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
	)	
	)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHZ Band	)	PS Docket No. 06-229
	)	
	)	
Implementation of the Commercial Spectrum Enhancement Act and Modernization of the Commission's Competitive Bidding Rules and Procedures	)	WT Docket No. 05-211
	)	
	)	
Development of Operational, Technical, and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through 2010	)	WT Docket No. 96-86
	)	

***EX PARTE* COMMENTS OF**
THE *AD HOC* PUBLIC INTEREST SPECTRUM COALITION

CONSUMER FEDERATION OF AMERICA
CONSUMERS UNION
FREE PRESS
MEDIA ACCESS PROJECT
NEW AMERICA FOUNDATION
PUBLIC KNOWLEDGE

April 5, 2007

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SUMMARY

The upcoming auction of licenses in the 700 MHz band is extremely important to American consumers. Due to the unique propagation characteristics of the 700 MHz band, license holders will be able to compete directly with the wireline broadband duopoly and provide consumers with their most affordable option for high-speed broadband Internet access, especially in rural areas. The fundamental right of consumers to "go anywhere" on the Internet and "attach any compatible device" without undue interference from the network operator must be maintained for these valuable services. Given that the spectrum to be auctioned is a publicly owned asset to which public interest obligations historically have been attached, operation of broadband services using that spectrum should protect that fundamental right. Moreover, given the potential for wireless broadband providers operating in the 700 MHz band to serve as a powerful third competitor to the broadband duopoly, which is now free to discriminate, it is essential that consumers be given a third broadband option that operates without discrimination.

For the following reasons, the FCC should, in this proceeding, establish a service rule for broadband services operating in the 700 MHz band 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:

- The unique propagation characteristics of the 700 MHz band will allow auction winners to deploy high-speed Internet access services at a much lower cost than other wireless services, making them a more affordable option for consumers;
- Wireless broadband is not a niche service, but will increasingly compete directly with wireline broadband services, which are subject to the basic consumer choice and open network principles adopted by the Commission;
- The marketplace is not working to protect consumers; existing wireline and wireless providers currently seek to control or limit the consumer's choice with respect to safe devices, applications and access to Internet content and services. Consumers have no guarantees that they will have access to competitive services that are free from gatekeeper control;
- A service rule to require auction winners to comply with basic consumer choice and openness principle, like the service rule for hearing aid compatibility (HAC), is squarely in the public interest and an appropriate condition to place on a license to make exclusive use of the publicly-owned airwaves;
- The timing is critical; services have not yet been deployed in the 700 MHz band, which means that auction winners have time to incorporate the openness principle into the design of their networks from their inception;
- The Commission has previously indicated that it would take action where, as here, there is evidence of a market failure that limits consumer's choices;
- A service rule will not reduce the value of the licenses and will certainly increase competition and consumer welfare, benefiting the economy overall;
- There is ample precedent in Commission policy for service rules that require interoperability standards for competing services and equipment.

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***EX PARTE* COMMENTS OF**
THE *AD HOC* PUBLIC INTEREST SPECTRUM COALITION

To: The Commission:

Consumer Federation of America, Consumers Union, Free Press, Media Access Project, New America Foundation and Public Knowledge (collectively referred to here as the "Public Interest Spectrum Coalition" or "PISC"), file these *ex parte* comments urging the Federal Communications Commission ("FCC" or "Commission") to condition the award of licenses for the 700 MHz band on the licensees' compliance with a service rule that requires 700 MHz license holders to provide broadband Internet access service on a non-discriminatory basis in a manner that enables consumers to attach any compatible device and 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.

INTRODUCTION

The upcoming auction of licenses in the 700 MHz band is extremely important to American consumers. Due to the unique propagation characteristics of the 700 MHz band, the license holders may be able to provide consumers with their most affordable option for high-speed broadband Internet access, especially in rural areas. The right of consumers to "go anywhere" on the Internet and "attach any compatible device" without undue interference from the network operator must be maintained for these valuable services. The PISC urge the Federal Communications Commission (FCC or Commission) to establish a service rule in this proceeding 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. [1]

The timing of this proceeding is critical. Services have not yet been deployed in the 700 MHz band. The Commission can and should adopt service rules for the 700 MHz band now, before the auctions are held, so that the auction winners have time to incorporate these principles into the design of their networks from their inception.

1. The 700 MHz band is uniquely capable of providing high-speed, mobile broadband service at affordable prices for consumers, competing as a potential substitute for wireline broadband access.

