Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Preserving the Open Internet	)	GN Docket No. 09-191
	)	
Broadband Industry Practices	)	WC Docket No. 07-52

REPLY COMMENTS OF CTIA – THE WIRELESS ASSOCIATION®

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EXECUTIVE SUMMARY

As the record developed in response to the *Further Inquiry* makes clear, the debate over wireless net neutrality continues to be dominated by discussion of services not covered by a net neutrality regime, a lack of evidence supporting regulation, and an absence of statutory authority for the regulation of wireless broadband Internet access. The fact remains that wireless broadband is a competitive, consumer-driven service that brings the Internet to the person, wherever and whenever they want it, and more importantly, brings incredible benefit to the United States economy. As Senator Evan Bayh said in a letter to the New York Times this week, "every policy must be viewed through a single prism: does it help the economy grow?"[1] For a market and ecosystem such as the wireless that is driving investment, innovation and growth, the application of stifling new rules fails that test. Further, as former FCC Chairman Reed Hundt said three weeks ago "[b]ecause wireless is robustly competitive, it is the least regulated of all communications media in the U.S. That is not a coincidence. This approach translated into a more rapid pace of innovation, deployment investment and job growth."[2] Net neutrality regulation is plainly inappropriate for the vibrant wireless broadband ecosystem and calls for such regulation should be rejected.

As with the previous proceedings addressing net neutrality in the wireless context, the initial comments filed in this proceeding do not identify a market or consumer failure justifying intervention in the wireless broadband market. It is clear that consumers are not being prevented from accessing the "free and open Internet" over wireless broadband services – in fact, mobile wireless is bringing the Internet out of the home to mass transit, parks and anywhere else

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1 Sen. Evan Bayh, *Where Do Democrats Go Next?*, N.Y.TIMES, Nov. 3, 2010, at A27.

2 *The Communicators* (C-SPAN television broadcast, Oct. 9, 2010).

Americans want access. The chart on page four of these comments illustrates how this ecosystem has evolved since we began the net neutrality discussion. Moreover, it is impossible to harmonize the effort by net neutrality proponents to limit carriers' abilities to manage their network with the Herculean efforts of the National Broadband team, the FCC, NTIA, the White House, and Congress to identify and reallocate spectrum to address the exact same issue that is causing the need to evolve network management practices – the dramatic increase in wireless broadband adoption and use.

Finally, the Commission still lacks the authority to impose arbitrary rules unsupported by the Communications Act on wireless broadband providers. As such, CTIA believes the net neutrality rules under consideration by the Commission should not, and legally cannot be applied to wireless networks.

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CTIA – The Wireless Association® ("CTIA") hereby submits these reply comments in response to the Commission's Public Notice ("*Further Inquiry*") seeking comment on two "under-developed" issues in the ongoing Open Internet proceeding.[3] As the record developed in response to the *Further Inquiry* makes clear, the debate over wireless net neutrality continues to be dominated by discussion of services not covered by a net neutrality regime, a lack of evidence supporting regulation, and an absence of statutory authority for the regulation of wireless broadband Internet access. The fact remains that wireless broadband is a competitive, consumer-driven service that brings the Internet to the person, wherever and whenever they want it, and more importantly, brings incredible benefit to the United States economy. As Senator Evan Bayh said in a letter to the New York Times this week, "every policy must be viewed through a single prism: does it help the economy grow?"[4] For a market and ecosystem such as the wireless that is driving investment, innovation and growth, the application of stifling new rules fails that test. Further, as former FCC Chairman Reed Hundt said three weeks ago

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[3] *Further Inquiry Into Two Under-Developed Issues in the Open Internet Proceeding*, Public Notice, GN Docket No. 09-191, WC Docket No. 07-52 (Sept. 1, 2010) ("*Further Inquiry*").

[4] Sen. Evan Bayh, *Where Do Democrats Go Next?*, N.Y.TIMES, Nov. 3, 2010, at A27.

"[b]ecause wireless is robustly competitive, it is the least regulated of all communications media in the U.S. That is not a coincidence. This approach translated into a more rapid pace of innovation, deployment investment and job growth."[5] Net neutrality regulation is plainly inappropriate for the vibrant wireless broadband ecosystem and calls for such regulation should be rejected.

As with the previous proceedings addressing net neutrality in the wireless context, the initial comments filed in this proceeding do not identify a market or consumer failure justifying intervention in the wireless broadband market. It is clear that consumers are not being prevented from accessing the "free and open Internet" over wireless broadband services – in fact, mobile wireless is bringing the Internet out of the home to mass transit, parks and anywhere else Americans want access. Moreover, it is impossible to harmonize the effort by net neutrality proponents to limit carriers' abilities to manage their network with the Herculean efforts of the National Broadband team, the FCC, NTIA, the White House, and Congress to identify and reallocate spectrum to address the exact same issue that is causing the need to evolve network management practices.

Finally, the Commission still lacks the authority to impose arbitrary rules unsupported by the Communications Act on wireless broadband providers. As such, CTIA believes the net neutrality rules under consideration by the Commission should not, and legally cannot be applied to wireless networks.

I. THE COMMISSION'S FURTHER INQUIRY AND A MAJORITY OF COMMENTERS RECOGNIZE THAT WIRELESS IS DIFFERENT.

In its *Further Inquiry*, the Commission affirmed the well-developed record in this proceeding when it found that wireless Internet access services "have unique characteristics

[5] *The Communicators* (C-SPAN television broadcast, Oct. 9, 2010).

related to technology, associated application and device markets, and consumer usage."[6] CTIA and others have repeatedly demonstrated the key differences between wireless and wireline Internet access that make application of net neutrality rules to wireless particularly inappropriate. Comments filed in response to the *Further Inquiry* highlight the unique technical characteristics that differentiate wireless broadband services from their wireline counterparts. Customer expectations for wireless have similarly been managed based on the unique capabilities and limitations of both wireless and wired networks. Finally, the market structure for the provision of wireless broadband, characterized by intense competition at every level of the wireless ecosystem, and accordingly the customer experience, is completely different. There is simply no basis for the Commission to intervene and disrupt a virtuous cycle of innovation and competition that has delivered significant consumer and economic benefits. The following chart displays what has happened in the industry since the Commission has begun consideration of net neutrality rules for wireless:

[6] *Further Inquiry* at 2.

During the deliberation of net neutrality rules, the wireless ecosystem has evolved tremendously.

YE 2006		YE 2009
233,040,781	Total Subscribers	285,646,191
158,648,546,798	Total SMS for Year	1,563,090,908,850
1,798,361,585,325	Total MOU for Year	2,275,271,269,991
52,014,499	Churn	66,623,516
6%, 4Q06	% Smartphones of Total Handset Market	31%, 4Q09
29	# Manufacturers	33
7	# of Operating Systems	11
< 5,000	# of Apps	> 400,000
$50.56	Average Bill	$48.16
Phone, SMS, MMS, Camera, MP3 Player, WAP Browser	Capabilities of Best-Selling Device	Phone, SMS, MMS, Camera, Video, MP3 Player, App Store Access, HTML Internet Browser, Broadband Internet Access, GPS, and more.
	Growth in Facilities-Based Competition (selected cities)	
4	New York, NY	6
4	Los Angeles, CA	6
6	Chicago, IL	8
4	Washington, DC	6
4	Corpus Christi, TX	7
4	Bakersfield, CA	5
YE 2006		YE 2009

Once again, commenters in the net neutrality proceedings have developed a consistent record demonstrating the unique technical characteristics of wireless networks that make application of the Commission's contemplated network management restrictions particularly troubling in the wireless context. As the Communications Workers of America say in their comments, wireless services "face spectrum capacity constraints and signal strength, interference and variability issues that wireline services do not" and the mobile nature of wireless services "creates unique technical challenges and network management requirements."[7] In operating a wireless broadband network, "network engineers must employ countless different and ever-evolving network management techniques as a fundamental part of the day-to-day, second-to-second reality of operating a wireless network."[8] Further, because wireless broadband usage is growing at an exponential rate, wireless broadband providers must be accorded the utmost flexibility and ability to evolve at Internet speed, not APA speed, to manage their networks to address the "harsh realities of the RF environment" and to serve their customers.[9]

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[7] Comments of Communications Workers of America In Response to Further Inquiry into Two Under-Developed Issues, GN Docket No. 09-191, at 4-5 (Oct. 12, 2010) ("CWA Further Inquiry Comments").

