

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands)	WT Docket No. 06-150
)	
Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems)	CC Docket No. 94-102
)	
Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones)	WT Docket No. 01-309
)	
Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services)	WT Docket No. 03-264
)	
Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules)	WT Docket No. 06-169
)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band)	PS Docket No. 06-229
)	
Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010)	WT Docket No. 96-86

COMMENTS OF THE CENTER FOR DEMOCRACY & TECHNOLOGY

Leslie Harris
David Sohn
Alissa Cooper
Center for Democracy & Technology
1634 Eye St. NW, Suite 1100
Washington, D.C. 20006
(202) 637-9800

Dated: May 23, 2007

I. Introduction

The Center for Democracy & Technology (CDT) respectfully submits these comments to the Federal Communications Commission (FCC) in response to the FCC's *Report and Order and Further Notice of Proposed Rulemaking* in the above referenced proceedings. CDT believes that the upcoming 700 MHz spectrum auction presents the FCC with a critical opportunity to spur broadband competition and promote the proliferation of innovative services and applications on the broadband platform.

CDT is a non-profit, public interest organization dedicated to developing and implementing public policies that preserve civil liberties and democratic values on the Internet. The organization was founded in the belief that the Internet's uniquely empowering nature stems from its versatility, lack of gatekeepers, and decentralized structure. CDT has consistently supported practical policies that preserve these qualities by promoting the Internet's end-to-end architecture and user control. CDT believes that such policies advance the goals of increased innovation, competition, and investment in cutting-edge communications networks. The upcoming spectrum auction offers the FCC a unique opportunity to take action that will further all of these objectives.

CDT believes the FCC's primary goal for the auction should be to foster additional competitive choices in the broadband Internet market. Convergence is finally occurring, in large part because services of all kinds – voice, video, data – can be delivered over the Internet. Devoting spectrum to broadband therefore has the potential to increase competition across a full range of services. In contrast, devoting spectrum to more specialized services may increase competition only in that more limited area.

Getting the full competitive benefits from new broadband offerings, however, requires that such offerings be open to all kinds of traffic. If certain applications are blocked or disfavored by the network operator, it undermines the versatility that is the reason for focusing on broadband in the first place. Moreover, because there simply is not enough spectrum to increase radically the number of broadband providers, maximizing the pro-competitive benefit of the auction also requires that at least some of the spectrum be auctioned with the understanding that the winning bidder(s) will provide access on a wholesale basis to multiple retail broadband providers.

In short, whatever one may think about concepts like "Internet neutrality" or "open access" in the wireline context, the limited and high-value spectrum at issue in this auction presents a different case. The spectrum is a scarce and extraordinarily valuable public resource. Given its limited nature, certain kinds of openness requirements are essential to achieving the maximum benefit to the competitive landscape. Objections to neutrality or open access rules that may arise in the context of privately constructed last mile networks simply do not apply to the use of public spectrum.

In order to foster maximal benefit from the available 700 MHz spectrum, CDT makes the following recommendations to the FCC, as detailed in Sections II-V below:

1. **Adopt auction rules that will give consumers a new broadband option.** The 700 MHz spectrum auction provides an unprecedented opportunity to increase broadband competition. The FCC should adopt rules such that substantial spectrum can be licensed to one or more new nationwide wireless broadband Internet providers.
2. **Require that at least a portion of the broadband spectrum be operated in a neutral manner.** The neutral and non-discriminatory character of the Internet has been fundamental to its unique ability to foster economic activity, innovation, free expression, and democratic participation. The new broadband licensee(s) should be required to maintain that neutral character on a substantial portion of their networks.
3. **Require that at least a portion of the broadband spectrum be operated on a wholesale basis so that it can support multiple retail service providers.** Requiring broadband licensee(s) to sell non-discriminatory access to the network on a wholesale basis will provide consumers with a more competitive marketplace for broadband Internet access and hence reduce any risk of “gatekeeper” behavior by a small number of broadband access providers.
4. **Require that the broadband licensee(s) abide by the FCC’s broadband Policy Statement.**¹ CDT believes that allowing consumers to access the content, run the applications, and connect the devices of their choice are fundamental requirements for any broadband Internet network.

