

Congress of the United States
U.S. House of Representatives
Committee on Small Business
2361 Rayburn House Office Building
Washington, DC 20515-6515

Memorandum

To: Members, Committee on Small Business
From: Committee Staff
Date: September 15, 2014
Re: Hearing: "Is the FCC Responding to the Needs of Small Business and Rural America?"

I. Introduction

On Wednesday, September 17, 2014 at 1:00 pm, the Committee on Small Business will conduct a hearing titled, "Is the FCC Responding to the Needs of Small Business and Rural America?" The hearing will provide members the opportunity to discuss the telecommunication needs of small businesses and rural America that can be addressed by the Federal Communications Commission (FCC or the Commission). Chairman of the FCC Commissioners, the Hon. Thomas Wheeler, will be the sole witness and will discuss among other issues, broadband deployment, Universal Service Fund (USF) reform efforts, net neutrality, wireless spectrum availability, and increasing media concentration through mergers.

II. The Federal Communications Commission

The FCC¹ is an independent federal agency established by the Communications Act of 1934² (hereinafter "the Communications Act or the Act"). The mission of the FCC is to ensure that the American people have available—at reasonable cost and without discrimination—rapid, efficient, nation- and world-wide communication services, whether by radio, television, wire, satellite, or cable. It achieves this mission by regulating interstate and international communication whether by wire or wireless service.

¹ The FCC is directed by five commissioners appointed by the President and confirmed by the Senate for five-year terms. The President designates one of the commissioners to serve as chairperson. Only three commissioners may be members of the same political party. None of them can have a financial interest in any Commission-related business. The commissioners are: Tom Wheeler, Chair; Michael O'Rielly; Jessica Rosenworcel; Ajit Pai; and, Mignon Clyburn.

² The Communications Act of 1934, 47 U.S.C. §§ 151-621 has been amended numerous times, most significantly in recent years by the Telecommunications Act of 1996, P.L. 104-104, 110 Stat. 56 (1996). Some of the provisions in the Telecommunications Act of 1996 with respect to broadband were transferred to a new chapter 12 of Title 47, United States Code by the Broadband Data Improvement Act, Pub. L. No. 110-385, Tit. I, 122 Stat. 4096-4102 (2008).

The Act imposes various regulatory standards on different sectors of the telecommunications industry. This memorandum will focus on several aspects of the FCC's regulatory authority as it affects various operations of telecommunication providers with respect to broadband deployment, service to rural areas, net neutrality, ability to offer wireless services, and the impact of mergers on the mission of the FCC as expressed in the 1934 Communications Act.

III. Broadband Deployment

Broadband has the potential to transform the way small businesses operate and compete in the 21st Century. The Internet provides a number of tools to help small firms increase their productivity, efficiency, and overall success. Social media, teleworking, cloud data storage, and global video conferencing are a few examples of opportunities provided by the Internet. The FCC estimates that 97 percent of small businesses use some form of broadband applications to strengthen their operations.³

One of the most important tools the Internet offers to businesses is the ability to access the global electronic marketplace. From 2000 to 2012, electronic commerce in the United States, also known as online sales, grew from \$27.4 billion to \$224.4 billion, or an increase of 718 percent.⁴ Moreover, broadband generated an entrepreneurship boom in new Internet technologies, such as websites and applications; the expectation is that these enterprises will grow into medium and large businesses.

Once they understand the benefits of broadband, small businesses are concerned with the speed, price and choice of Internet provider.⁵ A survey by the Office of the Chief Counsel for Advocacy at the United States Small Business Administration, showed almost half (48 percent) of rural businesses and more than one-third (37 percent) of urban businesses are not satisfied with their current Internet speed.⁶

The development and adoption of Internet technology continues to grow at a rapid pace. To keep up with the demand, private sector carriers have been aggressively building out their broadband infrastructure to provide more coverage at faster speeds. Due to the cost, this build-out has tended to occur in high-density urban and suburban areas where costs for constructing broadband networks can be spread over a larger customer base.