[8] Comments of AT&T Inc., GN Docket No. 09-191, at 62 (Oct. 12, 2010) ("AT&T Further Inquiry Comments."). *See also, e.g.,* Comments of Cricket Communications, Inc. to Public Notice of Further Inquiry, GN Docket No. 09-191, at 3 (Oct. 12, 2010) ("Cricket Further Inquiry Comments") (stating that "the unique limitations that exist in a dynamic mobile environment warrant the flexibility to employ a wide range of techniques to use scarce network capacity efficiently"); Comments of T-Mobile USA, Inc., GN Docket No. 09-191, at 20 (Oct. 12, 2010) ("T-Mobile Further Inquiry Comments") ("To manage the day-to-day challenges of a wireless network, including spectrum constraints, expanding and highly unpredictable demand, interference sensitivity, security threats, and the effects of technological evolution, wireless broadband providers must have a full toolkit of network management techniques that enable them to respond quickly and dynamically.").

[9] Comments of Qualcomm Incorporated, GN Docket No. 09-191, at 6 (Oct. 12, 2010) ("Qualcomm Further Inquiry Comments") ("Each mobile broadband user's connection is affected by RF noise, multipath, and signal blockage conditions, and these impairments vary by time and location, and occur randomly. These harsh realities of the RF environment introduce added complexity and variability into the wireless broadband ecosystem and impose great challenges upon service providers to provide the best service to the greatest number of users. To

Trying to memorialize a set of rules by placing technological limitations on network operators' reasonable network management techniques and ability to constantly evolve these techniques to meet new demands fails to recognize the speed with which this environment is changing and could undermine consumer welfare through reductions in service quality, and ultimately "result in *no* user receiving timely throughput of content." [10] This is an end result plainly inconsistent with the public interest. Further, it is impossible to harmonize this effort to limit carriers' abilities to manage their network with the Herculean efforts of the National Broadband team, the FCC, NTIA, the White House, and Congress to identify and reallocate spectrum to address the exact same issue that is causing the need to evolve network management practices.

Despite protests to the contrary by "consumer groups,"[11] actual consumers understand the difference in the Internet experience between mobile and wired providers, because of the well-documented, unique technical characteristics stated above and described by the wireless industry in a variety of other FCC comment cycles.[12] If they did not, no wireless customer would try to use broadband outside their homes: the mobility of wireless broadband and its ability to bring broadband to the person is precisely what sets wireless broadband apart. U.S. consumers are savvy and understand that these mobile services will necessarily differ from those

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support this growth in broadband data usage, devices, applications and services, mobile operators need to be accorded the utmost flexibility to manage their networks, free of unnecessary – and potentially counterproductive – regulation.").

[10] *See, e.g.*, Comments of Ericsson Inc., GN Docket No. 09-191, at 7 (Oct. 12, 2010) ("Ericsson Further Inquiry Comments") (emphasis in original).

[11] *See, e.g.*, Comments of Free Press Regarding Further Inquiry, GN Docket No. 09-191, at 20 (Oct. 12, 2010) ("Free Press Further Inquiry Comments") (alleging that "[f]rom the Internet user's vantage point, there are no longer fixed categories of wireline and wireless devices").

[12] *See, e.g.*, RM-11361; GN Docket No. 09-191; GN Docket No. 10-127. These dockets are replete with filings documenting the extensive technical differences between wireless and wireline broadband networks and the impact of those differences on how network operators maintain service quality.

available at a single location. However, net neutrality regulation would greatly threaten the ability of wireless providers to provide quality of service to subscribers[13] – consistent with the service that has resulted in expansive growth in demand for wireless broadband. In fact, the ability of wireless networks to bring broadband to the person has contributed to the explosive growth of wireless services: in the first six months of 2009, the number of mobile wireless service subscribers with data plans for full Internet access increased by 40 percent.[14] Moreover, as of just one year later, comScore reported that mobile wireless Internet subscribers had more than doubled the FCC's June 2009 total – increasing to more than 71 million.[15] And, in 2010, the total number of mobile broadband connections will exceed the total number of fixed broadband connections.[16] Consumers' growing adoption of wireless broadband demonstrates their awareness of the key differences between the platforms, differences that make regulation of the wireless broadband market particularly troubling.

While there are significant differences between the wireless and wired broadband platforms, the incredible success of the wireless broadband ecosystem also militates against the adoption of net neutrality regulation. As Commissioner McDowell recently observed, "[t]he American wireless marketplace is dynamic and explosive; a world leader in innovation and

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13 *See, e.g.*, AT&T Further Inquiry Comments at 61-62 ("[Net Neutrality] obligations would force network engineers to err on the side of extreme conservatism in addressing network challenges, lest the Commission decide, in an enforcement proceeding several years later, that those engineers had guessed wrong about which network-management techniques would pass regulatory scrutiny. That conservatism would undermine the service quality available to all consumers and expose every wireless network to greater risks of failure.").

14 News Release, Federal Communications Commission, FCC Releases New Data on Internet Access Services (Sept. 2, 2010).

15 comScore, "MobiLens Trend" (last accessed Nov. 4, 2010).

16 Robert M. McDowell, Commissioner, Federal Communications Commission, Remarks at the FCC Spectrum Summit (Oct. 21, 2010), *available at* http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1021/DOC-302340A1.pdf ("Commissioner McDowell Spectrum Summit Remarks").

competition."[17] The success of the wireless broadband ecosystem "should come as no surprise, given the intense competition among wireless providers and massive levels of investment and innovation in wireless networks, services, devices and applications."[18] And, as Democratic and Republican Commissioners have observed, wireless broadband represents a vital component of the U.S. economy.[19] Yet the imposition of net neutrality regulation on wireless "may stifle the future, successful growth of a critically important sector of our economy and driving force behind the lengthy economic recovery."[20]

A. Wall Street Analysts Are Wary of Uncertainty Caused by Net Neutrality Rules for Wireless.

The investment community has cautioned that the imposition of net neutrality regulation could have a chilling effect on investment in broadband. For example, on a recent panel of analysts Citigroup's Mike Rollins said that "[i]nvestors like certainty and visibility of policy[.]"[21] Similarly, Height Analytics Managing Director Tom Seitz said "[i]nvestors hate uncertainty and clearly what is being created right now is uncertainty in the marketplace."[22]

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17 Commissioner McDowell Spectrum Summit Remarks at 1.

18 Comments of Verizon and Verizon Wireless on Under-Developed Issues in the Open Internet Proceeding, GN Docket No. 09-191, at 13 (Oct. 12, 2010) ("Verizon Further Inquiry Comments").

19 Julius Genachowski, Chairman, Federal Communications Commission, Remarks at the FCC Spectrum Summit: "Unleashing America's Invisible Infrastructure" at 2 (Oct. 21, 2010) ("Genachowski Spectrum Summit Remarks") ("Though you can't see it, spectrum is the oxygen of our mobile communications infrastructure and the backbone of a growing percentage of our economy. Spectrum enables wireless innovation that will grow our economy and create jobs of the future."); Commissioner McDowell Spectrum Summit Remarks at 1 (stating that wireless "offers one of the brightest rays of growth and opportunity in the U.S. economy").