These recommendations are in line with the submissions made by both the Ad Hoc Public Interest Spectrum Coalition (PISC)² and Frontline Wireless.³ CDT applauds both groups for adding provocative, thoughtful proposals to these proceedings. The FCC should also be commended for opening the proposals of both groups for public comment, as they raise issues that are central to increasing broadband competition.

CDT urges the FCC, in considering the recommendations set forth herein and in the PISC and Frontline proposals, not to give undue weight to speculation about whether such rules could have a negative impact on auction revenues. The primary goal of the auction should not be to maximize one-time auction revenues, but to serve the public interest, increase competition, and spur new technologies through efficient use and availability of spectrum.⁴ CDT believes that creating a versatile broadband spectrum platform in the 700 MHz band would spur innovation and economic growth, with ongoing benefits that would dwarf any possible short-term advantage to the U.S. Treasury from alternative approaches.

¹ *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Policy Statement, 20 FCC Rcd 14986 (2005) (*Policy Statement*).

² The PISC proposes, among other things, requiring “open access” rules on at least three 10 MHz blocks of the 700 MHz spectrum to allow competitive entry into the wireless broadband market. The PISC also suggests establishing a service rule that protects the consumer’s right to use any equipment, content, application or service on a non-discriminatory basis without interference from the network provider on the broadband wireless spectrum. *Ad Hoc* Public Interest Spectrum Coalition Apr. 5 *Ex Parte* in PS Docket No. 06-229, WT Docket Nos. 06-150, 05-211, 96-86.

³ Frontline Wireless proposes, among other things, that a single national wireless licensee operate a national wholesale broadband network using 10 MHz of spectrum. The licensee would be required to provide non-discriminatory access to all legal content, applications, and devices, and to operate under “open access” rules. Frontline Mar. 26 *Ex Parte* in WT Docket Nos. 06-150 and 06-169 and PS Docket No. 06-229.

⁴ *See* 47 U.S.C. § 309(j)(3), the section of the Balanced Budget Act of 2007 that outlines the goals for the Upper 700 MHz spectrum auction.

II. FCC Should Adopt Auction Rules to Allow for a New Broadband Option

CDT encourages the Commission to create auction rules that will allow for as large a swath as possible of the 700 MHz spectrum to be allocated for the use of broadband Internet services. Both Frontline Wireless and the PISC propose using the 700 MHz spectrum to provide nationwide broadband Internet. The Frontline Wireless proposal suggests auctioning 10 MHz of spectrum to a single wireless wholesaler, with a requirement that binds the licensee to build out its network to 75% of the U.S. population within four years, and to 98% within ten years.⁵ The PISC proposal urges the Commission to allow new entrants to create national footprints, and suggests setting aside at least three 10 MHz blocks (perhaps with different licensees) under conditions allowing use for residential broadband.⁶ Although these proposals differ, CDT endorses their general vision of devoting spectrum to broadband.

Over a decade ago, Congress passed the Telecommunications Act, directing the FCC to encourage the deployment of broadband services to all Americans. In 2004, President Bush announced his desire to see broadband Internet in “every corner” of the United States.⁷ Unfortunately, a variety of studies indicate that U.S. progress on broadband has been slower than in many other countries. When the Organization for Economic Cooperation and Development (OECD) first began collecting statistics on broadband uptake six years ago, the United States ranked fourth among 30 nations.⁸ We now rank 15th, down from 12th just a year ago.⁹ Statistics collected by the International Telecommunications Union show the United States at a similarly low ranking. Extrapolating from FCC and census data, at least half of all households across the nation are still without a broadband connection.¹⁰

Most consumers who do have broadband have a very limited choice of providers, receiving broadband service from either their cable or telephone company. Indeed, the FCC’s most recent

⁵ See Frontline Mar. 26 *Ex Parte* in WT Docket Nos. 06-150 and 06-169 and PS Docket No. 06-229 at 7.

⁶ See *Ad Hoc* Public Interest Spectrum Coalition Apr. 3 *Ex Parte* in PS Docket No. 06-229, WT Docket Nos. 06-150, 05-211, 96-86 at 24; See *Ad Hoc* Public Interest Spectrum Coalition Apr. 5 *Ex Parte* in PS Docket No. 06-229, WT Docket Nos. 06-150, 05-211, 96-86 at 7 and 10.

