

ARTICLES

HOLD THE PHONE: ASSESSING THE RIGHTS OF WIRELESS HANDSET OWNERS AND CARRIERS

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ABSTRACT

Most subscribers in the United States acquire a subsidized handset when they activate or renew wireless telephone service. In exchange for purchasing a handset below cost, these customers must commit to a two-year service term with substantial financial penalties for early termination, and they must accept carrier-imposed limitations on the use of their handsets. Wireless carriers typically lock subscriber access to one carrier and lock out or thwart unaffiliated providers from providing content, software, and applications to these handsets.

Limitations on the use of wireless handsets juxtaposes with the *Carterfone* policy established by the Federal Communications Commission (FCC) forty years ago, which requires all telephone companies to allow subscribers to attach any technically compatible device. Consumers take for granted the right to attach any device to a network that is “privately beneficial without being publicly detrimental.”¹ Only recently have some wireless subscribers come to understand the costs of not having complete freedom to use their handsets. Technically sophisticated users have resorted to “self-help” strategies to override carrier locks at the risk of permanently disabling (“bricking”) the handset.

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1. Use of the Carterfone Device in Message Toll Tel. Serv., 13 F.C.C.2d 420, *4 (1968) (West pagination), *recon. denied*, 14 F.C.C.2d 571 (1968).

As wireless networking increasingly serves as a key medium for accessing a broad array of information, communications, and entertainment services, the consequences of locked and restricted access become more significant. Despite offering common carrier regulated voice telecommunications, wireless carriers emphasize “next generation” information services, including internet access. They also seek to operate free of any significant FCC oversight, including the duty to comply with the *Carterfone* policy and to provide a neutral conduit for accessing content.

This Article examines whether wireless carriers have a legal obligation to comply with the *Carterfone* policy and, more broadly, what costs and benefits result from government-imposed rules requiring wireless carriers to operate neutral networks. This Article demonstrates that the FCC has applied the *Carterfone* device freedom and network access policies in a number of instances where the Commission identified the need to prevent network operators from requiring equipment upgrades or replacements that subscribers do not need because less expensive options exist. The Article concludes that the rising importance of wireless networking and growing consumer disenchantment with carrier-imposed restrictions on handset versatility and wireless network access will trigger closer regulatory scrutiny of the public interest benefits accruing from the implementation of a wireless *Carterfone* policy.

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I. INTRODUCTION

Wireless operators in most nations qualify for streamlined regulation² when providing telecommunications services³ and qualify for even less government oversight when providing a blend of information services,⁴ entertainment, and electronic publishing.⁵ In the United States, congressional legislation,⁶ real or perceived competition, and a dichotomy between regulated telecommunications services and mostly unregulated information services⁷

2. “Developments in broadband and mobile technologies are resolving several issues related to the natural monopoly characteristics of traditional PSTNs [public switched telephone networks]. Economically viable alternatives in the form of mobile networks and end-to-end fibre-based networks are dissipating the PSTN’s last mile network access bottleneck.” ANDY BANERJEE ET AL., INT’L TELECOMM. UNION, REGULATORY TRENDS: NEW ENABLING ENVIRONMENT 23 (2007), available at <http://www.itu.int/osg/spu/ni/voice/papers/FoV-Madden-Banerjee-Tan-Draft.pdf>.

3. The Communications Act of 1934, as amended, defines telecommunications as “the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.” 47 U.S.C. § 153(43) (2000). Telecommunications service means “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.” *Id.* § 153(46). The Communications Act defines telecommunications carrier as

any provider of telecommunications services, except that such term does not include aggregators of telecommunications services [as defined in 47 U.S.C. § 226]. A telecommunications carrier shall be treated as a common carrier under this chapter only to the extent that it is engaged in providing telecommunications services, except that the Commission shall determine whether the provision of fixed and mobile satellite service shall be treated as common carriage.

Id. § 153(44).

4. 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.” *Id.* § 153(20).

5. See International Telecommunication Union, ITU New Initiatives Programme: The Regulatory Environment for Future Mobile Multimedia Services, <http://www.itu.int/osg/spu/ni/multimobile/index.html> (last visited Aug. 23, 2008).

6. Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, 107 Stat. 312 (1993) (codified at 47 U.S.C. § 332(c) (2000)) creates a hybrid, streamlined regulatory classification for Commercial Mobile Radio Service Providers, commonly known as cellular telephone carriers. The term “commercial mobile service” is defined as “any mobile service . . . 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 the Commission.” 47 U.S.C. § 332(d)(1). “Mobile service” is defined at 47 U.S.C. § 153(27). The term “commercial mobile service” came to be known as the “commercial mobile radio service.” 47 C.F.R. § 20.3 (2007).

7. The FCC interprets the Telecommunications Act of 1996 to create mutual exclusivity between telecommunications services (subject to Title II common carrier regulation) and information services

contribute to the view that the Federal Communications Commission (FCC) has no significant regulatory mandate to safeguard the public interest. Such a hands-off approach made sense when cellular telephone carriers primarily supplemented wireline services and offered voice and text messaging services in a marketplace with six or more facilities-based competitors in most metropolitan areas.

The wireless industry, however, has become significantly more concentrated,⁸ even as wireless networking becomes a viable alternative to wireline services and serves as a key medium for accessing a broad array of information, communications, and entertainment (ICE) services.⁹ As wireless

(subject to limited regulation available under Title I). “Congress intended the categories of ‘telecommunications service’ and ‘information service’ to be mutually exclusive.” Fed.-State Joint Bd. on Universal Serv., 13 F.C.C.R. 11501, 11508 (1998). “Based on our analysis of the statutory definitions, we conclude that an approach in which ‘telecommunications’ and ‘information service’ are mutually exclusive categories is most faithful to both the 1996 Act and the policy goals of competition, deregulation, and universal service.” *Id.* at 11530.

In contrast with the Communications Act, CALEA [the Communications Assistance for Law Enforcement Act] does not define or utilize the term “telecommunications service,” it does not adopt the Communications Act’s narrow definition of “telecommunications,” and it does not construct a definitional framework in which the regulatory treatment of an integrated service depends on its classification into one of two mutually exclusive categories, i.e., telecommunications service or information service. As a result, structural and definitional features of the Communications Act that play a critical role in drawing the Act’s regulatory dividing line between telecommunications service and information service, and that undergird the Commission’s resulting classification of integrated broadband Internet access service as solely an information service for purposes of the Communications Act, are absent from CALEA.

Comme’ns Assistance of Law Enforcement Act & Broadband Access & Servs., 20 F.C.C.R. 14989, 14998 (2005). The lack of an absolute telecommunications-service versus information-service dichotomy provided the basis for the FCC to interpret CALEA as requiring even information service providers to cooperate in wiretapping operations. *See also* Rob Frieden, *Neither Fish Nor Fowl: New Strategies for Selective Regulation of Information Services*, 6 J. TELECOMM. & HIGH TECH. L. 373 (2008); 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).

8. The top four cellular carriers in the United States have a combined market share of 88.1%. Leslie Cauley, *iWeapon: AT&T Plans to Use its Exclusive iPhone Rights to Gain the Upper Hand in the Battle for Wireless Supremacy*, USA TODAY, May 21, 2007, at B1, available at 2007 WLNR 9574768.

9. “Convergence in telecommunications gives many consumers access to multiple technologies or platforms that can be used to send and receive voice communications. Consumers are no longer limited to wireline platforms: they can choose from a range of platforms, including wireless and broadband. As wireless and broadband technologies have become more widely available to and used by consumers, they have increasingly become part of the competitive continuum. As more consumers view and use wireless and broadband services as substitutes for wireline services, the extent to which wireline and broadband services are competitive with wireline services will increase.” ED ROSENBERG, NAT’L REGULATORY RESEARCH INST., ASSESSING WIRELESS AND BROADBAND SUBSTITUTION IN LOCAL TELEPHONE MARKETS 31 (2007), available at <http://nrri.org/pubs/telecommunications/07-06.pdf>.

ventures plan and install next generation networks (NGNs),¹⁰ these carriers expect to offer a diverse array of ICE services, including broadband internet access, free from common carrier regulatory responsibilities that still apply to wireless telecommunications services.¹¹ Wireless carrier managers reject any attempt by government to implement consumer safeguards, including policies that would require wireless carriers to decouple their sale of handsets to subscribers with their delivery of services.

Wireless carriers and some researchers offer more caustic opposition to initiatives that would require nondiscriminatory access, commonly termed wireless network neutrality.¹² The carriers claim that wireless network

10. See International Telecommunication Union, What Rules for IP-enabled NGNs?, ITU Workshop, <http://www.itu.int/osg/spu/ngn/event-march-2006.phtml> (last visited Aug. 23, 2008); see also International Telecommunication Union, Background Sources on Delivery of Digital Content, http://www.itu.int/osg/spu/stn/digitalcontent/resources_topics.html (last visited Aug. 23, 2008); Organisation for Economic Co-Operation and Development, Directorate for Science Technology and Industry, "Next Generation Networks: Evolution and Policy Considerations" OECD Foresight Forum, http://www.oecd.org/document/12/0,3343,en_2649_34225_37392780_1_1_1_1,00.html (last visited Aug. 23, 2008).

11. Title II of the Communications Act of 1934 requires providers of basic telecommunications services to operate on a nondiscriminatory basis, to provide services at just and reasonable charges and also holds providers subject to numerous entry regulations, tariffing, interconnection, and operating requirements. 47 U.S.C. §§ 201-202 (2000).

12. Network neutrality refers to the view that the internet and other telecommunications and information processing networks should remain open, nondiscriminatory, and largely managed by users, rather than carriers. The principle supports end-to-end connectivity and the kind of access equality provided by "best efforts" network routing of traffic. Opponents of the concept claim it would impose common carrier nondiscrimination responsibilities on information service providers, create disincentives for investment in NGN infrastructure, and generate regulatory uncertainty. See Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 F.C.C.R. 14986 (2005) (articulating network neutrality policy objectives); Barbara A. Cherry, *Misusing Network Neutrality to Eliminate Common Carriage Threatens Free Speech and the Postal System*, 33 N. KY. L. REV. 483 (2006); Rob Frieden, *Network Neutrality or Bias?—Handicapping the Odds for a Tiered and Branded Internet*, 29 HASTINGS COMM. & ENT. L.J. 171 (2007) [hereinafter Frieden, *Network Neutrality*]; Rob Frieden, *Internet 3.0: Identifying Problems and Solutions to the Network Neutrality Debate*, 1 INT'L J. COMM. 461 (2007) [hereinafter Frieden, *Internet 3.0*], available at <http://ijoc.org/ojs/index.php/ijoc/article/view/160/86>; Brett Frischmann & Barbara van Schewick, *Network Neutrality and the Economics of an Information Superhighway: A Reply to Professor Yoo*, 47 JURIMETRICS J. 383 (2007); Bill D. Herman, *Opening Bottlenecks: On Behalf Of Mandated Network Neutrality*, 59 FED. COMM. L.J. 103 (2006); 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); J. Gregory Sidak, *A Consumer-Welfare Approach to Network Neutrality Regulation of the Internet*, 2 J. COMPETITION L. & ECON. 349 (2006); Adam Thierer, *Are "Dumb Pipe" Mandates Smart Public Policy? Vertical Integration, Net Neutrality, and the Network Layers Model*, 3 J. TELECOMM. & HIGH TECH. L. 275 (2005); Barbara van Schewick, *Towards an Economic Framework for Network Neutrality Regulation*, 5 J. TELECOMM. & HIGH TECH. L. 329 (2007); Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOMM. & HIGH TECH. L. 141 (2005); Christopher S. Yoo, *Network Neutrality and the Economics of Congestion*, 94 GEO. L.J. 1847 (2006); Christopher S. Yoo, *Beyond Network Neutrality*, 19 HARV. J.L. & TECH. 1 (2005); Christopher S. Yoo, *Would Mandating*

neutrality responsibilities have no place in the currently competitive and innovative wireless marketplace, would create disincentives for NGN investment, and would generate regulatory uncertainty.

This Article examines the costs and benefits of government-imposed rules that would mandate the right of subscribers to attach any technically compatible handset to wireless networks, as well as broader wireless network neutrality rules. The Article also examines whether and how liberalized wireless handset attachment rules jibe with policies announced decades ago by the FCC in its *Carterfone* decision¹³ and related orders that mandated the decoupling of wireline handset rentals, inside wiring installation and maintenance,¹⁴ and telephone service. Additionally, this Article considers the broader wireless network neutrality debate with an eye toward identifying differences in the factors and issues raised by an earlier debate about neutral internet access via wired networks.

For example, most wireless subscribers currently appear to welcome the opportunity to use increasingly sophisticated handsets at subsidized sale prices to access a blend of ICE services, while before the FCC implemented its *Carterfone* policy wireline subscribers objected to limited choices and having to pay a monthly package rate that obscured the fact that they overcompensated carriers for handset rentals. But for other services, such as video programming, the FCC, largely on its own accord, has pursued regulatory safeguards that provide consumers the opportunity to access only

Broadband Network Neutrality Help or Hurt Competition? A Comment on the End-to-End Debate, 3 J. TELECOMM. & HIGH TECH. L. 23 (2004); Craig McTaggart, *Was The Internet Ever Neutral?* (Sept. 30, 2006) (unpublished manuscript), <http://web.si.umich.edu/tprc/papers/2006/593/mctaggart-tprc06rev.pdf>.

13. *Mebane Home Tel. Co.*, 53 F.C.C.2d 473 (1975), *aff'd sub nom.* *Mebane Home Tel. Co. v. F.C.C.*, 535 F.2d 1324 (D.C. Cir. 1976); *Telerent Leasing Corp.*, 45 F.C.C.2d 204 (1974), *aff'd sub nom.* *N.C. Utils. Comm'n v. F.C.C.*, 537 F.2d 787 (4th Cir. 1976); *Use of the Carterfone Device in Message Toll Tel. Serv.*, 13 F.C.C.2d 420 (1968); *see also* *Pub. Util. Comm'n of Tex. v. F.C.C.*, 886 F.2d 1325 (D.C. Cir. 1989) (noting long established F.C.C. policy that carriers and non-carriers alike have a federal right to interconnect to the public telephone network in ways that are privately beneficial if they are not publicly detrimental).

Previous F.C.C. opposition to this principle failed to pass muster with a reviewing court that interpreted the Communications Act of 1934 as mandating the right of consumers to attach equipment to the network in ways that were privately beneficial but not publicly harmful. *Hush-A-Phone Corp. v. United States*, 238 F.2d 266 (D.C. Cir. 1956). “The intervenors’ tariffs [prohibiting the use of plastic device to enhance privacy and low volume conversations], under the Commission’s decision, are in unwarranted interference with the telephone subscriber’s right reasonably to use his telephone in ways which are privately beneficial without being publicly detrimental.” *Id.* at 269.

14. *Detariffing the Installation & Maint. of Inside Wiring*, 51 Fed. Reg. 8498 (F.C.C. Mar. 12, 1986), *recon.*, 1 F.C.C.R. 1190 (1986), *further recon.*, 3 F.C.C.R. 1719 (1988), *partially remanded sub nom.* *Nat’l Ass’n of Regulatory Util. Comm’rs v. F.C.C.*, 880 F.2d 422 (D.C. Cir. 1989), *remanded to 5 F.C.C.R. 3407* (1990), *partially modified by 7 F.C.C.R. 1334* (1992).

desired content using the least cost equipment options, including an exemption from having to rent operator-supplied set-top converter boxes.