20 Qualcomm Further Inquiry Comments at 4.

21 "Regulatory Uncertainty Created by FCC Seen Limiting Network Investment," COMMUNICATIONS DAILY at 1-2 (July 15, 2010).

22 *Id.*

Finally, Wise Harbor founder Keith Mallinson, stated that changing how broadband is regulated would invariably mean a drawn-out court fight and delays in investments. "I really don't see the need to increase regulation at this time," he said. "I think people are hungry to have more capabilities [in their broadband connections] and the market has the capability to deliver that, but increasing regulation has the risk of stifling that through the uncertainties but also by limiting some basic economic freedoms."[23] These quotes show that industry concerns with the impact of the type of unwarranted, sweeping changes to the broadband market proposed by the Commission are not only warranted, they are confirmed.

The success of the wireless broadband ecosystem can be attributed to Congress and the Commission's regulatory approach to wireless, under which "the market processes that discipline competing firms, spur innovation, and generally advance consumer welfare will discourage harmful practices while encouraging beneficial ones."[24] Conversely, regulation in this space would be highly detrimental to consumers. As the American Consumer Institute correctly observed in its comments, "[i]mposing regulations on a competitive market, and one with significant capacity restrictions, would reduce investment, raise industry costs and lead to consumer welfare losses."[25] CTIA strongly urges the Commission to refrain from heavy-handed use of regulation to attempt to manage wireless broadband carriers' provision of service. The current regulatory framework has led to immeasurable consumer benefits and competition – introduction of government intervention in the form of net neutrality regulation into this ecosystem will have a stifling effect on innovation, quality of service and consumer welfare.

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[23] *Id.*

[24] Comments of the Competitive Enterprise Institute, GN Docket No. 09-191, at 7 (Oct. 12, 2010) ("CEI Further Inquiry Comments").

[25] Comments of the American Consumer Institute, GN Docket No. 09-191, at 4 (Oct. 12, 2010).

II. "EXAMPLES" CITED BY NET NEUTRALITY ADVOCATES AS JUSTIFICATION OF A NET NEUTRALITY REGIME FOR WIRELESS ARE UNAVAILING.

A. Examples of Alleged Harmful Conduct Proffered In Support of Regulation Are Irrelevant, Factually Inaccurate, or Outside the Scope of Proposed Net Neutrality Rules.

As stated in the previous section, the wireless broadband ecosystem has produced significant consumer benefits and has not produced any market harm that would justify regulatory intervention. A number of commenters in this proceeding have attempted to meet CTIA's challenge to produce examples of wireless provider conduct that justifies application of net neutrality regulation to wireless. CTIA, however, is still waiting for any persuasive examples. To the extent commenters have attempted to characterize the conduct of wireless network operators as harmful, none of these claims justify the imposition of the Commission's proposed rules.

For example, some commenters argue that in the absence of net neutrality regulation, wireless networks "may develop into fundamental non-neutral platforms," and point to provider terms of use prohibiting peer-to-peer applications, Web broadcasts, and tethering, among other things as harmful acts justifying regulation.[26] With regard to tethering, CTIA has already demonstrated that whether or not customers can tether mobile phones to other devices has no bearing on their ability to access content on the Internet.[27] Further, terms of service related to tethering or peer-to-peer file sharing generally are a response to wireless carriers' limited capacity. MetroPCS, for example, found that as a result of its limited capacity and the strains placed on its network by tethering and peer-to-peer file sharing, it has been necessary to not

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[26] Free Press Further Inquiry Comments at 23.

[27] Comments of CTIA – The Wireless Association®, GN Docket No. 09-191, at 10-11 (Jan. 14, 2010).

permit tethering.[28] While Free Press objected to AT&T's initial decision to not allow SlingPlayer to operate on its network,[29] this is clearly another example of a reasonable network management decision made by a network operator in response to limited network capacity.[30] As AT&T previously indicated, it worked with Sling Media to lessen the impact its 3G network and consumers, and AT&T has supported SlingPlayer since February 2010.[31] In other words, these terms of service are a direct response to the capacity limitations inherent to wireless networks, and unquestionably constitute reasonable network management decisions on the part of wireless providers. Moreover, the competitive wireless marketplace effectively and efficiently has led to the introduction and support of features that consumers value. Skype, which initiated a proceeding at the FCC on wireless openness now is not only available on a huge number of wireless devices, Skype has evolved its own business model to partner only with certain carriers – its own choice. Other examples of new features for consumers include a new unlimited tethering plan for just $15 per month that T-Mobile introduced this week.[32] Similarly, the popularity of the iTunes App Store spurred the development of the Android Market, with an application's popularity in one app store driving its availability in others.[33] Because the

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28 MetroPCS Further Inquiry Comments at 15-16.

29 Free Press Further Inquiry Comments at 23.

30 Robert X. Cringely, "Game Over: The U.S. is unlikely to ever regain its broadband leadership", (Aug. 3, 2007) *available at* http://www.pbs.org/cringely/pulpit/2007/pulpit_20070803_002641.html (recognizing that "three Slingboxes can take down an EVDO cell.").

31 Reply Comments of AT&T Inc., GN Docket No. 09-191, at 74 (Apr. 26, 2010).

32 Press Release, T-Mobile, T-Mobile Kicks Off the Holidays With a Compelling Lineup of Affordable Android-Powered Smartphones and New Low-Cost Data Service Plans (Nov. 1, 2010), *available at* http://press.t-mobile.com/articles/t-mobile-offers-affordable-android-smartphones-data-plans.

33 *See, e.g.*, CEI Further Inquiry Comments at 7 ("Just four years ago, the mobile application marketplace was virtually nonexistent. With the advent of the iPhone, numerous

competitive marketplace has shown time and time again that it will respond to consumer demand for new technologies and services, there is no need for government regulation.

Complaints related to short message service ("SMS") and common short code ("CSC") traffic also fail to justify the imposition of net neutrality regulation, yet have been reiterated in initial comments as evidence of harm in the wireless ecosystem.[34] These commenters' continued citation of actions involving the use of SMS and CSCs ignores well-established facts. As CTIA has previously demonstrated, SMS and CSC traffic is not Internet traffic, and indeed the FCC has not classified it as a telecommunications or information service.[35] CSCs are not even telecommunications: they are an addressing standard and advertising service maintained by the wireless industry. As such, these services would be out of the reach of net neutrality-like regulation, as CTIA has previously and repeatedly demonstrated. Carriers' policies with regard to SMS and CSCs have been developed in response to consumer demand and are designed to protect consumers from unwanted spam and fraud.[36]

As neither SMS nor CSCs would be subject to the Commission's proposed rules, allegations of harm with respect to these services cannot be used to justify the proposed net

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developers began writing applications for the iPhone App Store. Then, as the Android mobile platform took off in 2010, many developers began writing apps for the Android Market as well. Today, at least three mobile application distribution platforms each enjoy an installed base exceeding 10 million users, and these figures are in a constant state of flux.").

[34] *See* Comments of the Mobile Internet Content Coalition on the Further Inquiry, GN Docket No. 09-191, at 7 (Oct. 12, 2010) ("MICC Further Inquiry Comments"); Free Press Further Inquiry Comments at 24.

[35] *See, e.g., Petition for Declaratory Ruling that Text Messages and Short Codes are Title II Services or are Title I Services Subject to Section 202 Non-Discrimination Rules*, Public Notice, 23 FCC Rcd 262, 262 (Jan. 14, 2008) (explaining that petitioners "ask the Commission to clarify the regulatory status of text messaging services, including short-code based services sent from and received by mobile phones").