⁷ “President Bush: High Tech Improving Economy, Health Care, Education,” Remarks by the President on Innovation, (Jun. 2004) <http://www.whitehouse.gov/news/releases/2004/06/20040624-7.html>.

⁸ Organization for Economic Cooperation and Development (OECD), “OECD Broadband Statistics to December 2006,” (Apr. 2007) http://www.oecd.org/document/7/0,2340,en_2649_37441_38446855_1_1_1_37441.00.html.

⁹ *Ibid.*

¹⁰ See Ben Scott, “Communications, Broadband and Competitiveness: How Does the U.S. Measure Up?,” Testimony before the U.S. Senate Committee on Commerce, Science and Transportation (Apr. 2007), <http://commerce.senate.gov/public/ files/UPDATEDTESTIMONYScottCommerceTestimony424.pdf>. The most recent FCC study of high-speed Internet access found 50,262,193 residential broadband lines capable of at least 200 kbps in at least one direction. See Federal Communications Commission, “High-Speed Services for Internet Access as of June 30, 2006,” (Jan. 2007). U.S. Census data from March 2006 estimated that there were approximately 114,384,000 households in the United States at that time. See *America’s Families and Living Arrangements: 2006*, Table H1, U.S. Census Bureau, (Mar. 2007) <http://www.census.gov/population/socdemo/hh-fam/cps2006/tabH1-all.xls>. Assuming one high-speed line per household, this yields the calculation that at least half of all households do not have broadband connections.

survey revealed that in 37% of ZIP codes, consumers have only one of these choices, or neither.¹¹ This number is a conservative estimate since the FCC studies are conducted such that a ZIP code is considered to be served by a broadband provider even if only a single resident in the ZIP code has access through that provider, and since the FCC's threshold speed for "broadband" is low by today's standards.¹² The actual percentage of households without a true choice of broadband providers is probably much higher.

Spurring competition by allocating at least a portion of the 700 MHz spectrum for broadband will ensure the most versatile use of the band. The broadband Internet is an extremely flexible platform that can support all kinds of services, including some that have yet to be imagined. In the wireline context, broadband has been used as a vehicle for vigorous competition among providers of many types of applications that did not even exist a few years ago. With the limited amount of spectrum available, devoting as much as possible to the broadband Internet will maximize competitive benefits across a wide array of services, rather than restricting those benefits to a specialized service or application.

For all of these reasons, the FCC should seize the unique opportunity that the 700 MHz auction presents by requiring that adequate spectrum be auctioned for the development of a wireless broadband platform that can provide a real competitive alternative to wireline broadband offerings. CDT does not today express an opinion on the precise amount of spectrum this will require, but urges the FCC to keep in mind that wireline broadband Internet providers will be increasing their capacity over time and wireless licensee(s) will need sufficient bandwidth to offer a viable competitive choice.

III. FCC Should Include Neutrality Requirements for Broadband Licensee(s)

The FCC should require neutral, nondiscriminatory treatment of traffic on as large a portion of the broadband spectrum as possible. Establishing a neutral wireless broadband network will be the best way to ensure that a multitude of innovative services can flourish using the newly available spectrum.

Historically, Internet users have enjoyed the open and roughly equal nature of communications on the Internet, without gatekeepers to filter or favor particular content and applications. This open and neutral character has allowed the Internet to become a vibrant platform for new kinds of speech and media. For example, the explosion of blogging and other forms of political expression – including creative, innovative, and sometimes controversial videos and multimedia presentations – have had a tremendous impact on political and social discourse.

The Internet's openness has also led to an astounding array of innovative technologies and applications, including the World Wide Web, instant messaging, Web-based email, secure online

¹¹ Federal Communications Commission, "High-Speed Services for Internet Access as of June 30, 2006," (Jan. 2007).