Signals in the 700 MHz band have superior propagation characteristics. At a given transmit power level, the signals travel farther and are far more likely to penetrate walls and tree cover compared to higher-frequency spectrum used for most current commercial mobile radio

[1] This rule is sometimes summarily referred to in this document as the "consumer choice and openness principle."

services (CMRS). As a result, fewer towers and base stations are needed to provide service in the 700 MHz band, especially in rural areas.[2] One of the biggest obstacles preventing the nation's more than 3,000 commercial wireless ISPs (WISPs) from reaching more rural households is the difficulty of penetrating dense foliage and cost-effectively covering large, low-population areas with signals that rely on 2.4 GHz and 5 GHz unlicensed spectrum.[3] If WISPs, rural local exchange carriers (RLECs) and other wireless broadband access providers had greater access to low-frequency spectrum, rural customers could be served with better quality coverage and at a lower cost of deployment.

Because of these characteristics, the costs of deploying broadband Internet access services in the 700 MHz band could be far less than the costs of deploying service at higher frequencies. A 2004 study by Intel Corporation concluded that a wireless service with access to spectrum in the 700 MHz band "has significant capital advantages over a carrier operating at higher frequencies." Intel's study showed, for example, that "a 2.5 GHz MMDS licensee in a rural environment will incur capital expenditures over 4 times that incurred by a hypothetical 700 MHz operator."[4]

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[2] Aloha Partners testified before the Senate Commerce Committee in July of 2005 as follows:

> Studies have consistently shown that 700 MHz can provide broadband service in rural areas at half to one third the cost of the 1900 MHz personal communications services frequencies used by the cellular carriers (see Attachment). 700MHz can provide broadband services in rural areas at one fourth to one sixth the cost of the 2400 MHz Wi-Fi and MMDS (now BRS) frequencies used by unlicensed owners and by companies such as Sprint and Nextel. 700 MHz has the advantage of traveling further and being able to penetrate walls, dense foliage and other obstructions without the deterioration of signal experienced with either 1900 MHz or 2400 MHz wireless transmissions. . . . What this means is that rural areas that were previously "unreachable" can now get broadband service on an affordable basis.

Charles C. Townsend, President, Aloha Partners, before the Senate Committee on Commerce, Science, and Transportation, July 12, 2005.

[3] Interview with Marlon Schaefer, WISPA Board Member and FCC Committee Chair, January 26, 2007.

[4] Chris Knudsen and Masul Kibria, "Capital Expenditure Implications of Spectrum Assets in Semi-Rural Environments," Intel Corporation, unpublished study results, Oct. 30, 2004.

These lower costs are likely to translate into lower prices. In addition, wireless broadband services operating on 700 MHz spectrum will be far better able to reach consumers inside buildings, allowing these operators to compete as a direct substitute for DSL and cable wireline broadband access in the home. The combination of lower prices and far better quality coverage – including inside homes and businesses – is expected to be enormously popular with consumers. The 700 MHz band could provide Internet access that is faster and cheaper than existing wireless services, combined with a mobility that provides a significant advantage over existing wireline services. Rather than serving a "niche" market, services in the 700 MHz band could become many consumers' primary source of high speed Internet access and low-cost voice service.

2. The openness of wireless Internet services is increasingly important because of the overall growth in wireless broadband and the efforts of existing broadband providers to control the market.

The trends in both the wireless and wireline market make it even more critical that the FCC adopt a service rule to preserve customer choice and network openness in this proceeding. The entire wireless broadband market is expanding rapidly. The FCC's June 2006 data show that the number of wireless broadband users has grown from 0 to 11 million in just the past two years.[5] While today as much as 90 percent of these "broadband" connections are not potential substitutes for wireline broadband access – since 3G cellular services are extremely asymmetrical and offer customers data rates far slower than most DSL and cable modem services – both the quantity and quality of wireless Internet access services could increase dramatically *if* there is sufficient competition. Wireless voice users number well over 200 million, which indicates that the "head-room" for further growth is much higher. Wireless carriers are rapidly

[5] High-Speed Services for Internet Access: Status as of June 30, 2006; Industry Analysis and Technology Division, Wireline Competition Bureau, FCC, January 2007, Table 1.

deploying 3G data services, such as EVDO and HSPA, while the full suite of 4G services is not far behind.

Despite their growth, both wireline and wireless providers are impeding customer choice and openness. The two dominant providers of broadband Internet access – the cable and telephone companies – control more than 95 percent of the market and are taking steps to extend their control over adjacent markets for Internet applications and content in a manner that violates the principles of consumer choice and openness. They have proposed to prioritize (give preference to) certain Internet traffic over other traffic. They routinely prevent consumers from using their Internet access for certain types of services.[6] Mobile providers, who are largely owned by the dominant wireline providers, routinely prevent consumers from using the equipment of their choice. Furthermore, equipment manufacturers are increasingly marketing network equipment that make it easier for network operators to identify, screen, prioritize, block or impair certain types of traffic.