[36] Comments of CTIA – The Wireless Association, WT Docket No. 08-7, at 8-12 (Mar. 14, 2008).

neutrality regulations. Ironically, SMS is exactly the type of "best-effort" service that net neutrality advocates envision for mobile Internet access, and consumers would be worse off as messages on a congested network would wait for an opening rather than have capacity managed and shared among users. The "store and forward" method to deliver SMS messages waits until there is capacity available to deliver the message. If other services or users are dominating network capacity, that message waits – sometimes for an extended period – until there are available network resources to enable its delivery.

Examples of alleged harmful conduct in other countries are similarly irrelevant to the current discussion. In its comments, Free Press cited the actions of Canada's Telus Communications, which it alleged blocked its Internet subscribers from accessing a website supporting striking union members.[37] While one can look around the world to find examples of conduct that could justify net neutrality proponents' preferred course of action, such examples have no bearing on the U.S. market. And, ironically, international regulators that have addressed net neutrality have chosen to (1) take a "wait-and-see" approach; (2) exempt mobile broadband networks from the scope of any new regulations; or, (3) adopt regulations far less intrusive than those proposed by the Commission and supported by Free Press and other net neutrality proponents.[38]

Finally, commenters who claim that there are U.S. wireless providers with "significant market power" as a justification for net neutrality regulation are wrong. Allegations that the U.S. wireless marketplace is not competitive are simply untrue: the Commission's recent proceeding

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[37] Free Press Further Inquiry Comments at 24.

[38] Comments of the GSM Association, GN Docket No. 09-191, at 7 (Oct. 12, 2010) ("GSMA Further Inquiry Comments") (discussing approaches taken by regulators in the European Union, Japan, Hong Kong, Canada, and the United Kingdom).

regarding wireless competition, as well as a recent report by the Government Accountability Office,[39] contained a wealth of data showing continuing competition, growth, innovation, investment, and consumer gains in the wireless industry.[40] Moreover, these arguments ignore the technical infeasibility of net neutrality regulation in the wireless space and the resulting detrimental impact on wireless consumers. The Commission's existing regime of allowing the marketplace, not regulation, to drive innovation and competition in the wireless space, together with a licensing regime that provides significant technological flexibility to wireless network operators, has yielded considerable benefits, and false charges of "significant market power" are not a basis to alter this regime.

B. The Copyright Safeguards Sought by the Future of Music Coalition Would be Prohibited Under the Regime Sought by Net Neutrality Supporters.

In its comments, the Future of Music Coalition ("FMC") supports a non-discrimination mandate, yet also asks broadband providers to implement technological measures to protect musicians' intellectual property rights.[41] Meanwhile, the net neutrality advocates allege that broadband providers' usage of deep packet inspection ("DPI") warrants the imposition of net neutrality regulation by the Commission.[42] FMC cannot have it both ways: either it supports reasonable network management and the methods used by wireless providers to manage their

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39 Telecommunications: Enhanced Data Collection Could Help FCC Better Monitor Competition in the Wireless Industry, U.S. Government Accountability Office (July 27, 2010) *available at* http://www.gao.gov/products/GAO-10-779.

40 *See* WT Docket No. 10-133.

41 Comments of Future of Music Coalition, GN Docket No. 09-191, at 6 (Oct. 12, 2010).

42 *See, e.g.,* Comments of Computer & Communications Industry Association, GN Docket No. 09-191, at 4 (Jan. 13, 2010); Comments of Free Press, GN Docket No. 09-191, at 141-151 (Jan. 14, 2010); Comments of Open Internet Coalition, GN Docket No. 09-191, at 14, 77-82 (Jan. 14, 2010); Comments of Dish Network L.L.C., GN Docket No. 09-191, at 10-11 (Oct. 12, 2010) (arguing that the use of DPI by broadband providers enables them to "discriminate against content from competitors").

networks or it supports so-called network neutrality which would potentially forbid the type of DPI needed to protect copyrighted works. It is ironic that the FMC has therefore aligned itself with parties who would seek to prohibit the very technologies that FMC seeks to promote.

C. Regulation of Only Part of the Applications Market Will Not Achieve the End Advocated by Net Neutrality Proponents.

Ironically, commenters further cite to the actions of app store providers such as Apple as constituting harmful conduct. In fact, they are proving that the regulation contemplated by the Commission will not achieve their desired end. CTIA has oft-demonstrated the interdependent nature of the wireless ecosystem and the fact that consumers have multiple points of contact with the wireless ecosystem. In the case of the applications market, consumers frequently interact with application developers and app store operators that are not Commission licensees or regulatees.[43]

Once again, commenters have reiterated charges relating to wireless providers' exclusion of applications from their networks including, for example, actions surrounding Skype, Apple and AT&T.[44] Yet the *Further Notice* contemplates regulation of app store operators that are also network operators and, importantly, are Commission licensees.[45] It is true that there are application store operators and content providers that have restricted consumers' ability to access certain content. One very prominent company is Skype, the same company calling for regulation of the carriers. In an amazing and ironic twist, Skype has provided the most recent examples of blocking consumer access to products. Skype, for example, recently blocked the Fring

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[43] Moreover, consumers frequently interact with app stores and download applications to their wireless devices using unlicensed wireless service, *e.g.*, Wi-Fi, without the involvement of licensed wireless carriers.

[44] Free Press Further Inquiry Comments at 23-24.

[45] *Further Inquiry* at 5-6.

application from connecting to its service,[46] and more recently blocked a similar VoIP client, Nimbuzz.[47] Yet, as stated in more detail in Section III, as non-licensees these actors are outside the reach of the Commission's authority, and net neutrality regulation would have no impact on their behavior. There is no basis for the regulation of wireless network operators when such regulation will have absolutely no effect on application store operators – parties who are outside the reach of both the FCC and wireless carriers. In fact, the same parties who seek the application of net neutrality rules to the consumer-oriented wireless market out of fear that providers will block third-party applications also insist that regulation not extend to app store operators.[48] These arguments ignore the fact that many of the parties engaging in content blocking are outside the scope of the Commission's proposed rules, some are groups that have pushed for net neutrality regulation, and yet are the very parties that the public interest community does not want regulated.

III. COMMISSION ACTION IN THE WIRELESS APPLICATION ENVIRONMENT IS UNWARRANTED AND UNSUPPORTED BY STATUTE.

The Commission's proposed course of action with respect to mobile application development and distribution would be ill-advised at best, and antithetical to the Communications Act at worst. The application market is a growing and innovative part of the mobile broadband ecosystem that is driving consumers' use of the mobile Internet. Commission

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46 *See* Matthew Lasar, Shades of irony? Skype blocks Fring, citing "misuse", arstechnica.com (July 13, 2010), *available at* http://arstechnica.com/tech-policy/news/2010/07/shades-of-irony-skype-blocks-fring-citing-misuse.ars.

47 *See* Om Malik, Skype Boots Nimbuzz, Tightens Grip on Ecosystem, GigaOm (Oct. 25, 2010), *available at* http://gigaom.com/2010/10/25/skype-vs-nimbuzz/.

48 *See, e.g.*, Comments of the Open Internet Coalition, GN Docket No. 09-191, at 8-9 (Oct. 12, 2010) (suggesting that carriers have "incentives to discriminate against content, applications and services that may compete with services offered by the carriers themselves" but that "the Commission's focus should remain on the conduct of wireless network operators and not on operators of app stores").

intervention into this nascent part of the wireless ecosystem as suggested in the *Further Inquiry* risks derailing the growth of this pro-consumer and economically important part of the wireless broadband ecosystem. Moreover, the Commission lacks the ancillary authority to regulate the mobile application space. As the D.C. Circuit has previously detailed for the Commission, "[n]o case has ever permitted, and the Commission has never . . . asserted jurisdiction over an entity not engaged in 'communication by wire or radio.'"[49]

A. Initial Comments Clearly Demonstrate the Success of the Application Environment and the Inappropriateness of Regulation.