An important issue is how to economically provide coverage to rural, including unserved areas. The federal government has a number of programs in place that provide

³ FCC, NATIONAL BROADBAND PLAN 16 (2010), [hereinafter "Broadband Plan"] *available at* <http://download.broadband.gov/plan/national-broadband-plan.pdf>.

⁴ BUREAU OF THE CENSUS, UNITED STATES DEPARTMENT OF COMMERCE, MONTHLY AND ANNUAL RETAIL TRADE-E-COMMERCE ADJUSTED CHART, *available at* <http://www.census.gov/retail/#ecommerce>. Retail e-commerce sales are estimated from the Monthly Retail Trade Survey (MRTS) and do not include all types of online commerce including financial brokers, travel services, and ticket sales.

⁵ OFFICE OF THE CHIEF COUNSEL FOR ADVOCACY, THE IMPACT OF BROADBAND SPEED AND PRICE ON SMALL BUSINESS 32 (2010), *available at* http://www.sba.gov/sites/default/files/rs373tot_0.pdf. [hereinafter "Broadband Speed Report"].

⁶ *Id.* at 41.

incentives for the development of broadband in these areas. However, it is important to enact regulatory policies that do not diminish the incentive for private sector investment, because this will ultimately harm small businesses and the economy that rely on investments for the growth needed to create jobs.

A. Developments in Broadband

Initial forays into providing access to the Internet relied on modems attached to the wireline telephone network. Although these networks could transmit at high speeds between telephone company central offices and nodes on the Internet, users, including most small businesses, had to rely on slow (56 Kpbs) wireline telephone connections. This represented a bottleneck in adoption of Internet and services that utilized the Internet.

Congress attempted to jumpstart deployment of high speed access with the enactment of the Telecommunications Act of 1996, which set the goal of removing regulatory barriers and encouraging market participation. In that Act, Congress defined advanced telecommunications capability as “high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.”⁷ Even that definition was superseded by consumer demand,⁸ application development, and technological improvements to the infrastructure.

Internet service providers have adopted technologies, such as coaxial or fiber optic cable for broadband service, which generally has sufficient capacity to transmit all the data needed by small businesses. As already noted, the cost of wiring communities, particularly remote locations, with advanced technologies, especially fiber optics, is expensive. To reduce costs, some providers utilize wireless transmission. Wireless technologies are provided by cellular carriers directly to consumer smart phones, tablets, or other devices through licensed or unlicensed frequencies.⁹ Wireless Internet delivery (either from satellites or terrestrial services) continues to grow at a rapid pace. According to the technology firm Cisco, the demand for mobile data grew by 62 percent in 2012 compared to the previous year, and is forecast to increase nine fold by 2017, an annual compound rate of 56 percent.¹⁰

The speed and capabilities of broadband can vary greatly depending upon the type of service. According to the National Telecommunications and Information Administration (NTIA), 98.6 percent of the United States population has access to broadband speeds of at least 768 kpbs download/200 kbps upload; and 97.6 percent has access to at least 3 megabits per second (mbps) download/768 kbps upload.¹¹ Although the Telecommunications Act of 1996 established a baseline, Congress authorized the FCC to revise that definition as new

⁷ Telecommunications Act of 1996, Tit. VII, § 706, 110 Stat. at 153.

⁸ Broadband Speed Report, *supra* note 5, at 42.

⁹ *Id.* at 13.

¹⁰ http://www.cisco.com/web/solutions/sp/vni/vni_mobile_forecast_highlight/index.html#--Country.

¹¹ <http://www.broadbandmap.gov/summarize/nationwide>.

technologies are developed under their authority. The FCC has established a benchmark minimum speed for broadband as 4 mbps download and 1 mbps upload.¹²

In describing the expansion of broadband, it is important to note how the rapid growth of the Internet has led to the ‘technological convergence’ of different technologies and infrastructure that provide similar communication services.¹³ For example, at the beginning of the 1990s, many small businesses accessed the Internet as part of their telephone line, in the form of dial-up service. Later in the 1990s, telephone companies began offering digital subscriber line or DSL service over customers’ normal telephone lines.¹⁴ Then, as the Internet infrastructure and technology developed, many small firms switched to even higher-capacity broadband lines, instead of the telephone line, to utilize voice services, also known as voice over Internet protocol (VoIP) and other communication services (such video and Internet access). The technological convergence and the rise in demand of Internet capabilities have led policy makers to consider ways to expand broadband access to rural areas of the United States.

