

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

In the Matter of)
Policies Regarding Mobile Spectrum Holdings) WT Docket No. 12-269

NOTICE OF PROPOSED RULEMAKING

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I. INTRODUCTION

1. With this Notice of Proposed Rulemaking, we initiate a review of our policies governing mobile spectrum holdings in order to ensure that they fulfill our statutory objectives given changes in technology, spectrum availability, and the marketplace since the Commission's last comprehensive review more than a decade ago. In the last few years, large, medium, and small providers as well as public interest groups have raised concerns about the current approach, and sought review. In addition, we adopt today, in a separate proceeding, a Notice of Proposed Rulemaking soliciting comment on the framework for an incentive auction of the broadcast television spectrum, which will represent a major addition of new spectrum available for mobile broadband. We initiate this proceeding to provide rules of the road that are clear and predictable, and that promote the competition needed to ensure a vibrant, world-leading, innovation-based mobile economy.

2. Since the Commission's last comprehensive review of these issues, the number of spectrum bands used for mobile wireless services has expanded; new, innovative service offerings have been rolled out; increasingly sophisticated devices have been introduced into the marketplace; and consumers have adopted these devices to access a wide array of bandwidth-intensive applications. In light of the surge in consumer demand for mobile broadband services that require greater bandwidth, spectrum – a key input in the provision of mobile wireless services – is becoming increasingly critical for all providers. In this proceeding, we seek comment on retaining or modifying the current case-by-case analysis used to evaluate mobile spectrum holdings in the context of transactions and auctions, as well as on bright-line limits advocated by some providers and public interest groups. In addition, we seek comment on updating the spectrum bands that should be included in any evaluation of mobile spectrum holdings and whether to make distinctions between different bands. We also take a fresh look at geographic market analysis and other implementation issues such as attribution rules, remedies, and possible transition issues. This proceeding affords us the opportunity to receive valuable input from a broad range of active participants in the mobile broadband industry, as well as trade associations and consumer groups, that have requested that our policies be revised to keep pace with market changes.

II. BACKGROUND

A. Statutory Framework

3. Section 309(j)(3)(B) of the Communications Act provides that, in designing systems of competitive bidding, the Commission shall “promot[e] economic opportunity and competition and ensur[e] that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses.”¹ Additionally, under the Communications Act, when reviewing a proposed license assignment or transfer application, the Commission must determine whether the applicant has demonstrated that the proposed assignment or transfer of control of licenses will serve the public interest, convenience, and necessity.² Moreover, Congress has established the promotion of competition as a fundamental goal of the nation's mobile wireless policy.³ More recently, Congress enacted Section 6404 of the *Spectrum Act*, which modifies Section 309(j) to prohibit the Commission from preventing an otherwise qualified entity from participating in an auction, but reaffirms the Commission's authority “to adopt and enforce rules of general applicability, including rules concerning spectrum aggregation that promote competition.”⁴

¹ 47 U.S.C. § 309(j)(3)(B).

² 47 U.S.C. § 310(d).

³ See 47 U.S.C. § 332(a)(3), (c)(1)(C); Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993. See also Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, including Commercial Mobile Services, WT Docket No. 10-133, *Fifteenth Report*, 26 FCC Rcd 9664, 9687 ¶ 3 (2011) (*Fifteenth Mobile Wireless Competition Report*).

⁴ Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6404 (*Spectrum Act*).

B. The Commission's Policies Regarding Mobile Spectrum Holdings

4. Access to spectrum is a precondition to the provision of mobile wireless services. Ensuring the availability of sufficient spectrum is critical for promoting the competition that drives innovation and investment. Over time, the Commission has increased the amount of spectrum available for the provision of mobile wireless services, making this additional spectrum available in different frequency bands, bandwidths, and licensing areas.⁵ As discussed below, in order to address its statutory mandate, the Commission has implemented a variety of mobile spectrum aggregation policies and rules, including the cellular cross interest rule, the Personal Communications Service (PCS) cross-ownership rule, the Commercial Mobile Radio Services (CMRS) spectrum cap, and the current case-by-case spectrum aggregation analysis.⁶

5. *Cellular Services.* In 1981, in establishing the rules for the licensing of cellular service, the Commission decided to award two cellular services licenses per market – a separate allocation of 20 megahertz for incumbent wireline carriers and an allocation of 20 megahertz for other applicants.⁷ With two licensees per market, the Commission reasoned it would be more difficult for a single entity to dominate the cellular market nationwide.⁸ The Commission adopted the cellular cross-interest rule in 1991 “to guarantee the competitive nature of the cellular industry and to foster the development of competing systems.”⁹ The rule was adopted when only two cellular licensees provided mobile voice services in each geographic area of the U.S.¹⁰ At that time, a party with a controlling interest in one of the cellular licensees was prohibited from having more than a five percent direct or indirect ownership interest in the other licensee in the same cellular geographic service area (CGSA).¹¹ In the *Second Biennial Review Order* in 2001, the Commission eliminated the cellular cross-interest rule in Metropolitan Statistical Areas (MSAs) after finding numerous competitive choices for consumers in urban markets.¹² Later, in 2004, the Commission eliminated the cellular cross-interest rule in favor of a case-by-case review for all markets, finding that the continued application of the cellular cross-interest rule in Rural Service Areas (RSAs) could impede the development of new services in rural and underserved areas.¹³

6. *Cellular/PCS Cross-Ownership Rule.* In 1993, in establishing the initial PCS service rules, the Commission imposed service-specific limitations on the aggregation of broadband PCS

⁵ See *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9821 ¶ 266.

⁶ See *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9826-28 ¶¶ 280-281.

⁷ Inquiry Into the Use of the Bands 825-845 MHz and 870-890 MHz for Cellular Communications Systems; and Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems, CC Docket No. 79-318, *Report and Order*, 86 FCC 2d 469, 488-92 ¶¶ 38-43 (1981) (*Cellular Report and Order*).

⁸ See *Cellular Report and Order*, 86 FCC 2d at 491 ¶ 43.

⁹ Amendment of Part 22 of the Commission's Rules to Provide for Filing and Processing of Applications for Unserved Areas in the Cellular Service and to Modify Other Cellular Rules, CC Docket No. 90-6, *First Report and Order and Memorandum Opinion and Order on Reconsideration*, 6 FCC Rcd 6185, 6628 ¶ 104 (1991) (*Cellular First Report and Order*).

¹⁰ See *Cellular First Report and Order*, 6 FCC Rcd at 6228 ¶ 103.

¹¹ See *Cellular First Report and Order*, 6 FCC Rcd at 6228 ¶¶ 104-105.

