re* Appropriate Framework for Broadband Access to Internet over Wireline Facilities, 17 F.C.C.R. 3019, 3027-28 (released Feb. 15, 2002) (citing *In re* Federal-State Joint Board on Universal Service, 13 F.C.C.R. 11,501 ¶ 69, at 11534 (released Apr. 10, 1998)).

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capabilities with data transmission such that the consumer always uses them as a unitary service.⁴⁰

One should appreciate the context in which the FCC issued its Wireline Internet Access Report and Order. Having received Supreme Court affirmation of its decision to exempt cable modem Internet access,⁴¹ the Commission sought to level the competitive playing field and burnish its deregulatory reputation by including Internet access via Digital Subscriber Lines. But even as it was striving to find a basis to free all retail broadband Internet access services, the Commission offhandedly did note that it was addressing only the link providing the first and last mile service to end users: “[T]he current record does not support a finding or compulsion that the transmission component of wireline broadband Internet access service is a telecommunications service as to the end user.”⁴²

The Internet cloud is comprised of telecommunication networks operated by carriers whose operations in the United States fall squarely under Title II of the Communications Act, as amended.⁴³ Even though the FCC has recognized that a competitive market supports streamlined regulation, including the elimination of some requirements, such as the filing of public service contracts known as tariffs,⁴⁴ the Commission cannot completely eliminate the applicable title II regulatory foundation.⁴⁵

On its own initiative or in response to complaints, the FCC has direct statutory authority to investigate the practices of Title II regulated carriers, a category that certainly applies to carriers that participate in the long-haul transmission of Internet traffic and

⁴⁰ *In re* Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 F.C.C.R. 14,853 ¶ 9, at 14860 (released Sept. 23, 2005) (footnotes omitted).

⁴¹ *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967 (2005).

⁴² *In re* Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 F.C.C.R. ¶ 106, at 14912.

⁴³ 47 U.S.C. § 201 *et seq.*

⁴⁴ The FCC first created a dichotomy between carriers still having market power and ones subject to sufficiently robust competition. Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor, First Report and Order, 85 FCC 2d 1 (1980), *cert. denied sub nom.* *MCI Telecomms. Corp. v. AT&T*, 113 S. Ct. 3020 (1993). The FCC largely deregulated interexchange, long distance telephone service. Competition in the Interstate Interexchange Marketplace, Report and Order, 6 F.C.C.R. 5880 (1991).

⁴⁵ For example, in *MCI Telecomms. Corp. v. FCC*, 765 F.2d 1186 (D.C. Cir. 1985), the court vacated an FCC order attempting to eliminate the tariff filing requirement for competing long distance telephone companies because Congress had not yet provided the Commission with statutory authority to do so.

arguably can apply, in part, to ISPs that deliver the traffic onward to end users. The FCC used this rationale to penalize an ISP providing Digital Subscriber Line (DSL) service⁴⁶ that denied its broadband subscribers opportunities to originate or receive Voice over the Internet Protocol (VoIP) service.⁴⁷ Similarly, the FCC could sanction an ISP that refuses to deliver traffic received from an upstream carrier with which the ISP has a dispute over compensation.

Arguably, the stakes are higher when an ISP blocks access to content than when a broadcaster denies a cable television operator access to content.⁴⁸ Most consumers could install an antenna to receive the prohibited content, and retransmission disputes typically get resolved before or soon after broadcasters deny access to content. In the Internet context, the traffic-terminating carrier has a functional monopoly because subscribers typically select only one ISP to handle all of their upstream and downstream traffic.⁴⁹ It would take consumers significant time and effort to secure an alternative carrier capable of restoring content access on similar terms and conditions.⁵⁰ Additionally, the

⁴⁶ *In re Madison River Commc'ns., L.L.C.*, 20 F.C.C.R. 4295 (2005) (small independent telephone company agreed to a \$15,000 monetary forfeiture and consent decree agreeing not to block Digital Subscriber Link customers' access to Voice over the Internet Protocol telephone services).

⁴⁷ VoIP service offers a voice telephone service alternative to conventional wired and wireless dialup services. Rather than use a dedicated switched circuit, VoIP traffic is divided into digital packets routed and switched through the Internet cloud for all or part of the complete route. For technical background on how VoIP works, see 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>; and 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).

⁴⁸ See Lee L. Selwyn & Helen E. Golding, *Revisiting the Regulatory Status of Broadband Internet Access: A Policy Framework for Net Neutrality and an Open Competitive Internet*, 63 FED. COMM. L.J. 91 (2010).

⁴⁹ *In re Preserving the Open Internet*, 24 F.C.C.R. 13,064, 13094 (adopted Oct. 22, 2009) (“[E]ven if there is competition among broadband Internet access service providers, once an end-user customer has chosen to subscribe to a particular broadband Internet access service provider, this may give that broadband Internet access service provider the ability, at least in theory, to favor or disfavor any traffic destined for that subscriber.”).

⁵⁰ “[M]any end users may have limited choice among broadband providers Moreover, those that can switch broadband providers may not benefit from switching if rival broadband providers charge edge providers similarly for access and priority transmission and prioritize each edge provider’s service similarly. Further, end users may not know whether charges or service levels their broadband provider is imposing on edge providers vary from those of alternative broadband providers, and even if they do have this information may

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Commission could identify the public interest benefits in uninterrupted service, for which subscribers might incur costs and inconvenience in finding an adequate alternative carrier and installing replacement equipment such as a modem compatible with the new network.

In its correspondence with the FCC, Comcast characterized the dispute with Level 3 as a private commercial peering matter for which the FCC lacks jurisdiction. Comcast sought to frame the dispute in the context of two related and competitive markets, both fully functional absent government oversight. The two-sided markets served by Comcast involve upstream content sources and ISPs as well as the retail Internet access services Comcast provides end users. Opponents of Network Neutrality note that operators in the two-sided Internet access market have incentives for underpricing retail services to stimulate subscribership and demand for upstream services that ISPs such as Comcast could charge at profit-maximizing rates.⁵¹ For example, television broadcasters opt to provide content free of charge to end users with an eye toward maximizing audiences for which advertisers pay rates based on market penetration.