In their initial comments in response to the *Further Inquiry*, participants in this proceeding emphatically answered the Commission's inquiry regarding how to best promote the success of the applications space: regulation is unwarranted, unnecessary, and would only seek to stifle a rapidly growing market segment. At the Commission's recent Spectrum Summit, Chairman Genachowski affirmed the apps market's success, noting that "[t]he mobile revolution has spawned the 'apps economy,' with tens of thousands of developers and companies, including many startups creating new jobs, inventing more than 250,000 apps, driving 4 billion dollars in sales last year alone."[50] The Commission can best promote the continued success of this nascent market segment by continuing to allow market forces – not regulation – to drive its development.

This proceeding makes clear that "[b]y any measure, the market for wireless apps is extremely competitive, innovative, and is growing rapidly."[51] The enormous popularity of innovative wireless applications means that "[p]roviders compete vigorously on the basis of applications, and every major wireless broadband provider actively works with application

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49 *Am. Library Ass'n*, 406 F.3d at 702 (quoting *Accuracy in Media, Inc. v. FCC*, 521 F.2d 288, 293 (D.C. Cir. 1975)).

50 Genachowski Spectrum Summit Remarks at 3.

51 MetroPCS Further Inquiry Comments at 31.

developers to encourage the creation of applications for its network."[52] The results have been staggering: nearly 400,000 mobile applications are currently available to American consumers today,[53] the iTunes App Store has had over 6.5 billion total downloads, and the Android Market has had more than 1 billion total downloads.[54] Further, in the absence of regulation, diverse business models have emerged that give consumers a choice among application stores with varying degrees of management.[55] Allowing such variation in the application market "ultimately benefit[s] innovation and freedom."[56]

As MetroPCS observed in its comments, there is no evidence that wireless consumers are unable to obtain the applications they demand, and the small fraction of consumers who have unlocked their mobile handsets to obtain applications otherwise not available indicates that for the vast majority of consumers, the existing applications regime satisfies their desires.[57] Indeed, "wireless providers know that they can win customers only by offering a robust mix of applications – and that if they reject, limit, or compromise useful applications, they will undermine the value of their service and drive customers to one of many alternatives."[58] Put

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52 AT&T Further Inquiry Comments at 53.

53 Commissioner McDowell Spectrum Summit Remarks at 1.

54 MetroPCS Further Inquiry Comments at 31.

55 AT&T Further Inquiry Comments at 64 ("As competitors have worked to win and retain customers, several distinct service models have emerged and gained wide acceptance among different groups of consumers. For example, many wireless consumers prefer a secure, mediated broadband environment, where they can feel safe about the applications they use and confident that those applications will function well on their wireless devices. . . . In contrast, other customers prefer less actively managed models that allow them more independent customization of their wireless broadband experiences.").

56 CEI Further Inquiry Comments at 8.

57 MetroPCS Further Inquiry Comments at 32.

58 AT&T Further Inquiry Comments at 55. *See also* MetroPCS Further Inquiry Comments at 32 ("The vigorous competition in the wireless industry means that consumers are willing and

simply, there is a vibrant, competitive application market that "has grown up without regulation, and there remains no demonstrated need for the Commission or other policymakers to intervene in this burgeoning marketplace."[59]

B. Legally, the Commission Lacks the Authority to Regulate the Applications Environment.

The *Further Inquiry*'s proposed regulation of the mobile application space raises troubling questions about the Commission's authority to act in this area. In the *Further Inquiry*, the Commission proposes to restrict wireless broadband Internet access providers' ability to "prevent or restrict the distribution or use of types of applications;" to narrow providers' "discretion with respect to applications that compete with services the provider offers;" and to mandate the "ability of developers to load software applications onto devices for development or prototyping purposes."[60] The *Further Inquiry* even goes so far as to propose that providers be "prohibited from denying or restricting access to applications in their capacity as network providers" and subject to restrictions "regarding what apps are included in app stores that they operate."[61] These proposed regulatory intrusions into the mobile application space run afoul of the Communications Act and First Amendment.

1. The Communications Act Prohibits the Commission from Regulating the Mobile Application Space.

To the extent that any company is operating as an application store, they do so outside the

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able to vote with their feet. A wireless provider that refuses to provide its consumers with the apps they demand, or significantly restricts its customers' ability to purchase and/or run the apps that they desire, will find itself losing customers to providers or platforms that are willing to provide such flexibility.").

59 Verizon Further Inquiry Comments at 30.

60 *Further Inquiry* at 5.

61 *Id.* at 5.

scope of the FCC's authority. As Verizon and Google have both correctly stated, "[b]ecause communications regulatory bodies, such as the FCC, are agencies of limited jurisdiction, at a minimum they must have requisite jurisdiction before they can subject any Internet application, content, or service to regulation."[62] Indeed, the Commission, as an administrative agency, "is a 'creature of statute,' having 'no constitutional or common law existence or authority, but *only* those authorities conferred upon it by Congress.'"[63] "As the Supreme Court has recognized, 'an agency literally has no power to act . . . unless and until Congress confers power upon it.'"[64] Put simply, Congress has not granted the Commission the authority to regulate the application space in the manner proposed by the *Further Inquiry*.

In fact, the Communications Act prohibits the Commission's proposed course of action because providing the ability to run applications is an integral part of wireless broadband Internet access providers' "information service" offering.[65] Section 3(44) of the Act provides that, like all telecommunications carriers, a commercial mobile radio service ("CMRS") provider may be treated as a common carrier "only to the extent that it is engaged in providing telecommunications services."[66] The Commission has already found, however, that CMRS providers are not engaged in providing "telecommunications services" when they offer

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62 Letter from Alan Davidson, Google Inc. and Thomas J. Tauke, Verizon to Chairman Julius Genachowski et al, GN Docket No. 09-191, at 3 (Jan. 14, 2010) ("Verizon/Google Net Neutrality Comments").

63 *Cal. Indep. Sys. Operator Corp. v. FERC*, 372 F.3d 395, 398 (D.C. Cir. 2004) (quoting *Atlantic City Elec. Co. v. FERC*, 295 F.3d 1, 8 (D.C. Cir. 2002)).

64 *Id.* (quoting *La. Pub. Serv. Comm'n v. FCC*, 476 U.S. 355, 374 (1986)).

65 *See* Reply Comments of CTIA – The Wireless Association®, GN Docket No. 09-191, at 54-59 (Apr. 26, 2010) ("CTIA Net Neutrality Reply Comments"); Reply Comments of CTIA – The Wireless Association®, GN Docket No. 10-127, at 54-55 (Aug. 12, 2010) ("CTIA NOI Reply Comments").

66 47 U.S.C. § 153(44).

customers the ability to run applications on their mobile devices. "[W]ireless broadband Internet access service offers a single, integrated service to end users, Internet access, that inextricably combines the transmission of data with computer processing, information provision, and computer interactivity, *for the purpose of enabling end users to run a variety of applications*."[67] "These applications," the Commission has concluded, "taken together constitute an information service as defined by the Act."[68] Thus, any attempt by the Commission to impose common carrier regulations in the application space would be "inconsistent with law" and therefore beyond the Commission's authority.[69]

The Commission also lacks ancillary authority to regulate the mobile application space. The Commission "may exercise ancillary jurisdiction only when two conditions are satisfied: (1) the Commission's general jurisdictional grant under Title I [of the Communications Act] covers the regulated subject and (2) the regulations are reasonably ancillary to the Commission's

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67 Declaratory Ruling, *Appropriate Regulatory Treatment for Broadband Access to the Internet over Wireless Networks*, 22 FCC Rcd 5901, ¶ 26 (2007) ("*Wireless Broadband Order*") (emphasis added).