¹² 2000 Biennial Regulatory Review – Spectrum Aggregation Limits for Commercial Mobile Radio Services, WT Docket No. 01-14, *Report and Order*, 16 FCC Rcd 22668, 22671 ¶ 7, 22707 ¶ 84 (2001) (*Second Biennial Review Order*).

¹³ See *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services*, WT Docket No. 02-381, *Report and Order and Further Notice of Proposed Rule Making*, 19 FCC Rcd 19078, 19113-115 ¶¶ 63-67 (2004) (*Rural Report and Order*).

spectrum and on cellular/PCS cross-ownership.¹⁴ The Commission limited broadband PCS licensees to 40 megahertz of total spectrum allocated to broadband PCS,¹⁵ and limited cellular licensees to 10 megahertz of broadband PCS spectrum in their cellular service areas.¹⁶ In 1996, the Commission eliminated the service-specific limitations on the aggregation of broadband PCS spectrum and on cellular/PCS cross-ownership, and decided to rely solely on the 45 megahertz CMRS spectrum cap, implemented in 1994, “to ensure that multiple service providers would be able to obtain broadband PCS spectrum and thereby facilitate the development of competitive markets for wireless services.”¹⁷

7. *CMRS Spectrum Cap.* In 1994, the Commission implemented a spectrum cap on Cellular, broadband PCS, and Specialized Mobile Radio (SMR) spectrum to promote diversity and competition in mobile services,¹⁸ “recognizing the possibility that mobile service licensees might exert undue market power or inhibit market entry by other service providers if permitted to aggregate large amounts of spectrum.”¹⁹ The Commission found that a spectrum cap provided a “minimally intrusive means” to ensure that the mobile communications marketplace remained competitive and preserved incentives for efficiency and innovation.²⁰ Under former Section 20.6 of the Commission’s rules, no licensee in the broadband PCS, Cellular, or SMR services regulated as CMRS could have an attributable interest in more than 45 megahertz of licensed spectrum (broadband PCS, cellular, and SMR spectrum regulated as CMRS) that has significant overlap in any geographic area.²¹ A few years later, the Commission increased the cap to 55 megahertz in the RSAs.²² Subsequently, in the *Second Biennial Review Order*, the Commission eliminated the spectrum cap effective January 1, 2003,²³ in favor of case-

¹⁴ See Amendment of the Commission’s Rules to Establish New Personal Communications Services, *Second Report and Order*, 8 FCC Rcd 7700, 7728 ¶ 61, 7745 ¶ 106 (1993) (*PCS Second Report and Order*).

¹⁵ See *PCS Second Report and Order*, 8 FCC Rcd at 7728 ¶ 61.

¹⁶ See *PCS Second Report and Order*, 8 FCC Rcd at 7745 ¶ 106. See also Amendment of the Commission’s Rules to Establish New Personal Communications Services, *Memorandum Opinion and Order*, 9 FCC Rcd 4957, 4984 ¶¶ 66-67 (1994).

¹⁷ See *Second Biennial Review Order*, 16 FCC Rcd at 22673 ¶ 13 (citing Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap; Amendment of the Commission’s Cellular/PCS Cross-Ownership Rule, WT Docket No. 96-59, *Report and Order*, 11 FCC Rcd 7824, 7869 ¶ 94 (1996), *aff’d*, 12 FCC Rcd 14031 (1997), *aff’d sub nom. BellSouth Corp. v. FCC*, 162 F.3d 1215 (D.C. Cir. 1999)).

¹⁸ Implementation of Sections 3(n) and 332 of the Communications Act – Regulatory Treatment of Mobile Services, GN Docket No. 93-252, *Third Report and Order*, 9 FCC Rcd 7988, 8100 ¶ 238, 8109 ¶ 263 (1994) (*CMRS Third Report and Order*).

¹⁹ *CMRS Third Report and Order*, 9 FCC Rcd at 8100 ¶ 239.

²⁰ See *CMRS Third Report and Order*, 9 FCC Rcd at 7999 ¶ 16.

²¹ See 1998 Biennial Regulatory Review – Spectrum Aggregation Limits for Wireless Telecommunications Carriers, WT Docket No. 98-205, *Report and Order*, 15 FCC Rcd 9219, 9224 ¶ 8 (1999) (*First Biennial Review Order*) (quoting former 47 C.F.R. § 20.6(a)). A “significant overlap” of a PSC licensed service area, CGSA, and SMR service area occurred when at least ten percent of the population of the PCS licensed service area was within the cellular geographic service area and/or SMR service area. See *id.* (citing former Section 20.6(c)). The spectrum cap sunset on January 1, 2003. 47 C.F.R. § 20.6(f).

²² See *First Biennial Review Order*, 15 FCC Rcd at 9254-57 ¶¶ 80-84.

²³ See 47 C.F.R. § 20.6(f); *Second Biennial Review Order*, 16 FCC Rcd at 22669 ¶ 1, 22696 ¶ 55. The Commission also raised the spectrum cap to 55 MHz in all markets during the sunset period. See 47 C.F.R. § 20.6(a); *Second Biennial Review Order*, 16 FCC Rcd at 22671 ¶ 6, 22693 ¶ 47.

by-case review of mobile spectrum holdings.²⁴

8. *Case-by-Case Analysis.* Since 2003, the Commission has examined the competitive effects of proposed wireless transactions involving the transfer, assignment, or lease of Commission licenses by employing a case-by-case review. In 2008, the Commission determined that it would apply the case-by-case analysis to spectrum acquired via auction.²⁵ Beginning in 2004, the Commission has used a two-part screen to help identify markets where the acquisition of spectrum provides particular reason for further competitive analysis.²⁶ The Commission does not, however, limit its consideration of potential competitive harms in proposed transactions solely to markets identified by its initial screen.²⁷ The first part of the screen considers changes in market concentration as a result of the transaction and is based on the size of the post-transaction Herfindahl-Hirschman Index (HHI)²⁸ and the change in the HHI.²⁹ The second part examines the amount of spectrum that is suitable and available on a market-by-market basis for the provision of mobile telephony/broadband service.³⁰ For those markets highlighted by one or both steps in the analysis, the Commission routinely conducts detailed, market-by-market reviews to determine whether the transaction would result in an increased likelihood or ability in those markets for the combined entity to behave in an anticompetitive manner.³¹ The case-by-case analysis considers variables that are important in predicting the incentives and ability of service providers to successfully reduce competition on price or non-price terms, and transaction-specific public interest benefits that may

²⁴ See *Second Biennial Review Order*, 16 FCC Rcd at 22670-71 ¶ 6.