No evidence supports the premise that Comcast deliberately underprices retail Internet access subscriptions or, more broadly, that broadband service competition in the United States forces carriers to provide service at comparatively low rates.⁵² Likewise, the upstream commercial terms currently in use

find it costly to switch.” *In re Preserving the Open Internet*, 25 F.C.C.R. 17,905, ¶ 27, at 17,921 (adopted Dec. 21, 2010) (footnotes omitted).

⁵¹

Examples abound in two-sided markets of very low, even negative, prices on one side of the market and relatively high prices on the other side of the market. These include Yellow Pages, free television, and various software programs like Adobe Acrobat. In this last example, the Adobe reader is free, but the Adobe writer commands a relatively steep price. Two observations are noteworthy. First, uniform pricing is rare in two-sided markets; it is much more common to observe differential prices across the two sides of the market. Second, one side of the market may actually prefer to face a relatively high price to the extent that it results in a lower price on the other side of the market, and hence a higher level of participation on that side.

Weisman & Kulick, *supra* note 4, at 92-93 (footnotes omitted).

⁵² See, e.g., Organization for Economic Co-Operation and Development, Broadband Portal, Average monthly subscription price for connections between 2.5 and 15 Mbps advertised download speed (Sept. 2010), <http://www.oecd.org/dataoecd/22/46/39575020.xls>. The main OECD Broadband Portal is available at:

typically involve a type of barter, i.e., peering, in lieu of financial payments. If Comcast and other ISPs sought to execute a profit maximizing, two-sided market strategy using conventional tactics, the company would charge end users less with an eye toward replacing peering with a traffic-based delivery charge. Instead, most ISPs appear inclined to raise end user Internet access charges, by offering tiers of service based on bit delivery speeds and how much content a subscriber can download in one month. Until the Comcast-Level 3 dispute, there appeared to be no indication that existing peers sought to replace their barter arrangement with selectively imposed surcharges applicable to specific upstream peers.

1. Ancillary Jurisdiction

The FCC also may have a basis for intervening even if a court were to reject the view that Title II authority applies to Internet traffic flows between an ISP and end users or to an ISP and other upstream ISPs and content sources. Neither the FCC nor reviewing courts have extended the information services classification upstream from the ISP-end user link. On the contrary, the Madison River investigation and financial sanction supports limited FCC authority even for the ISP-end user link. Accepting for the sake of analysis whether any alternatives exist to direct Title II authority, alternative direct statutory authority might exist elsewhere in the Communications Act.

2. Titles I, III, and VI of the Communications Act

The FCC has achieved a mixed appellate record in its attempt to assert ancillary jurisdiction⁵³ in the absence of an

http://www.oecd.org/document/54/0,3746,en_2649_34225_38690102_1_1_1_1,00.html.

⁵³ 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.’

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explicit statutory mandate. Reviewing courts endorsed the FCC's regulation of cable television, in light of its potential to impact adversely the ability of regulated television broadcasters to offer free, advertiser-supported content.⁵⁴ Similarly, the Supreme Court endorsed both the FCC's abandonment of Title II regulatory oversight of Internet access and the Commission's retention of some residual Title I authority going forward.⁵⁵ However, when the FCC attempted to apply the Court's apparent deference to Title I authority to sanction Comcast for deliberately meddling with subscribers' traffic in the absence of compelling network management need, the D.C. Circuit Court of Appeals refused to affirm the Commission's action based on the lack of a sufficiently clear link to statutory authority.⁵⁶ The FCC continues to test the scope of its Title I ancillary jurisdiction by claiming authority to impose nondiscrimination and other so-called Network Neutrality requirements on ISPs, notwithstanding the Comcast holding that rejected the Commission's jurisdictional authority to sanction anticompetitive practices of an ISP.⁵⁷

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).

⁵⁴ *United States v. Sw. Cable Co.*, 392 U.S. 157 (1968); *see also* *FCC v. Midwest Video Corp.* (Midwest Video II), 440 U.S. 689 (1979); *United States v. Midwest Video Corp.* (Midwest Video I), 406 U.S. 649 (1972) (affirming the FCC's assertion of jurisdiction to impose mandatory broadcast signal carriage rules).

⁵⁵ "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 (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.* at 996.

⁵⁶ *Comcast Corp. v. F.C.C.*, 600 F.3d 642 (D.C. Cir. 2010).

⁵⁷ *In re Preserving the Open Internet*, 24 F.C.C.R. 13,064 (proposed Oct. 22, 2009); *In re Preserving the Open Internet, Report and Order*, 25 F.C.C.R. 17,905 (released Dec. 23, 2010).

Attempts by both Comcast and Fox to block or subject specific traffic streams to discriminatory practices may trigger a claim of lawful jurisdiction to remedy anticompetitive practices that occur when a participating ISP or content source targets particular traffic streams. The basis for imposing Network Neutrality safeguards in these two instances involves a carrier or content provider tactic to discipline a peer or penalize a class of content consumers based on their having subscribed to a venture in a service dispute with the content provider. The FCC can claim that its intervention does not impose common carrier requirements, but it instead offers consumer safeguards when a venture can use negotiating tactics that deprive consumers of lawful content, a policy created by the FCC on a nonpartisan basis in 2005.⁵⁸

Lastly, ISP interconnection disputes and a content provider denying access to a specific class of broadband subscriber calls into question what rights and reasonable service expectations ISP subscribers have. Broadband consumers expect their retail ISP to provide access to the Internet cloud at a promised bit rate and without the option of blocking, dropping, and otherwise denying subscribers opportunities to access lawful content, i.e., content that does not cause technical harm to the ISP network or fit within several categories of subscriber-specified undesirable content—for example, unsolicited commercial messages commonly known as spam. Similarly, ISPs have a contractual duty to use their best efforts to deliver promised services.

The FCC has prevailed over all legal objections to its imposition of service commitments on VoIP operators even as these requirements match common carrier telephone company duties and reduce VoIP operators' competitive attractiveness and cost advantages over conventional dial-up services. While VoIP arguably constitutes a type of information service,⁵⁹ the FCC has managed to avoid having to make that determination even as the Commission requires VoIP operators to incur the same obligations of Title II regulated common carrier telephone companies.⁶⁰ VoIP

⁵⁸ *In re* Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities, 20 F.C.C.R. 14,986 (released Sept. 23, 2005).