68 *Id.*; *see also* Declaratory Ruling and Notice of Proposed Rulemaking, *Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities*, 17 FCC Rcd 4798, ¶ 38 (2002) ("*Cable Modem Order*") ("E-mail, newsgroups, the ability for the user to create a web page that is accessible by other Internet users, and the DNS are applications that are commonly associated with Internet access service. Each of these applications encompasses the capability for 'generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.' Taken together, they constitute an information service, as defined in the Act."); Report and Order and Notice of Proposed Rulemaking, *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, 20 FCC Rcd 14853, ¶ 14 (2005) ("*Wireline Broadband Order*") ("[W]ireline broadband Internet access service combines computer processing, information provision, and computer interactivity with data transport, enabling end users to run a variety of applications (e.g., e-mail, web pages, and newsgroups). These applications encompass the capability for 'generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications,' and taken together constitute an information ser-vice as defined by the Act.").

69 47 U.S.C. § 303(r).

effective performance of its statutorily mandated responsibilities."[70] The D.C. Circuit has explained that "the Commission may not invoke its ancillary jurisdiction under Title I to regulate matters outside of the compass of communication by wire or radio."[71] Indeed, "[n]o case has ever permitted, and the Commission has never . . . asserted jurisdiction over an entity not engaged in 'communication by wire or radio.'"[72]

Here, the Commission's proposed intervention into the application space fails at the first step because the operation of an app store does not constitute "communication by wire or radio."[73] As Google previously explained, "[t]hese software-derived offerings are not associated with either the network provider's transmission functions or the source of potential FCC concerns, *i.e.*, affecting the facilities of communications by wire or radio."[74] "The majority of Internet content and applications . . . fall well outside of the Commission's jurisdiction because such offerings supply access to stored data and do not provide the transmission component that constitutes 'communications by wire or radio.' The FCC simply is not free to regulate stored data or the content of the stored information."[75]

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70 *Comcast Corp. v. FCC*, 600 F.3d 642, 643 (D.C. Cir. 2010) (quoting *Am. Library Ass'n v. FCC*, 406 F.3d 689, 691-92 (D.C. Cir. 2005)).

71 *Am. Library Ass'n*, 406 F.3d at 702.

72 *Id.* (quoting *Accuracy in Media, Inc. v. FCC*, 521 F.2d 288, 293 (D.C. Cir. 1975)).

73 47 U.S.C. § 152(a).

74 Comments of Google Inc., GN Docket No. 09-191, at 84 (Jan. 14, 2010) ("Google Net Neutrality Comments").

75 *Id.* at 85.

Moreover, a regulation by definition cannot be ancillary to the Commission's authority if it is "inconsistent with" the Act.[76] Regulation of the application space as proposed in the *Further Inquiry* would be squarely contrary to the Act to the extent it would impose the equivalent of common carriage obligations on information services.[77] Because "telecommunications services" and "information services" are mutually exclusive categories, a provider cannot be subject to common carriage regulation under Title II with respect to the provision of information services.[78] As described above, the Commission has concluded that wireless broadband Internet access service is neither a telecommunications service pursuant to Section 3(46) of the Communications Act nor a CMRS service pursuant to Section 332 of the Act, but rather an "information service" as defined by Section 3(20). Under the Act, this designation precludes the application of common carriage requirements to wireless broadband Internet access service. Thus, the Commission lacks ancillary authority because imposing common carrier regulation on information services would be "inconsistent with" the Act.[79] In the absence of statutory authority, the Commission simply "may not impose common carrier status upon any given entity on the basis of the desired policy goal the Commission seeks to advance."[80]

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[76] 47 U.S.C. § 154(i) ("[t]he Commission may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this chapter, as may be necessary in the execution of its functions"); *Am. Library Ass'n*, 406 F.3d at 692 (quoting 47 U.S.C. § 154(i)).

[77] Reply Comments of Verizon and Verizon Wireless, GN Docket No. 09-191, at 82-83 (Apr. 26. 2010) ("Verizon Net Neutrality Reply Comments").

[78] *See NCTA v. Brand X Internet Servs.*, 545 U.S. 967, 975 (2005) ("The Act regulates telecommunications carriers, but not information-service providers, as common carriers.").

[79] *See* CTIA Net Neutrality Reply Comments at 59-62.

[80] *Sw. Bell Tel. Co. v. FCC*, 19 F.3d 1475, 1481 (D.C. Cir. 1994).

For the most part, application store providers are not Commission licensees or entities that fall under the Commission's regulatory authority.[81] And, the applications provided through these stores are written by another player in the wireless ecosystem—the application provider—who, again, is rarely a Commission licensee. And the application space has indeed proliferated outside of the Commission's jurisdiction. There is little doubt that the actions of these ecosystem players are for the most part outside the scope of Commission authority under the Communications Act.

Reclassification of broadband Internet access service, as proposed in the Commission's *Notice of Inquiry*, would not provide the Commission with the authority it needs to regulate the application space.[82] As the Act makes clear, the "telecommunications service" component of a reclassified broadband Internet access offering would include only "transmission . . . of information of the user's choosing, without change in the form or content of the information as sent and received."[83] In contrast, the functions associated with the provision of applications and content over the transmission facility require the "capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information," and therefore would remain "information service[s]."[84] Indeed, a rule guaranteeing the user access to the content or applications of his or her choice would regulate the broadband provider's provision of services designed to process and retrieve information (*i.e.*, from a third-party content or

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81 *See, e.g.*, Comments of Akamai Technologies, Inc., GN Docket No. 09-191, at 14 (Jan. 14, 2010) ("Akamai Net Neutrality Comments") ("Akamai's business has never been subject to Commission regulation, and there is no reason for the Commission to extend such regulation over Akamai or similar Internet companies.").

82 CTIA Net Neutrality Reply Comments at 82.

83 47 U.S.C. § 153(43).

84 *See id.* § 153(20).

applications provider). Accordingly, the proposals in the *Further Inquiry* would purport to regulate the aspect of broadband Internet access that would continue to be deemed an information service. Any of the *Further Inquiry*'s proposed regulations would therefore be no more permissible following reclassification than they would have been before undertaking such action.

2. The First Amendment Also Prohibits the Commission from Regulating in This Area.

Even assuming the Commission had statutory authority pursuant to which it could regulate the mobile application space, the *Further Inquiry*'s proposed regulatory action would violate the First Amendment rights of wireless broadband providers. As Verizon has explained, broadband providers "have created app stores that they take great care to manage, exercising discretion over the applications they make available."[85] These providers "engage in protected speech by providing original Internet content on their own and in conjunction with partners, and by featuring selected content on their networks."[86] The Commission's *Further Inquiry*, however, proposes to limit providers' "discretion regarding what apps are included in app stores that they operate" in a manner that would directly restrict their protected speech.[87] Limiting broadband providers' discretion to distribute certain applications would prevent a broadband

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85 Verizon Net Neutrality Reply Comments at 111; *see also* Comments of AT&T Inc., GN Docket No. 09-191, at 235-44 (Jan. 14, 2010) ("AT&T Net Neutrality Comments"); Comments of the National Cable & Telecommunications Association, GN Docket No. 09-191, at 49-64 (Jan. 14, 2010).

86 Verizon Net Neutrality Reply Comments at 110-11; *see also Simon & Schuster, Inc. v. Members of New York State Crime Victims Bd.*, 502 U.S. 105, 117 (1991) (when Internet service providers "contract[] with [others] to transmit [others'] speech," they act as members of the media protected by the First Amendment and "[a]ny 'entity' that enters into such a contract becomes by definition a medium of communication, if it was not one already."); *Hurley v. Irish-American Gay, Lesbian & Bisexual Group of Boston*, 515 U.S. 557, 570 (1995) (First Amendment precedent does not "require a speaker to generate, as an original matter, each item featured in the communication").