In short, wireline and wireless broadband Internet access providers are increasingly controlling the user's Internet experience. If left unchecked, the consequences to the Internet, and to consumers, could be disastrous. Unless action is taken now to extend fundamental principles of consumer choice and openness to wireless services, consumers will lose the transforming benefits that the Internet has made possible over the past decade. Implementing non-discrimination requirements for wireless broadband will help ensure that consumers have open and unfettered access to the Internet without gatekeeper control.

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[6] For further discussion of the importance of maintaining an open Internet and the efforts of existing broadband providers to control the user's experience, see "Good Fences Make Bad Broadband," a Public Knowledge White Paper, by John Windhausen, Jr., February 6, 2006, available at http://www.publicknowledge.org/content/papers/pk-net-neutrality-whitep-20060206.

3. The broadband marketplace, which is highly concentrated, is unlikely to ensure that the openness of the Internet is preserved unless the FCC requires it.

Consumers cannot be guaranteed that the winners of the 700 MHz band auctions will abide by the consumer choice and openness principle unless the Commission requires it. First, the broadband access market is highly concentrated. As noted above, the dominant providers of broadband access are increasingly putting limitations on consumer choice and openness. The most likely winners of the 700 MHz band auctions are the same incumbent providers who currently impose restrictions on existing wireline and mobile services. In the most recent AWS auction, for instance, the majority of licenses – particularly those covering the most densely populated regions – were won by wireless incumbents (the largest of whom are integrated with wireline providers or have other wireless broadband platforms) and the largest cable incumbents. These providers are likely to exercise the same control over the 700 MHz band services that they currently exercise over their existing wireline and wireless assets. The same incumbent LECs that are the two largest providers of wireline DSL are simultaneously by far the two largest wireless carriers. Their rational business interest is to thwart the emergence of a viable "third pipe" competitor to their wireline broadband offerings – which, in turn, makes it easier down the road to either tollgate or vertically integrate into the applications and content markets that today are generally subject to openness principles.

Second, even if the licenses are won by new entrants in the marketplace, there is no reason to believe that they will incorporate the consumer choice and openness principle into their business plans. The experience in the existing market for cellular and PCS operators demonstrates that, even when there are multiple providers in a market, network providers are placing limits on the ability of consumers to use the devices and applications of their choice. A recent Working Paper issued by the New America Foundation documented how the incumbent

mobile broadband providers typically impose five kinds of restrictions on consumers that violate the principle of consumer choice and openness:

1) Refusing to allow consumers to attach their own devices to the mobile services;
2) Requiring equipment manufacturers to omit or cripple many consumer-friendly features of the devices authorized by the services provider;
3) Prohibiting access to or full use of many Internet-based applications and content services, including terms of use that preclude downloading music, video, games and VOIP services not approved by the carrier;
4) Imposing undisclosed bandwidth limits and usage restrictions on consumers' use of their phones; and
5) Stalling the development of new applications.[7]

The study found that these practices are common among all four of the nationwide providers of mobile services. Even though there are multiple providers in the mobile services market, each of them routinely controls the equipment that customers can connect to the network and builds walls around the applications, services and content that customers can access over the Internet. If the 700 MHz auction licenses are won by brand new entrants into the mobile services marketplace, they will face no competitive pressure from existing providers to abide by the principle of openness. In fact, closing the consumer's experience appears to have become standard business practice in the mobile services marketplace – a tacit collusion aimed at dominating the adjacent markets for consumer devices, applications and paid content.

Thus, there is no reason to believe that the marketplace will address the consumer's need for an open platform. The Commission must adopt service rules to ensure that the consumers' right to an open Internet is protected.

[7] See, Tim Wu, Wireless Net Neutrality: Cellular *Carterphone* and Consumer Choice in Mobile Broadband, Feb. 2007, attached as Appendix A, and available at http://www.newamerica.net/files/WorkingPaper17_WirelessNetNeutrality_Wu.pdf.

4. Requiring spectrum licensees to abide by principles of openness is an appropriate condition to place on services making exclusive use of a publicly-owned resource.