⁵⁹ 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* High-Speed Access to the Internet Over Cable and Other Facilities, 17 F.C.C.R. 4798, 4802, (2002), *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, 20 F.C.C.R. 14,853 (adopted Aug. 25, 2005). It follows that software and other applications carried via information service links similarly qualify as information services.

⁶⁰ "To date, the Commission has not classified interconnected VoIP service as either an information service or a telecommunications service. The Commission

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service providers 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,⁶¹ make arrangements to support subscriber access to emergency 911 service,⁶² cooperate with law enforcement authorities,⁶³ incorporate the technical accommodations telephone companies provide persons with disabilities (such as deaf callers),⁶⁴ support the ability of existing subscribers to keep their existing telephone numbers when switching service,⁶⁵ and report service outages to the FCC.⁶⁶

The FCC can impose possibly competition-reducing regulatory requirements on VoIP service providers based on a reference to Title I of the Communications Act that provides the basis for asserting ancillary jurisdiction when no direct statutory authorization exists.⁶⁷ Because VoIP competes with conventional

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*, 26 F.C.C.R. 4554, 4582 (released Feb. 9, 2011) (citations omitted).

⁶¹ *In re Universal Serv. Contribution Methodology*, 21 F.C.C.R. 7518, 7538 (proposed June 27, 2006) (extending section 254(d) permissive authority to require interconnected VoIP providers to contribute to the USF).

⁶² *In re IP-Enabled Servs.*, 20 F.C.C.R. 10,245 (proposed May 19, 2005).

⁶³ *In re Communications Assistance for Law Enforcement Act & Broadband Access & Servs.*, 20 F.C.C.R. 14,989 (2005).

⁶⁴ *In re IP-Enabled Servs.*, 22 F.C.C.R. 11,275 (released June 15, 2007); *In re IP-Enabled Servs.*, 22 F.C.C.R. 18,319 (released Oct. 9, 2007) (granting in part and denying in part waivers of the FCC order). *See also In re Contributions to the Telecommunications Relay Servs. Fund*, 26 F.C.C.R. 3285 (proposed Mar. 3, 2011).

⁶⁵ *In re Telephone Number Requirements for IP Enabled Services Providers*, 22 F.C.C.R. 19,531 (released Nov. 8, 2007); *In re Local Number Portability Porting Interval and Validation*, 25 F.C.C.R. 6953 (released May 20, 2010) (establishing fast deadlines for conversions).

⁶⁶ The Proposed Extension of Part 4 of the Commission’s Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers, PS Docket No. 11-82, FCC 12-22 (report and order) (Feb. 21, 2012), http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-12-22A1.doc.

⁶⁷ 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

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. 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.⁶⁸

Arguably, an ISP leveraging access to its customers and threatening to block such access does not satisfy the fiduciary duty of care the carrier's subscription agreement requires. The promise to deliver Internet access presumably includes a duty to take affirmative steps to maintain interconnection agreements, particularly for traffic end users expecting to receive, for example, timely delivery of full-motion video content from Netflix. Comcast may have available an alternative to simply demanding more compensation from Level 3: rearranging its upstream traffic requirements so that Level 3 provides more carriage. Comcast's peering contract with Level 3 and its subscription contract with end users both obligate the company to attempt to remedy traffic imbalances in ways that reduce the likelihood of disconnection and "de-peering." Rather than first resorting to a surcharge demand, arguably Comcast should have an affirmative obligation to pursue routing adjustments so that both Level 3 and Comcast broadband subscribers do not experience service disruptions.

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). The Supreme Court affirmed the FCC's claim of ancillary jurisdiction. *United States v. Sw. Cable Co.*, 392 U.S. 157 (1968); *see also* John Blevins, *Jurisdiction as Competition Promotion: A Unified Theory of the FCC's Ancillary Jurisdiction*, 36 FLA. ST. U. L. REV. 585 (2009); Andrew Gioia, *FCC Jurisdiction over ISPs in Protocol-Specific Bandwidth Throttling*, 15 MICH. TELECOMM. & TECH. L. REV. 517 (2009); James B. Speta, *The Shaky Foundations of the Regulated Internet*, 8 J. TELECOMM. & HIGH TECH. L. 101 (2010).

⁶⁸ *Vonage Holding Corp. v. The Minnesota Public Utilities Comm'n*, 290 F. Supp. 2d 993, 994 (D. Minn. 2003) (upholding FCC preemption of state VoIP regulation).

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B. Rationales Opposing FCC Intervention

The arguments against FCC regulation emphasize the assumption that any Internet access service wherever situated constitutes an information service; the FCC's general reluctance to intervene in Internet disputes; and the D.C. Circuit Court of Appeals' determination that the FCC lacks direct statutory authority and cannot stretch ancillary authority even to remedy anticompetitive practices of ISPs.⁶⁹ 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 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 others upstream, 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.⁷⁰ However the

⁶⁹ Comcast Corp. v. FCC, 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).

⁷⁰ 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.

Commission considers the telecommunications aspects of Internet access to end users as so integrated with information services as to become subordinate and unseverable.⁷¹ In its Wireline Internet Access Report and Order, the FCC considered the regulatory classification of the “Broadband Internet Access Transmission Component.”⁷² If one were to infer that this component lies not just between the ISP and end users, but also upstream from the retail ISP to other ISPs, carriers, and content providers, then the information service classification appropriately can apply throughout the Internet cloud. 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,”⁷³ because the Commission expressly declined to compel “the offering of a telecommunications service to ISPs.”⁷⁴

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 apparently effective industry self-regulation, the FCC wisely has shown restraint when addressing claims of Internet market failure.⁷⁵

In re Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 F.C.C.R. 14,853, 14,911 (Sept. 23, 2005).

⁷¹ For analysis of the sometimes-metaphysical difference between telecommunications and telecommunications service, see Rob Frieden, *What Do Pizza Delivery and Information Services Have in Common? Lessons From Recent Judicial and Regulatory Struggles with Convergence*, 32 RUTGERS COMPUTER & TECH. L.J. 247 (2006).

⁷² See *In re* Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 F.C.C.R. 14,853, 14,909 (proposed Sept. 23, 2005).