B Federal Role in Expanding Broadband

1. The FCC Role

Federal involvement in the management and deployment of communication services dates back to the Great Depression. In the 1930s, many rural areas lacked the infrastructure to support communications services, or even electrical service, due to the high cost. The gap in coverage of communication services was one factor that led to the 1934 Communications Act, which established the concept of providing ‘universal service’ to all Americans.¹⁵ The goal of universal service, described in greater detail later in the memorandum, is to provide telecommunication services to all individuals in the United States at a just, reasonable and non-discriminatory rate.¹⁶ The FCC, through its regulatory powers, ensures that regulatory policies ensure access to this universal service.

¹² *In Re Connect America Fund: A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High Cost Universal Service Support*, WC Docket Nos. 10-90, 07-135, 05-337, 03-109; GN Docket No. 09-51; CC Docket Nos. 01-92, 96-45; WT Docket No. 10-208, Report and Order and Further Notice of Proposed Rulemaking (FCC 11-161), 26 FCC Rcd 17,663, 17,667-68 (2011), reprinted in summary form at 76 Fed. Reg. 73,830 (Nov. 29, 2011) [hereinafter “USF/ICC Transformation Order”].

Technically, the FCC did not adopt a new definition of broadband under its authority pursuant to the Telecommunications Act of 1996. Rather, the Commission determined that carriers would not be eligible for assistance from the Connect America Fund unless they provided 4 Mbps downstream and 1 Mbps upstream. Downstream refers to the speed at which someone can download something to a computer or other web-enabled device (such as a smart phone) and upstream refers to speeds at a computer or other web-enabled device can transmit data to the Internet.

¹³ JONATHAN E. NUECHTERLEIN AND PHILIP J. WEISER, DIGITAL CROSSROADS: AMERICAN TELECOMMUNICATIONS POLICY IN THE INTERNET AGE 24 (2005).

¹⁴ DSL uses filtering techniques to separate voice and data portions of the signal using conventional telephone lines. At the customer end, the signal must be split so voice is sent to the telephone and data to a computer modem. JEFFREY BEASLEY, ET. AL., ELECTRONIC COMMUNICATIONS 408-409 (2014).

¹⁵ 47 U.S.C. § 151.

¹⁶ *Id.* at §§ 151, 201(b).

2. The Rural Utilities Service (RUS) Role

In addition, the Rural Electrification Act of 1936 established the Rural Electric Administration (REA) to provide loans for the electrification of America.¹⁷ This program was then expanded in 1949 to allow telecommunication cooperatives and increase the build-out of telephone services to needed areas.¹⁸ The functions of the REA were transferred to a new organization in the Department of Agriculture, the RUS.¹⁹

The RUS is the primary agency for financing rural broadband development. RUS regularly²⁰ administers two funding programs to expand broadband: the Rural Broadband Access Loan and Loan Guarantee program; and the Community Connect Broadband grants.²¹

3. The National Telecommunications and Information Administration (NTIA) Role

The NTIA is the primary agency responsible for developing telecommunications and information policy for the Executive Branch.²² NTIA intercedes in FCC regulatory proceedings to represent the interests of the federal government. The agency also manages the spectrum owned by the federal government for use of wireless services by federal agencies. Finally, NTIA administered parts of the American Recovery and Reinvestment Act that provided federal dollars for deploying broadband services.

C. Federal Regulatory Policies to promote Broadband Service in Rural Areas— The Universal Service Fund or USF

As already mentioned, the concept of providing universal service of communication to all of the people of the United States was first alluded to in the 1934 Communications Act.²³ Specifically, the FCC was and still is tasked with making “wire and radio so as to make available, so far as possible, to all the people of the United States...a rapid, efficient, nationwide, and world-wide wire and radio communications services with adequate facilities at reasonable charges.”²⁴ In response, the FCC developed the USF as a mechanism to subsidize telephone service to high-cost, almost always rural areas and low-income households.