¹² The FCC standard for residential broadband is 200 kbps downstream, with no minimum upstream speed. Yet the FCC's own data show that nearly half of all U.S. high-speed lines are capable of at least 200 kbps upstream and over 2.5 Mbps in at least one direction. *Ibid.* The OECD surveyed several U.S. broadband providers in 2005, showing DSL speeds of 3 Mbps downstream and 384 kbps upstream and cable speeds of 4 to 6 Mbps downstream and 768 kbps upstream. Of the 30 countries in the survey, nearly half had typical broadband service providers offering higher speeds than the United States. *See* Organization for Economic Cooperation and Development (OECD), "Multiple Play: Pricing and Policy Trends," (Apr. 2006) <http://www.oecd.org/dataoecd/47/32/36546318.pdf>.

transactions, and VoIP, all of which were developed by single individuals or small organizations. Other than to obtain an Internet connection, the creators of these and other new online technologies have not had to seek permission or make deals with any network operator in order to make their content and services available online.

As the FCC is well aware, there is a major policy debate underway about whether new regulatory requirements are warranted to preserve these core elements of the Internet's character. But whatever view one takes of that issue in the wireline or existing mobile wireless markets, the 700 MHz spectrum is an entirely different policy environment. The spectrum provides a clean slate where no private entity has any entrenched business plans or investment-backed expectations. Nor is there a serious argument that discrimination is somehow necessary to maximize deployment of new capacity. Build-out requirements could ensure that the limited amount of available spectrum is used – and beyond that, the argument from the wireline context that neutrality rules could deter the creation of additional capacity through the laying of additional wires simply does not apply. With a neutrality requirement for the auction, bidders would know all the rules and expectations and would craft business plans based on neutrality before the auction begins.

Frontline Wireless appears to be one such potential bidder, and we expect that others would step forward as well. Frontline has proposed a service rule that would prohibit the E Block licensee from “blocking users from accessing IP services (including voice services) or content provided by unaffiliated parties, or otherwise engaging in unreasonable discrimination against such services or content, except with the consent of the user or as required by law.”¹³ At the same time, Frontline believes that it has crafted a viable business model for operation in the 700 MHz band and is already raising venture capital to help launch its bid.¹⁴

The PISC recommends a principle similar to that of Frontline that would require licensee(s) to enable “any customer to reach any web site, post any information, provide any service, access or provide any application, without degradation, prioritization, or interference by the network operator.”¹⁵ CDT believes either proposal could provide a framework for maintaining neutrality on the new wireless broadband offering.

In short, by establishing appropriate auction rules, the FCC can take an important step towards ensuring that neutral, general purpose Internet connectivity remains widely available as a marketplace option. The 700 MHz auction offers an opportunity to promote this crucial goal in a context that presents significantly fewer competing arguments than the Internet neutrality debate generally.

IV. FCC Should Include Requirements for Wholesale Access to Spectrum

CDT believes the Commission should require that at least some of the broadband wireless spectrum be operated on a wholesale basis, with access available for purchase by any retail ISP that is interested. This would be a vital step towards achieving the FCC's goal of maximizing competition in the broadband market.

¹³ See Frontline Mar. 6 Comments in WT Docket No. 06-150 at 18.

¹⁴ Frontline Wireless, “Support from High Tech Heavyweights Strengthens Frontline Business Plan for Public Safety, Open Access,” (Apr. 2007) <http://frontlinewireless.com/file/press040907.pdf>.

¹⁵ See *supra* note 6.

With the limited spectrum available in the 700 MHz band, it is unlikely that the band will support a sizable number of nationwide broadband licensees. Thus, the best way to substantially increase users' choice for broadband providers is to allow multiple retail ISPs to pay for access to the licensees' spectrum. Because the spectrum is not currently owned by any private entity, many complexities of prior "open access" debates in the wireline world do not factor into the determination of the spectrum auction rules.

CDT believes that open access regimes can be economically viable. Critics might argue otherwise. However, at least one potential bidder – Frontline Wireless – has crafted what it believes to be a workable business plan based on open access. Frontline's proposal recommends that the E Block licensee be required to act as a pure wholesaler.¹⁶ We expect that if these were the terms for obtaining valuable 700 MHz spectrum, other bidders would develop suitable business plans as well. The PISC proposal also endorses wholesaling, requiring different amounts of spectrum to be governed by open access rules depending on whether the licensee(s) are incumbents or not.¹⁷

CDT supports any configuration that would provide for a substantial portion of spectrum to operate under an open access regime. The open access wholesale model will only work if there is sufficient spectrum for the wholesaler to support service by several ISPs concurrently; otherwise, the first ISP would use up most of the available spectrum and additional competitors would be foreclosed, much as if the open access regime were not in place. The Commission should thus apply this requirement on a large enough portion of spectrum to support multiple ISPs serving at speeds that will be competitive with incumbent wireline broadband carriers in the future.