²⁵ See *Union Telephone Company, Cellco Partnership d/b/a Verizon Wireless, Applications for 700 MHz Band Licenses, Auction No. 73, Memorandum Opinion and Order*, 23 FCC Rcd 16787, 16791 ¶ 9 (2008) (*Verizon Wireless-Union Tel. Order*).

²⁶ See, e.g., *Applications of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo LLC and Cox TMI, LLC for Consent to Assign AWS-1 Licenses, et al.*, WT Docket No. 12-4, *Memorandum Opinion and Order and Declaratory Ruling*, FCC 12-95 (rel. Aug. 23, 2012) at ¶ 48 (*Verizon Wireless-SpectrumCo Order*); *Application of AT&T Inc. and Qualcomm Incorporated For Consent to Assign Licenses and Authorizations*, WT Docket No. 11-18, *Order*, 26 FCC Rcd 17589, 17602 ¶ 31 (2011) (*AT&T-Qualcomm Order*); *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations*, WT Docket No. 04-70, *Memorandum Opinion and Order*, 19 FCC Rcd 21522, 21552 ¶ 58 (2004) (*Cingular-AT&T Wireless Order*).

²⁷ See, e.g., *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 48; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17609-10 ¶¶ 49-50; *Applications of AT&T Inc. and Centennial Communications Corp. For Consent to Transfer Control of Licenses, Authorizations, and Spectrum Leasing Arrangements*, WT Docket No. 08-246, *Memorandum Opinion and Order*, 24 FCC Rcd 13915, 13946-48 ¶¶ 71-74, 13952 ¶ 85 (2009) (*AT&T-Centennial Order*); *Applications for the Assignment of License from Denali PCS, L.L.C. to Alaska Digitel, L.L.C. and the Transfer of Control of Interests in Alaska Digitel, L.L.C. to General Communication, Inc.*, WT Docket 06-114, *Memorandum Opinion and Order*, 21 FCC Rcd 14863, 14898 ¶ 85 (2006).

²⁸ The Herfindahl-Hirschman Index (HHI), which is calculated by summing the squares of all provider subscriber market shares in any given market, is a commonly used measure of market concentration in competition analysis. See *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9707-08 ¶¶ 48-49.

²⁹ The HHI screen identifies for further case-by-case market analysis those markets in which, post-transaction, the HHI would be greater than 2800 and the change in the HHI would be 100 or greater, or the change in the HHI would be 250 or greater, regardless of the level of the HHI. The HHI screen has remained the same since the Commission adopted the case-by-case review process. See *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9708 n. 121.

³⁰ See, e.g., *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 59; see also *infra* discussion on determining spectrum that is suitable and available for the relevant product market at ¶ 26.

³¹ This Notice of Proposed Rulemaking does not address the part of our review that considers changes in market concentration based on HHI, but considers only our review of mobile spectrum holdings.

mitigate or outweigh any harms arising from the transaction.³²

C. Criticisms of Current Case-by-Case Analysis Approach

9. In its consideration of transactions, the Commission generally has reviewed and, when necessary, adjusted its case-by-case analysis to reflect changing industry and consumer needs. In recent years, large and small wireless providers, as well as trade associations and public interest groups, have requested that the Commission undertake an examination of its current policies regarding mobile spectrum holdings. For example, Verizon Wireless has contended that we should reconsider the particular spectrum to be examined in a competitive analysis and has urged that we include additional spectrum bands.³³ AT&T has expressed concerns that the current case-by case evaluation is not clear and predictable and the spectrum screen changes from one transaction to the next.³⁴ AT&T has argued that there is “more regulatory uncertainty on top of an industry that is a foundation for a lot of today's innovation, making it difficult for all of us to allocate and commit capital,”³⁵ and that “we don't know how much spectrum we're allowed to hold.”³⁶ Sprint Nextel has argued that the current method of evaluating spectrum holdings values spectrum equally, “regardless of whether it lies within more valuable ‘beachfront’ bands or in higher-frequency bands of limited commercial use.”³⁷ T-Mobile has argued that to further the goal of a robust marketplace, the Commission should modify its case-by-case evaluation to recognize the difference in value of spectrum above and below 1 GHz.³⁸

10. The Rural Cellular Association (RCA) has urged the Commission to “take a fresh approach to its competitive analysis” instead of “recycl[ing] the outdated spectrum screen.”³⁹ RTG has urged the Commission to conduct a more in-depth competitive review of large-scale transactions, in part by adopting a lower spectrum screen that will trigger a heightened level of review and allow consideration of certain factors other than the amount of spectrum held by licensees, in order to determine whether further spectrum concentration will threaten market competition.⁴⁰ Both RTG and Leap Wireless have contended that the case-by-case approach creates uncertainty and/or suggest that an alternative approach would provide greater clarity.⁴¹ Free Press has urged the use of a spectrum screen based on spectrum

³² See Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC For Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager and *De Facto* Transfer Leasing Arrangements and Petition for Declaratory Ruling that the Transaction is Consistent with Section 310(b)(4) of the Communications Act, WT Docket No. 08-95, *Memorandum Opinion and Order and Declaratory Ruling*, 23 FCC Rcd 17444, 17460 ¶ 26 (2008) (*Verizon Wireless-ALLTEL Order*).

³³ See Verizon Wireless Comments, WT Docket No. 11-186, at 117, 120-25.

³⁴ See AT&T Inc. Q4 2011 Earnings Call Transcript, *Morningstar.com*, January 26, 2012, Q&A, p. 2, available at <http://www.morningstar.com/earnings/34640330-at-t-inc-t-q4-2011.aspx?pindex=3&qindex=2> (last visited Sept. 6, 2012).

³⁵ AT&T Inc. Q4 2011 Earnings Call Transcript, *Morningstar.com*, January 26, 2012, Presentation, p. 3, available at <http://www.morningstar.com/earnings/34640330-at-t-inc-t-q4-2011.aspx?pindex=3> (last visited Sept. 6, 2012).

³⁶ See AT&T Inc. Q4 2011 Earnings Call Transcript, *Morningstar.com*, January 26, 2012, Q&A, p. 2, available at <http://www.morningstar.com/earnings/34640330-at-t-inc-t-q4-2011.aspx?pindex=3&qindex=2> (last visited Sept. 6, 2012).

³⁷ Sprint Nextel Comments, WT Docket No. 12-4, at ii.

³⁸ See T-Mobile Comments, WT Docket No. 11-186, at 6.

³⁹ See RCA Petition to Condition or Otherwise Deny Transactions, WT Docket No. 12-4, at 44.

⁴⁰ See RTG Petition to Deny, WT Docket No. 12-4, at 16-17.