This Article also examines why wireless carriers could avoid becoming involved in a debate over consumer handset attachment rights and network neutrality for several years, despite the fact that their common carrier status, vis-à-vis voice services, provides a clear basis for imposing nondiscrimination responsibilities that do not apply to internet access provided by wireline telephone companies and cable television operators. This Article concludes that the rising importance of wireless networking for most ICE services and growing consumer disenchantment with carrier-imposed restrictions on handset versatility¹⁵ will trigger civil litigation on antitrust and consumer protection grounds,¹⁶ as well as congressional¹⁷ and FCC consideration of the public interest benefits accruing from applying *Carterfone* policies to wireless handset sales and possibly selective application of wireless net neutrality principles.

Consumers can expect wireless carriers to loosen some restrictions and financial penalties¹⁸ to avoid laws and regulations requiring more. While some wireless carriers now appear to embrace some aspects of a wireless *Carterfone* policy,¹⁹ their lack of specificity, the absence of enforceable commitments, reports of ongoing blocking,²⁰ and newfound enthusiasm²¹

15. See Carl Howe, *Time For Wireless Carriers to 'Unlock' Customer Handsets*, SEEKING ALPHA, Dec. 7, 2006, <http://seekingalpha.com/article/21976-time-for-wireless-carriers-to-unlock-customer-handsets> (last visited Aug. 23, 2008):

Increasingly, phone handsets are as much a window into online lives as our computers are, storing text, email messages, music, and even video for us. With phones becoming more complex and expensive, the concept that consumers have to throw those experiences away if they want to change their carrier is as absurd as forcing them to throw away their computer if they change Internet provider. And consumers are smart enough to know this.

16. See, e.g., Olga Kharif, *Cell-Phone Contract Disputes Heat Up*, BUS. WK., Aug. 20, 2007, available at http://www.businessweek.com/technology/content/aug2007/tc20070820_113598.htm?chan=search; Elena Malykhina, *California Court Lets Class-Action Suit Against T-Mobile Go Forward*, INFO. WK., Oct. 15, 2007, available at <http://www.informationweek.com/showArticle.jhtml?articleID=202402978>.

17. See, e.g., Cell Phone Consumer Empowerment Act of 2007, S. 2033, 110th Cong. (2007), 2007 CONG US S 2033 (Westlaw).

18. See, e.g., Elena Malykhina, *AT&T To Drop Early Termination Fees*, INFO. WK., Oct. 16, 2007, available at <http://www.informationweek.com/news/showArticle.jhtml?articleID=202403410> (announcing that some future contracts will prorate early termination fees over a two-year period).

19. See, e.g., Press Release, Verizon Wireless, Verizon Wireless To Introduce "Any Apps, Any Device" Option For Customers in 2008 (Nov. 27, 2007), <http://news.vzw.com/news/2007/11/pr2007-11-27.html>.

20. Bruce Meyerson, *Not On Our Network, You Don't*, BUS. WK., Dec. 24, 2007, at 34 ("Even as the wireless industry spreads a new gospel about opening mobile-phone networks to outside devices and

despite previously fierce opposition may not obviate the need for official action by the FCC.²² Similarly, the FCC may refrain from aggressive efforts to promote wireless access freedom in light of the Commission's perceptions about the competitiveness of the wireless marketplace²³ and an apparent inability to manage a dual regulatory regime for ventures that provide both regulated telecommunications services and lightly regulated information services.

II. WIRELESS *CARTERPHONE* AND NETWORK NEUTRALITY INITIATIVES

For several years the debate about telephone subscribers' handset freedoms and network neutrality did not include wireless carriers, despite the fact that these operators constitute common carriers when providing telecommunications services. The lack of interest may have resulted from the fact that most wireless subscribers currently use their handsets for voice telephony and text messaging, and the view that regular opportunities to buy handsets at subsidized rates make palatable a two-year lock-in with high early termination fees²⁴ and carrier control over the features and functions available

applications, some of the biggest U.S. carriers are blocking new services that would compete with their own.”).

21. *The Year of the Cell Phone*, Pogue's Posts: The Latest in Technology from David Pogue, <http://pogue.blogs.nytimes.com/2007/12/13/the-year-of-the-cellphone/> (Dec. 13, 2007 12:19 EST) (“Cellphones and cellphone services made news with amazing frequency, making it clear that this service-we-love-to-hate is still in its crude Neanderthal age. . . . No matter how depressed you get about the state of the world, you have to have faith in one thing: when things swing out of control, the public has a way of setting things straight. . . . [T]he latest public pushback concerns evil cellphone-carrier greediness.”).

22. *See* *Cellco P'ship d/b/a Verizon Wireless v. F.C.C.*, No. 07-1359 (D.C. Cir. Sept. 10, 2007) (petition for review), available at http://www.freepress.net/docs/vzw_appeal_700_petition.pdf (filing, although ultimately withdrawing, a petition to vacate the FCC's decision and to enjoin the Commission from pursuing an open access initiative); 700 MHz Statement, <http://policyblog.verizon.com/PolicyBlog/Blogs/policyblog/DavidFish9/337/700MHz-statement.aspx> (July 26, 2007, 8:59 EST) (“Verizon's position is that the Federal Communications Commission should not impose ‘open access’ conditions on the 700 MHz spectrum. The record compiled at the FCC does not justify these conditions.”); *see also* *The Hype in the Skype Petition*, <http://policyblog.verizon.com/PolicyBlog/Blogs/policyblog/LinkHoewing9/294/The-Hype-in-the-Skype-Petition.aspx> (May 9, 2007, 9:47 EST). *Cf.* *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, 20 F.C.C.R. 14986 (2005) (incorporating *Carterfone* device as an essential internet freedom) [hereinafter 2005 Internet Policy Statement].

23. *See, e.g.*, F.C.C., ANNUAL REPORT & ANALYSIS OF COMPETITIVE MARKET CONDITIONS WITH RESPECT TO COMMERCIAL MOBILE SERVICES, ELEVENTH REPORT, 21 F.C.C.R. 10947 (2006).

24. CTIA Petition for Expedited Declaratory Ruling on Early Termination Fees, F.C.C. WT Docket No. 05-194 (2006), available at http://files.ctia.org/pdf/PositionPaper_Furchgott_Roth ETF.pdf (explaining the rationale for imposing early termination fees).

from the subsidized handset. Consumers increasingly have grown displeased with limitations on handsets as these devices become an essential interface for access to many diverse wireless NGN services.²⁵ In advance of such demand side advocacy, a petition filed by Skype,²⁶ a major Voice over the Internet Protocol (VoIP)²⁷ provider owned by eBay, widespread advocacy for network

25. See, e.g., Free My Phone, <http://mossblog.allthingsd.com/20071021/free-my-phone/> (Oct. 21, 2007, 21:10 EST):

A shortsighted and often just plain stupid federal government has allowed itself to be bullied and fooled by a handful of big wireless phone operators for decades now. And the result has been a mobile phone system that is the direct opposite of the PC model. It severely limits consumer choice, stifles innovation, crushes entrepreneurship, and has made the U.S. the laughingstock of the mobile-technology world, just as the cell[]phone is morphing into a powerful hand-held computer. . . . That's why I refer to the big cell[]phone carriers as the "Soviet ministries." Like the old bureaucracies of communism, they sit athwart the market, breaking the link between the producers of goods and services and the people who use them.

26. Skype Commc'ns S.A.R.L., Petition to Confirm a Consumer's Right to Use Internet Commc'ns Software & Attach Devices to Wireless Networks (Feb. 20, 2007), available at http://download.skype.com/share/skype_fcc_200702.pdf [hereinafter Skype Petition].

27. Voice over the Internet Protocol (VoIP) offers voice communications capabilities, much like ordinary telephone service, using the packet switched internet, for all or part of the link between call originator and call recipient. VoIP calls originating or terminating over a standard, dial-up telephone network require conversion from or to the standard telephone network's architecture, which creates a dedicated "circuit-switched" link as opposed to the ad hoc, "best efforts" packet switching used in the internet. See Robert Cannon, *State Regulatory Approaches to VoIP: Policy, Implementation, and Outcome*, 57 FED. COMM. L.J. 479 (2005); Mark C. Del Bianco, *Voices Past: The Present and Future of VoIP Regulation*, 14 COMMLAW CONCEPTUS 365 (2006); Robert M. Frieden, *Dialing for Dollars: Should the FCC Regulate Internet Telephony?*, 23 RUTGERS COMPUTER & TECH. L.J. 47 (1997); Cherie R. Kiser & Angela F. Collins, *Regulations on the Horizon: Are Regulators Poised to Address the Status of IP Telephony?*, 11 COMMLAW CONCEPTUS 19 (2003); Sunny Lu, Note, *Cellco Partnership v. FCC & Vonage Holdings Corp. v. Minnesota Public Utilities Commission: VoIP's Shifting Legal and Political Landscape*, 20 BERKELEY TECH. L.J. 859 (2005).

For technical background on how VoIP works, see Dialogic, White Paper, *Telephony Fundamentals: An Introduction to Basic Telephony Concepts* (2007), available at http://www.dialogic.com/products/docs/whitepapers/3146_Intro_Basic_Tel_Concepts_wp.pdf; Susan Spradley & Alan Stoddard, FCC Office of Engineering and Technology, Tutorial on Technical Challenges Associated with the Evolution to VoIP, Power Point Presentation, http://www.fcc.gov/oet/tutorial/9-22-03_voip-final_slides_only.ppt (last visited Aug. 23, 2008). See also Stephen E. Blythe, *The Regulation of Voice-Over-Internet-Protocol in the United States, the European Union, and the United Kingdom*, 5 J. HIGH TECH. L. 161 (2005); Del Bianco, *supra* note 27; R. Alex DuFour, *Voice over Internet Protocol: Ending Uncertainty and Promoting Innovation Through a Regulatory Framework*, 13 COMMLAW CONCEPTUS 471 (2005); Jerry Ellig & Alastair Walling, *Regulatory Status of VoIP in the Post-Brand X World*, 23 SANTA CLARA COMPUTER & HIGH TECH. L.J. 89 (2006); Amy L. Leisinger, Note, *If It Looks Like a Duck: The Need for Regulatory Parity in VoIP Telephony*, 45 WASHBURN L.J. 585 (2006).

neutrality by Google,²⁸ and a paper written by Columbia law professor Tim Wu²⁹ heretofore have stimulated a largely political and academic debate.

Skype sought confirmation by the FCC that consumers have a legal and enforceable right to attach devices to wireless networks and to access any software, application, or content of their choosing.³⁰ Long ago the FCC determined that wireline carrier subscribers have such rights, provided their access causes no technical harm to carrier networks. As a result of the FCC's *Carterfone* decision and subsequent orders,³¹ telecommunications services have no direct coupling or linkage with subscribers' acquisition of telephone handsets and other devices, such as facsimile machines, modems, and personal computers. Telephone companies used to bundle telephone handset rentals, customer-premises inside wiring installation and maintenance, and telephone service. Consumers had no way of knowing the actual cost of each category, nor could they opt out and procure and use their own telephones and premise wiring. When the FCC ordered the unbundling of telephone service from wiring and accessing devices, a competitive market evolved for both the installation of premises wiring and for devices that attach to telecommunications networks.³² Consumers now take for granted the legal

28. See Google Public Policy Blog, Network Neutrality, <http://googlepublicpolicy.blogspot.com/search/label/Net%20Neutrality> (explaining that Google's interest in wireless net neutrality appears to stem from its possible interest in using wireless spectrum and offering a wireless handset to promote greater access to its internet services).

29. Tim Wu, *Wireless Net Neutrality: Cellular Carterfone and Consumer Choice in Mobile Broadband* (New America Foundation, Working Paper No. 17, 2007), available at http://www.newamerica.net/files/WorkingPaper17_WirelessNetNeutrality_Wu.pdf.

30. Skype Petition, *supra* note 26, at 6:

Skype respectfully requests that the Commission declare that *Carterfone* applies fully to wireless networks, to initiate a rulemaking proceeding to evaluate wireless carrier practices in light of *Carterfone* and to enforce *Carterfone*, and to create an industry-led mechanism to ensure the openness of wireless networks. Doing so will ensure both that consumers retain a right to run the applications of their choosing and a right to attach all non-harmful devices to the wireless network. These essential rights will prevent carriers from using illegitimate network management practices as an excuse for otherwise anti-consumer behavior.

31. See *supra* note 13.

32. As the FCC said in *MTS & WATS Market Structure*:

The benefits of competition have been observed in a great variety of markets through centuries of experience. We ourselves have observed such tangible benefits in telecommunications equipment markets after our *Carterfone* decision effectively opened such markets to competition. In Docket No. 20003—a broad fact-finding inquiry into the economic implications and relationships arising from regulatory policies and pricing practices for telecommunications services and facilities subject to competition—we concluded that “consumer inter-connection has benefited the general public by speeding innovation and meeting needs that were unmet prior to the introduction of customer provided equipment.”

81 F.C.C.2d 177, 202 (1980) (quoting Econ. Implications and Interrelationships Arising from Policies and

“right” to possess and connect their own telephone to wired telecommunications networks.

The FCC has never stated that its *Carterfone* decision and its conceptualization of network neutrality apply equally to wireless carriers when providing telecommunications services. Absent such an affirmative declaration by the FCC, wireless carriers and “big box” store agents sell most wireless radiotelephones at the same time as consumers acquire or renew cellular telephone service.³³ Wireless carriers currently offer no discount service plans for subscribers who continue using an existing handset, or activate a new or used handset that does not trigger any carrier financial subsidy. Without such a discount on service, consumers have no incentive to make do with a used handset in exchange for cheaper telecommunications services rates. Accordingly, consumers regularly renew service at the same time they replace their handsets, and the contract for such bundled service includes language permitting the carrier to disable equipment features and limit the manner in which subscribers access third-party content, services, and applications.

When most subscribers anticipate using their cellphones for voice and text messaging, carriers offer a compelling value proposition of “free” or low-priced handsets in exchange for a two-year service commitment. Only recently have cellphone subscribers begun to identify the foregone or limited options resulting from this decision, including early purchasers of Apple’s iPhone, who received little or no direct subsidy and who acquired a phone usable on only one carrier’s network and unable to provide access to, and use of, software, applications, and content otherwise accessible via wired and some other wireless networks.³⁴

Practices Relating to Customer Interconnection, Jurisdictional Separations and Rate Structures, 75 F.C.C.2d 506, 562 (1980)).

33. See A. GREENGART & B. AKYUZ, CONSUMER HANDSETS 2-3 (2006), available at <http://www.currentanalysis.com/k/files/CurrentAnalysis-MA569.pdf> (“The carrier retail channel still accounts for the large majority of wireless sales; however, the distribution support provided by indirect channel partners keeps getting stronger. . . . Verizon Wireless has been shifting its own retail outlets that account for 65% of new sales.”).

34. “Of the 1.4 million iPhones sold so far (of which 1,119,000 were sold in the quarter ending Sept. 30), [Apple Chief Operating Office Timothy] Cook estimated that 250,000 were sold to people who wanted to unlock them from the AT&T network and use them with another carrier.” Saul Hansell to Bits, <http://bits.blogs.nytimes.com/tag/iphone/> (Oct. 22, 2007, 19:26 EST).

You bought the iPhone, you paid for it, but now Apple is telling you how you have to use it, and if you don’t do things the way they say, they’re going to lock it. Turn it into a useless “brick.” Is this any way to treat a customer? Apparently, it’s the Steve Jobs way. But some iPhone users are mad as heck, and they’re not going to take it anymore.