The funding mechanism for the USF was not explicitly delineated when the FCC developed the concept. Initially, higher rates for long-distance calls by subscribers in low-

¹⁷ Pub. L. No. 74-605, § 2, 49 Stat. 1363, 1363 (1936), codified as amended at 7 U.S.C. § 902.

¹⁸ Act of Oct. 28, 1949, Ch. 776, Pub. L. 81-423, 63 Stat. 948, codified at 7 U.S.C. § 921.

¹⁹ Federal Crop Insurance Reform and Department of Agriculture Reorganization Act of 1994, Pub. L. 103-354, § 232, 108 Stat. 3178, 3219 (1994), codified at 7 U.S.C. § 6942.

²⁰ This does not include the one-time appropriation from the American Recovery and Reinvestment Act (ARRA) to administer the Broadband Initiatives Program (BIP), which is described in greater detail in a later section of the memorandum.

²¹ <http://www.rurdev.usda.gov/AboutRD.html>.

²² <http://www.ntia.doc.gov/about>.

²³ 47 U.S.C. § 151.

²⁴ *Id.*

cost areas were used to fund the USF.²⁵ As Congress considered the overhaul to the 1934 Communications Act in 1995 and 1996, a decision was made to statutorily recognize the concept of universal service and require the FCC to make the subsidies for universal service explicit and transparent.

The FCC's decision made sense in 1997. Internet usage was in an embryonic stage at the time. To demonstrate the growth of the Internet, consider that one of the largest companies in the United States, Google, did not even exist four years after the passage of the 1996 Telecommunications Act. If the Internet was only just entering growth at the dawn of the 21st Century, no one could have imagined delivery on wireless networks. It took less than a half-decade for Internet usage to go from something for tech geeks to widespread mainstream adaptation.

Today, the USF, generally, is the money collected²⁶ from all telecommunications companies and then allocated to carriers with the mission of providing universal telecommunication service to American citizens, including small businesses, at an affordable rate. However, broadband was not included in the FCC's original definition of telecommunication services for which USF support could be used from the 1996 Telecommunications Act.

In 2007, the FCC Federal-State Joint Board²⁷ recommended that broadband and Internet services should receive support from the USF to meet the nation's communication goals.²⁸ The FCC has adopted that recommendation and started making changes to its policies in order to enable firms to increase deployment of broadband under USF and the Telecommunications Act of 1996.

On November 18, 2011, the FCC announced a comprehensive reform of the USF and the intercarrier compensation system²⁹ to "ensure that robust, affordable voice and broadband service, both fixed and mobile, are available to Americans throughout the nation."³⁰ The principal goals of the comprehensive reform are to: "1) preserve and advance universal

²⁵ Long-distance telephone service customers could not see what portion of their bill was being used to provide for the USF monies.

²⁶ Currently, all telecommunications companies that provide service between states, including long distance companies, local telephone companies, wireless telephone companies, paging companies, and payphone providers, are required to contribute to the federal Universal Service Fund. The USF is administered through four programs: High Cost, Low Income, Rural Health Care, and Schools and Libraries. From 1998 to 2010, the USF provided over \$43 billion to the High Cost program; over \$9.8 billion for the Low Income program; over \$426 million for the Rural Health Care program; and over \$29 billion for the Schools and Libraries program.

²⁷ The Federal-State Joint Board on Universal Service is comprised of the FCC Commissioners, State Utility Commissioners, and a consumer advocate representative. The Joint Board is tasked with providing recommendations to implement the universal service provisions of the 1996 Telecommunications Act, including the separation of property and expenses between interstate and intrastate operations. The Joint Board is created pursuant to the authority of § 410 of the 1934 Communications Act. U.S.C. 47 §410.

²⁸ In the Matter of High-Cost Universal Service Support; Federal-State Joint Board on Universal Service, WC Docket No. 05-337, 22 FCC Rcd 20,477 (2007).

²⁹ Intercarrier compensation is referred to as the monetary compensation that is transferred between carriers when one carrier finishes a call started by another carrier.