87 *Further Inquiry* at 5.

provider from promoting or featuring certain chosen content in accordance with its own editorial judgment. These decisions involve editorial discretion that is undeniably protected by the First Amendment.[88]

Moreover, regulatory enforcement of a non-existent duty to deal with all application providers would compel broadband providers to associate with speakers they otherwise would not. The *Further Inquiry*, for example, proposes to prohibit providers "from denying or restricting access to applications in their capacity as network providers" and limit providers' "discretion with respect to applications that compete with services the provider offers."[89] It is firmly established, however, that "the right of freedom of thought protected by the First Amendment against state action includes both the right to speak freely and the right to refrain from speaking at all."[90] Indeed, "Government-enforced right of access inescapably 'dampens the vigor and limits the variety of public debate.'"[91] As Verizon explains, the end result of enforcing this duty to deal with all application providers would be to deter, rather than facilitate, speech: if a provider were required to allow access to *all* content or applications into the provider's

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88 *Hurley*, 515 U.S. at 568-70 ("[A] private speaker does not forfeit constitutional protection simply by combining multifarious voices, or by failing to edit their themes to isolate an exact message as the exclusive subject matter of the speech."); *see also Miami Herald Publishing Co. v. Tornillo*, 418 U.S. 241, 258 (1974) ("The choice of material to go into a newspaper, and the decisions made as to limitations on the size and content of the paper, and treatment of public issues and public officials—whether fair or unfair—constitute the exercise of editorial control and judgment" protected by the First Amendment.).

89 *Further Inquiry* at 5.

90 *Wooley v. Maynard*, 430 U.S. 705, 714 (1977) (citation omitted); *Hurley*, 515 U.S. at 573 ("[O]ne important manifestation of the principle of free speech is that one who chooses to speak may also decide what not to say."); *Pacific Gas & Elec. Co. v. Public Util. Comm'n of Cal.*, 475 U.S. 1, 19 (1986) (plurality opinion) ("Our cases establish that the State cannot advance some points of view by burdening the expression of others."); *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 642 (1994) ("At the heart of the First Amendment lies the principle that each person should decide for himself or herself the ideas and beliefs deserving of expression, consideration, and adherence.").

91 *Tornillo*, 418 U.S. at 256-58.

storefront or application store, there would be a real deterrent to offering any at all.[92] Any such restrictions would thus restrict a provider's ability to engage in its own protected speech and impermissibly "diminish the free flow of information and ideas."[93]

Regulatory action in this space also would be fatally underinclusive if the Commission's rules did not reach content-delivery networks, search providers, and other service providers that likewise have an effect on the free flow and accessibility of information on the Internet. As AT&T has explained, regulation of speech "can violate the First Amendment by restricting too little speech, as well as too much."[94] Here, regulatory action with respect to only the subset of app store operators who are also FCC licensees would not only be unconstitutional, it would also artificially distort the market for applications and fail to achieve any meaningful consumer benefits.

IV. USAGE-BASED PRICING BY SOME WIRELESS BROADBAND PROVIDERS IS NOT A SUBSTITUTE FOR ONGOING, DYNAMIC NETWORK MANAGEMENT, NOR DOES IT GRANT THE COMMISSION AUTHORITY TO SET RULES FOR MANAGING WIRELESS NETWORK CAPACITY.

Contrary to the Commission's implication that the adoption of usage-based pricing models by wireless broadband providers mitigates the need for network management, such pricing models do nothing to alleviate the spectrum crunch facing wireless broadband providers or eliminate the need for dynamic network management to promote consumer benefit, as detailed below and as CTIA detailed in an attachment from a wireless network engineer that was attached

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92 Verizon Net Neutrality Comments at 113-14; *see also Arkansas Educ. Tel. Comm'n v. Forbes*, 523 U.S. 666, 681 (1998) ("Were it faced with the prospect of cacophony, on the one hand, and . . . liability, on the other, a public television broadcaster might choose not to air candidates' views at all.").

93 *Turner*, 512 U.S. at 656.

94 AT&T Net Neutrality Comments at 240-41.

to our initial comments.[95] While CTIA supports a regulatory environment that allows for a variety of innovative pricing models, some have suggested that usage-based pricing "may be the symptom of a larger problem rather than a viable solution to deal with abusively data-intensive applications."[96] Even if the Commission identifies, allocates, and licenses significant additional spectrum for wireless broadband, network management will continue to be critical to the provision of wireless broadband services, with or without the presence of usage-based pricing.

The Commission has recognized the looming spectrum crunch facing wireless broadband providers in light of explosive demand for wireless data capacity. In a recent technical paper, the Commission convincingly found that "mobile data demand will outstrip available wireless capacity in the near-term."[97] The Commission found that there will be "strong expected growth in mobile data traffic from 2009 levels – by a factor of five by 2011, more than 20 times by 2013, and reaching 35 times 2009 levels by 2014."[98] And Chairman Genachowski made clear the implications of this spectrum crunch: "[i]f we don't act to update our spectrum policies for the 21st century, we're going to run into a wall – a spectrum crunch – that will stifle American innovation and economic growth and cost us the opportunity to lead the world in mobile communications."[99]

While CTIA applauds the recent efforts by the Commission to quantify the spectrum crunch and make more spectrum available for wireless broadband, the fact remains that dynamic

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95 *See* John Marinho, "Wireless Broadband, Tiered Services and Network Management" (September 2010), CTIA Further Inquiry Comments at Attachment D.

96 MetroPCS Further Inquiry Comments at 34.

97 FCC Staff Technical Paper, *Mobile Broadband: The Benefits of Additional Spectrum* at 5 (Oct. 21, 2010).

98 *Id.* at 9.

99 Genachowski Spectrum Summit Remarks at 3.

network management remains critical to the continued success of the wireless ecosystem. Unlike operators of wireline networks, wireless network operators cannot readily build their way out of capacity constraints – more spectrum is necessary.[100] And the spectrum that is available is shared among all users on the network, who move and demand varying levels of data in highly unpredictable ways.[101] In the absence of additional spectrum, wireless network operators must "retain the greatest flexibility to manage access by increasing numbers of mobile users through an unconstrained array of bandwidth conservation tools."[102]

Network management "is inescapably a vital component to running a vital wireless network"[103] – even when wireless network operators offer usage-based pricing options designed to promote bandwidth conservation. As multiple commenters in this proceeding noted in response to the Further Inquiry, usage-based pricing will not reduce, much less eliminate, the need for active network management.[104] As AT&T observed, while usage-based pricing may

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100 ITIF Further Inquiry Comments at 13 ("In the absence of increasing coding efficiency, wireless operators can only increase capacity by using more spectrum or by employing antennas more densely. Antenna deployment is labor-intensive, while wireline bandwidth increases are often accomplished simply by upgrading the electronics on existing facilities in the course of routine maintenance.").

101 *See, e.g.*, Clearwire Further Inquiry Comments at 6 ("In mobile broadband networks, spectrum assets are inherently shared, creating a greater potential for network congestion than is found with a wireline broadband network, where each end user has dedicated access. . . . In addition, throughput, latency, and transmission errors vary much more widely over a mobile network because of constantly fluctuating radio signal conditions and extensive digital radio processing. Additionally, wireless network congestion is often cell site or sector specific, which may require appropriate traffic management during periods of heavy network utilization to maintain a good experience for all users on the network.").