⁴¹ See, e.g., RTG Reply Comments, RM No. 11498, at 1-3 (urging the Commission to consider instituting a spectrum cap); Leap Comments, RM No. 11498, at 8-9. (advocating bright-line rules). Because this Notice of Proposed Rulemaking addresses policies regarding mobile spectrum holdings from a broad perspective, we decline (continued...)

value,⁴² contending that the current spectrum screen, a “simple old analytical tool,” is insufficient to reveal changes in market power.⁴³ Similarly, Public Knowledge has argued that the assumptions underlying the method used to calculate the spectrum screen have proven to be unreliable,⁴⁴ and that we should consider the long-term implications of spectrum holdings among carriers.⁴⁵

D. The Current Wireless Landscape

11. During the past decade, the use of wireless services has surged as the number of spectrum bands used to provide mobile wireless services has expanded, an array of increasingly sophisticated devices has been introduced in the marketplace, and new service offerings have been rolled out. As discussed below, some of these changes could have implications for our policies regarding mobile spectrum holdings. The industry is undergoing a transformation, from an industry providing predominantly voice services to one that is increasingly focused on providing data services, particularly mobile broadband services. This transition has led to the need of competitors for more spectrum to meet the increasing demand for mobile broadband, which consumes greater amounts of bandwidth.⁴⁶ In order to ensure that our policies continue to serve the public interest and keep pace with changing technologies and consumer needs, we must consider these and other industry changes.

12. Facilitating access by all providers to valuable spectrum resources they need to serve their customers is essential given the current mobile wireless landscape. The rapid adoption of smartphones, as well as tablet computers and the wide-spread use of mobile applications, combined with deployment of high-speed 3G and 4G technologies, is driving more intensive use of mobile networks. A single smartphone can generate as much traffic as 35 basic-feature phones; a tablet as much traffic as 121 basic-feature phones; and a single laptop can generate as much traffic as 498 basic-feature phones.⁴⁷ The adoption of smartphones alone increased at a 50 percent annual growth rate in 2011, from 27 percent of U.S. mobile subscribers in December 2010 to nearly 42 percent in December 2011.⁴⁸ Moreover, global mobile data traffic is anticipated to grow eighteen-fold between 2011 and 2016.⁴⁹ Indeed, a study by the

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to initiate the more narrowly-tailored requests made in RTG’s petition for rulemaking. *See* RTG Petition for Rulemaking, RM No. 11498, at 5 (proposing that the FCC impose, on a county level, a 110 MHz aggregation limit below 2.3 GHz).

⁴² *See* Free Press Reply to Opposition, WT Docket No. 12-4, at 23; *see also* Free Press Petition to Deny, WT Docket No. 12-4, at 11.

⁴³ *See* Free Press Petition to Deny, WT Docket No. 12-4, at 19. *See also* Free Press Petition to Deny, WT Docket No. 12-4, at 11.

⁴⁴ *See* Public Knowledge *et al.*, Petition to Deny, WT Docket No. 12-4, at 34-35.

⁴⁵ Letter from Harold Feld, Public Knowledge, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 12-4, at 3 (Apr. 30, 2012).

⁴⁶ Connecting America: The National Broadband Plan at 77 (Mar. 16, 2010).

⁴⁷ *See* Cisco White Paper, Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2011-2016, at 7, February 14, 2012, available at http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.pdf (last visited Sept. 6, 2012).

⁴⁸ comScore 2012 Mobile Future in Focus (2012), available at http://www.comscore.com/Press_Events/Presentations_Whitepapers/2012/2012_Mobile_Future_in_Focus (last visited Sept. 6, 2012). For consumers ages 25-34, eight of ten recent new phone purchases were smartphones. *See* Survey: New U.S. Smartphone Growth by Age and Income, NIELSENWIRE, Feb. 20, 2012, available at http://blog.nielsen.com/nielsenwire/online_mobile/survey-new-u-s-smartphone-growth-by-age-and-income/ (last visited Sept. 6, 2012).

⁴⁹ *See* Cisco White Paper, Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2011-2016, Executive Summary, February 14, 2012, available at (continued...)

Council of Economic Advisors (CEA) found that “the spectrum currently allocated to wireless is not sufficient to handle the projected growth in demand, even with technological improvements allowing for more efficient use of existing spectrum and significant investment in new facilities.”⁵⁰

13. Given the limited spectrum resources, we must consider how our policies regarding mobile spectrum holdings can accommodate the increasing demand for spectrum by all providers. While there are numerous ways in which wireless service providers can increase network capacity to satisfy increasing demand, acquiring more spectrum has been the least costly way for all providers to address capacity constraints. In light of these circumstances, ensuring that our policies regarding mobile spectrum holdings promote access to spectrum is critical.⁵¹

14. Since the sunset of the spectrum cap, there also have been other changes in the wireless industry that warrant reexamination of our policies. In 2003, when the Commission eliminated the spectrum cap, there were six mobile telephone operators that analysts then described as nationwide: AT&T Wireless, Sprint PCS, Verizon Wireless, T-Mobile, Cingular Wireless (“Cingular”), and Nextel.⁵² Today, as a result of mergers and other transactions, there are four nationwide providers: Verizon Wireless, AT&T, T-Mobile, and Sprint Nextel.⁵³ As of December 2003, the top six facilities-based nationwide providers served approximately 78 percent of total mobile wireless subscribers in the country.⁵⁴ By December of 2009, the top four facilities-based nationwide providers had increased their

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http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.html (last visited Sept. 6, 2012).

⁵⁰ Council of Economic Advisors, *The Economic Benefits of New Spectrum for Wireless Broadband at 5* (Feb. 2012), available at http://www.whitehouse.gov/sites/default/files/cea_spectrum_report_2-21-2012.pdf (last visited Sept. 6, 2012).