The Skype petition invited the FCC to state explicitly that consumers have an unfettered right to use any technically compatible handset to access any wireless carrier's network and to use that handset to access any available service, including ones the telecommunications provider would prefer subscribers not access, or acquire only on terms and conditions set by the carrier.³⁵ In other words, the Skype petition seeks an FCC declaration that absent a compelling technical justification, wireless carriers cannot sell locked handsets that only access the network and services of the wireless carrier and cannot access services, software, and content of other wireless carriers and third parties.

Columbia law professor Tim Wu energized pro-wireless net neutrality advocates with a paper identifying instances where applying *Carterfone* principles would serve the public interest and prevent or limit harmful carrier discrimination.³⁶ Professor Wu provided several examples of carrier tactics designed to prevent subscribers from easily migrating to competing carriers and from having greater flexibility in accessing third-party content and applications.³⁷ Professor Wu identified the following as examples of net neutrality violations having little, if any, public safety and welfare justifications:

- Locking handsets so that subscribers cannot access competitor networks (by frequency, transmission format, firmware, or software); in the U.S. carriers even lock handsets designed to allow multiple carrier access by changing an easily inserted Subscriber Identity Module ("SIM");
- Using firmware "upgrades" to "brick," i.e., render inoperative, the handset or alternatively disable third party firmware and software;

Apple Users Talking Class-Action Lawsuit Over iPhone Locking, http://www.informationweek.com/blog/main/archives/2007/09/iphone_users_ta.html (Sept. 30, 2007, 9:02 EST).

35. See Skype Petition, *supra* note 26, at 6:

In the wireless arena . . . carriers are using their considerable influence over handset design and usage to maintain an inextricable tying of applications to their transmission networks and are limiting subscribers' rights to run applications of their choosing. Carriers are doing so, moreover, in violation of the Commission's *Carterfone* principle and the strictures of the Commission's original order permitting bundling of consumer equipment and wireless service.

36. Tim Wu, *Wireless Carterfone*, 1 INT'L J. COMM. 389 (2007), available at <http://ijoc.org/ojs/index.php/ijoc/article/view/152/96>.

37. See *id.* at 389-90:

By controlling entry, carriers are in a position to exercise strong control over the design of mobile equipment. They have used that power to force equipment developers to omit or cripple many consumer-friendly features. Carriers have also forced manufacturers to include technologies, like "walled garden" Internet access, that neither equipment developers nor consumers want. Finally, through under-disclosed "phone-locking," the U.S. carriers disable the ability of phones to work on more than one network.

- Disabling handset functions, e.g., bluetooth, Wi-Fi access, internet browsers, GPS services, and email clients;
- Specifying formats for accessing memory, e.g., music, ringtones, and photos;
- Creating “walled garden” access to favored video content of affiliates and partners; and
- Using proprietary, non-standard interfaces making it difficult for third parties to develop compatible applications and content.³⁸

Opponents to wireless net neutrality have aggressively responded to Professor Wu. Robert Hahn, Robert Litan, and Hal Singer claim that *Carterfone* policy made economic sense only in a vertically integrated, uncompetitive wireline marketplace, and that it would be ill-advised if not illegal for government to receive revenues from wireless service spectrum auction and impose burdensome regulatory conditions.³⁹ Additionally, they note that cellphone rates have dropped significantly,⁴⁰ and they consider network restrictions as necessary safeguards for subscriber privacy, protecting the network from technical harm, and managing limited bandwidth.⁴¹ The authors suggest that wireless net neutrality advocates should bear the burden of proving market failure in the wireless marketplace and demonstrating how government intervention would accrue greater benefits than costs.⁴²

III. WHY DO WIRELESS CARRIERS OPPOSE SUBSCRIBER HANDSET ATTACHMENT AND NETWORK NEUTRALITY RIGHTS?

Wireless carriers oppose the implementation of *Carterfone* and network neutrality policies for three reasons:

- (1) Increased wireless subscriber freedom to attach devices and to demand network neutrality would reinforce the FCC’s ongoing statutory obligation to enforce conventional telecommunications service rules on carriers that successfully have avoided the rules;
- (2) Wireless carriers have determined that the financial benefits of locking subscribers into two-year service commitments exceed the cost of subsidizing handset sales; and
- (3) Locking and limiting subsidized handsets helps carriers foreclose subscriber access to services, content, and applications available from third parties that

38. *Id.* at 390, 401-08.

39. Robert W. Hahn et al., *The Economics of “Wireless Net Neutrality,”* 3 J. COMPETITION L. & ECON. 399, 426-31 (2007).

40. *Id.* at 407.

41. *Id.* at 421-26.

42. *Id.* at 407-11.

make no financial contribution to the wireless carrier and possibly compete with services offered by the carrier.

A. Wireless Carriers Operate as Common Carriers When Providing Telephone Services

Wireless carriers would like consumers and the FCC to ignore the simple fact that carriers providing Commercial Mobile Radio Service (CMRS),⁴³ the classification used by the FCC to identify cellular radiotelephone carriers' telecommunications service, remain subject to regulation contained in Title II of the Communications Act.⁴⁴ CMRS operators do enjoy regulatory forbearance of some specified regulations—e.g., the need to file tariffs that establish the terms and conditions for service.⁴⁵ However, for regulation not explicitly removed, CMRS carriers must comply with Title II regulatory requirements, and the FCC can forbear from applying any of the remaining regulations, but only upon determining that consumers will remain protected against unreasonable and discriminatory service and that the public interest supports forbearance.⁴⁶ Put another way, CMRS operators do not avoid most basic common carrier responsibilities simply because they provide wireless services, subject to partial regulatory forbearance, or because they also offer information services.

43. The Omnibus Budget Reconciliation Act of 1993 amended Section 332 of the Communications Act of 1934 to create the CMRS carrier category. The law defines CMRS as "any mobile service . . . 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." 47 U.S.C. § 332(d)(1) (2000).

44. *Id.* §§ 201-276.

45. *See, e.g.*, Implementation of Sections 3(N) and 332 of the Commc'ns Act Regulatory Treatment of Mobile Servs., 9 F.C.C.R. 2035, ¶ 2(d) (1994).

46. Specifically,

(A) A person engaged in the provision of a service that is a commercial mobile service shall, insofar as such person is so engaged, be treated as a common carrier for purposes of this chapter, except for such provisions of subchapter II of this chapter as the Commission may specify by regulation as inapplicable to that service or person. In prescribing or amending any such regulation, the Commission may not specify any provision of section 201, 202, or 208 of this title, and may specify any other provision only if the Commission determines that—

(i) enforcement of such provision is not necessary in order to ensure that the charges, practices, classifications, or regulations for or in connection with that service are just and reasonable and are not unjustly or unreasonably discriminatory;

(ii) enforcement of such provision is not necessary for the protection of consumers; and

(iii) specifying such provision is consistent with the public interest.

Id. § 332(c)(1)(A)(i)-(iii); *see also id.* § 160(a) (establishing similar forbearance criteria for other telecommunications service providers).

When CMRS operators offer subscribers a combination of telecommunications and lightly regulated information services, such as broadband internet access,⁴⁷ the latter group of services does not supersede ongoing telecommunications service regulation. The combination of regulatory classifications has the potential to cause uncertainty about how far the common carrier designation extends, but it does not eliminate the lawful application of such regulation.

Despite the clear applicability of Title II regulation and the occasional acknowledgement by the FCC that such regulation still applies,⁴⁸ regulatory uncertainty supports carrier efforts to evade government oversight. The FCC has contributed to the confusion by expressing a preference for making “either/or” regulatory classifications of services that combine telecommunications and information services.⁴⁹ The Commission strongly prefers to shoehorn any and all converged services into the lightly regulated information services “safe harbor,”⁵⁰ including wireless broadband internet access. With rare exception, the FCC appears reluctant to hold CMRS operators to the still applicable Title II requirements, despite not having undertaken the examination necessary to forbear officially from regulating.

Notwithstanding significant regulatory forbearance, CMRS operators still retain their common carrier status and core obligation to provide the public with access to other carriers. This obligation includes the requirement that carriers provide the public with wireless-to-wireline network access—i.e., access to the conventional wired public switched telephone network (PSTN) as well as the duty to provide subscribers with “roaming” access to other wireless carriers when a subscriber travels outside his or her home service area.⁵¹

CMRS operators do not have unlimited and unconditional authority to determine whether and how their subscribers can access other networks and

47. See *Appropriate Regulatory Treatment for Broadband Access to the Internet over Wireless Networks*, WT Docket No. 07-53, F.C.C. 07-30 (Mar. 22, 2007) (declaratory ruling), *available at* http://fjallfoss.fcc.gov/edocs_public/attachmatch/FCC-07-30A1.pdf.

48. See, e.g., *Reexamination of Roaming Obligations of Commercial Mobile Radio Serv. Providers*, WT Docket No. 05-265, F.C.C. 07-143 (Aug. 7, 2007) (report and order and further notice of proposed rulemaking), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-143A1.pdf.

49. See *supra* note 7.

50. 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).

51. *Reexamination of Roaming Obligations of Commercial Mobile Radio Serv. Providers*, 22 F.C.C.R. 15817 (Aug. 7, 2007) (report and order and further notice of proposed rulemaking), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-143A1.pdf.

end users. While the FCC has forborne from regulating the price of access and some terms and conditions for service, the Commission cannot abandon its regulatory responsibility to ensure that CMRS operators provide access and interconnection on a fair and nondiscriminatory basis. For example, a CMRS operator must provide its subscribers with access to the network services of other carriers operating in locations where the CMRS operator does not.⁵² The FCC recently reiterated that the common carrier responsibilities still borne by CMRS operators include the unconditional duty to provide “roaming” access to “the facilities of another CMRS provider with which the subscriber has no direct pre-existing service or financial relationship to place an outgoing call, to receive and incoming call, or to continue an in-progress call.”⁵³

B. Wireless Carriers Financially Benefit from Bundling Handset Sales and Telephone Service

It should come as no surprise that because wireless carriers do not operate as charities they have calculated the costs and benefits of every marketing strategy. Accordingly, the carriers have determined that subsidizing the cost of handsets provides greater financial benefits than the cost of the subsidy. Providing consumers with devices using cutting edge technologies enhances the likelihood that subscribers will remain loyal to the carrier and will use the new handset to access services that will increase the carrier’s revenues. In light of declining Average Return Per User (ARPU) for basic services,⁵⁴ a wireless carrier has a keen interest in offering new services and thwarting

52. *See id.* at 15818:

We determine that when a reasonable request is made by a technologically compatible CMRS carrier, a host CMRS carrier must provide automatic roaming to the requesting carrier outside of the requesting carrier’s home market, consistent with the protections of Sections 201 and 202 of the Communications Act. We also find that the common carrier obligation to provide roaming extends to services that are real-time, two-way switched voice or data service that are interconnected with the public switched network and utilize an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls.

53. *Id.* at 15819.

54. *See Decision Time for Mobile Operators Faced with Declining Spend*, *Says Analysys*, BUS. WK., May 30, 2007:

Mobile operators may experience substantial decline in ARPU in developed countries, as voice prices decrease, non-voice services fail to capture consumers’ interest, and mobile phones lose their fashionable image, according to a forthcoming report, *The Future of the Global Wireless Industry: scenarios for 2007-12*, to be published by Analysys, the global advisers on telecoms, IT and media (<http://research.analysys.com>) (June 5, 2007).

subscriber access to alternatives available from ventures that have no obligation to share revenues with the carrier.

Bundling handset sales with two-year service commitments forecloses development of a market for used handsets, or for handsets having unconditional access to third-party sources of content and services. Subscribers opting to continue using a previously purchased handset, or to acquire one outside the carrier's subsidized channel of distribution, accrue no cost savings, despite reducing the carrier's customer acquisition costs. Wireless carriers do not offer a lower monthly service rate for existing or prospective customers who trigger no handset subsidy burden. Whether by explicit agreement or "consciously parallel" conduct, all wireless carriers have agreed not to compete for the most price sensitive consumer, who would gladly give up cutting edge technologies in exchange for lower monthly service rates.

C. Wireless Carriers Financially Benefit By Locking Handsets and Locking Out Potential Competitors

Opponents to a wireless *Carterfone* policy frame their reasons primarily on technical and economic policy grounds without acknowledging the financial upside accruing to carriers. For example, Robert Hahn, Robert Litan, and Hal Singer claim that the *Carterfone* policy made economic sense only in a vertically integrated, uncompetitive wireline marketplace.⁵⁵ They assert that proponents should bear the burden of proof that market failure exists and that regulation will do more good than harm.⁵⁶ These authors and other opponents of wireless *Carterfone* and network neutrality seek to frame the debate in macro-economic terms, such as the overall impact on carrier incentives to invest in facility upgrades, the need to conserve spectrum, and the greater complexity in wireless networking compared to the wireline telephone infrastructure.⁵⁷

Whether by design or coincidence, opponents to wireless *Carterfone* ignore the consumer and public interest benefits that would accrue if the FCC implemented a handset unbundling policy. CMRS operators can extract greater profits by denying subscribers *Carterfone* device attachment freedom. As currently constituted, the marketplace does not punish any single carrier

55. Hahn et al., *supra* note 39, at 426-31.

56. *Id.* at 408-11.

57. *Id.* at 405, 433, 444.

for engaging in such practices because even at the conclusion of a two-year service contract, subscribers cannot yet migrate to a carrier with clearly more liberal device attachment and network access policies, or a discounted service for subscribers who activate or extend service without a handset subsidy.

The four major CMRS operators and the few remaining regional carriers offer roughly the same service terms and conditions on a “take-it-or-leave-it” basis and do not vary significantly on a continuum from most restrictive to least restrictive in terms of device attachment freedom. Likewise, no carrier offers a cheaper rate plan for subscribers extending service without purchasing a subsidized handset. It comes across as an overstatement to suggest that the current CMRS marketplace operates in a robustly “competitive process in which independent developers, content owners, hardware vendors and networks vie to discover preferred packages and pricing.”⁵⁸

For its part, the FCC views *Carterfone* as a major catalyst for lower consumer prices, greater competition, and enhanced service options.⁵⁹ *Carterfone* makes it clear that “[c]ustomers have the right to use common carrier telecommunications services in any way that is privately beneficial, so long as it is not publicly harmful.”⁶⁰ Even for non-common carrier access to wireline information services, the FCC’s “Four Internet Freedoms” include the right of consumers “to connect their choice of legal devices that do not harm the network.”⁶¹

58. Thomas Hazlett, *How the “Walled Garden” Promotes Innovation*, FIN. TIMES, Sept. 25, 2007, available at <http://www.ft.com/cms/s/0/b459c6aa-6bc8-11dc-863b-0000779fd2ac.html>.

59. “As a result of *Carterfone* and other Commission actions, ownership of telephones moved from the network operator to the consumer. As a result, the choice of features and functions incorporated into a telephone has increased substantially, while the cost of equipment has decreased.” Implementation of Section 304 of the Telecomms. Act of 1996, Commercial Availability of Navigation Devices, 13 F.C.C.R. 14775, 14780 (1998) (report and order).

Over the last several decades, some of the most important issues raised before this Commission have concerned the introduction of competition in the provision of telecommunications equipment and services. In the customer premises equipment (CPE) market, competition was fostered by a series of regulatory and judicial actions, beginning with the *Hush-a-Phone* and *Carterfone* decisions, continuing with the equipment registration program, and culminating in the *Second Computer Inquiry* decision. As a result of these decisions and the responses of businesses and customers to the new opportunities for the provision of CPE, competition in the CPE marketplace is now well established.