102 Qualcomm Further Inquiry Comments at 9.

103 Clearwire Further Inquiry Comments at 8.

104 *See, e.g.*, Cricket Further Inquiry Comments at 5 ("However, Cricket wishes to emphasize that network management continues to be essential to wireless networks for delivering the type of Internet experience that consumers have come to expect, *regardless* of how tiers or service plans are constructed.") (emphasis in original); T-Mobile Further Inquiry Comments at 17 ("Although usage-based data pricing can help mitigate some concerns about wireless network congestion caused by apps and third-party devices, wireless providers need the

make customers more mindful of their data usage over the course of their monthly billing cycle, it will not necessarily impact a consumer's decision to use a particular amount of bandwidth at a given moment.[105] It is this behavior that leads to the localized spikes in congestion that are inherent to wireless networks and increasing in an era of heightened data usage.[106] Only through access to a comprehensive package of resources are wireless network engineers able to manage networks every minute of every day to ensure American consumers receive the highest quality

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ability to use other network management techniques in addressing wireless network congestion or other legitimate network-related concerns."); Verizon Further Inquiry Comments at 19 ("As discussed below, however, while it is critical that all providers retain the ability to employ alternative pricing models such as usage-based pricing, this alone cannot eliminate the technological challenges with wireless networks and do not replace the need for network management.").

[105] AT&T Further Inquiry Comments at 60-61 ("Although a usage-based service plan may make some customers more mindful of their bandwidth consumption on a monthly basis, it may have little impact on a customer's decision to consume a certain amount of bandwidth at a specific location at a particular point in time.").

[106] *See, e.g.,* AT&T Further Inquiry Comments at 61 ("Thus, usage-based pricing cannot reduce the sudden spikes in congestion that arise from the inherent mobility of wireless customers, who move unpredictably from one cell site to another. The number of users on a given cell site can change dramatically in hours or even minutes. A major car accident on a sleepy road, a protest march, or a holiday shopping surge can cause wireless traffic to peak suddenly, imposing unpredictable bandwidth demand that far exceeds the cell's capacity to support data usage. In such circumstances, wireless providers can preserve network resources for essential functions, including emergency and other voice calls, only if they can manage the bandwidth available to bandwidth-intensive applications during periods of congestion."); Cricket Further Inquiry Comments at 5 ("Rate plans that influence the volume of customer activity are not sufficient to prevent network congestion given the great variation of demand that can occur on the network as a whole, in particular regions or markets, at particular cell sites, and at varying times of the day."); GSMA Further Inquiry Comments at 5 ("Mobile broadband networks rely upon a shared spectrum resource to provide service to all users. To a much greater extent than with fixed service networks, mobile networks have limited capacities and are prone to highly localized spikes in congestion at specific times and places based upon social, cultural, economic, and other factors outside of the control of network operators."); T-Mobile Further Inquiry Comments at 17 ("Usage-based pricing may moderate average usage patterns, but even under a tiered-pricing framework, a small number of users operating inefficient (or worse, malicious) devices or "'bandwidth-hog' apps in the same cell could block other users in the area from accessing the network and cause harm to the network, consumers, or other devices. Because users often travel across multiple cells, a large number of other users could be affected by just a few inefficient or malicious devices or apps. In addition, operators offering usage-based pricing will still need to manage certain high priority traffic from lower-tier users (*e.g.*, emergency calls) and congestion spikes.").

wireless experience. Additional spectrum, network management, and technological advances work together to increase the wireless broadband experience: one, taken alone, does not remove or lessen the need for the others.

For the Commission to best promote the public interest, it should continue to permit wireless providers to offer a variety of pricing models and not favor some business models by placing greater regulatory constraints on others. Commenters agree that the presence of multiple pricing models serves the public interest.[107] Usage-based pricing plans enable consumers to only pay for what they need and enable wireless adoption by consumers who may otherwise be unable to do so. Indeed, AT&T estimates that the tiered data plans it recently introduced will result in savings for the vast majority of their customers.[108] All-you-can-eat data plans, meanwhile, offer convenience and simplicity to those who choose to adopt them.[109] And pre-paid offerings give consumers the freedom to decide exactly how much to spend on wireless services. As the

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[107] Cricket Further Inquiry Comments at 4-5 ("A marketplace that has available a variety of plans and price points allows consumers to pick and choose the service attributes that suit their needs, without having to pay for more than they require."); Comments of The National Organizations, GN Docket No. 09-191, at 11 (Oct. 12, 2010) ("Owing to the deep and persistent racial wealth gap and to deep racial disparities in income and unemployment status, research shows that minorities are particularly sensitive to increases in the retail prices of broadband services, and that such price increases can be enough to dramatically slow the rate of broadband adoption among minorities. As such, one way to keep minority broadband adoption figures on a track towards closing the digital divide is for broadband providers to explore ways to equitably recover the majority of network deployment costs to the heaviest users. Thus, the Commission must take care to preserve the ability of broadband providers to experiment with tiered pricing and other sorts of voluntary arrangements, mentoring, and incubation programs.").

[108] Press Release, AT&T, AT&T Announces New Lower-Priced Wireless Data Plans to Make Mobile Internet More Affordable to More People (June 2, 2010), *available at* http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=30854.

[109] *See, e.g.*, MetroPCS Further Inquiry Comments at 22 ("Unlimited service pricing allows users to access their chosen service whenever doing so is necessary or useful. This is what some consumers want.").

presence of multiple pricing mechanisms promotes the public interest, there is no basis for the Commission to favor one model over another.[110]

Finally, as CTIA and others have detailed for the Commission, the agency lacks the legal authority under the Communications Act (or any other Federal law) to dictate the manner in which wireless providers provision service on their networks.[111] Efforts to cabin a provider's discretion to manage its network would necessarily interfere with the information-processing aspects of broadband service: to conduct such management, providers must examine markers and other information associated with the packets at issue and act upon those packets based on the information discovered.[112] And, regulating the manner in which wireless providers provision service would be inconsistent with Congress's mandate that the Commission apply a light regulatory touch to wireless and broadband Internet access services.[113]

V. CONCLUSION

As former FCC Chairman Reed Hundt said three weeks ago "[b]ecause wireless is robustly competitive, it is the least regulated of all communications media in the U.S. That is not a coincidence. This approach translated into a more rapid pace of innovation, deployment investment and job growth."[114] Neither the Commission nor any supporter of the regulations

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110 MetroPCS Further Inquiry Comments at 21 ("There is an important place in the market for unlimited providers and tiered data providers, and the Commission should not encourage or discourage one or the other by adopting harmful net neutrality regulations."); Qualcomm Further Inquiry Comments at 9 ("The FCC should not be favoring one pricing mechanism over another based on the possibility that one is less likely to 'run afoul of open Internet principles.' Nor should the FCC prescribe more restrictive management practices for 'all-you-can-eat' data plans. Providers should be allowed to offer any number of consumer-focused data plans and pricing models without any threat of a sliding scale of government regulation.").

111 CTIA Net Neutrality Reply Comments at 54-62.

112 *Id.* at 83.

113 CTIA NOI Reply Comments at 39-42.

114 *The Communicators* (C-SPAN television broadcast, Oct. 9, 2010).

contemplated by the *Further Inquiry* has provided evidence of harm in this ecosystem warranting the imposition of net neutrality regulation. Further, the Commission continues to lack the authority to impose arbitrary rules unsupported by the Communications Act on the wireless broadband ecosystem. Finally, CTIA remains strongly opposed to the application of net neutrality rules to wireless networks because of the multitude of reasons stated above, including that it fails Sen. Evan Bayh's test for good policy: "does it help the economy grow?"[115]

Respectfully submitted,

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[115] Sen. Evan Bayh, *Where Do Democrats Go Next?*, N.Y.TIMES, Nov. 3, 2010, at A27.