⁵¹ We note that Congress, as well as the Commission and NTIA, has taken innovative steps to bring additional spectrum suitable for mobile broadband to the commercial marketplace. For instance, Congress recently passed the *Spectrum Act*, which authorizes the auction and repurposing of television broadband spectrum for the provision of wireless services. See Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, Subtitle D - Spectrum Auction Authority, § 6401 *et seq.* As another example, the Commission has opened a proceeding to increase the supply of spectrum for mobile broadband by providing for flexible use of 40 megahertz of spectrum assigned to the Mobile Satellite Service (MSS) in the 2 GHz Band. See, e.g., Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands, WT Docket No. 12-70, *Notice of Proposed Rulemaking and Notice of Inquiry*, 27 FCC Rcd 3561 (2012) (*AWS-4 NPRM*). NTIA undertook a “fast-track” review of several bands that could be reallocated to mobile use. See U.S. Department of Commerce, *An Assessment of the Near-Term Viability of Accommodating Wireless Broadband Systems in the 1675-1710 MHz, 1755-1780 MHz, 3500-3650 MHz, and 4200-4220 MHz, 4380-4400 MHz Bands* (Oct. 2010), available at http://www.ntia.doc.gov/reports/2010/FastTrackEvaluation_11152010.pdf (*NTIA Fast Track Report*) (last visited Sept. 6, 2012). Additionally, on August 13, 2012, the Commission granted T-Mobile’s application for experimental special temporary authority to begin testing possible use of the 1755 MHz to 1780 MHz band on a shared basis for providing commercial mobile broadband services. See *FCC Experimental Special Temporary Authorization*, Call Sign No. WF9XQW, File No. 0373-EX-ST-2012, available at <https://apps.fcc.gov/els/GetAtt.html?id=128554> (last visited Sept. 6, 2012).

⁵² See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, WT Docket No. 04-111, *Ninth Report*, 19 FCC Rcd 20597, 20613 ¶ 36 (2004) (*Ninth Annual CMRS Competition Report*).

⁵³ See, e.g., *AT&T-Qualcomm Order*, 26 FCC Rcd at 17604 ¶ 35; *AT&T-Centennial Order*, 24 FCC Rcd 13915; *Verizon Wireless-ALLTEL Order*, 23 FCC Rcd 17444; Applications of Nextel Communications, Inc. and Sprint Corporation For Consent to Transfer Control of Licenses and Authorizations, WT Docket No. 05-63, *Memorandum Opinion and Order*, 20 FCC Rcd. 13967 (2005) (*Sprint-Nextel Order*).

⁵⁴ See *Ninth Annual CMRS Competition Report*, 19 FCC Rcd at ¶ 174, A-8, Table 4.

combined market share to 88 percent.⁵⁵ Moreover, since 2003, a number of regional and rural facilities-based providers have exited the marketplace through mergers and acquisitions, including Dobson Communications, SunCom Wireless, Rural Cellular Corporation, ALLTEL, and Centennial Communications.⁵⁶ In addition, there have been significant spectrum-only transactions, such as the transaction at the end of 2011 in which AT&T acquired Qualcomm's nationwide Lower 700 MHz downlink spectrum⁵⁷ and the more recent transaction in which Verizon Wireless acquired AWS-1 licenses from SpectrumCo, LLC, and Cox TMI.⁵⁸

III. DISCUSSION

15. In the sections below, we seek comment on whether and how to revise our policies and rules regarding mobile spectrum holdings. In particular, we ask that comments address how to ensure that our policies and rules afford all interested parties greater certainty, transparency and predictability to make investment and transactional decisions, while also promoting the competition needed to ensure a vibrant, increasingly mobile economy driven by innovation. First, we discuss general approaches to address competitive harm resulting from foreclosing access to spectrum, including a case-by-case analysis, bright-line limits, and other methodologies, and how they might apply not only to secondary market transactions but also to initial spectrum licensing after auctions. We then take a fresh look at implementation issues under various approaches, such as which spectrum should be considered, relevant product and geographic markets, and issues relating to attribution rules, appropriate remedies and transition concerns.

16. We also seek comment on the costs and benefits of any proposals or proposed changes to policies and rules. We ask that commenters take into account only those costs and benefits that directly result from the implementation of the particular approach or rule that could be adopted. Further, to the extent possible, commenters should provide specific data and information, such as actual or estimated dollar figures for each specific cost or benefit addressed, including a description of how the data or information was calculated or obtained, and any supporting documentation or other evidentiary support.⁵⁹

A. General Approaches to Mobile Spectrum Holdings

1. Case-by-Case Analysis

17. We seek comment on our current policies regarding mobile spectrum holdings. In general, we currently examine the impact of spectrum aggregation on competition, innovation, and the efficient use of spectrum on a case-by-case basis, after establishing the relevant product and geographic markets in each case.⁶⁰ The Commission has applied this approach to wireless transactions, using an initial spectrum screen, since 2004,⁶¹ and to mobile spectrum acquired through competitive bidding since

⁵⁵ See *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9760, Table 14, and John C. Hodulik *et al.*, *US Wireless 411 Report for 4Q2010*, UBS Investment Research, UBS, at 13, Table 8.

⁵⁶ See *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9722, Table 10.

⁵⁷ See generally *AT&T-Qualcomm Order*, 26 FCC Rcd 17589.

⁵⁸ See generally *Verizon Wireless-SpectrumCo Order*, FCC 12-95.

⁵⁹ During the pendency of this proceeding, the Commission will continue to apply its current case-by-case approach to evaluate mobile spectrum holdings during our consideration of secondary market transactions and initial spectrum licensing after auctions.

⁶⁰ See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17602 ¶¶ 31-32.

⁶¹ See *Cingular-AT&T Wireless Order*, 19 FCC Rcd at 21568-69 ¶¶ 107-12. See also *AT&T-Qualcomm Order*, 26 FCC Rcd at 17602 ¶ 31; *AT&T Inc. and Cellco Partnership d/b/a Verizon Wireless Seek FCC Consent To Assign or Transfer Control of Licenses and Authorizations and Modify a Spectrum Leasing Arrangement*, WT Docket No. 09-104, *Memorandum Opinion and Order*, 25 FCC Rcd 8704, 8720-21 ¶ 32 (2010) (*AT&T-Verizon Wireless Order*).

2008.⁶² In reviewing a proposed wireless transaction, the Commission evaluates the current spectrum holdings of the acquiring firm that are “suitable” and “available” in the near term for the provision of mobile telephony/broadband services.⁶³ The current screen identifies local markets where an entity would acquire more than approximately one-third of the total spectrum suitable and available for the provision of mobile telephony/broadband services.⁶⁴ The Commission does not, however, limit its consideration of potential competitive harms in proposed transactions solely to markets identified by its initial screen.⁶⁵ The Commission balances a number of factors in its analysis, considering the totality of the circumstances in each market.⁶⁶ The Commission also has considered whether harms in numerous local markets may result in nationwide harms.⁶⁷

18. We recognize that a case-by-case approach affords flexibility to consider different circumstances, permits a variety of factors to be considered, and allows us to better tailor any remedies to the specific harm and circumstances, particularly in our review of wireless transactions. In addition to recognizing factors unique to each licensee, a case-by-case approach allows us to consider the changing needs of the mobile wireless marketplace more generally. On the other hand, a case-by-case approach is time- and resource-intensive, and has been criticized for creating uncertainty as to whether a particular transaction will be approved.⁶⁸ One commenter, however, has suggested generally that a case-by-case approach can provide sufficiently clear guidance to enable providers to make their transactional and investment decisions.⁶⁹ We seek comment on the costs and benefits of a case-by-case analysis to consumers, wireless service providers, and others, as well as the overall effectiveness of such an approach in achieving our public policy objectives. Should we change our current case-by-case analysis process? For instance, should we continue to use a screen that includes a measure of spectrum holdings? Could we take measures to make the process more transparent, predictable, or better tailored to promote our goals? For example, should we consider a regular review of our policies and guidelines to keep pace with changing marketplace conditions? Should we adopt guidelines setting forth the factors that will be considered during any review of a licensee’s mobile spectrum holdings or delegate authority to the Wireless Telecommunications Bureau to do so?