GTE Sprint Commc’ns Corp., US Telecom, Inc., Allnet Commc’ns Servs., Inc., & United States Transmission Systems, Inc., Joint Petition for Expedited Rulemaking, F.C.C. 85-604, 1985 WL 260270, at *1 (1985) (notice of proposed rulemaking).

60. Revisions to Price Cap Rules for AT&T, 8 F.C.C.R. 5205, *3 (1993) (notice of proposed rulemaking) (Westlaw pagination).

61. 2005 Internet Policy Statement, 20 F.C.C.R. at 14988.

IV. FCC INITIATIVES TO PROTECT CONSUMERS FROM MANDATORY BUNDLING ARRANGEMENTS

While the FCC has no apparent plans to endorse wireless *Carterfone* or to enforce wireless net neutrality, the Commission has established rules for other media designed to protect consumers from incurring higher costs and less flexibility when attaching equipment and when accessing ICE content and services. On several occasions at both the supplier and end user level, the FCC has implemented safeguards that restrict or eliminate requirements that consumers have to pay for services, equipment, and content that they do not want or need as a condition precedent for access to desired services and content.

A. *On the Supply Side*

The FCC, on its own initiative and to implement a statute, has established operating rules that limit how carriers package services. The Commission also has imposed restrictions on what contractual service terms carriers can impose that have the effect of locking in consumers and foreclosing their ability to take service from a competitor. On the supply side, the FCC requires CMRS providers to allow local number portability, which is the ability of subscribers to retain the same telephone number when changing carrier services.⁶² Such local number portability promotes competition by eliminating a disincentive to shift carriers. Local number portability, as discussed below, requires carriers to cooperate on the assignment and transfer of telephone numbers. The FCC also promotes consumer access to diverse video content by foreclosing ventures that provide both content and content delivery from stifling competition through exclusive dealing arrangements.⁶³ Additionally,

62. See Implementation of Section 6002(B) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Eleventh Report, 21 F.C.C.R. 10947, 11005 (2006):

Local number portability (LNP) refers to the ability of users of telecommunications services to retain, at the same location, existing telecommunications numbers when switching from one telecommunications carrier to another. Thus, subscribers can port [i.e., interconnect and hand off traffic] numbers between two CMRS carriers (intramodal porting) or between a CMRS and wireline carrier (intermodal porting).

63. See generally Implementation of the Cable Television Consumer Protection & Competition Act of 1992, Dev. of Competition & Diversity in Video Programming Distrib.: Section 628(C)(5) of the Comm'n's Act: Sunset of Exclusive Contract Prohibition, Review of the Comm'n's Program Access Rules & Examination of Programming Tying Arrangements, 22 F.C.C.R. 17791 (2007) (report and order and notice of proposed rulemaking).

the Commission has imposed a number of service obligations on VoIP providers to ensure that these operators offer essential services.⁶⁴

1. Local Number Portability

The FCC has recognized that if wireless consumers cannot retain a previously assigned telephone number when shifting their business to another carrier, many consumers might refrain from pursuing even a lower-cost or better-suited service arrangement.⁶⁵ The Commission requires both wireline⁶⁶ and wireless carriers⁶⁷ to provide consumers with Local Number Portability (LNP), to promote competition and to eliminate the potential for lock-in

64. See, e.g., E911 Requirements for IP-Enabled Serv. Providers, 20 F.C.C.R. 10245, 10266 (2005) (first report and order and notice of proposed rulemaking) (mandatory provision of enhanced 911 emergency access); Commc'ns Assistance for Law Enforcement Act & Broadband Access & Servs., 20 F.C.C.R. 14989, 15001 (2005) (first report and order and further notice of proposed rulemaking) (mandatory wiretapping cooperation with law enforcement agencies), *aff'd*, Am. Council on Educ. v. F.C.C., 451 F.3d 226 (D.C. Cir. 2006). See generally Vonage Holdings Corp. v. F.C.C., 489 F.3d 1232 (D.C. Cir. 2007) (VoIP operators with access to wired telephones must contribute to universal service funding mechanism); Tel. No. Requirements for IP-Enabled Servs. Providers; Local No. Portability Porting Interval & Validation Requirements, 22 F.C.C.R. 19531 (2007) (VoIP operators must make it possible for former subscribers to keep the same telephone number when migrating to another carrier).

65. Tel. No. Portability, 11 F.C.C.R. 8352, 8368 (1996) (first report and order and further notice of proposed rulemaking):

The ability of end users to retain their telephone numbers when changing service providers gives customers flexibility in the quality, price, and variety of telecommunications services they can choose to purchase. Number portability promotes competition between telecommunications service providers by, among other things, allowing customers to respond to price and service changes without changing their telephone numbers. The resulting competition will benefit all users of telecommunications services. Indeed, competition should foster lower local telephone prices and, consequently, stimulate demand for telecommunications services and increase economic growth.

66. Section 251(2) of the Communications Act of 1934 (codified at 47 U.S.C. § 251(b)(2)) requires each local exchange carrier to provide number portability, which is specified as “[t]he duty to provide, to the extent technically feasible, number portability in accordance with requirements prescribed by the Commission.”

67. The FCC required CMRS carriers operating in the largest 100 metropolitan statistical areas (MSAs) to offer number portability upon request from a competing carrier by November 24, 2003, having previously extended the deadline by several years. Tel. No. Portability, 11 F.C.C.R. 8352, 8368 (1996) (first report and order and further notice of proposed rulemaking), *recon.*, 12 F.C.C.R. 7236 (1997) (memorandum opinion and order); Tel. No. Portability-Carrier Requests for Clarification of Wireless-Wireless Porting Issues, 18 F.C.C.R. 20971 (2003) (memorandum opinion and order); Verizon Wireless Petition for Partial Forbearance from the Commercial Mobile Radio Servs. No. Portability Obligation, 17 F.C.C.R. 14972 (2002) (memorandum opinion and order); Tel. No. Portability, Cellular Telecomm'ns & Indus. Ass'ns Petition for Forbearance from Commercial Mobile Radio Servs. No. Portability Obligations, 14 F.C.C.R. 3092 (1999) (memorandum opinion and order); see also 47 C.F.R. § 52.31(a) (2007).

resulting from consumer reluctance to change carriers if the shift entails assignment of a new telephone number.

Compulsory LNP requires carriers to coordinate the assignment of telephone numbers and their association with a specific subscriber. While carriers surely would prefer to punish customers who discontinue service by reclaiming the assigned telephone number, the FCC requires carriers to cooperate in ways that enable the migrating customer to retain and continue to use the previously assigned telephone number.⁶⁸ LNP demonstrates that Congress and the FCC will not always allow carriers to unilaterally establish the terms and conditions under which subscribers access service, particularly since the carriers' business strategies might motivate them to deem unnecessary or infeasible network access arrangements that promote competition and enhance consumer welfare.

2. Promoting Competition in Video Program Distribution

The FCC has articulated a longstanding concern about vertical integration⁶⁹ by video content creators and distributors in light of the likelihood for harm to consumers. Because cable television companies generate the vast majority of desired video content and control the major medium for distributing the content, the FCC has expressed concern that the cable companies can stifle competition, extract rates above competitive levels from subscribers, favor affiliated content providers, and stifle the development of new content sources. This concern for the consumer and the determination of market failure juxtaposes with the Commission's lack of concern with similarly integrated providers of CMRS.

68. *See generally* Tel. No. Requirements for IP-Enabled Servs. Providers; Local No. Portability Porting Interval & Validation Requirements, 22 F.C.C.R. 19531 (2007).

69. Vertical integration refers to the combination of separate market activities by a single enterprise. For example, the major cable television companies own ventures creating video programming as well as the ventures that distribute such content to consumers. "Vertical relationships may have beneficial effects, or they may deter competitive entry in the video marketplace and/or limit the diversity of programming." ANNUAL ASSESSMENT OF THE STATUS OF COMPETITION IN THE MARKET FOR THE DELIVERY OF VIDEO PROGRAMMING, TWELFTH ANNUAL REPORT, 21 F.C.C.R. 2503, 2575 (2006). "Beneficial effects can include efficiencies in the production, distribution, and marketing of video programming, and providing incentives to expand channel capacity and create new programming by lowering the risks associated with program production ventures." *Id.* at 2575 n.565. "Possible detrimental effects can include unfair methods of competition, discriminatory conduct, and exclusive contracts that are the result of coercive activity." *Id.* at 2575 n.566.

The FCC released a Report and Order⁷⁰ that extends the ban of exclusive contracts between vertically integrated programmers and cable operators to October 5, 2012.⁷¹ The Commission determined that vertically integrated programmers still have the ability⁷² and the incentive⁷³ to favor operators with whom they have a corporate affiliation over competitors.⁷⁴ In light of the FCC's determination that vertically integrated ventures still control "must-see" content, for which no viable substitute exists,⁷⁵ the Commission retained

70. Implementation of the Cable Television Consumer Protection & Competition Act of 1992, Dev. of Competition & Diversity in Video Programming Distrib.: Section 628(c)(5) of the Commc'ns Act: Sunset of Exclusive Contract Prohibition, MB Docket No. 07-29 (F.C.C. Sept. 11, 2007) (report and order), available at http://fjallfoss.fcc.gov/edocs_public/attachmatch/FCC-07-169A1.doc.

71. *Id.* ¶ 1 ("[W]e find that the exclusive contract prohibition continues to be necessary to preserve and protect competition and diversity in the distribution of video programming, and accordingly, retain it again for five years, until October 5, 2012.").

72. *Id.* ¶ 37 (footnotes omitted):

What is most significant to our analysis is not the percentage of total available programming that is vertically integrated with cable operators, but rather the popularity of the programming that is vertically integrated and how the inability of competitive MVPDs to access this programming will affect the preservation and protection of competition in the video distribution marketplace. While there has been a decrease since 2002 in the percentage of the most popular programming networks that are vertically integrated, we find that the four largest cable MSOs (Comcast, Time Warner, Cox, and Cablevision) still have an interest in six of the Top 20 satellite-delivered networks as ranked by subscribership, seven of the Top 20 satellite-delivered networks as ranked by prime time ratings, almost half of all RSNs, popular subscription premium networks, such as HBO and Cinemax, and video-on-demand ("VOD") networks, such as iN DEMAND.

73. *Id.* ¶ 44:

An exclusive arrangement between a cable-affiliated programmer and its affiliated cable operator will reduce the number of platforms distributing the cable-affiliated programming network and thus the total number of subscribers to the network. This results in a reduction in potential advertising or subscription revenues that would otherwise be available to the network. In the long term, however, the cable-affiliated programmer would gain from an increased number of subscribers as customers switch to the affiliated cable distribution service in order to receive the exclusive programming. Thus, an exclusive contract is a kind of "investment," in which an initial loss of profits from programming is incurred in order to achieve higher profits later from increased cable distribution. This type of arrangement is most profitable when the costs of the investment are low and its benefits are high.

74. *Id.* ¶ 41:

We find that access to vertically integrated programming is essential for new entrants in the video marketplace to compete effectively. If the programming offered by a competitive MVPD lacks "must have" programming that is offered by the incumbent cable operator, subscribers will be less likely to switch to the competitive MVPD. We give little weight to the claims by cable operators that recent entrants, such as telephone companies, have not experienced "any trouble" to date in acquiring access to satellite-delivered vertically integrated programming.

75. *Id.* ¶ 29 ("[W]e conclude that there are no good substitutes for some satellite-delivered vertically integrated programming and that such programming therefore remains necessary for viable competition in the video distribution market.").

the prohibition against exclusive content distribution contracts from ventures that vertically integrate content production and distribution to consumers.

The FCC declined to narrow its restriction based on programmer suggestions that the Commission should apply the restriction based on the popularity of the programming network and competitive circumstances occurring in specific geographic areas served by a cable operator.⁷⁶ Additionally, the Commission refused to limit the restriction to conventional cable television operators, which would exclude other multi-channel video programming distributors (MVPDs), or to limit the restriction to cable operators that have been in the MVPD market for more than five years, have extensive resources, or have entered into exclusive contracts for programming.⁷⁷

On the other hand, the FCC declined to expand the exclusive contract prohibition to apply to non-cable-affiliated programming—e.g., content created by vertically integrated Direct Broadcast Satellite (DBS) operators and new MVPDs, such as AT&T and Verizon, that offer ICE content via wired and wireless conduits. The Commission also concluded that terrestrially delivered programming lies beyond the scope of the exclusive contract prohibition in section 628(c)(2)(D) of the Communications Act of 1934, as

76. *Id.* ¶¶ 68-72:

The exclusive contract prohibition in Section 628(c)(2)(D) [of the Communications Act] and the implementing rules pertain to all satellite-delivered programming networks that are vertically integrated with a cable operator, regardless of their popularity. . . .

. . . . One of the key anticompetitive practices that the exclusive contract prohibition addresses is the practice of leveraging cable's market power collectively by withholding affiliated programming from rival MVPDs while selling the affiliated programming to other cable operators which do not compete with one another. A cable operator may gain by weakening a current or potential rival (such as a DBS operator) even in markets that the cable operator itself does not serve. Thus, proposals to narrow the exclusive contract prohibition by allowing exclusive arrangements outside of the footprint of the affiliated cable operator or with cable operators whose networks pass only a small number of households throughout the nation will impede competition in the video distribution marketplace. We similarly find that allowing exclusive arrangements for affiliated cable operators that face competition from both DBS and telephone companies would harm competition in the video distribution marketplace. We conclude herein that a cable operator will not lose the incentive and ability to enter into an exclusive arrangement in a given geographic area simply because it faces competition from both DBS operators and telephone companies in that area.

77. *Id.* ¶ 74 (“Section 628 makes no distinction among MVPDs of the kind suggested by these commenters. Moreover, we find that adopting such restrictions on the entities that can benefit from the prohibition will limit competition in the video distribution market and will result in no discernible public interest benefits.”).

amended, that applies specifically to content delivered via satellite.⁷⁸ However, in light of finding that a vertically integrated cable television operator had withheld terrestrially delivered regional sports network content in San Diego and Philadelphia, the FCC sought comment on whether to extend the program-access rules to all terrestrially delivered cable-affiliated programming.⁷⁹

Despite a clearly articulated preference for marketplace solutions to any conflict, the FCC also proposed to amend its program-access complaint procedures with an eye toward promoting efficient resolution of complaints through negotiated dispute settlements. In a Notice of Proposed Rulemaking (NPRM), the Commission sought comment on two revisions to the program access complaint procedures.⁸⁰ The NRPM sought comment on whether to allow complainants to seek a temporary stay of any proposed changes to existing contracts targeted by a program access complaint. The NPRM also sought comment on creating an arbitration-type step in the complaint process whereby the Commission may request, as part of its evaluation of the appropriate remedy, that the parties submit their best and final proposals for the rates, terms, or conditions under review.

The NPRM also expressed concern about programming tying arrangements where MVPDs must purchase and carry undesired cable network programming in return for the opportunity to carry desired networks. The NPRM sought comment on whether the Commission should preclude tying arrangements and require all programming services to be offered on a stand-alone basis to all MVPDs.

78. *Id.* ¶ 78 (“We decline to apply an exclusive contract prohibition to terrestrially delivered programming at this time. . . . The exclusive contract prohibition in Section 628(c)(2)(D) pertains only to vertically integrated ‘satellite cable programming’ and vertically integrated ‘satellite broadcast programming.’”).