It is entirely appropriate for the Commission to exercise its traditional authority to condition a license for exclusive use of the publicly-owned spectrum resource on obligations that promote the public interest, convenience and necessity. Section 309(j) of the Communications Act provides for auctions to resolve conflicting applications for an available license, but it in no way diminishes the Commission's responsibility to ensure that the ultimate use of the public airwaves promotes the general public interest. Service rules predicated on Commission consumer protection policies are nothing new. Conditioning a license on a public interest obligation to ensure basic consumer choice and open network principles is, like license conditions imposing build-out requirements and technical criteria to avoid harmful interference to other licensed services, a traditional and transparent approach that gives bidders explicit notice that use of this public resource must not contradict public policy. At a minimum, we propose that the Commission make explicit in the 700 MHz auction service rules that the Commission's *Carterfone* principles and other open network principles, including those adopted in pending[8] or future proceedings, will extend equally to wireless broadband Internet access services operating on the auctioned frequencies.[9]

[8] *See Consumer Protection in the Broadband Era NPRM*, 20 FCC Rcd at 14929-35, ¶ 146-59.

[9] *See Declaratory Ruling, Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, WT Docket No. 07-53 (March 22, 2007), at ¶ 69-70.

5. Adopting a service rule to preserve consumer choice and openness is comparable to the HAC rules that the Commission has already proposed.

Imposing a public interest obligation on licensees to preserve the openness of broadband Internet access services in the 700 MHz band is comparable to the HAC service rules that the FCC tentatively concluded should be applied to these licenses. The FCC tentatively concluded that the HAC rules should be extended to 700 MHz licensees in part because persons with hearing disabilities should have "the social, professional, and convenience benefits" that accrue to other wireless telecommunications users.[10] Similarly, consumers of broadband Internet services should have the same "social, professional, and convenience" benefits as non-broadband services, such as dial-up. Dial-up services continue to be governed by common carrier rules under Title II of the Communications Act, including prohibiting "unjust and unreasonable discrimination."[11] There is no reason that consumers of high-speed broadband connectivity should have fewer "social, professional, and convenience" benefits than low-speed dial-up consumers. Treating broadband customers different than dial-up customers raises the same type of discrimination issues that led the FCC to tentatively adopt HAC rules for the hearing-disabled.

6. The FCC can reduce or eliminate any costs of complying with an openness service rule by adopting it prior to the auction.

This proceeding gives the Commission the opportunity to adopt an openness service rule *before* the auctions are held. This timing is important. First, parties can participate in the auction with full awareness of the rules. Second, adopting an openness service rule at this time will ensure that the 700 MHz services and products will be designed from the start to be compatible with multiple handsets and service, application and content providers. The industry

[10] *See Hearing Aid Compatibility Report and Order*, 18 FCC Rcd at 16755 ¶ 4.

[11] See, e.g., Section 202(a) (47 U.S.C. 152(a)).

cannot make the argument at this stage that they have already made a "sunk" investment that should not disturbed. The 700 MHz band services are still in a nascent phase; every auction winner will have the opportunity to design its services and equipment to satisfy the openness regime from their inception. The incorporation of openness into the design phase significantly reduces, if not eliminates, any possible costs of compliance.

7. The Commission has already indicated it would consider imposing a service rule to preserve consumer choice and openness if the marketplace did not operate to protect consumers against blocking or discrimination.

The FCC's Wireline Broadband Order changed many of the requirements for wireline broadband internet access providers. Significantly, however, the FCC expressed concern about the possibility that broadband network operators might engage in blocking or otherwise interfere with the consumers' ability to use the Internet. While it refused to adopt a service rule at that time, it reached this decision only because of the lack of evidence that the network operator would engage in such behavior.

> While we agree that actively interfering with consumer access to any lawful Internet information, products, or services would be inconsistent with the statutory goals of encouraging broadband deployment and preserving and promoting the open and interconnected nature of the public Internet, [footnote omitted] we do not find sufficient evidence in the record before us that such interference by facilities-based wireline broadband Internet access service providers or others is currently occurring.[12]

As set forth above, the evidence that mobile carriers are violating the principles of openness is now clear. New America has already published its study documenting the abuses of openness in the wireless marketplace, and Skype has recently filed a petition documenting the difficulties that consumers have using certain equipment and applications with wireless

[12] *See Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, CC Docket No. 02-33, Policy Statement, FCC 05-150 (rel. Sept. 23, 2005), para 96.

providers.[13] End users simply do not have the freedom to choose which devices, applications, services and content are best for them.