19. Finally, we seek comment on the specific costs and benefits of applying a case-by-case approach to initial licenses acquired through competitive bidding. Does a case-by-case analysis afford auction participants sufficient certainty to determine whether they would be allowed to hold a given license post-auction? Does the lack of a bright-line spectrum limit deter auction participation? Further, does the lack of a bright-line rule provide an opportunity for licensees to bid on spectrum, regardless of whether they believe they ultimately would be allowed to hold the licenses, in order to raise bidding costs or foreclose other competitors from acquiring certain licenses? A case-by-case approach could result in an inefficient auction process if we ultimately deny the winning bidder’s application to hold a license. In

⁶² See *Verizon Wireless-Union Tel. Order*, 23 FCC Rcd at 16791-92 ¶ 9.

⁶³ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 59; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17605-06 ¶ 38; *AT&T-Verizon Wireless Order*, 25 FCC Rcd at 8723-24 ¶ 39; *AT&T-Centennial Order*, 24 FCC Rcd at 13934 ¶ 43. See *infra* discussion of determining spectrum suitable and available for the relevant product market at ¶ 26.

⁶⁴ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 59; *Verizon Wireless-ALLTEL Order*, 23 FCC Rcd at 17473 ¶ 54.

⁶⁵ See, e.g., *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 48; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17609-10 ¶¶ 49-50; *AT&T-Centennial Order*, 24 FCC Rcd 13915, 13946-48 ¶¶ 71-74, 13952 ¶ 85.

⁶⁶ See, e.g., *Verizon Wireless-ALLTEL Order*, 23 FCC Rcd at 17487-88 ¶ 91.

⁶⁷ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 76.

⁶⁸ See, e.g., “Stephenson: Verizon/Cable Deals Could Offer Guidance from FCC,” TR Daily (June 12, 2012).

⁶⁹ See Union Tel. Co. Comments, RM No. 11498, at i.

addition to imposing costs on competitors, the expenditure of public or private resources and resulting delay in awarding the spectrum to another bidder impose costs on the public. We seek comment on whether there are additional measures we would need to adopt to promote an effective and efficient auction process while discouraging the potential for anticompetitive behavior. If we continue our case-by-case analysis for secondary market transactions, should we adopt another approach for initial licensing rather than a case-by-case analysis, such as band-specific limits adopted prior to an auction?

2. Bright-Line Limits

20. As discussed above, the Commission employed a CMRS spectrum cap to prevent excessive spectrum concentration, but eliminated that cap in 2003 and then started using the current case-by-case approach. Before employing a CMRS spectrum cap, the Commission used other bright-line limits on spectrum holdings.⁷⁰ There have been many changes in the mobile wireless industry since we first started using a case-by-case approach to assess spectrum concentration, as noted above, and we believe that these changes warrant reevaluating that approach.⁷¹ We seek comment on whether adoption of bright-line limits would serve the public interest now, and also on the specific costs and benefits of adopting such an approach. Bright-line limits could offer providers greater certainty, clarity, and predictability regarding which licenses they could acquire. Bright-line limits might encourage auction participation or more secondary market transactions by affording parties greater certainty and predictability to develop their business plans and obtain necessary financing. On the other hand, a bright-line approach would limit the Commission's flexibility to consider individualized circumstances and to respond swiftly to the changing needs of the mobile wireless industry and consumers. If we were to adopt bright-line limits, how could we do so in a manner that preserves our flexibility?

21. We seek comment on related implementation issues with respect to applying bright-line limits to initial licenses acquired through competitive bidding as well as to licenses acquired through the secondary market. We further seek comment on whether we should consider applying a band-specific spectrum limit in the context of any band-specific service rules that we adopt prior to an auction. Such an approach would be consistent with the Commission's practice of seeking comment on spectrum aggregation issues with respect to particular spectrum bands prior to an auction, would afford auction participants greater certainty, and would allow us to re-evaluate our spectrum aggregation policies in the context of newly available spectrum bands and changing industry and consumer needs.⁷² Further, adopting band-specific spectrum limits generally applicable to all licensees would be consistent with Section 6404 of the *Spectrum Act*, which recognizes the Commission's authority "to adopt and enforce rules of general applicability, including rules concerning spectrum aggregation that promote competition."⁷³ For instance, should we consider adopting limits on the amount of spectrum that entities could acquire in the context of spectrum auctions mandated by the *Spectrum Act*? We seek comment on these approaches.

3. Alternative Approaches

22. We seek comment on any alternative approaches to evaluate the competitive effect of spectrum aggregation. Are there other mechanisms for evaluating spectrum aggregation that would better serve the public interest and meet our statutory objectives? In this regard, we seek comment on whether there are different ways in which we could conduct a case-by-case analysis, such as adopting a case-by-case analysis that does not include an initial spectrum screen. Another approach would be to combine

⁷⁰ See *PCS Second Report and Order*, 8 FCC Rcd 7700, 7728 ¶ 61, 7745 ¶ 106.

⁷¹ See *Second Biennial Review Order*, 16 FCC Rcd at 22694 ¶ 50. See *supra* section II.D.: The Current Wireless Landscape.

⁷² See, e.g., *Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band*, WT Docket No. 07-195, *Notice of Proposed Rulemaking*, 22 FCC Rcd 17035, 17079-80 ¶¶ 101-03 (2007).

⁷³ *Spectrum Act* at § 6404.

some elements of a bright-line limit with a case-by-case analysis. One hybrid approach would be to adopt a bright-line threshold that, if exceeded, would trigger a heightened burden on the applicants to demonstrate that approval of the proposed transaction would be in the public interest. We seek comment on these approaches and how they could be implemented, and on any other alternatives.