79. *Id.* ¶ 116:

As demonstrated by the examples of withholding of RSNs in San Diego and Philadelphia, we believe that withholding of terrestrially delivered cable-affiliated programming is a significant concern that can adversely impact competition in the video distribution market. To address this concern, we seek comment on whether it would be appropriate to extend our program access rules to all terrestrially delivered cable-affiliated programming pursuant to Sections 4(i), 201(b), 303(r), 601(6), 612(g), 616(a), 628(b), or 706, or any other provision under the Communications Act.

80. Dev. of Competition & Diversity in Video Programming Distrib.: Section 628(C)(5) of the Comm’n’s Act: Sunset of Exclusive Contract Prohibition, Review of the Comm’n’s Program Access Rules & Examination of Programming Tying Arrangements, 22 F.C.C.R. 17791, 17847-58 (2007) (report and order and notice of proposed rulemaking).

The FCC recognizes that vertical integration in video content creation and distribution requires regulatory intervention. CMRS operators operate in a similarly integrated mode. The top two CMRS carriers, AT&T and Verizon, control 53.4% of the wireless market⁸¹ and are owned by the ventures that have substantial market share in broadband wireline access—e.g., Digital Subscriber Line (DSL)⁸² and fiber optic cable links, and wireline telephone service. In addition to the possible market power accruing from a commanding share of the wireless industry, AT&T and Verizon vertically integrate by securing exclusive content distribution rights for carriage via their wireless networks. They horizontally integrate by bundling triple-play⁸³ and quadruple-play service packages,⁸⁴ combining wireless service with wireline telephony, internet access, and wireline video program access.

As the internet increasingly becomes the focal point and preferred medium for all ICE services, ventures such as AT&T and Verizon have great opportunities to leverage their size, vertical integration, and horizontal integration⁸⁵ to offer facilities-based, competitive alternatives to incumbent

81. Cauley, *supra* note 8 (displaying statistics compiled by Forrester Research). The top four carriers control 88.1% of the wireless telecommunications market. *Id.*

82. Digital subscriber links provide internet access via the copper wires initially used solely to provide narrowband telephone service. Telephone companies retrofit the wires to provide medium speed broadband services by expanding the available bandwidth by about 1500 kiloHertz. The FCC provides the following definition:

Digital Subscriber Line is a technology for bringing high-speed and high-bandwidth, which is directly proportional to the amount of data transmitted or received per unit time, information to homes and small businesses over ordinary copper telephone lines already installed in hundreds of millions of homes and businesses worldwide. With DSL, consumers and businesses take advantage of having a dedicated, always-on connection to the Internet.

Federal Communications Commission, F.C.C. Consumer Facts, Broadband Access for Consumers, <http://www.fcc.gov/cgb/consumerfacts/dsl2.html> (last visited Aug. 23, 2008).

83. Exclusive Serv. Contracts for Provision of Video Servs. in Multiple Dwelling Units & Other Real Estate Devs., 22 F.C.C.R. 5935, 5938 (2007) (notice of proposed rulemaking) (“[T]raditional phone companies that are primed to offer a ‘triple play’ of voice, high-speed Internet access, and video services over their respective networks.”).

84. AT&T Inc. & Bellsouth Corp., Application for Transfer of Control, 22 F.C.C.R. 5662, 5735 (2007) (memorandum opinion and order) (“The quadruple play refers to the combination of ‘video, broadband Internet access, VoIP and wireless service’”).

85. Horizontal integration occurs when a single company develops, or acquires firms offering the capability of providing, two or more services that may compete in the same relevant market. For example, a major newspaper chain may diversify by developing cable television programming or acquire companies that produce such content. Horizontal integration also covers situations where a venture acquires an existing or potential competitor. While such a combination might reduce existing or potential competition, the FCC believes that the merger can diversify available content so that the acquiring firm can offer new, niche programming. *See* Amendment of Section 73.658(G) of the Comm’n’s Rules—The Dual Network Rule, 16 F.C.C.R. 11114, 11125 (2001):

providers such as cable television operators. On the other hand, AT&T and Verizon currently face none of the structural safeguards that the FCC has appropriately placed on vertically integrated cable television ventures.⁸⁶ Nothing prevents any CMRS operator, including AT&T and Verizon, from engaging in the anticompetitive practices that the Commission seeks to prevent in the cable television marketplace, a plausible outcome in light of strong incentives for major telephone companies to find and dominate new markets to compensate for declining revenues from core telephony markets.⁸⁷ The FCC apparently assumes that having four CMRS operators in a market would prevent any single carrier, or group of colluding carriers, from harming consumers by favoring owned or affiliated content providers. Likewise, the FCC appears unconcerned about the ability of companies having dominant market share in CMRS, broadband internet access, and wireline telephony to leverage bundled service packages into market dominance in most ICE markets.

3. Public Interest Obligations Imposed on Voice over the Internet Protocol (VoIP) Providers

Ostensibly to serve the public interest, the FCC has imposed a number of service obligations on VoIP providers that use software to provide telephone

With respect to horizontal integration of a major and emerging television network, the merger should have little or no adverse effect on competition or pricing in the market for television network advertising, since major and emerging networks compete in different strategic groups. To the extent that the emerging network continues to offer programming following the merger that targets niche or special interest audiences, then the welfare of viewers of both mass audience and niche programming should not be adversely affected by the merger and may indeed be advanced by the resulting efficiencies.

86. The FCC seeks to limit horizontal integration by cable television operators with a 30% cap on national market penetration. *See generally* Comm'n's Cable Horizontal & Vertical Ownership Limits 23 F.C.C.R. 2134 (2008) (fourth report and order and further notice of proposed rulemaking). The Commission's program access rules generally prohibit exclusive dealing by programming networks that are vertically integrated with cable operators. *See generally* Dev. of Competition & Diversity in Video Programming Distrib.: Section 628(C)(5) of the Comm'n's Act: Sunset of Exclusive Contract Prohibition, Review of the Comm'n's Program Access Rules and Examination of Programming Tying Arrangements, 22 F.C.C.R. 17791 (2007) (report and order and notice of proposed rulemaking).

87. *See, e.g.,* Gary Kim, *Consumer Revenue: Declining Importance for Incumbent Telcos*, <http://internetcommunications.tmcnet.com/topics/broadband-mobile/articles/22287-consumer-revenue-declining-importance-incumbent-telcos.htm> (last visited Aug. 23, 2008):

One of the clear revenue trends in the incumbent local exchange carrier space is the decreasing importance of consumer fixed voice, the growth in importance of business customer and other new revenue sources, even for firms that have no IPTV or entertainment video operations. To be sure, access line losses are not going to stop in the near term.

services via wireline broadband information services. The Commission's regulatory burdens make VoIP service more like conventional telephony, at the expense of reducing VoIP's competitive cost advantage.⁸⁸ VoIP service providers, which offer subscribers telephone calling access to the conventional wireline public switched telephone network (PSTN), must reconfigure their service to provide wiretapping capabilities to law enforcement authorities,⁸⁹ caller location identification and emergency 911 access,⁹⁰ and service to disabled users.⁹¹ Despite extensive rhetoric about refraining from imposing regulation on both emerging technologies and competitive services,⁹²

88. See Frieden, *supra* note 7, at 373.

89. Commc'ns Assistance for Law Enforcement Act and Broadband Access and Servs., 20 F.C.C.R. 14989, 15001 (2005) (notice of proposed further rulemaking) (citations omitted), *aff'd sub nom.* Am. Council on Educ. v. F.C.C., 451 F.3d 226 (D.C. Cir. 2006).

90. IP-Enabled Servs., E911 Requirements for IP-Enabled Serv. Providers, 20 F.C.C.R. 10245 (2005) (notice of proposed further rulemaking), *aff'd sub nom.* Nuvio Corp. v. F.C.C., 473 F.3d 302 (D.C. Cir. 2006).

91. IP-Enabled Servs.: Implementation of Sections 255 & 251(a)(2) of the Commc'ns Act of 1934, as Enacted by the Telecomms Act of 1996, 22 F.C.C.R. 11275 (2007).

92. For example, the FCC classified wireless broadband internet access as a lightly regulated information service:

[W]e find that classifying wireless broadband Internet access service as an information service furthers the goals of sections 7 and 230(b)(2) of the Communications Act, and section 706 of the Telecommunications Act of 1996. As noted above, wireless broadband Internet access technologies continue to evolve at a rapid pace. Through this classification, we provide the regulatory certainty needed to help spur growth and deployment of these services. Particularly, the regulatory certainty we provide through this classification will encourage broadband deployment in rural and underserved areas, where wireless broadband may be the most efficient broadband option. Additionally, we believe that wireless broadband Internet access service can provide an important homeland security function by creating redundancy in our nation's communications infrastructure.

Appropriate Regulatory Treatment for Broadband Access to the Internet over Wireless Networks, 22 F.C.C.R. 5901, 5911 (2007) (footnote omitted). Section 706 of the Telecommunications Act of 1996 requires

[t]he Commission and each State commission with regulatory jurisdiction over telecommunications services . . . [to] encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) by utilizing in a manner consistent with the public interest, convenience, and necessity, price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.

Telecommunications Act of 1996, Pub. L. No. 104-104, § 706, Feb. 8, 1996 U.S.C.A.N. (110 Stat.) 153, *amended by* Pub. L. No. 107-110, § 1076(gg), 2001 U.S.C.A.N. (115 Stat.) 2093 (codified at 47 U.S.C. § 157), Section 706(c)(1) defines advanced telecommunications capability "without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology." *Id.*; see also 47 U.S.C. §§ 157, 230(b)(2) (2000) (stating that it is the policy of the

the FCC chose to not allow the marketplace to determine whether considerable service discounts available from VoIP service providers outweigh the greater risk in an emergency and greater inconvenience for some users.

The FCC has imposed costly, market countervailing, public interest obligations on VoIP operators, because the Commission believes inadequate public access issues warrant speedy administrative remedies.⁹³ VoIP service providers must reconfigure their networks to provide additional types of services and access that they had not contemplated or wished to provide. Regardless of whether VoIP operators consider their services the functional alternative to existing wireline or wireless services, the FCC has imposed a number of requirements that force closer equivalency. The Commission made no assessment of the financial costs incurred by VoIP providers, or the potential adverse impact on competition and service rates borne by the public. It appears that the FCC elevated public interest concerns over its general predisposition not to fetter with regulatory burdens on market entrants having minor market share. Such intervention must have occurred because the Commission identified several instances of market failure—i.e., the inability of market forces to generate outcomes that the Commission considered essential to serve the public interest.

B. On the Demand Side: Preventing Purchases of Unwanted Content and Compulsory Equipment Leases

At the end-user level, the FCC has established several safeguards designed to help consumers avoid having to pay for content that they do not want, or equipment that they do not need. The safeguards include preventing cable television operators from requiring consumers to subscribe to one or more tiers of service before qualifying for the opportunity to access desired content, such as a premium movie channel.⁹⁴ The FCC also requires cable

United States “to preserve the vibrant and competitive free market that presently exists for the Internet”).

93. VoIP providers of service capable of reaching subscribers of conventional wireline and wireless services must contribute to universal service funding, incur the costs related to providing wiretap access to law enforcement agencies, support local number portability, make it possible for users with disabilities to access service, and provide enhanced 911 emergency access. *See generally* Vonage Holdings Corp. v. F.C.C., 489 F.3d 1232 (D.C. Cir. 2007); *Am. Council on Educ. v. F.C.C.*, 451 F.3d 226 (D.C. Cir. 2006); *Tel. No. Requirements for IP-Enabled Servs. Providers, Local No. Portability Porting Interval & Validation Requirements*, 22 F.C.C.R. 19531 (2007); *IP-Enabled Servs., Implementation of Sections 255 & 251(a)(2) of the Comm’ns Act of 1934, as Enacted by the Telecomms. Act of 1996*, 20 F.C.C.R. 11275 (2007).

94. *Implementation of Sections of the Cable Television Consumer Protection & Competition Act*

operators to provide service to subscribers who have television sets that can perform content descrambling and other security functions via the insertion of a computer chip card in lieu of using a leased set-top converter.⁹⁵ The Commission also works to ease technology transitions that require the acquisition of new equipment—e.g., digital cellphones to replace analog handsets—or the installation of a new converter—e.g., retrofitting analog televisions so that they can display digital signals.⁹⁶

1. Prohibiting Mandatory Cable Tier “Buy-Throughs”

Section 3 of the Cable Television Consumer Protection and Competition Act of 1992⁹⁷ prohibits cable television operators, operating in a market without effective competition, from requiring subscribers to “buy through”⁹⁸ intermediate tiers of programming in order to have the opportunity to access desired content positioned in a higher service tier.⁹⁹ This means that consumers do not have to subscribe to so-called “enhanced basic” services, which bundle a variety of cable television programming, before securing the

of 1992, Rate Regulation Buy-Through Prohibition, 9 F.C.C.R. 4316, 4327 (1994).

95. See generally Implementation of Section 304 of the Telecomms. Act of 1996, Commercial Availability of Navigation Devices, 20 F.C.C.R. 6794 (2005).

96. Third Periodic Review of the Comm’n’s Rules & Pol’y’s Affecting the Conversion to Digital Television, 2007 WL 4571081, ¶ 22 (F.C.C. Dec. 31, 2007) (retailers that continue to sell analog-only television equipment must disclose at the point-of-sale that such devices will require a converter box to receive over-the-air broadcast television after the February 17, 2009 transition date). See generally DTV Consumer Educ. Initiative, 2008 WL 582525 (F.C.C. Mar. 3, 2008); Year 2000 Biennial Regulatory Review—Amendment of Part 22 of the Comm’n Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radiotel. Serv. & Other Commercial Mobile Radio Servs., 17 F.C.C.R. 18401 (2002), *recon.*, 19 F.C.C.R. 3239 (2004).

97. Pub. L. No. 102-385, § 3, 106 Stat. 1460, 1464-71 (1992) (codified as amended at 47 U.S.C. § 543 (2000)).

98. “The tier buy-through prohibition of the 1992 Cable Act prohibits cable operators from requiring subscribers to purchase a particular service tier, other than the basic service tier, in order to obtain access to video programming offered on a per-channel or per-program basis.” Implementation of Sections of the Cable Television Consumer Prot. and Competition Act of 1992: Rate Regulation Buy-Through Prohibition, 9 F.C.C.R. 4316, 4327 (1994); see also F.C.C., Fact Sheet: Consumer Options for Selecting Cable Channels & the Tier Buy-Through Prohibition (2003), available at http://fjallfoss.fcc.gov/edocs_public/attachmatch/DOC-231469A1.pdf.

99. 47 U.S.C. § 543(b)(8)(A):

A cable operator may not require the subscription to any tier other than the basic service tier required by paragraph (7) as a condition of access to video programming offered on a per channel or per program basis. A cable operator may not discriminate between subscribers to the basic service tier and other subscribers with regard to the rates charged for video programming offered on a per channel or per program basis.

opportunity to view content offered on a per view or per channel basis, such as individual premium channels like Home Box Office.