8. Requiring openness will not reduce the value of the licenses and may increase their value.

As discussed above, the physical characteristics of the 700 MHz band make it extremely attractive for service providers and for consumers. The Congressional Budget Office has projected that the 700 MHz auction should generate more than $10 billion in revenue, while other expert commentators have given considerably higher estimates of $20 billion or more, based on other auctions and private transactions for spectrum with less desirable characteristics. There is no doubt that the 700 MHz band licenses will attract investors seeking to take advantage of the unique propagation characteristics of this band to provide low-cost service to consumers. There is no evidence that an openness service rule will reduce the value of these services because the licenses to operate in the 700 MHz band are tremendously valuable. At least one commentator has recognized that the 700 MHz band is the "best spectrum for wireless broadband because of its propagation characteristics."[14] In fact, an openness requirement may even increase the value of the licenses because consumers will find the services more attractive with the assurance that their ability to "go anywhere" and "attach any equipment." And certainly consumer welfare and the value to the economy overall will be enhanced if the license conditions promote competition in the adjacent markets for equipment, applications and content relative to today's vertically-integrated "closed garden" variety of 3G cellular Internet access.

[13] See Petition to Confirm a Consumer's Right to Use Internet Communications Software and Attach Devices to Wireless Networks, filed by Skype Communications, S.A.R.L., RM-11361, Feb. 20, 2007.

[14] "The 700 MHz band has long been viewed as the best spectrum for wireless broadband because of its propagation characteristics, particularly its ability to cover larger areas -- which reduces capital expenditures and makes a new-entrant strategy more feasible -- and its ability to penetrate buildings." **700 MHz: A Pivotal Auction:** ***New Blood for Broadband & Video or Telco/Cable Sweep; Stifel, Nicolaus & Company, Inc.; March 2, 2007.***

9. Service rules to ensure that consumers can obtain access to any content, application and service and can attach any compatible equipment would be consistent with a long line of communications policy decisions.

The U.S. has a long history of ensuring the compatibility and interoperability of equipment and services. The FCC has for decades ensured that telephone equipment would operate seamlessly with the telephone network (the so-called "*Carterfone*" rules). Both Congress and the FCC require television sets to be compatible with broadcast and cable television signals. Just recently, the FCC took steps to ensure that the newly merged AT&T would not privilege, degrade, or prioritize any Internet traffic. Furthermore, the FCC requires most telephone equipment to adhere to the rules for hearing aid compatibility (HAC). All these requirements have been instrumental in allowing consumers to benefit from competition and a diversity of media and technology sources. For the same reasons, the FCC should establish service rules for two-way broadband services to ensure that 700 MHz licensees do not discriminate against unaffiliated applications, services, content or equipment. Moreover, the Commission should indicate, as part of the service rules, that the licensees will also be subject to any interoperability standards later adopted to facilitate consumer choice and open networks by creating an interface comparable to the standard phone jack that derived from the *Carterfone* principles.

CONCLUSION AND RECOMMENDATION

The genius of the Internet is its promise of unlimited and non-discriminatory access to applications, services and content at the *edge* of the network. The Internet was designed to operate over an open platform and allow any consumer to visit any web site, attach any device, post any content and provide any service. With an Internet connection, especially a broadband Internet connection, ordinary citizens can be producers, not just consumers, of information.

Broadband connectivity allows individuals to "broadcast" their own video programs, operate their own on-line businesses, initiate their own videoconferences, develop their own software applications, and engage in multi-lateral research projects with people the world over. If preserved as it was designed, the Internet can promote freedom of information and expression to a degree never before achieved in human history.

All these benefits – commercial, social, scientific, democratic – depend upon the existence of an open and transparent network that carries Internet traffic without interference from the owner of the underlying network. The openness of the Internet is exactly what has made it so popular and so transforming. Its very success depends on the fact that no one controls it.

This proceeding represents a unique opportunity for the Commission to ensure that consumers of broadband Internet access services in the 700 MHz band have control over their use of the Internet, without interference from the network provider. The Commission should issue a simple service rule and apply it on a prospective basis to all winners of licenses to operate in the 700 MHz band when they provide two-way broadband Internet access services. The FCC need not issues pages of details or engage in a lengthy rulemaking proceeding. Rather, the FCC should simply issue one enforceable rule that 700 MHz license holders must provide broadband Internet access service on a non-discriminatory basis in a manner that enables

- 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; and
- 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.

Adoption of this policy will help to create a vibrant wireless broadband market that will make the U.S. the global leader in wireless communications and ensure that consumers are able to maximize the benefits of their wireless broadband connection.

Respectfully submitted,

CONSUMER FEDERATION OF AMERICA
CONSUMERS UNION
FREE PRESS
MEDIA ACCESS PROJECT
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PUBLIC KNOWLEDGE

Dated: April 5, 2007