B. Implementation Issues

23. Certain threshold issues would need to be considered if the Commission were to adopt any new or modified approach to reviewing mobile spectrum holdings, including establishing initial definitions such as the relevant product and geographic markets, assessing the spectrum bands that should be included, and deciding how to treat different spectrum bands. Finally, we discuss attribution and remedies, and explore whether there are other factors for us to consider in this area.

1. Relevant Product Market

24. In order to assess competition in a given market, the Commission has initiated its analysis of a proposed transaction by establishing definitions for the relevant product market. In recent wireless transactions, the Commission has determined that the relevant product market is a combined “mobile telephony/broadband services” product market,⁷⁴ comprised of mobile voice and data services, including mobile voice and data services provided over advanced broadband wireless networks (mobile broadband services).⁷⁵ In *AT&T-Qualcomm* and *Verizon Wireless-SpectrumCo*, while the Commission evaluated the transaction using a combined mobile telephony/broadband market, it recognized the growing importance of mobile broadband services and focused its analysis to an increasing degree on mobile broadband services.⁷⁶

25. We seek comment on whether the Commission’s current approach to the product market definition continues to be appropriate. Given the transition to data-centric services and the development of more spectrum-efficient technologies that will transmit voice as data,⁷⁷ we seek comment on whether the relevant product market has changed and, if so, whether these changes warrant any modifications to our product market definition. For example, should we modify the relevant product market definition to reflect differentiated service offerings, devices, and contract features?⁷⁸ We also seek comment on whether we should separately define smaller product markets that may be nested within a larger defined product market and, if so, how we would analyze such smaller defined product markets vis-à-vis the larger defined product market. What are the costs and benefits if we were to modify our product market

⁷⁴ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 53; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17603 ¶ 33; *AT&T-Verizon Wireless Order*, 25 FCC Rcd at 8721 ¶ 35; *AT&T-Centennial Order*, 24 FCC Rcd at 13932 ¶ 37. The Commission has previously determined that there are separate relevant product markets for interconnected mobile voice and data services, and also for residential and enterprise services, but found it reasonable to analyze all of these services under a combined mobile telephony/broadband services product market. See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17603 ¶ 33; *AT&T-Verizon Wireless Order*, 25 FCC Rcd at 8721 ¶ 35; *AT&T-Centennial Order*, 24 FCC Rcd at 13932 ¶ 37.

⁷⁵ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 53; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17602-03 ¶¶ 32-33; *AT&T-Verizon Wireless Order*, 25 FCC Rcd at 8721 ¶ 35; *AT&T-Centennial Order*, 24 FCC Rcd at 13932 ¶ 37.

⁷⁶ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶¶ 53, 70; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17602-03 ¶ 32, 17605 ¶ 38.

⁷⁷ One example of changing technology is the development of “Voice over LTE” (or “VoLTE”). See “MetroPCS Unveils First U.S. Voice Over LTE Service, Phone,” by Chloe Albanesius, PCMag.com, Aug. 8, 2012, available at <http://www.pcmag.com/article2/0,2817,2408216,00.asp> (last visited Sept. 6, 2012).

⁷⁸ See American Antitrust Institute Comments, WT Docket No. 11-65, at 6; Sprint Petition to Deny, WT Docket No. 11-65, at 11-15; Free Press Petition to Deny, WT Docket No. 11-65, at 9-12; Greenlining Institute Petition to Deny, WT Docket No. 11-65, at 4, 12-13.

definition versus keeping the current combined “mobile telephony/broadband services” product market or focusing the analysis on mobile broadband services? Commenters also should discuss how their particular approach for the relevant product market definition is supported by economic or antitrust theory.

2. Suitable and Available Spectrum

26. In order to assess whether any particular spectrum acquisition exceeds a certain threshold of available spectrum, we first must determine what spectrum we will include in our overall evaluation. Currently, we include spectrum in our case-by-case analysis if we determine that it is suitable and available for the relevant product market.⁷⁹ “Suitability” is determined by whether the spectrum is capable of supporting mobile service given its physical properties and the state of equipment technology, whether the spectrum is licensed with a mobile allocation and corresponding service rules, and whether the spectrum is committed to another use that effectively precludes its use for the relevant mobile service.⁸⁰ Particular spectrum is considered to be “available” if it is fairly certain that it will meet the criteria for suitable spectrum in the near term.⁸¹ In recent applications of the spectrum screen, the Commission has included cellular, PCS, SMR, and 700 MHz spectrum, as well as AWS-1 and certain BRS spectrum, where available.⁸²

27. Should we continue to consider spectrum based on its suitability and availability for a given product market? Are there other factors that we should consider in determining whether particular spectrum bands are suitable and available for the relevant product market? We seek comment on any measures that might increase the transparency with which we determine what spectrum we would include in a case-by-case spectrum analysis or in implementing bright-line limits. For example, should we adopt a regular process to add or remove existing or newly allocated spectrum bands for purposes of assessing spectrum concentration? We also seek comment on the costs and benefits of implementing a new process for identifying the spectrum to include in a case-by-case spectrum analysis. We seek comment on the legal, economic, and engineering justifications to support the existing or any modified criteria for determining the suitability and availability of spectrum.

28. While mobile wireless operators primarily have used licenses associated with three different frequency bands to provide mobile voice and, in most cases, mobile data services – cellular (in the 850 MHz band), SMR (in the 800/900 MHz band), and broadband PCS (in the 1.9 GHz band) – providers are now incorporating additional spectrum bands into their networks, such as BRS and EBS in the 2.5 GHz band, AWS in the 1.7/2.1 GHz band, and the 700 MHz band. These bands enable the provision of additional competitive mobile voice and data services.⁸³ In several recent transactions, some parties have suggested modifying our spectrum analysis to include additional spectrum bands, such as the BRS spectrum that is not currently included in the screen, EBS, or MSS.⁸⁴ Others also have argued in favor of including WCS spectrum, citing certain changes the Commission made to the WCS technical

⁷⁹ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 59; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17605-06 ¶ 38; *AT&T-Centennial Order*, 24 FCC Rcd at 13935 ¶ 43.

⁸⁰ See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17605-06 ¶ 38; *AT&T-Centennial Order*, 24 FCC Rcd at 13935 ¶ 43; *Verizon Wireless-ALLTEL Order*, 23 FCC Rcd at 17473 ¶ 53.

⁸¹ See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17606 ¶ 38.

⁸² See, e.g., *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 59; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17605-06 ¶ 39; *AT&T-Centennial Order*, 24 FCC Rcd at 13935 ¶ 43.

⁸³ See *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9822-23 ¶ 269.