The Commission also has explored the prospect of allowing consumers to select content on an à la carte, network-by-network basis in lieu of service tiers that contain many channels of content, some of which individual consumers may not want. In a stunning reversal of its previous research and analysis, the FCC now asserts that à la carte access to cable television networks could save many consumers money and would not result in a reduction of television viewership. The Commission released the Further Report on the Packaging and Sale of Video Programming Services to the Public¹⁰⁰ to reexamine the conclusions and underlying assumptions of the earlier Media Bureau report on à la carte channel access submitted to Congress in November 2004.¹⁰¹ The Commission reported that previous calculations of per-channel cable television costs failed to net out the cost of broadcast stations and accordingly overstated costs by as much as 50%.¹⁰²

The FCC also abrogated its previous finding that à la carte would cause consumers to watch nearly 25% less television, resulting in two fewer hours of television consumption per day. The Further Report stated no reason to believe that viewers would watch less video programming than they do today simply because they could choose the channels they find most interesting. The Further Report states that “many consumers could be better under an à la carte model.”¹⁰³

2. Mandating an Alternative to Set-Top Box Leasing

The FCC also has established rules designed to enable cable television subscribers to access content via “cable ready” television sets¹⁰⁴ without the

100. F.C.C., FURTHER REPORT ON THE PACKAGING AND SALE OF VIDEO PROGRAMMING SERVICES TO THE PUBLIC (2006), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-263740A1.pdf [hereinafter F.C.C. REVISED À LA CARTE STUDY].

101. F.C.C., REPORT ON THE PACKAGING AND SALE OF VIDEO PROGRAMMING SERVICES TO THE PUBLIC (2004), available at <http://www.ncta.com/ContentView.aspx?hiddenavlink=true&type=reltyp1&contentid=401>; cf. F.C.C. REVISED À LA CARTE STUDY, *supra* note 100.

102. F.C.C. REVISED À LA CARTE STUDY, *supra* note 100, ¶ 14.

103. *Id.* ¶ 3.

104. Implementation of Section 304 of the Telecomms. Act of 1996, Commercial Availability of Navigation Devices, 20 F.C.C.R. 6794 (2005). Section 629 of the Communications Act of 1934, as amended, 47 U.S.C. § 549 (2000), directs the FCC to adopt regulations to assure the commercial availability of navigation devices equipment used by consumers to access services from MVPDs. The FCC must

adopt regulations to assure the commercial availability, to consumers of multichannel video

expense of having to lease a device, known as a set-top converter, to provide necessary signal descrambling functions. The FCC generally prohibits cable television companies from offering set-top converters that combine security functions—e.g., descrambling and other features, such as channel selection, and navigation, electronic program guides, and pay-per-view and on-demand access to content.¹⁰⁵ The prohibition prevents cable companies from requiring all subscribers to lease set-top boxes.¹⁰⁶ With the integration ban, cable television companies can perform security and digital rights management via a computer chip, known as a CableCARD that subscribers can insert into most recent vintage television sets.¹⁰⁷

programming and other services offered over multichannel video programming systems, of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming and other services offered over multichannel video programming systems, from manufacturers, retailers, and other vendors not affiliated with any multichannel video programming distributor.

47 U.S.C. § 549(a).

105. Implementation of Section 304 of the Telecomms. Act of 1996, Commercial Availability of Navigation Devices, 13 F.C.C.R. 14775, 14793-94 (1998) (footnote omitted):

[W]e find that it would be most consistent with our obligations under Section 629 to require that, by July 1, 2000, a security element separated from navigation devices be available from MVPDs so that equipment may be commercially available from unaffiliated manufacturers, retailers, and other vendors. Our rule permits MVPDs to continue to provide equipment on an integrated basis until January 1, 2005, so long as modular security components are also made available. The record responding to the *NPRM* reflects strong advocacy that separating the security function will enhance portability of equipment generally. This requirement will facilitate the development and commercial availability of navigation devices by permitting a larger measure of portability among them, increasing the market base and facilitating volume production and hence lower costs. We think it significant that the separation of security elements has been recognized, most prominently by cable operators, as empowering new functionality and services.

106. Implementation of Section 304 of the Telecomms. Act of 1996, Commercial Availability of Navigation Devices, 20 F.C.C.R. 6794, 6807-08 (2005) (footnote omitted):

At the heart of a robust retail market for navigation devices is the reliance of cable operators on the same security technology and conditional access interface that consumer electronics manufacturers must rely on in developing competitive navigation devices. We conclude that a software-oriented conditional access solution may provide a “common reliance” standard capable of both reducing the costs for set-top boxes and adding significantly to the options that equipment manufacturers now have in using the CableCARD. In balancing our specific statutory requirement to assure commercial availability of navigation devices and our general obligation to facilitate and promote the DTV transition, we conclude that a further extension of the effective date of the prohibition on integrated devices will permit the development of the statutorily required competitive market for navigation devices, with the potential benefit of reducing costs to consumers.

107. See *Charter Commc'ns, Inc. v. F.C.C.*, 460 F.3d 31, 35 (D.C. Cir. 2006) (“[A] CableCARD . . . plugs into a slot in a host navigation device, permitting the device to perform both the security and non-security functions.”).

Several cable operators challenged the FCC's CableCARD policy, which prohibited the use of one set-top converter that integrated both security and non-security functions.¹⁰⁸ As it had done previously,¹⁰⁹ the D.C. Circuit Court of Appeals affirmed the Commission on several grounds. The court first refused to consider petitioners' statutory claim that a difference exists between set-top converter boxes and other equipment within the context of section 629(a) of the Communications Act, as amended, which states that the FCC "shall not prohibit any [MVPD] from also offering converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming."¹¹⁰ The court characterized the petitioners' claim as arguing

that if integrated set-top boxes are not "converter boxes," as we held in *General Instrument*, then they must be "other equipment," a possibility we did not address there. And if integrated boxes are "other equipment," then section 629(a)'s second sentence prevents the FCC from barring cable operators from offering them.¹¹¹

The court refused to consider this statutory claim on two procedural grounds: (1) that section 629(a) established a sixty-day time period for any petitions for review of applicable Commission orders; and (2) that the petitioners never presented this issue for consideration by the FCC, and therefore section 405 of the Communications Act precluded raising the issue on appeal.¹¹² The court also rejected petitioners' arguments that changed circumstances so warranted a different outcome that the FCC should have abandoned the non-integration requirement. Given the fact that while CableCARD-compatible television sets had become commonplace, few consumers use CableCARDs, the court held "there was nothing unreasonable about the FCC's conclusion that 'the competitive reasons that led the Commission to impose the integration ban have not been eliminated by the developments in the market.'"¹¹³

108. *Id.*

109. *See* Gen. Instrument Corp. v. F.C.C., 213 F.3d 724 (D.C. Cir. 2000) (affirming the FCC's statutory authority to require separation of security and other set top converter functions); Implementation of Section 304 of the Telecomms. Act of 1996, Commercial Availability of Navigation Devices, 13 F.C.C.R. 14775, 14806 (1998).

110. 47 U.S.C. § 549(a) (2000).

111. *Charter Commc'ns, Inc.*, 460 F.3d at 37-38.

112. *Id.* at 38-39.

113. *Id.* at 41 (citing Implementation of Section 304 of the Telecomms. Act of 1996, Commercial Availability of Navigation Devices, 20 F.C.C.R. 6794, 6809 (2005)).

Additionally, the court rejected the claim that the FCC failed to consider the additional costs cable companies would incur as a result of the ban:

The Commission also took steps to minimize industry costs, both by extending the implementation deadline from 2006 to 2007, and by promising to reconsider eliminating the ban altogether should the cable and consumer electronics industries achieve a downloadable security solution capable of providing common reliance without requiring the physical separation of security and non-security functions.¹¹⁴

The court also rejected the claim that the FCC arbitrarily exempted DBS operators from the integration ban. The court upheld the exemption of DBS operators from the ban based on the criteria established by the Commission: when an MVPD “supports the active use by its subscribers of navigation devices that: (i) operate throughout the continental United States, and (ii) are available from retail outlets . . . throughout the United States that are not affiliated with the . . . [MVPD].”¹¹⁵ The court noted that DBS operators have met the requirements while “the vast majority of cable subscribers remain dependent upon non-portable converter boxes available only from their cable companies.”¹¹⁶ Lastly, the court rejected the cable operators’ claims that increased facilities-based competition—e.g., video program delivery from telephone companies—has created incentives for cable companies to offer consumers every possible equipment alternative: “whatever the theoretical incentives, the FCC found that the real-world result that section 629(a) commanded it to assure—the commercial availability of navigation devices from vendors unaffiliated with MVPDs—has not arrived.”¹¹⁷

Cable operators have largely thwarted the congressional mandate that consumers have the option of using alternatives to the operator-leased devices. While a competitive market for such devices has not evolved, and few consumers even know about the CableCARD option, recent innovations in digital video recorders may incorporate many of the features provided by the cable operators. From recent decisions by the FCC, it appears that cable operators will no longer succeed in stalling compliance with Section 629 of the Communications Act.¹¹⁸

114. *Id.* at 42.

115. 47 C.F.R. § 76.1204(a)(2) (2007), *quoted in Charter Commc’ns, Inc.*, 460 F.3d at 42.

116. *Charter Commc’ns, Inc.*, 460 F.3d at 43.

117. *Id.* at 44.

118. *See generally id.* at 31; Implementation of Section 304 of the Telecomms. Act of 1996, Commercial Availability of Navigation Devices, 20 F.C.C.R. 6794, 6802-03 (2005); Comcast Corp. Request for Waiver of Section 76.1204(a)(1) of the Comm’n’s Rules, DA07-49, CSR-7012-Z, CS Docket No. 97-80 (F.C.C. Jan. 10, 2007), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-07-

3. *Avoiding “Flash Cut” Equipment Obsolescence*

The FCC appreciates that the public does not want regulatory decisions to render unusable already purchased and operating consumer electronics equipment such as cellphones and televisions. Even at the cost of postponing the onset of measurable benefits, such as more efficient use of spectrum, the Commission avoids ordering the immediate, “flash cut” obsolescence of in-service equipment. The Commission typically establishes a transition period, spanning several years, before establishing a deadline for mandatory equipment upgrades, replacements, or retrofits that would trigger expense for consumers.

a. Analog Cellphones

The FCC has retained the requirement that CMRS operators continue to provide analog radiotelephone service, based largely on the goal of not forcing wireless subscribers to replace functional handsets that operate in the analog mode, or depriving service to subscribers in remote areas where analog transmissions offer better signal penetration.¹¹⁹ CMRS operators want to operate entirely in digital modes that promote spectrum efficiency and the ability to accommodate more subscribers. Notwithstanding compelling business and operational justifications, including the fact that for several years all new handsets offer subscribers the ability to access digital services,¹²⁰ the Commission established a five-year transition period leading to the termination of the analog service requirement.¹²¹

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119. Year 2000 Biennial Regulatory Review—Amendment of Part 22 of the Comm’n Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radiotel. Serv. & Other Commercial Mobile Radio Servs., 17 F.C.C.R. 18401 (2002), *recon.*, 19 F.C.C.R. 3239 (2004) (order) [hereinafter Analog Sunset Order].

120. In similar fashion, CMRS operators limit the type of handsets they will allow subscribers to use. While CMRS subscribers may acquire handsets from alternative outlets, any compatible device must have the same access limitations as would exist in CMRS operator-sold handsets.

121. Analog Sunset Order, *supra* note 119, at 18406:

[E]liminating the [analog service] rule immediately without a reasonable transition period would be extremely disruptive to certain consumers, particularly those with hearing disabilities as well as emergency-only consumers, who currently continue to rely on the availability of analog service and lack digital alternatives. Accordingly, we modify our rules requiring application of the analog compatibility standard to include a sunset period of five years, during which time we anticipate that problems regarding access will likely be resolved.

b. Easing the Financial Consequences from the Complete Conversion to Digital Broadcast Television

The FCC also has undertaken a number of initiatives to ensure that owners of analog television sets can continue to view video content even after all television broadcasters must migrate to digital service. First, Congress directed the Commission to postpone the deadline for the conversion to digital service as a result of slower than anticipated consumer migration to more expensive digital television sets.¹²² Second, the Commission and the Commerce Department developed a subsidy program whereby every household in the United States can receive two \$40 coupons for use in buying a converter that will enable the use of analog television sets to display broadcast digital content.¹²³ Third, the FCC, on its own accord and through

122. The Digital Television Transition and Public Safety Act of 2005 (DTV Act) is Title III of the Deficit Reduction Act of 2005. Section 3002(a) of the DTV Act amends § 309(j)(14) of the Communications Act to establish February 17, 2009 as a new hard deadline for the end of analog transmissions by full-power stations. Pub. L. No. 109-171, § 3002(a), 120 Stat. 21 (2006). Section 3002(b) of the DTV Act directs the Commission to

take such actions as are necessary (1) to terminate all licenses for full-power television stations in the analog television service, and to require the cessation of broadcasting by full-power stations in the analog television service, by February 18, 2009; and (2) to require by February 18, 2009, . . . all broadcasting by full-power stations in the digital television service, occur only on channels between channels 2 and 36, inclusive, or 38 and 51, inclusive (between frequencies 54 and 698 megahertz, inclusive).

Section 3005(a) of the DTV Act also created a coupon program to subsidize the purchase of digital-to-analog (“D-to-A”) converter boxes. *See generally* Third Periodic Review of the Comm’n’s Rules & Policies Affecting the Conversion to Digital Television, F.C.C. 07-228, MB Docket No. 07-91 (F.C.C. Dec. 31, 2007), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-228A1.doc.

123. Third Periodic Review of the Comm’n’s Rules & Policies Affecting the Conversion to Digital Television, F.C.C. 07-228, ¶ 23 (Dec. 31, 2007):

We also note that subsidized digital-to-analog (“D-to-A”) converter boxes will be available to eligible consumers starting January 2008, further promoting access to digital reception equipment. This subsidy program, which was created by the DTV Act, will allow consumers with analog-only TV sets to receive over-the-air broadcast programming after the February 17, 2009 transition date, when analog broadcasting ends. Congress directed the National Telecommunications and Information Administration (“NTIA”) of the U.S. Department of Commerce to administer this subsidy program. In March 2007, NTIA issued final rules to implement the program, which subsidizes the purchase of D-to-A converter boxes. The Commission is working with NTIA to test the D-to-A converters for eligibility to be certified for the coupon program.

See also Rules to Implement & Administer a Coupon Program for Digital-to-Analog Converter Boxes, 72 Fed. Reg. 12097-01, ¶ 8 (F.C.C. 2007) (codified at 47 C.F.R. § 301.1-301.6). Starting January 1, 2008, all U.S. households will be eligible to request up to two \$40 coupons to be used toward the purchase of up to two D-to-A converter boxes while the initial \$990 million allocated for the program is available. 47

television set retailers, broadcasters, and cable systems, undertook a campaign to alert consumers to the future migration to digital broadcast television.¹²⁴ Lastly, the Commission has proposed to require cable television operators to convert digital video content back into analog so that subscribers can continue to use television sets lacking the subsidized digital converter.¹²⁵

i. Informing the Public

After granting several extensions of time for broadcasters to continue transmitting in an analog format, the FCC now faces a congressionally mandated, February 17, 2009 deadline for the complete migration to digital transmission.¹²⁶ The Commission recently auctioned off the vacated broadcast UHF television spectrum generating \$19.6 billion for the national treasury.¹²⁷ The FCC now recognizes the need to inform the public that conventional analog television sets will not receive digital transmissions without a converter or a subscription to an MVPD such as a cable television operator.