V. FCC Should Require Broadband Licensee(s) To Comply With Policy Statement

With the creation of any new nationwide broadband Internet operator, it is imperative that the operator be required to abide by the principles outlined in the FCC's broadband Policy Statement. The principles state, among other things, that consumers are entitled to access the content, run the applications, and connect the devices of their choice, within the bounds of the law and without harming the network. These requirements can help create a framework where innovation on all parts of the network can truly flourish, and where consumers can maximize their Internet experiences.

None of the current licensed mobile wireless operators abide by the FCC's Policy Statement – each one blocks certain devices, applications, and services from being used on its network.¹⁸ By making compliance with the Policy Statement a requirement for the 700 MHz broadband licensee(s), the FCC will be creating the only nationwide, licensed wireless network that gives consumers freedom to choose the content, applications, and devices they wish to use on the network.

While neither the Frontline Wireless proposal nor the PISC proposal mentions adherence to the Policy Statement directly, both proposals are supportive of the ideas embodied by the statement's

¹⁶ See Frontline Mar. 6 Comments in WT Docket No. 06-150 at 18-19.

¹⁷ See *Ad Hoc* Public Interest Spectrum Coalition Apr. 5 *Ex Parte* in PS Docket No. 06-229, WT Docket Nos. 06-150, 05-211, 96-86 at Appendix.

¹⁸ See Tim Wu, *Wireless Net Neutrality: Cellular Carterfone on Mobile Networks*, (Feb. 2007) http://papers.ssrn.com/sol3/papers.cfm?abstract_id=962027.

principles, particularly as they relate to device connections. The PISC’s rules would require broadband licensees to allow “any customer to attach any compatible device to any wireless broadband network in the 700 MHz band using standard and non-proprietary interfaces, subject only to minimal ‘do-no-harm’ requirements.”¹⁹ The Frontline Wireless proposal would likewise impose a rule requiring the E Block licensee to “allow users to attach any device (or multiple devices) to the network, subject to security requirements and compliance with published network interface specifications.”²⁰ CDT is supportive of both of these approaches.

Requiring compliance with the Policy Statement is not a replacement for a neutrality requirement. The Policy Statement lacks a non-discrimination principle, leaving the door open for network operators to favor particular content and services.²¹ The combination of the Policy Statement principles with a neutrality rule will ensure that the new wireless broadband spectrum will support the Internet as a platform for free speech and innovation.

VI. Conclusion

The 700 MHz spectrum auction presents a pivotal moment for the FCC to give full meaning to the national policy goal of deploying robust broadband services to all Americans. The FCC has the opportunity to create the conditions for a new, nationwide broadband Internet offering to reach the homes of millions of consumers. This will require the FCC to license a substantial portion of spectrum under neutrality and open access rules, and in compliance with the broadband Policy Statement. Seizing this opportunity to promote a neutral wireless broadband option would also have the impact of increasing competition across the broad range of services that broadband supports. The long-term economic and public interest benefits of this approach are simply too important to disregard.

The FCC has before it the proposals of the PISC and Frontline Wireless, both of which set out concrete ideas for promoting competitive broadband Internet services. Whether the Commission pursues either of these proposals, combines elements of each, or devises another way to reach the same ends, CDT urges the FCC to seize the opportunity that the 700 MHz auction presents to help our nation realize the full potential of the broadband Internet.

¹⁹ See *supra* note 10.

²⁰ See Frontline Mar. 6 Comments in WT Docket No. 06-150 at 17-18.

²¹ The FCC has separately invited public comment on whether it should incorporate into the Policy Statement a new principle of non-discrimination. See *Notice of Inquiry In the Matter of Broadband Industry Practices*, WC Docket No. 07-52. CDT plans to express its views on that question in that proceeding. But as discussed above, neutrality rules for the 700 MHz spectrum should not be dependent on the resolution of broader questions in the Internet neutrality debate.