³⁰ USF/ICC Transformation Order, *supra* note 12, 26 FCC Rcd at 17,668.

availability of voice services; 2) ensure universal availability of modern networks capable of providing voice and broadband services to homes, businesses, and community anchor institutions; 3) ensure universal availability of modern networks capable of providing advanced mobile voice and broadband service; 4) ensure that rates for broadband services and rates for voice services are reasonably comparable in all regional of the nation; and 5) minimize the universal service contribution on consumers and businesses.”³¹

The USF/ICC Transformation Order states that provisions will be implemented over a multi-year period to “adopt a gradual, measured transition that will facilitate predictability and stability.”³² One of the most important provisions for communication carriers is the restructuring and transition of the High-Cost Program,³³ which has been the largest beneficiary of USF disbursements,³⁴ to the Connect America Fund (CAF).³⁵ The order adopted a framework to impose limits on reimbursable funds and costs for wireline carriers serving the highest cost rural areas.³⁶

While the changes are designed to prevent unwise capital spending by rural carriers, the CAF limitations might prevent such carriers from deploying broadband services as their costs might exceed CAF contributions. In addition, numerous other changes of the USF/ICC Transformation Order (such as how compensation is calculated between carriers finishing other carriers calls) may impose additional roadblocks to broadband deployment in high-cost areas, be they rural areas or inner cities.³⁷

IV. Net Neutrality

User demand and federal policies are likely to lead to increased access to broadband services. That could lead to the degradation of service (either through lost data or slower service) unless there is a significant increase in Internet capacity.³⁸ One possibility would be to deploy greater levels of optical fiber for broadband service.³⁹ However, deployment of optical fiber still remains more expensive than other broadband technologies, especially at distances greater than a few miles.⁴⁰ Moreover, installation of optical fiber does not address increased demands for broadband access on wireless networks; no amount of costly network expansion can overcome the basic physical laws that limit the amount of spectrum and within

³¹ *Id.* at 17,612.

³² *Id.* at 17,676-77.

³³ The High Cost Program allows carriers who serve those areas to obtain funds to help offset the high costs of providing service. This program is in addition to the various financial programs available to carriers throughout the RUS.

³⁴ <http://www.usac.org/about/about/universal-service/fast-facts.aspx>.

³⁵ USF/ICC Transformation Order, *supra* note 12, 26 FCC Rcd at 17,673.

³⁶ *Id.* at 17,674.

³⁷ Inner cities, where adoption of broadband is low, can result in high costs for the carriers as the number of subscribers to cover the cost may be as limited as in a very rural area.

³⁸ W. STALLINGS & T. CASE, BUSINESS DATA COMMUNICATIONS 324 (7th ed. 2013) [hereinafter Stallings Business Data Communications].

³⁹ *Id.* at 354-355.

⁴⁰ *Id.* at 356.

that spectrum are also physical constraints on the amount of data that can be transmitted.⁴¹ The alternative would be to manage the flow of traffic over the broadband network in a way to ensure maximum utility to the most users.⁴² However, one person's management of communication on a broadband network might be viewed in a hostile manner as a degradation of another person's service.⁴³

The move to place potential restrictions on the ability of owners of broadband networks that control traffic to the Internet so that existing users have equal access and non-discriminatory treatment is often referred to as "net neutrality." While there is no single accepted definition of net neutrality, most agree that any such definition should include the general principles that owners of broadband networks should not control how consumers or others lawfully use that network, and they should not be able to discriminate against content provider access to that network.

In 2005, the FCC adopted an Internet Policy Statement⁴⁴ setting out four "principles" designed to preserve and promote an open Internet. Those principles were that customers were entitled to: access the lawful Internet content of their choice; run applications and use services of their choice, subject to the needs of law enforcement; connect their choice of legal devices that do not harm the network; and, competition.⁴⁵

In 2008, the Commission, utilizing the principles contained in the 2005 policy statement, found that Comcast Corporation had deliberately interfered with some customers' usage of Internet peer-to-peer applications and thus violated § 706 of the Telecommunications Act of 1996, 47 U.S.C. § 1302.⁴⁶ In 2010, the United States Court of Appeals for the D.C. Circuit struck down the Commission's action, stating that § 706 of the Act had never been interpreted by the FCC as granting the agency regulatory authority over providers of Internet access and the FCC is bound by these rules until it conducts rulemaking to change them.⁴⁷

In December of 2010, the Commission responded to the court's decision by adopting an Open Internet Order again utilizing Section 706 as the statutory authority for its 2010 Open

⁴¹ R. HORAK, TELECOMMUNICATIONS AND DATA COMMUNICATIONS HANDBOOK 553 (2007) [hereinafter Horak, Telecommunications].