Toward the goal of informing the public about the impending change, the FCC established a comprehensive consumer outreach initiatives that requires broadcasters, MVPDs, retailers, and manufacturers to publicize the digital transition in addition to efforts by the FCC.¹²⁸

The Commission's multifaceted approach requires television broadcast licensees to conduct on-air consumer education efforts including public service announcements, all MVPDs to include periodic notices about the transition in customer bills, and all manufacturers of television receivers or related devices—e.g., set-top converters and digital video recorders—to

C.F.R. § 301.3 to .4 (2007). If the initial funds are used up and the additional funds (up to \$510 million) are authorized, eligibility for the coupons will be limited to over-the-air-only television households. Rules to Implement & Administer a Coupon Program for Digital-to-Analog Converter Boxes, 72 Fed. Reg. 12097-01, at ¶ 8. Eligible consumers will have until March 31, 2009 to make a request for these coupons. DTV Act, Pub. L. No. 109-171, § 3005(c)(1)(A), 120 Stat. 21 (2005).

124. *See generally* DTV Consumer Educ. Initiative, F.C.C. 08-56, 2008 WL 582525 (Feb. 19, 2008).

125. *See generally* Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Comm'n's Rules, 22 F.C.C.R. 21064 (2007).

126. *See* 47 U.S.C. § 309(j)(14) (2000) ("A full-power television broadcast license that authorizes analog television service may not be renewed to authorize such service for a period that extends beyond February 17, 2009."); *id.* § 337(e); *see also* Third Periodic Review of the Comm'n's Rules & Policies Affecting the Conversion to Digital Television, F.C.C. 07-228, MB Docket 07-91 (F.C.C. Dec. 31, 2007), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-228A1.doc.

127. Auction of 700 MHz Band Licenses Closes, 23 F.C.C.R. 4572 (2008).

128. *See generally* DTV Consumer Educ. Initiative, F.C.C. 08-56, 2008 WL 582525 (Feb. 19, 2008).

include transition information with the devices.¹²⁹ The FCC will also work with the National Telecommunications and Information Administration to require retailers to participate in a program that provides consumers access to government subsidized converter boxes.¹³⁰ The Commission noted that many consumers do not know about the impending conversion to digital television and the fact that the conversion will render analog televisions inoperative.¹³¹

ii. Must Carry Conversion of Digital Signals to Analog

Even as the FCC strives to achieve the complete conversion to digital television, the Commission has proposed to require cable operators to continue delivering analog signals of broadcast stations after the February 17,

129. *Id.* ¶ 2:

[B]roadcasters must provide on-air information to their viewers about the DTV transition, by compliance with one of three alternative sets of rules, and must report those efforts to the Commission and the public. Second, multichannel video programming distributors (“MVPDs”) must provide monthly notices about the DTV transition in their customer billing statements. Third, manufacturers of television receivers and related devices must provide notice to consumers of the transition’s impact on that equipment. Fourth, DTV.gov Partners must provide the Commission with regular updates on their consumer education efforts. Fifth, companies participating in the Low Income Federal Universal Service Program must provide notice of the transition to their low income customers and potential customers. Sixth, the winners of the 700 MHz spectrum auction must report their consumer education efforts.

130. Rules to Implement and Administer a Coupon Program for Digital-to-Analog Converter Boxes, 72 Fed. Reg. 12,097 (Mar. 15, 2007) (to be codified at 47 C.F.R. pt. 301), *available at* http://www.ntia.doc.gov/ntiahome/frnotices/2007/DTVCouponFinalRule_031207.pdf; *see also* Press Release, Nat’l Telecomm. & Info. Admin., Commerce Department Issues Final Rule to Launch Digital-to-Analog Converter Box Coupon Program (Mar. 12, 2007), http://www.ntia.doc.gov/ntiahome/press/2007/DTVfinalrule_031207.htm (announcing a program granting all U.S. households access to two \$40 coupons that can be used toward the purchase of digital-to-analog converter boxes starting January 2008).

131. DTV Consumer Educ. Initiative, F.C.C. 08-56, 2008 WL 582525, ¶ 6 (Feb. 19, 2008): There is a clear and compelling need for educational efforts directed toward consumers. As Association of Public Television Stations (“APTS”) found in its most recent quarterly consumer survey on the DTV transition, a majority of Americans do not fully understand the transition. Moreover, as the Commission’s Consumer Advisory Committee (“CAC”) points out, a substantial number of Americans have not yet made the switch to digital. By the end of 2007, it was expected that only one-third of households would have a digital television. Of households that rely on over-the-air (“OTA”) broadcasts, only seven percent own a digital television. Furthermore, the households that principally rely on OTA broadcasts are the most vulnerable and arguably the most difficult to reach; almost half have annual incomes of less than \$30,000, and two-thirds are headed by someone over 50 years of age or someone for whom English is a second language. Thus, we must take immediate and effective action to ensure that viewers are informed of the effect that the full-power digital transition will have on them and the options that are available to them to make the transition to digital television without losing full-power television service.

2009 conversion deadline.¹³² In assessing the post-digital conversion, must-carry obligations of cable operators,¹³³ the Commission considers it in the public interest for cable operators to downconvert must-carry broadcast station content:

[W]e propose that cable operators must comply with this “viewability” provision and ensure that cable subscribers with analog television sets are able to continue to view all must-carry stations after the end of the DTV transition by either: (1) carrying the digital signal in analog format, or (2) carrying the signal only in digital format, provided that all subscribers have the necessary equipment to view the broadcast content. In the absence of such a requirement, analog cable subscribers (currently about 50% of all cable subscribers, or approximately 32 million house holds) would no longer be able to view commercial must-carry stations or non-commercial stations after February 17, 2009. We believe such an outcome would adversely impact the DTV transition and would unduly burden millions of consumers.¹³⁴

On the other hand, the Commission reiterated that cable operators must not downgrade high-definition broadcast retransmissions.¹³⁵

Ironically, the Commission does not appear to follow consistently its prohibition on signal degradation by cable operators. On one hand, cable operators cannot degrade must-carry broadcast high-definition television signals by delivering a signal with lower resolution, but on the other hand, the FCC proposes to require cable operators to degrade digital signals and convert them into the inferior analog format that offers lower resolution than the digital signal.¹³⁶ The Commission proposes a stringent test to ensure no degradation of high-definition signals and no discrimination against broadcast high-definition signals vis-à-vis cable network high definition signals:

[W]e previously determined . . . that a broadcast signal delivered to the cable headend in HD must be carried in HD in order to comply with the prohibition on material degradation. We continue to require such carriage and reiterate that

132. Carriage of Digital Television Broadcast Signals, Amendment to Part 76 of the Comm’n’s Rules, F.C.C. 07-71 (May 4, 2007), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-71A1.doc.

133. Section 614(b)(4)(B) of the Communications Act of 1934 directs the F.C.C. to revise the mandatory signal carriage rules to reflect changes necessitated by the transition from analog to digital broadcasting. 47 U.S.C. § 534(b)(4)(B) (2000).

134. Carriage of Digital Television Broadcast Signals, Amendment to Part 76 of the Comm’n’s Rules, F.C.C. 07-71, ¶ 4 (May 4, 2007) (footnote omitted), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-71A1.doc.

135. “The prohibition against material degradation ensures that cable subscribers who invest in a HDTV are not denied the ability to view broadcast signals transmitted in this improved format.” *Id.* ¶ 5.

136. “In other words, the signal must be “viewable” on all television sets connected to the cable provider’s system.” *Id.* ¶ 17.

requirement. We now propose revisions to the material degradation requirements . . . with respect to carriage of bits in the broadcast signal. Specifically, we propose to move from a subjective to objective measure.¹³⁷

The Commission's objective measure would replace a general nondiscrimination obligation with an explicit requirement that cable operators retransmit broadcast high-definition content on a bit-by-bit basis, without compression.

V. DOES THE FCC HAVE JURISDICTION TO IMPOSE WIRELESS *CARTERPHONE* AND NET NEUTRALITY RULES?

CMRS operators provide both regulated common-carrier telecommunications services and lightly regulated information services—e.g., broadband internet access.¹³⁸ The combination of regulatory classifications has the potential to cause uncertainty as to how far the common carrier designation extends for two reasons. First, the FCC has expressed a preference for making “either/or” regulatory classifications of services that combine telecommunications and information services.¹³⁹ The Commission strongly prefers to shoehorn any and all converged services into the lightly regulated information services “safe harbor,”¹⁴⁰ including wireless broadband internet access. Second, both Congress and the FCC consider even core wireless telecommunications services as qualifying for uncharacteristically light government oversight.

The Omnibus Budget Reconciliation Act of 1993¹⁴¹ amended section 332 of the Communications Act of 1934 to create the CMRS carrier category. The law defines CMRS as “any mobile service . . . 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

137. *Id.* ¶ 12 (citing Carriage of Digital Television Broadcast Signals, Local Broadcast Signal Carriage Issues, Application of Network Non-Duplication, Syndicated Exclusivity & Sports Blackout Rules to Satellite Retransmission of Broadcast Signals, 16 F.C.C.R. 2598 (2001)).

138. See Appropriate Treatment for Broadband Access to the Internet Over Wireless Networks, F.C.C. 07-30 (Mar. 23, 2007), available at http://fjallfoss.fcc.gov/edocs_public/attachmatch/FCC-07-30A1.pdf.

139. See *supra* note 7 and accompanying text.

140. 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).

141. Pub. L. No. 103-66, 107 Stat. 312 (1993) (codified at 47 U.S.C. § 332).

public.”¹⁴² While deemed common carriers, CMRS operators qualify for regulatory forbearance that eliminates some of the conventional regulatory burdens imposed on common carriers, including the obligation to secure regulator approval of the rates charged for service.

Notwithstanding significant regulatory forbearance, CMRS operators still retain their common carrier status and core obligation to provide the public with access to other carriers. This interconnection obligation requires carriers to provide the public with wireless-to-wireline network access—i.e., access to the conventional wired PSTN—and the duty to provide subscribers with “roaming” access to other wireless carriers when a subscriber travels outside his or her home network area.¹⁴³

CMRS operators do not have unlimited and unconditional authority to determine whether and how their subscribers can access other networks. While the FCC has forborne from regulating the price of access and some terms and conditions for service, the Commission cannot abandon its regulatory responsibility to ensure that CMRS operators provide access and interconnection on a fair and nondiscriminatory basis. For example, a CMRS operator must provide its subscribers with access to the network services of other carriers operating in locations where the CMRS operator does not. The FCC recently reiterated that the common carrier responsibilities still borne by CMRS operators include the responsibility to provide access to “the facilities of another CMRS provider with which the subscriber has no direct pre-existing service or financial relationship to place an outgoing call, to receive and incoming call, or to continue an in-progress call.”¹⁴⁴

It follows that the even streamlined CMRS common carrier regulation includes FCC jurisdiction to impose subscriber handset-attachment responsibilities relating to subscribers’ access to CMRS operators. Bear in mind that even for non-common carriers such as cable television operators, the FCC imposed a restriction on cable television operator set-top box integration

142. 47 U.S.C. § 332(d)(1) (2000); *see also* 47 C.F.R. § 20.3 (2007), which defines “commercial mobile radio service” as

[a] mobile service that is: (a)(1) provided for profit, i.e., with the intent of receiving compensation or monetary gain; (2) An interconnected service; and (3) Available to the public, or to such classes of eligible users as to be effectively available to a substantial portion of the public; or (b) The functional equivalent of such a mobile service described in paragraph (a) of this section.

143. *See* Reexamination of Roaming Obligations of Commercial Mobile Radio Serv. Providers, WT Docket No. 05-265, F.C.C. 07-143 (F.C.C. Aug. 7, 2007) (report and order and further notice of proposed rulemaking), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-143A1.pdf.

144. *Id.* ¶ 5.

of security and other functions along with the affirmative duty to provide subscribers with a CableCARD or security download option in lieu of having to lease a set top box from the cable operator.

A. Broad Title I Ancillary Jurisdiction

Additionally, the FCC has unspecified and possibly broad “ancillary” jurisdiction¹⁴⁵ to serve the public interest pursuant to Title I of the Communications Act.¹⁴⁶ For example, the Commission asserted jurisdiction to regulate cable television prior to receiving explicit statutory authority based on the potential for cable television to impact directly regulated broadcast television.¹⁴⁷ The FCC’s assertion of ancillary jurisdiction must meet a two prong test articulated by the Supreme Court in *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*¹⁴⁸ Under *Chevron*, “[i]f the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.”¹⁴⁹ However, if the statute is “silent or ambiguous with respect to the specific issue,” courts have discretion to defer to the regulatory agency’s statutory interpretation based on its expertise, provided the court can conclude that the interpretation is “permissible” or “reasonable.”¹⁵⁰ A regulatory agency satisfies the second prong “even if the agency’s reading differs from what the court believes is the best statutory interpretation.”¹⁵¹ Put another way, “[a] court’s prior judicial construction of a statute trumps an agency construction otherwise entitled to *Chevron* deference only if the prior court decision holds that its construction follows from unambiguous terms of the statute and thus leaves no room for agency discretion.”¹⁵²

145. See IP-Enabled Services, E911 Requirements for IP-Enabled Service Providers, 20 F.C.C.R. 10245, 10261 (2005) (“Ancillary jurisdiction may be employed, in the Commission’s discretion, when Title I of the Act gives the Commission subject matter jurisdiction over the service to be regulated and the assertion of jurisdiction is ‘reasonably ancillary to the effective performance of [its] various responsibilities.’”).

146. 47 U.S.C. § 151-614 (2000).

147. See *F.C.C. v. Midwest Video Corp.*, 440 U.S. 689, 700 (1979); *United States v. Midwest Video Corp.*, 406 U.S. 649, 667-68 (1972); *United States v. Sw. Cable Co.*, 392 U.S. 157, 177-78 (1968).

148. 467 U.S. 837 (1984).

149. *Id.* at 842-43.

150. *Id.* at 843, 844.

151. *Nat’l Cable & Telecomm. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 980 (2005) (citing *Chevron*, 467 U.S. at 843-44 & n.11).

152. *Id.* at 982.

The FCC has invoked its Title I ancillary jurisdiction on a number of occasions where no explicit statutory authority exists. Already the Commission has stated that, should it be so inclined, it could impose nondiscrimination and other operational limitations on internet service providers based on its Title I ancillary jurisdiction: “The Commission, under Title I of the Communications Act, has the ability to adopt and enforce the net neutrality principles it announced in the 2005 Internet Policy Statement.”¹⁵³

The FCC appears to have ample direct jurisdiction under Title II of the Communications Act and ancillary Title I regulatory authority to apply the *Carterfone* policy to wireless carriers and to impose wireless network neutrality responsibilities.¹⁵⁴ Nothing in Title I or II of the Communications Act revokes such jurisdiction as a result of the passage of time between the Commission’s initial decision to apply *Carterfone* and the fact that CMRS carriers operate in a different environment than wireline service conditions almost forty years ago. Nor does the FCC lose such jurisdiction because CMRS operators face some degree of competition and do not vertically integrate handset manufacturing and telecommunications services. Likewise, the FCC does not lose jurisdiction over handset access to CMRS networks simply because of greater complexity in the interface as compared to handset access to wireline networks.

While questioning the wisdom of regulating wireless carriers, it appears that no network neutrality opponent has stated that the FCC lacks jurisdiction to impose *Carterfone* interconnection responsibilities on CMRS operators. The technical relationship of telephone handsets with a wireline carrier’s network directly parallels the technical relationship of wireless telephone handsets with a wireless carrier’s network. Because CMRS carriers operate as common carriers when providing telecommunications services, their common carrier regulatory obligation includes the duty to provider subscribers

153. 20 F.C.C.R. 14986 (2005).