⁷³ *Id.* at 14,910.

⁷⁴ *Id.*

⁷⁵

[W]e believe ‘broadband services should exist in a minimal regulatory environment that promotes investment and innovation in a competitive market.’ In this regard, we seek to remove regulatory uncertainty that in itself may discourage investment and innovation. And we consider how best to limit unnecessary and unduly burdensome regulatory costs.

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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.⁷⁶ Because the Level 3-Comcast and Cablevision-Fox disputes address such non-retail routing elements, 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 from 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 received from Level 3, Comcast would have incurred a higher financial burden.

In re Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling, 17 F.C.C.R. 4798, 4802 (2002) (quoting *In re* Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities, Universal Service Obligations of Broadband Providers, CC Docket No. 02-33, Notice of Proposed Rulemaking, 17 F.C.C.R. 3019, 3021 (2002), *affirmed sub nom.*, National Cable & Telecommunications Ass'n v. Brand X Internet Servs., 545 U.S. 967 (2005)).

⁷⁶

Even deliberate attempts by major ISPs to interfere with traffic flow as a competitive tactic fail. For example, in March 2008, Cogent Communications and the Swedish provider TeliaSonera stopped accepting traffic from each other's networks (known as "de-peering"). Cogent claimed that TeliaSonera failed to provide adequate bandwidth at interconnection points, and TeliaSonera argued that Cogent owed it compensation for carrying traffic. However, Swedes could still reach sites hosted on Cogent's network, and vice versa; it appears that the only entity made inaccessible by the dispute was Martha Stewart Living, and only from Sweden. Other ISPs carried traffic between the warring firms, slowing access but enabling it to continue.

Derek E. Bambauer, *Conundrum*, 96 MINN. L. REV. 584, 617-18 (2011) (footnotes omitted).

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.⁷⁷ 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.

V. WHAT SHOULD THE FCC DO?

The FCC recently has experienced a political and judicial drubbing when attempting to resolve real instances of discriminatory and potentially anticompetitive conduct undertaken by ISPs. The Commission should act cautiously in light of having questionable jurisdiction over Internet issues and the fact that the ISPs have managed to operate largely free of regulation while satisfying subscribers' service expectations. On the other hand, disputes have occurred that necessitated the Commission's limited, ad hoc intervention. Such disputes may grow in number as ISPs diversify services, as may the models used for calculating interconnection compensation.

The vast majority of past and future Internet interconnection disputes have reached or will reach closure without FCC intervention or a judicial remedy. Just as the FCC refrains from intervening in cable television retransmission consent negotiations, even ones that have triggered a disruption in service, the Commission also should refrain from proactively intervening in peering disputes and actual or threatened denials of access to content. However, there will be instances where the parties cannot

⁷⁷ See Yoo, *Internet Innovations*, *supra* note 16.

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reach an agreement, in part because one side benefits from delay, particularly when consumers temporarily lose access to content.

The FCC should provide its “good offices” to resolve disputes when a party seeks the Commission’s intervention by filing a complaint. The FCC has direct statutory authority to resolve carrier-to-carrier disputes regardless of whether some or all of the content carried over transmission facilities constitutes an information, broadcasting, or cable service. The fact that services delivered to an end user may qualify for an unregulated safe harbor does not by itself convert the upstream links into similarly unregulated carriage. When Level 3 provides long-haul transport for another carrier or ISP, Level 3 arguably provides a telecommunications service for hire subject to Title II. Similarly when Fox disconnects or otherwise deprives end users of access to content otherwise available to broadband subscribers whose ISP has no current dispute with Fox, the FCC has direct statutory authority to investigate the public interest consequences of such disconnections.

***A. Case Law Supporting FCC Authority To Resolve
Interconnection Complaints***

On a number of occasions involving many different aspects of facilities interconnection, the FCC has responded to complaints or initiated an investigation on its own accord. The range of FCC involvement runs the gamut including resolution of disputes among cable television operators and broadcasters; VoIP subscribers and their broadband carrier; wireless telephone and data service carriers; and owners of conduits and poles, such as electric utilities not otherwise subject to FCC oversight, and lessees, such as cable television operators and ISPs.

***1. Must Carry/Retransmission Consent and Other Types of
Mandatory Content Access***

In addition to questions about whether the FCC has lawful jurisdiction, compulsory interconnection and carriage of content by cable television operators raise questions about compelled speech and diminution of First Amendment speaker rights.⁷⁸ Must carry

⁷⁸ ISPs appear keen on both asserting and denying questionable First Amendment speaker rights. In the former, ISPs seek to deem their network

requirements possibly substitute specific broadcast channels for content cable operators otherwise would produce or acquire.⁷⁹ Despite such constraints on speech and property ownership, the Supreme Court has confirmed that the FCC can lawfully require cable television operators to deliver broadcast content to subscribers and to make available channels for educational, government, public, and leased access.⁸⁰ Courts have affirmed the FCC's assertion of ancillary jurisdiction to impose such carriage obligations even before Congress expressly mandated it. In effect the FCC can lawfully impose a compulsory duty to deal on a type of private, non-common carrier. Must carry imposes a duty to interconnect and deliver traffic even for ventures that do not constitute Title II regulated common carriers.

The line of must carry cases shows that the FCC can order interconnection and a duty to deal even among non-common carriers. In other words, a duty to interconnect does not derive solely from Title II of the Communications Act. Title VI-regulated cable television operators have to deal with Title III-regulated broadcasters. It does not appear to be a jurisdictional stretch for the FCC to infer that its conditional Title II oversight of carriers provides long haul transmission of Internet traffic.⁸¹ The

management functions as a type of expression, even if executed by software. In the latter, ISPs emphasize their network conduit function to qualify for exemption from potential tort and copyright liability. *See* Rob Frieden, *Invoking and Avoiding the First Amendment: How Internet Service Providers Leverage Their Status as Both Content Creators and Neutral Conduits*, 12 U. PA. J. CONST. L. 1279 (June 2010).