⁴² Stallings, Business Data Communications, *supra* note 38 at 324-35.

⁴³ For example, one person might consider that it is his or her right to watch Blu-Ray quality videos on a tablet; of course, this might interfere with the ability of another individual using the same wireless network to make a voice telephone call.

⁴⁴ *In Re: Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1988 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Treatment for Broadband Access to the Internet Over Cable Facilities*, CC Docket Nos. 02-33; 01-337; 95-20; 98-10; GN Docket No. 00-185; Cs Docket No. 02-52, Opinion and Policy Statement (FCC 05-151), 20 FCC Rcd 14,986 (2005).

⁴⁵ *Id.* at 14,988.

⁴⁶ *In Re: Formal Complaint of Free Press and Public Knowledge*, WC Docket No. 07-52, Memorandum Opinion and Order (FCC 08-183), 23 FCC Rcd 13, 028, 13,028 (2008).

⁴⁷ *Comcast Corp. v. FCC*, 600 F.3d 642, 658-59 (D.C. Cir. 2010).

Internet rules. This order sought to maintain network neutrality by establishing three rules covering transparency, the inability to block lawful content, and prohibited unreasonable discrimination against users.⁴⁸ Verizon Communications appealed the order arguing that § 706 of the Telecommunications Act of 1996 does not constitute a grant of regulatory authority to the FCC. The D.C. Circuit concluded that while § 706 does provide regulatory authority for oversight of broadband, absent a change in other FCC rules concerning whether such providers are to be regulated as common carriers, the Commission had no authority to impose prohibitions of broadband providers blocking content or discriminating against specific customers.⁴⁹

On May 15, 2014, the FCC adopted a Notice of Proposed Rulemaking (NPRM) seeking public comment on how best to protect and promote an open Internet.⁵⁰ The NPRM solicits comment on a broad range of issues to help establish a policy framework to ensure that the Internet remains an open platform and retains the concepts adopted by the FCC in its 2010 Open Internet Order, of transparency, no blocking and nondiscrimination.

The Commission sought comment on whether the scope of services as defined in the 2010 Open Internet Order should be modified.⁵¹ Furthermore, in the NPRM, the FCC seeks comment on whether it should revisit its different standard applied to mobile services regarding its no-blocking rule and its exclusion from the unreasonable discrimination rule,⁵² and whether technological and marketplaces changes are such that the FCC should consider if rules should be applied to satellite broadband Internet access services.⁵³

The NPRM has received over 1 million comments, an exceptional number when compared to other recent FCC actions. The final comment period for the proposal expired on Monday, September 15, 2014 and the FCC could issue a final order as early as the end of 2014. Depending on how the FCC addresses various issues raised in the NPRM, the ability of small business to utilize the Internet for their retail operations could be affected. Alternatively, small telecommunications carriers that provide broadband service could find their networks over taxed with burgeoning demand and no way to manage their networks.

V. Spectrum Availability

Usable spectrum is the range of electromagnetic spectrum that can be used to transmit data on mobile devices, such as smart phones and tablets.⁵⁴ The rapid growth in mobile

⁴⁸ *In Re: Preserving the Open Internet; Broadband Industry Practices*, WC Docket No. 07-52; GN Docket No. 09-191, Report and Order (FCC 10-201) 25 FCC Rcd 17,905, 17,906 (2010).

⁴⁹ *Verizon v. FCC* 740 F.3d 623, 657-59 (D.C. Cir. 2014).

⁵⁰ *In Re: Protecting and Promoting the Open Internet*, GN Docket No. 14-28, Notice of Proposed Rulemaking (FCC 14-61), 29 FCC Rcd 5561, 5563 (2014), *reprinted in* 79 Fed. Reg. 37,448 (July 1, 2014) (Open Internet NPRM).