154. The Commission said as much in its Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks Declaratory Ruling:

[T]he Commission [has] emphasized [that] consumer protection remains a priority and [has] sought to develop a framework for consumer protection in the broadband age. Such a framework would be built on the Commission’s Title I ancillary jurisdiction to ensure that consumer protection needs are met by all providers of broadband Internet access services regardless of the underlying technology, including providers of wireless broadband Internet access services.

Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks, F.C.C. 07-30, WT Docket No. 07-53, at 25 (Mar. 23, 2007), available at http://fjallfoss.fcc.gov/edocs_public/attachmatch/FCC-07-30A1.pdf (citing Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 F.C.C.R. 14986, 14929-35 (2005)).

with network access via any compatible handset that does not risk causing technical harm to the wireless network. For wired access, the FCC established an equipment registration process¹⁵⁵ to achieve speedy certification that specific handsets can access wired carrier networks. Additionally, the Commission established a common technical interface, including a standard basis for all handsets to plug into the PSTN in the same way.

VI. FRAMING THE DEBATE IN TERMS OF BROAD “NETWORK ACCESS”
VERSUS *CARTERPHONE*’S NARROW ISSUE OF CONSUMERS’
“RIGHT TO ATTACH”

Advocates and opponents for both wireline and wireless network neutrality tend to frame the debate in broad terms about the scope and nature of internet access and whether a sufficiently competitive marketplace exists for remedying any unreasonable restriction or discrimination. Wireless network neutrality supporters may have invited the broader debate by combining advocacy for wireless *Carterfone* policy with arguments in favor of more expansive anti-discrimination initiatives. They reasonably link advocacy for attaching device to wireless networks with a commensurate right to access any software or application available via such networks. However, some wireless network neutrality advocacy goes further by adding issues that may restrict legitimate business practices aimed at tiering consumer access by offering, for example, different quality of service, bandwidth, and transmission speeds.

Whether and how the *Carterfone* policy should apply wirelessly requires an assessment on its own merits before assessing whether and how, once implemented, the policy should also incorporate broader network neutrality principles. By blending wireless *Carterfone* policy with wireless network neutrality issues, advocates for both outcomes contribute to confusion about what the FCC can and should do, and they invite opponents to launch a broad sweeping attack that emphasizes worst case scenario problems that a wireless *Carterfone* policy could not possibly trigger.

155. Part 68 Home Page, http://www.fcc.gov/web/iatd/part_68.html (last visited Aug. 23, 2008): Part 68 of the FCC rules (47 C.F.R. Part 68) governs the direct connection of Terminal Equipment (TE) to the Public Switched Telephone Network (PSTN), and to wireline carrier-owned facilities used to provide private line services. Part 68 also contains rules concerning Hearing Aid Compatibility and Volume Control (HAC/VC) for telephones, dialing frequency for automated dialing machines, source identification for fax transmissions, and technical criteria for inside wiring.

A macro-level assessment of the internet's future juxtaposes with the much narrower issues relating to whether and how the *Carterfone* policy should apply to CMRS operators. Opponents of both initiatives have found it advantageous to mischaracterize the nature and scope of what consumer rights the FCC recognized in *Carterfone*. Oppositions to the Skype Petition and sponsored research frame the debate in terms of network access, as opposed to the core issue of whether subscribers should have the right to attach any compatible device that does not harm the wireless network. By framing the issue as an alarming and broad sweeping extension of an intrusive regulatory umbrella addressing user access, opponents appear intent on shaping the debate in terms of whether the wireless marketplace is or is not competitive and whether market failure does or does not exist.

The FCC has identified empirical evidence that the *Carterfone* policy has generated ample consumer benefits. The Commission views *Carterfone* as a major catalyst for lower consumer prices, greater competition, and enhanced service options in wireline telephony.¹⁵⁶ *Carterfone* makes it clear that “[c]ustomers have the right to use common carrier telecommunications services in any way that is privately beneficial, so long as it is not publicly harmful.”¹⁵⁷

A. The FCC Has Applied the Carterfone Right to Attach Outside Telephony Markets Well After 1968

In 1998, the FCC extended its *Carterfone* policy to cable television when it recognized the right of consumers to use cable-ready televisions and to buy set-top converters in lieu of the sole option of leasing one from their cable television provider.¹⁵⁸ The Commission explicitly linked this consumer right to attach navigation devices with its previously articulated *Carterfone* policy:

156. Implementation of Section 304 of the Telecomms. Act of 1996, Commercial Availability of Navigation Devices, 13 F.C.C.R. 14775, 14780 (1998) (report and order) (“As a result of *Carterfone* and other Commission actions, ownership of telephones moved from the network operator to the consumer. As a result, the choice of features and functions incorporated into a telephone has increased substantially, while the cost of equipment has decreased.”).

157. Revisions to Price Cap Rules for AT&T, 8 F.C.C.R. 5205, ¶ 12 (1993).

158. Implementation of Section 304 of the Telecomms. Act of 1996, 13 F.C.C.R. 14775 (1998); see also 47 U.S.C. § 549 (2000) (The [FCC] shall . . . adopt regulations to assure the commercial availability, to consumers of . . . equipment used . . . to access multichannel video programming and other services offered over multichannel video programming systems, from manufacturers, retailers, and other vendors not affiliated with any multichannel video programming distributor.”).

Subscribers have the right to attach any compatible navigation device to a multi-channel video programming system. We conclude that the core requirement, to make possible the commercial availability of equipment to MVPD subscribers, is similar to the *Carterfone* principle adopted by the Commission in the telephone environment. The *Carterfone* “right to attach” principle is that devices that do not adversely affect the network may be attached to the network.¹⁵⁹

The FCC also stated that it could and should extend its *Carterfone* policy to other technologies and service markets¹⁶⁰ despite the likelihood that non-telephone networks raise other, possibly more complex, operational matters than telephone network attachments:

The parallel to the telephone has limitations. When customer ownership of telephone CPE became available, the telephone network was effectively a national monopoly. Well developed technical standards existed throughout an almost ubiquitous network. CPE compatible with the telephone network was part of this environment. In contrast, cable networks do not reflect universal attributes, and have substantially different designs. Nor do satellite systems share commonality beyond the most basic elements. . . . This *Order* seeks to accommodate these differences from the telephone model.¹⁶¹

The Commission’s extension of its *Carterfone* policy to MVPD network attachment contradicts wireless *Carterfone* opponents who claim that the

159. Implementation of Section 304 of the Telecomms. Act of 1996, 13 F.C.C.R. 14775, 14778 (1998) (footnotes omitted).

The competitive market for consumer equipment in the telephone context provides the model of a market we have sought to emulate in this proceeding. Previously, consumers leased telephones from their service provider and no marketplace existed for those wishing to purchase their own phone. The *Carterfone* decision allowed consumers to connect CPE to the telephone network if the connections did not cause harm. As a result of *Carterfone* and other Commission actions, ownership of telephones moved from the network operator to the consumer. As a result, the choice of features and functions incorporated into a telephone has increased substantially, while the cost of equipment has decreased.

Id. at 14780.

160. “Following the *Carterfone* principle adopted in the telephone context would allow subscribers the option of owning their own navigation devices and would facilitate the commercial availability of equipment.” *Id.* at 14786; *see also* Implementation of Section 304 of the Telecomms. Act of 1996, Commercial Availability of Navigation Devices, 12 F.C.C.R. 5639, 5645 (1997) (footnotes omitted):

We propose to adopt the basic principle that equipment that is not part of a MVPD’s network distribution plant may be acquired by subscribers and attached to the network, limited only by the requirement that any such equipment attached to a MVPD’s network not cause it any harm. This basic principle parallels that adopted in the telephone context by the Commission’s *Carterfone* and subsequent decisions—devices that do not adversely affect the network and are privately beneficial without being publicly detrimental, may be attached to the network.

161. Implementation of Section 304 of the Telecomms. Act of 1996, 13 F.C.C.R. 14775, 14780 (1998) (footnotes omitted).

policy could only apply to a monopoly, vertically integrated wireline telephone environment.

B. Open Platform Access in a Portion of the 700 MHz Frequency Band

Recently, the FCC recognized the public interest benefits accruing from applying wireless *Carterfone* policy when establishing operational rules for a portion of the quite valuable reallocated spectrum that can provide next generation wireless services.¹⁶² The FCC established an “Open Platform” requirement for a 22 MHz block of choice “beachfront” 700 MHz spectrum made available for auction in the conversion from analog to digital broadcast television, scheduled to occur by February 17, 2009.

The winning bidder must allow consumers to use the handset of their choice and download and use any applications, subject to certain reasonable network management conditions that allow the licensee to protect the network from harm:

Although we generally prefer to rely on marketplace forces as the most efficient mechanism for fostering competition, we conclude that the 700 MHz spectrum provides an important opportunity to apply requirements for open platforms for devices and applications for the benefit of consumers, without unduly burdening existing services and markets. For the reasons described below, we determine that for one commercial spectrum block in the 700 MHz Band—the Upper 700 MHz Band C Block—we will require licensees to allow customers, device manufacturers, third-party application developers, and others to use or develop the devices and applications of their choice, subject to certain conditions¹⁶³

VII. ASSESSING THE COSTS AND BENEFITS OF WIRELESS *CARTERFONE*
AND NETWORK NEUTRALITY

Opponents to wireless *Carterfone* and network neutrality offer numerous reasons why one or both initiatives would cause harm to carriers and consumers.¹⁶⁴ Collectively, they oppose both types of initiatives on grounds

162. Serv. Rules for the 698-746, 747-762 & 777-792 MHz Bands, Revision of the Comm’n’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, 22 F.C.C.R. 15289 (2007).

163. *Id.* at 15361.

164. *See, e.g.*, Comments of AT&T Inc. Opposing Skype Commc’n’s Petition to Apply *Carterfone* Attachment Regulations to the Wireless Indus., Skype Commc’n’s Petition to Apply *Carterfone* Attachment Regulations to the Wireless Industry, RM-11361 (Apr. 30, 2007), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519408144; Comments of Verizon Wireless, Skype Commc’n’s S.A.R.L., Petition to Confirm A Consumer’s Right to Use Internet Commc’n’s Software & Attach Devices to Wireless Networks, RM-11361 (Apr. 30, 2007), available at

that the CMRS operators face extreme competition, offer consumers increasingly greater value at lower prices, and have invested billions of dollars in network upgrades. Opponents suggest that proponents of the application of wireless *Carterfone* and net neutrality should bear a high burden of proving that market failure exists and that the pervasive regulatory intervention would generate more benefits than costs. Opponents view the *Carterfone* policy as appropriate only for the vertically integrated Bell system monopoly and not the CMRS marketplace where carriers do not manufacture equipment and subscribers can freely acquire handsets from non-carrier sources. They consider restrictions on handsets and access to applications to be legitimate business decisions that protect networks from technical harm, help the carrier provide low cost service, and make it possible for carriers to cooperate with law enforcement agencies.

Regardless of how competitive one characterizes the CMRS marketplace, or how likely carriers might collude or engage in consciously parallel behavior, carriers have uniformly established policies that deny subscribers device attachment flexibility and network neutrality. No carrier filing or sponsored research dispute that CMRS carriers lock phones, impose early termination fees, disable built in features of subscriber's purchased handsets, create walled garden content with an eye toward thwarting subscriber access to other content, and block subscriber use of "unauthorized" software and applications.¹⁶⁵

The carriers and researchers have generated some credible and other disingenuous reasons for such limitations. One uncharacteristically candid rationale recognizes that "[v]ariety, options and greater 'openness' can entail various costs. Restrictions by wireless carriers that might strike some as

http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519408104; Marius Schwartz & Federico Mini, *Hanging up on Carterfone: The Economic Case Against Access Regulation in Mobile Wireless* (May 2, 2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=984240; Hahn et al., *supra* note 39; *Wireless Net Neutrality: From Carterfone to Cable Boxes*, PHOENIX CENTER POL'Y BULL. (Phoenix Ctr. for Advanced Legal & Econ. Pub. Policy Studies, Washington, D.C.) (Apr. 2007), available at <http://www.phoenix-center.org/PolicyBulletin/PCPB17Final.doc>.

165. Jessica E. Vascellaro, *A Fight Over What You Can Do on a Cellphone*, WALL ST. J., June 14, 2007, at A1:

Research In Motion Ltd. wants to move beyond its core business market, so it designed a device with features like video and music players. RIM wanted to include an electronic map, too, to let users find directions. But it needed AT&T Inc., which sells BlackBerrys to consumers and provides wireless service, to agree that the new model launched earlier this year could include this mapping software.

AT&T said no. It wanted to offer its subscribers its own version of a map service, and charge them \$9.99 a month.

excessive can reflect sound business judgments about relevant tradeoffs.”¹⁶⁶ Put even more bluntly, CMRS operators can extract greater profits by denying subscribers *Carterfone* device attachment freedom and network neutrality. As currently constituted, the marketplace does not punish any single carrier for engaging in such practices because, even at the conclusion of a two-year service contract, subscribers cannot migrate to a carrier with clearly more liberal device attachment and network access policies.

VIII. CONCLUSION

The onset of wireless *Carterfone* and net neutrality initiatives signals higher stakes when handsets offer access to much more than cordless voice telephone service. On one hand, CMRS operators want to stimulate subscriber interest in, and willingness to pay for, next generation network services and features. But on the other hand, the carriers want to limit access so that subscribers cannot use options available from unaffiliated ventures who do not share revenues with the carrier providing the telecommunications transmission link.

CMRS operators that limit, block, and disable some new features available from handsets or available via enhanced access to the internet reduce the scope, reach, and versatility of services available to consumers. These carriers have concluded that in light of the FCC’s inaction and apparent indifference, CMRS providers can limit consumer options that would be “privately beneficial without being publicly detrimental.”¹⁶⁷ Limiting, blocking, and disabling handset access to the plethora of existing and prospective services bolsters carriers’ revenue streams by foreclosing competitive alternatives in ways that constitute “an unwarranted interference with a person’s use of their telephone,”¹⁶⁸ an outcome appellate courts will not tolerate,¹⁶⁹ nor should the Commission.

Already some purchasers of Apple iPhones and other cellphones have resorted to “self-help” tactics to eliminate manufacturer or carrier-imposed

166. Schwartz & Mini, *supra* note 164, at 24.

167. *See* Hush-A-Phone Corp. v. United States, 238 F.2d 266, 269 (D.C. Cir. 1956) (“The intervenors’ tariffs [prohibiting the use of plastic device to enhance privacy and low volume conversations], under the Commission’s decision, are in unwarranted interference with the telephone subscriber’s right reasonably to use his telephone in ways which are privately beneficial without being publicly detrimental.”).

168. *Cellnet Commc’ns, Inc. v. F.C.C.*, 149 F.3d 429, 437 (6th Cir. 1998) (affirming the FCC’s right to eliminate resale provisions because elimination of such requirements would not upset customers’ rights to use their telephones).

169. *See supra* note 2 and accompanying text.

limitations on the handset's versatility, features, and access to third-party applications and content. Rather than all but criminalize such tactics, the FCC should establish a handset technical certification process that makes it possible for any handset operating in the proper format and frequency to access any carrier's network. At the very least, the Commission should expressly adopt a wireless *Carterfone* policy that forecloses CMRS operators from imposing handset restrictions based on theoretical rationales, novel economic constructs, invocations of national security, explanations about the need to manage spectrum, and unjustified concern about the "technical integrity" of their networks. Rather than wait for a consumer revolt, the FCC could adopt a wireless *Carterfone* policy that would place the burden on carriers to explain why their subscribers should not have the same handset attachment rights as wireline subscribers have enjoyed for forty years.