⁷⁹ *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180 (1997) (must-carry requirement imposed on cable television operators using an intermediate scrutiny standard and concluding that carriage requirements are reasonable and not content-based in that they promote the financial viability of television broadcasters and not any specific type of content); *see also* *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 663 (1994) (approving FCC "must-carry" requirements despite the lack of direct statutory authorization); *Satellite Broad. & Comm'n Ass'n v. FCC*, 275 F.3d 337 (4th Cir. 2001) (carry-one carry-all rule mandated by the Satellite Home Viewer Improvement Act); Nissa Laughner & Justin Brown, *Cable Operators' Fifth Amendment Claims Applied to Digital Must-Carry*, 58 Fed. Comm. L.J. 281, 305 (2006).

⁸⁰ *Time Warner Entm't Co. v. FCC*, 93 F.3d 957, 982 (D.C. Cir. 1996) (upholding as constitutional provisions of the 1992 Cable Act which, among other things, required cable operators to provide leased access and public, educational and governmental channels).

⁸¹ As James Speta observes,

One could conclude that the FCC simply has no authority to regulate Internet carriers, at all. But that would ignore the Supreme Court's statements in *Brand X*, and only the Supreme Court is free to call its own statements dicta. And arguments that the FCC has no authority over anything that Internet carriers do runs head-long against the ancillary jurisdiction

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combination of its public interest duties and the general jurisdiction over wire and radio confers authority on the FCC to resolve an interconnection dispute between two ISPs. It may also follow that the FCC could order Fox to refrain from obstructing the delivery of its content to ISPs having the duty to deliver unconditional access to lawful content for their subscribers.

The FCC appears so confident of its statutory authority to address broadcaster-cable television operator interconnection issues that it has undertaken an initiative to help resolve retransmission disputes in a timely manner.⁸² Retransmission consent negotiations have become more contentious and in some instances the parties have not reached closure before cable

cases which say that the FCC does have some regulatory authority over entities engaged in communications by wire or radio, even if those entities are not otherwise mentioned in the Act.

What is needed, then, is a doctrinally sound, more narrowly-tailored view of the FCC's ancillary jurisdiction over Internet carriers. Internet carriers are those entities providing "communications by wire or radio" that the FCC has classified as providing information services. A cable company, broadband over power line, or any wireless company providing Internet access service would qualify, but content and applications providers would not. The FCC's ancillary authority should be recognized in circumstances where the Internet carrier is providing or carrying a service regulated by the Communications Act.

James B. Speta, *The Shaky Foundations of the Regulated Internet*, 8 J. TELECOMM. & HIGH TECH. L. 101, 120 (2010).

⁸² The FCC has expressed similar concerns about the timeliness of negotiations between prospective competitors to incumbent cable television operators and local franchising authorities (LFAs). The Commission imposed limitations on what LFAs can require of market entrants and also established a deadline for their deliberation. *In re* Implementation of Section 621(A)(1) of the Cable Communications Policy Act of 1984 as Amended by the Cable Television Consumer Protection and Competition Act of 1992, 22 F.C.C.R. 5107 (2007) (report and order and further notice of proposed rulemaking), *cert. denied sub nom.* Alliance for Community Media v. F.C.C., 129 S. Ct. 2821 (2009).

In *Alliance for Community Media v. F.C.C.*, 529 F.3d 763 (6th Cir. 2008), the Sixth Circuit Court of Appeals affirmed the FCC's video franchising rules based on the court's finding that ambiguity in the Communications Act afforded the Commission an opportunity to make reasonable statutory interpretations worthy of judicial deference. The court held that the FCC reasonably interpreted Section 621(a)(1) of the Communications Act, 47 U.S.C. § 541(a)(1) (1996), as establishing no limits on the Commission's rulemaking authority despite providing no explicit delegation of authority to determine whether and how local franchising authorities unreasonably refuse to award an additional competitive franchise. The court concluded that the FCC acted well within its statutorily delineated authority in enacting the Franchising Order and that there exists sufficient record evidence to indicate that the FCC did not engage in arbitrary-and-capricious rulemaking activity.

operators have had to deny their subscribers access to highly desirable broadcast television content. The FCC has issued a Notice of Proposed Rulemaking seeking comment on a series of proposals to provide greater specificity on what the parties must do to satisfy the statutory requirement that they negotiate in good faith.⁸³ Additionally, the Commission proposes to improve notice to consumers in advance of possible service disruptions, extend to non-cable multi-channel video programming distributors (MVPDs) the prohibition now applicable only to cable operators on deleting or repositioning a local commercial television station during ratings “sweeps” periods, and allow MVPDs to negotiate alternative access to network programming by eliminating the Commission’s network non-duplication and syndicated exclusivity rules that preclude cable operators from delivering substitute content readily available from another broadcaster.

The FCC takes pains to emphasize its intent not to usurp marketplace-driven negotiations between broadcasters and MVPDs or to exceed its statutory authority by mandating interim carriage of broadcast signals during retransmission consent negotiations or imposing a duty for the parties to submit to mandatory binding dispute resolution procedures.⁸⁴ Having jurisdiction to assess whether broadcasters have negotiated in good faith with MVPDs,⁸⁵ the Commission believes that it can promote faster resolution of disputes by specifying additional examples of what constitutes a per se violation of the Section 76.65(b)(1) requirement that parties

⁸³ Amendment of the Commission’s Rules Related to Retransmission Consent, MB Docket No. 10-71, Notice of Proposed Rulemaking, MB Docket 10-71, FCC 11-31 (Mar. 3, 2011), http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-31A1.doc [hereinafter Retransmission Consent NPRM].

⁸⁴ *Id.* at ¶ 18 (“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.”); *Id.* at ¶ 17 (“Our goal in this proceeding is to take appropriate action, within our existing authority, to protect consumers from the disruptive impact of the loss of broadcast programming carried on MVPD video services. Subscribers are the innocent bystanders adversely affected when broadcasters and MVPDs fail to reach an agreement to extend or renew their retransmission consent contracts. In light of the changing marketplace, our proposals in this NPRM are intended to update the good faith rules and remedies in order to better utilize the good faith requirement as a consumer protection tool.”).

⁸⁵ *Id.* at ¶ 8 (“Congress required the Commission to revise its regulations so that they ‘prohibit a television broadcast station that provides retransmission consent from . . . failing to negotiate in good faith, and it shall not be a failure to negotiate in good faith if the television broadcast station enters into retransmission consent agreements containing different terms and conditions, including price terms, with different multichannel video programming distributors if such different terms and conditions are based on competitive marketplace considerations.’” (quoting 47 U.S.C. § 325(b)(3)(C)(ii) (2006)).