⁵¹ Open Internet NPRM, 29 FCC Rcd at 5581-84.

⁵² *Id.* at 5598-99, 5609.

⁵³ *Id.* at 5584.

⁵⁴ Horak, Telecommunications, *supra* note 41 at 553. Electromagnetic spectrum is commonly referred to as “radio frequency spectrum,” “wireless spectrum,” and also “spectrum.” The total amount of spectrum is limited by the laws of physics. Further limitations are imposed by the federal government. As a result, spectrum is a finite resource.

wireless technology and capabilities has enhanced the need for more spectrum not currently utilized for communication. In an effort to meet the increasing demand for spectrum, Congress and the Administration have developed policies aimed at reallocating spectrum to make it more available for wireless services including wireless Internet access.

In 1993, for reasons that not need be discussed in this memorandum, the FCC was authorized to issue licenses for spectrum through competitive bids for spectrum other than that utilized by broadcast radio and television. Despite FCC efforts, demand increased far more quickly than supply. The President and Congress took actions to increase available spectrum including authorizing incentives⁵⁵ for broadcast licenses to relinquish spectrum and more to other parts of the electromagnetic spectrum.⁵⁶ The Congressional Budget Office estimates the new incentive auctions could result in \$27 billion in federal receipts.⁵⁷ The FCC Chairman has set the goal of completing the incentive auction in the middle of 2015.⁵⁸

All of these auctions still operate under the 1993 law which requires that designated entities including small businesses be afforded the opportunity to purchase spectrum. While the wireless supports more spectrum availability, it remains to be seen whether small businesses will be able to get their fair share of spectrum.

VI. Media Concentration/ Mergers

Any business seeking to send or receive wireless signals must obtain a license from the FCC pursuant to Title III of the Communications Act of 1934. Any transfer of such licenses must be approved by the FCC after finding that such transfer would be in the public interest.⁵⁹ This standard is much broader than the review of a merger under the antitrust laws.⁶⁰

Once the parties file their applications, the FCC issues a public notice and sets a schedule for the public to comment. The Commission then evaluates the economic and public interest implications of the transaction based on the full record developed in the proceeding. There are three potential outcomes of the review: if the transaction violates a statute or rule, the Commission will deny the application; otherwise, the Commission can approve the transaction, with or without conditions; or, if for any reason it is unable to find that the transaction would serve the public interest (or if there is a substantial and material question of fact), it must designate the transaction for a hearing before an Administrative Law Judge.⁶¹

⁵⁵ Incentive auctions are a voluntary, market-based means of repurposing spectrum by encouraging licensees to voluntarily relinquish spectrum usage rights in exchange for a share of the proceeds from an auction of new licenses to use the repurposed spectrum, <http://www.fcc.gov/topic/incentive-auctions>.

⁵⁶ Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6402-03, 126 Stat. 156, 224-30.

⁵⁷ THE CONGRESSIONAL BUDGET OFFICE, COST ESTIMATE FOR AMERICAN JOBS ACT OF 2011, available at http://www.cbo.gov/sites/default/files/cbofiles/attachments/s1549_0.pdf.

⁵⁸ <http://www.fcc.gov/blog/path-successful-incentive-auction-0>

⁵⁹ 47 U.S.C. § 310(d).

⁶⁰ *United States v. RCA Corp.*, 358 U.S. 334, 350 n.18 (1959).

⁶¹ <http://www.fcc.gov/guides/mergers-frequently-asked-questions>.

The FCC reviews transactions under the Communications Act to determine whether they serve the public interest. Contentions arise when the FCC imposes conditions on those mergers and whether such conditions themselves will serve the public interest.

VII. Conclusion

Modern communications technology has provided endless opportunities to American small businesses and to rural America. Continued oversight of the FCC by Congress is essential to ensure that small firms and those enterprises located in rural America have equal access to technology and interconnectivity as their larger and more urban brethren. This hearing provides Members the opportunity to query Chairman Wheeler on a variety of telecommunications topics relating to small businesses and rural America.