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negotiate in good faith⁸⁶ and by further clarifying what is meant by the standard in Section 76.65(b)(2)⁸⁷ that requires the Commission to consider the totality of the circumstances affecting retransmission consent negotiations.

2. Madison River

The FCC asserted jurisdiction over a Digital Subscriber Line (DSL) broadband access provider that deliberately blocked

⁸⁶ Section 76.65(b)(1) of the Commission's Rules establish seven criteria for assessing the sufficiency of good faith in retransmission consent negotiations:

The following actions or practices violate a broadcast television station's or multichannel video programming distributor's (the 'Negotiating Entity') duty to negotiate retransmission consent agreements in good faith:

- (i) Refusal by a Negotiating Entity to negotiate retransmission consent;
- (ii) Refusal by a Negotiating Entity to designate a representative with authority to make binding representations on retransmission consent;
- (iii) Refusal by a Negotiating Entity to meet and negotiate retransmission consent at reasonable times and locations, or acting in a manner that unreasonably delays retransmission consent negotiations;
- (iv) Refusal by a Negotiating Entity to put forth more than a single, unilateral proposal;
- (v) Failure of a Negotiating Entity to respond to a retransmission consent proposal of the other party, including the reasons for the rejection of any such proposal;
- (vi) Execution by a Negotiating Entity of an agreement with any party, a term or condition of which, requires that such Negotiating Entity not enter into a retransmission consent agreement with any other television broadcast station or multichannel video programming distributor; and
- (vii) Refusal by a Negotiating Entity to execute a written retransmission consent agreement that sets forth the full understanding of the television broadcast station and the multichannel video programming distributor.

47 C.F.R. § 76.65 (2009).

⁸⁷ Retransmission Consent NPRM, *supra* note 76 at ¶ 10 (“[E]ven if the seven specific standards are met, the Commission may consider whether, based on the totality of the circumstances, a party failed to negotiate retransmission consent in good faith.”). The FCC appears to imply that, even if a Negotiating Entity can prove that it satisfied all specific criteria evidencing good faith, an opponent may demonstrate, based on the totality of the circumstances of a particular retransmission consent negotiation, that a television broadcast station or multichannel video programming distributor breached its duty to negotiate in good faith.

subscribers from accessing third party VoIP services.⁸⁸ The Commission secured a \$15,000 forfeiture and executed a Consent Decree with the Madison River Telephone Company, which agreed not to interfere with DSL subscribers' use of the company's network to originate and receive VoIP telephone calls. The Commission could assert jurisdiction, which Madison River opted not to challenge, even though DSL access constitutes an information service. A reasonable interpretation of ancillary jurisdiction includes an expectation that even non-common carrier broadband access providers cannot engage in discriminatory and anticompetitive practices aiming to thwart subscribers from lawfully using their broadband access to launch and receive a telephone service alternative to that provided by the DSL carrier.

3. Data Roaming

The FCC also has determined that a carrier providing a retail wireless information service does not insulate itself from having an interconnection obligation with other wireless carriers simply because the service is not treated as a Title II regulated common carrier service.⁸⁹ The Commission had no difficulty deciding that wireless carriers have a duty to interconnect so that subscribers using their handsets outside their local calling area can continue to make and receive voice telephone calls.⁹⁰ Only AT&T and Verizon objected to an extension of the roaming interconnection requirement to data services.⁹¹ The public interest benefits in supporting roaming subscriber access to a wireless

⁸⁸ Madison River Commc'ns, LLC, Order & Consent Decree, 20 F.C.C.R. 4295 (March 3, 2005).

⁸⁹ *In re* Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services, 26 F.C.C.R. 5411 (released Apr. 7, 2011) [hereinafter Mobile Data Roaming Order], notice of appeal filed by Verizon May 13, 2011.

⁹⁰ *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, 86 F.C.C.2d 469 (released May 4, 1981); *In re* Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers, 22 F.C.C.R. 15,817, 15,818 (released Aug. 16, 2007); *see also* 47 C.F.R. §§ 20.3, 20.12(d) (codifying roaming requirement).

⁹¹ "We reject arguments by AT&T and Verizon Wireless that a data roaming rule is unnecessary because data roaming agreements are occurring without regulation. We find that providers have encountered significant difficulties obtaining data roaming arrangements on advanced '3G' data networks, particularly from the major nationwide providers." Mobile Data Roaming Order, *supra* note 8, at 5424.

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network are the same regardless whether the interconnection supports a voice telephone call or Internet access. As the Internet becomes an increasingly important medium for all sorts of converging services, the lawful right of access to data networks becomes even more important and necessary.

Recently the Commission sought to impose common carrier interconnection responsibilities on wireless carriers when their data service customers seek access to the network of another carrier while roaming outside the customer's home service territory. The Commission's Second Report and Order on data roaming obligations of facilities-based wireless carriers requires interconnection backed up with the power to resolve formal complaints if commercially driven negotiations fail. The two Republican Commissioners dissented from the order based on the view that the FCC lacks jurisdiction to compel wireless ISPs to interconnect.⁹² The Democratic majority relied primarily on the view that Title III confers broad regulatory power over any venture using licensed spectrum, not just radio and television broadcasters.

Rather than claim ancillary jurisdiction based on Title I of the Communications Act, the FCC used an expansive interpretation of Title III to achieve the same outcome, while avoiding the inconvenient fact that the Commission treats wireless broadband and data services as information services not subject to Title II oversight.⁹³ The Commission creates a non-common carrier duty to deal; that is, wireless carriers must interconnect their data networks and provide access to roaming data service subscribers who take service from another unaffiliated carrier.⁹⁴ The

⁹² Dissenting Statement of Commissioner Robert M. McDowell, 26 F.C.C.R. 5483 (2011); Dissenting Statement of Commissioner Meredith Attwell Baker, 26 F.C.C.R. 5487 (2011).

⁹³ *In re* Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks, 22 F.C.C.R. 5901, 5915 (2007) ("Having determined that wireless broadband Internet access service, regardless of whether offered using mobile, portable, or fixed technologies, is an information service under the Act, we now address the applicability of the 'commercial mobile service' provision of section 332 of the Act to this broadband service. As discussed below, we find that 'mobile wireless broadband Internet access service' is not a 'commercial mobile service' as that term is defined in the Act and as implemented in the Commission's rules.").

⁹⁴ Mobile Data Roaming Order, *supra* note 81 at ¶ 1 ("[W]e promote consumer access to nationwide mobile broadband service by adopting a rule that requires facilities-based providers of commercial mobile data services to offer data roaming arrangements to other such providers on commercially reasonable terms and conditions, subject to certain limitations. Widespread availability of data roaming capability will allow consumers with mobile data plans to remain connected when they travel outside their own provider's network coverage areas by using another provider's network, and thus promote connectivity for and nationwide access to mobile data services such as e-mail and wireless broadband Internet access. The rule we adopt today also serves the public interest by

Commission considers it necessary to remedy the apparent absence of competitive necessity for the dominant national wireless carriers to offer reciprocal data roaming agreements, particularly to smaller, regional operators. The FCC correctly identified a problem that could prevent consumers from relying on their smartphones as mobile computers when seeking Internet access outside their local calling area, a likely occurrence for many users.

The FCC imposes a duty to deal on carriers based primarily on their use of spectrum and the Commission's broad mandate to service the public interest. By concentrating on Title III and the broad mandate in Section 706 of the Telecommunications Act of 1996 to promote Internet access, the Commission hopes it can impose a conventional common carrier interconnection obligation even in the absence of explicit statutory authority.

Because Title II cannot apply directly to data roaming, the FCC frames the interconnection obligation as a "spectrum usage condition"⁹⁵ and not a common carrier obligation. The Commission presumes that this characterization makes it possible to maneuver around the limitation contained in Section 332 of the Communications Act, as amended, that limits the application of streamlined Title II common carrier obligations only to voice services that connect with conventional wireline telephone networks.⁹⁶ The Commission summarily states that it does not have to make the determination whether and how Sec. 332 applies, if, more broadly, all or other sections within Title III apply.

The FCC attempts to differentiate compulsory data roaming interconnection from common carriage by emphasizing that wireless carriers will not apply single, tariffed terms and conditions. Wireless carriers typically negotiate voice or data

promoting investment in and deployment of mobile broadband networks, consistent with the recommendations of the National Broadband Plan. The deployment of mobile data networks is essential to achieve the goal of making broadband connectivity available everywhere in the United States, and the availability of data roaming will help ensure the viability of new wireless data network deployments and thus promote the development of competitive facilities-based service offerings for the benefit of consumers. Today's actions will therefore advance our goal of ensuring that all Americans have access to competitive broadband mobile data services."

⁹⁵ *Id.* at ¶ 66.

⁹⁶ 47 U.S.C. § 332(8)(d)(1-2) (2006) ("For purposes of this section—(1) the term 'commercial mobile service' means any mobile service (as defined in section 153 of this title) that is provided for profit and makes interconnected service available (A) to the public or (B) to such classes of eligible users as to be effectively available to a substantial portion of the public, as specified by regulation by the Commission; (2) the term 'interconnected service' means service that is interconnected with the public switched network (as such terms are defined by regulation by the Commission) or service for which a request for interconnection is pending pursuant to subsection (c)(1)(B) of this section.").

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roaming on an individualized, carrier-specific basis. Nevertheless, it appears that the FCC has created a duty to deal for wireless carriers that must offer nondiscriminatory terms and conditions to one or more “similarly situated” wireless carriers. In other words, the common carrier duty to provide service to all subscribers “indifferently” can result in a tariff or contract serving just one user or carrier, because no other user or carrier has similar usage requirements. For example, the fact that the United States government might have specific and large requirements unmatched by other users does not by itself convert service from Title II regulated common carriage to private carriage or convert wireless telephone companies into information service providers.

4. Pole Attachments

The FCC has statutory authority to require enterprises not customarily subject to its regulatory oversight to provide access to poles and duct capacity.⁹⁷ Facing complaints about the timeliness of access negotiations and the appropriateness of the compensation demanded, the Commission believes it has statutory authority to delve more deeply into the negotiation process. The FCC reformed its pole attachment rules to streamline access and reduce costs for attaching broadband lines and wireless antennas to utility poles across the country.⁹⁸ The Commission considers pole access reform a key element in finding ways to expedite access to affordable broadband services, a key mission of the National Broadband Plan.⁹⁹ The Commission identified three major impediments for which it provides solutions:

⁹⁷ Congress directed the Commission to “regulate the rates, terms, and conditions of pole attachments to provide that such rates, terms, and conditions are just and reasonable, and . . . adopt procedures necessary and appropriate to hear and resolve complaints concerning such rates, terms, and conditions.” 47 U.S.C. § 224(b)(1) (2006); *see also* Nat’l Cable & Telecomm. Ass’n, Inc. v. Gulf Power Co., 534 U.S. 327 (2002) (applying Pole Attachment Act to attachments by cable television systems that provide Internet service in addition to traditional cable service, without regard to the classification of the commingled cable modem service).

⁹⁸ *In re* Implementation of Section 224 of the Act, WC Docket No. 07-245, Report and Order and Order on Reconsideration, FCC 11-50 (Apr. 7, 2011), http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-50A1.doc [hereinafter Pole Attachment Report and Order].

⁹⁹ *Id.* at ¶ 3 (“In its efforts to identify barriers to affordable telecommunications and broadband services, the Commission has recognized that lack of reliable, timely, and affordable access to physical infrastructure—particularly utility poles—is often a significant barrier to deploying wireline and wireless services.”).

First, the process and timeline for negotiating access to poles varies across the various utility companies that own this key infrastructure. The absence of fixed timelines and the potential for delay creates uncertainty that deters investment. Second, if a pole owner does not comply with applicable requirements, the party requesting access may have limited remedies; because of time constraints, cost, or the need to maintain a working relationship with the pole owner, it may not wish to pursue the enforcement process. Third, the wide disparity in pole rental rates distorts service providers' decisions regarding deployment and offering of advanced services. For example, providers that pay lower pole rates may be deterred from offering services, such as high-capacity links to wireless towers, which could fall into a separate regulatory category and therefore risk having a higher pole rental fee apply to the provider's entire network.¹⁰⁰

Acting on the statutory authority contained in Section 224 of the Communication Act,¹⁰¹ the FCC determined that it should provide greater structure and timelines for the commercial negotiations that occur between pole owner and a lessee. Because the pole owner may have monopoly control over a facility needed by a broadband provider and because the broadband provider may not have a practical means to construct its own poles or conduits, the FCC recognized "the need to establish a more detailed framework to govern the rates, terms and conditions for pole attachments."¹⁰² The Commission adopted rules establishing a specific timeline for access, improvements to its enforcement process, a revised formula for the telecommunications access rate, and a process to ensure just and reasonable rates, terms, and conditions for pole attachments by incumbent LECs which initially owned much of the poles they used but increasingly have to negotiate for access like other carriers.

¹⁰⁰ *Id.*

¹⁰¹ Congress directed the Commission to "regulate the rates, terms, and conditions of pole attachments to provide that such rates, terms, and conditions are just and reasonable, and . . . adopt procedures necessary and appropriate to hear and resolve complaints concerning such rates, terms, and conditions." 47 U.S.C. § 224(b)(1) (2006).

¹⁰² Pole Attachment Report and Order, *supra* note 89, at ¶ 5.

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*5. Truth in Billing, Avoiding Bill Shock, and Sanctions for
Deliberate Overcharges*

The FCC has determined that it has statutory authority to safeguard consumers by requiring many different service providers to provide understandable bills, to help subscribers avoid unexpected charges triggered by exceeding allotted use and to sanction a wireless carrier for overcharges involving an information service. The Commission relies on Title III to regulate the billing practices of ventures that use radio spectrum and more generally applies Title I ancillary jurisdiction:

We note that our jurisdiction to regulate certain consumer equipment and non-Title II services delivered via various media is well established. . . . [W]hile Title II obligations have never generally applied to information services, when we have determined that regulatory requirements are necessary for performing our duties under the Communications Act, we may impose such regulations pursuant to our Title I ancillary jurisdiction.¹⁰³

The FCC also applied its Title II common carrier regulatory authority to sanction Verizon Wireless for billing its subscribers for unintentional initiation of an Internet access data session.¹⁰⁴ The company generated at least \$52.8 million in increments of \$1.99 when a subscriber inadvertently pressed a button that triggered charges for Internet access even when the subscriber had no intent to start a data session and no idea that a meter was running. The Commission also secured a voluntary contribution of \$25 million from Verizon probably in light of the carrier's knowledge of the overcharges and disinclination to stop the overcharges and provide refunds.¹⁰⁵ Verizon wisely did not challenge the FCC's jurisdiction to order a remedy based on the view that the Commission had no statutory basis to investigate and resolve a billing dispute pertaining to an "information service."

¹⁰³ *In re* Consumer Information and Disclosure, 24 F.C.C.R. 11,380, ¶ 61(released Aug. 28, 2009).

¹⁰⁴ Verizon Wireless Data Usage Charges, 25 F.C.C.R. 15,105 (2010).

¹⁰⁵ *Id.* at 15,113.

CONCLUSION

The FCC has lawful statutory authority to remedy disputes among carriers and between carriers and subscribers when the parties cannot reach a timely settlement. This public service is not prevented by the fact that all or part of the service in question involves something other than common carriage. The FCC is not statutorily prohibited from remedying carrier disputes even if one of the carriers qualifies for an unregulated safe harbor such as information service or uses telecommunications lines to deliver broadcast content to broadband customers via an information service.

However, the Commission must act with substantial restraint in light of the limited statutory authority to intervene and a healthy reluctance on the part of many courts to defer entirely to the Commission's determination of the length and breadth of its ancillary jurisdiction. FCC intervention should focus on whether and how the disputing parties have a duty to deal with each other, primarily by interconnecting their separate networks. The Commission should not try to determine the appropriate rate for interconnection and should make every effort to facilitate a commercial resolution negotiated by the parties.

The FCC has identified an increasing number of instances where disputes arise and the parties cannot reach a timely settlement. Technological innovations make it more possible for stakeholders to single out traffic streams and demand additional compensation backed up by the ability to prevent such traffic from reaching intended recipients. The Commission appreciates that various parties also may secure greater negotiating leverage simply by stalling. For example, it sees a public interest benefit in preventing Local Franchise Authorities from delaying the grant of authorization for new video service competitors to enter the marketplace.¹⁰⁶ The Commission also sees a benefit in becoming more active in monitoring retransmission consent negotiations, particularly ones that have so stalled as to trigger the temporary elimination of consumer access to desirable video content.¹⁰⁷

¹⁰⁶ *In re* Implementation of Section 621(A)(1) of the Cable Communications Policy Act of 1984 as Amended by the Cable Television Consumer Protection and Competition Act of 1992, 22 F.C.C.R. 5101 (2007), *cert. denied sub nom.* Alliance for Community Media v. FCC, 129 S. Ct. 2821 (2009).

¹⁰⁷ Amendment of the Commission's Rules Related to Retransmission Consent, MB Docket No. 10-71, Notice of Proposed Rulemaking, FCC 11-31, 2011 WL 765105 (released Mar. 3, 2011).

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Level 3 wants the Commission to intervene in an Internet traffic carriage dispute triggered by a significant increase in traffic that has resulted in an imbalance. Had Fox persisted in blocking Cablevision broadband customers' access to content, the Commission surely would have received plenty of consumer complaints. The Commission must consider whether and how to act on such complaints. It should err on the side of not intervening unless and until the dispute results in elimination of reduction of opportunities for end users to access lawful content when such access is throttled, restrained, blocked and otherwise handicapped for no legitimate reason.

The FCC has lawful authority to investigate possibly anticompetitive and discriminatory conduct as well as suspicious conduct deliberately obscured by non-disclosure agreements and the lack of transparency and candor in dealings with the Commission. However, the FCC should appreciate that it risks unlawfully or unnecessarily meddling with commercial, marketplace-driven negotiations best left to the individual stakeholders. The time to intervene may occur when the parties care so much about extracting concessions from each other that they ignore the harm they cause consumers.