⁸⁴ See, e.g., *AT&T-Qualcomm Order*, 26 FCC Rcd at 17606-07 ¶ 40; AT&T-Qualcomm Application, Public Interest Statement, WT Docket No. 11-18, at 22-27.

service rules that enable licensees to provide mobile broadband service in a portion of the WCS band.⁸⁵ Aside from general factors we should consider in determining whether spectrum is suitable and available, we also seek comment on the application of these factors to particular spectrum bands. Which spectrum bands should be included in our spectrum analysis? In particular, at what point should television broadcast spectrum that is repurposed in the incentive auction be included in our analysis?⁸⁶ Commenters also should discuss at what point other spectrum bands, such as WCS and the frequencies the Commission is required to auction under the *Spectrum Act*,⁸⁷ should be included in our analysis. Are there any band-specific factors we may want to consider in determining suitability and availability of a particular band? Further, we seek comment on whether there are any economic or technical justifications that would warrant modifying the criteria we use to determine the suitability and availability of spectrum. For example, should we consider factors such as channel size, potential interference issues, or conditions that may develop after the allocation and licensing of spectrum (such as technological developments that affect the timely deployment of services)? If we were to modify the criteria we use to determine the suitability and availability of spectrum, how could we do so in a manner that promotes clarity and predictability?⁸⁸

29. Further, we seek comment on whether we should remove any spectrum bands from our consideration. For instance, the Commission recently indicated that, as the provision of mobile broadband services becomes increasingly central to wireless transactions, it may be appropriate to reduce the amount of suitable SMR spectrum from 26.5 megahertz to 14 megahertz to reflect the portion of SMR spectrum through which mobile broadband service can be provided.⁸⁹ We seek comment on how much SMR spectrum is suitable and available in the near term for mobile broadband services.⁹⁰ We note that the Upper 700 MHz D Block is to be reallocated for public safety service rather than commercial service. We seek comment, however, on whether and how, pursuant to Section 6101 of the *Spectrum Act*,⁹¹ this spectrum and the existing public safety broadband spectrum may be relevant to our spectrum analysis in the event such spectrum is leased to a commercial licensee pursuant to this section of the *Spectrum Act*.⁹² We seek comment on these considerations, and whether there are any additional spectrum bands that should be reduced or removed from our analysis.

3. Relevant Geographic Market Area

30. Defining the relevant geographic market is important in accurately assessing the competitive effects that may result from a potential transaction. This can be a difficult process in some instances, as the licensed areas of different spectrum bands, and even within the same band, may not be

⁸⁵ See, e.g., RCA Petition to Deny, WT Docket No. 11-18, at 10-11. See also Amendment of Part 27 of the Commission's Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band, *Report and Order*, 25 FCC Rcd 11710, 11711 ¶ 1 (2010) (*WCS Report and Order*), recon. pending.

⁸⁶ See Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268, *Notice of Proposed Rulemaking*, FCC 12-118 (adopted Sept. 28, 2012).

⁸⁷ See *Spectrum Act* at § 6401 (identifying the following bands 1915-1920 MHz, 1995-2000 MHz, and 2155-2180 MHz).

⁸⁸ We also seek comment below on whether such factors should be reflected in any valuation approach. See *infra* at ¶ 38.

⁸⁹ See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17607 ¶ 42.

⁹⁰ See Improving Spectrum Efficiency Through Flexible Channel Spacing and Bandwidth Utilization for Economic Area-Based 800 MHz Specialized Mobile Radio Licensees, WT Docket No. 12-64, *Report and Order*, 27 FCC Rcd 6489 (2012).

⁹¹ See *Spectrum Act* at § 6101.

⁹² See *Spectrum Act* at § 6101.

the same.⁹³ Under the case-by-case analysis, the Commission has found that relevant geographic markets are local, larger than counties, may encompass multiple counties, and, depending on the consumer's location, may even include parts of more than one state.⁹⁴ The Commission has primarily used Cellular Market Areas (CMAs)⁹⁵ as the local geographic markets in which to analyze the potential competitive harms arising from spectrum concentration as a result of the transaction.⁹⁶

31. In the recent *Verizon Wireless-SpectrumCo Order*, the Commission found that it was appropriate to analyze the local markets in which consumers purchase mobile wireless services where they live, work, and shop.⁹⁷ The Commission also considered the potential nationwide competitive impacts of the transaction because the proposed acquisition would be in the majority of markets across the country and harms that may occur at the local level collectively could have nationwide competitive effects.⁹⁸ The Commission noted that although there are local geographic markets for retail wireless services, prices and service plan offerings do not vary for most providers across most geographic markets.⁹⁹ Moreover, the four nationwide providers, as well as other providers of retail mobile telephony/broadband services, set the same rates for a given plan everywhere and advertise nationally.¹⁰⁰ Also, mobile broadband equipment and devices are developed and deployed primarily on a national scale.¹⁰¹

32. In light of the above, we seek comment on the appropriate geographic market definition to use when evaluating a licensee's mobile spectrum holdings. If we were to adopt bright-line limits or continue to use a case-by case analysis, what should be the applicable geographic market? Should we adopt a two-tiered approach under which there is a spectrum threshold at the local level and a separate threshold that applies on a nationwide basis?¹⁰² Is there another approach that would allow us to consider both local and national competitive effects in establishing a spectrum threshold for bright-line limits or

⁹³ Cf., *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9693 ¶ 24.

⁹⁴ See, e.g., *AT&T-Qualcomm Order*, 26 FCC Rcd at 17604 ¶ 34; *Cingular-AT&T Wireless Order*, 19 FCC Rcd at 21562-63 ¶¶ 89-90; 21561 ¶ 82 (citing the Supreme Court's definition of a relevant geographic market in *Tampa Electric Co. v. Nashville Coal Co.*, 365 U.S. 320, 327 (1961) as "the area of effective competition to which purchasers can practicably turn for services"). The Commission based its findings on the "hypothetical monopolist test." Under the DOJ/FTC Horizontal Merger Guidelines, the hypothetical monopolist test ensures that markets are not defined too narrowly, but it does not lead to a single relevant market. The Guidelines also provide that "the Agencies may evaluate a merger in any relevant market satisfying the test, guided by the overarching principle that the purpose of defining the market and measuring market shares is to illuminate the evaluation of competitive effects." See DOJ/FTC Horizontal Merger Guidelines § 4.1.1.

⁹⁵ CMAs are standard geographic areas used for the licensing of cellular systems and are comprised of Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs). See 47 C.F.R. § 22.909; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17603 ¶ 32 n.96.

⁹⁶ See, e.g., *AT&T-Qualcomm Order*, 26 FCC Rcd at 17604 ¶ 34.

⁹⁷ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 58.

⁹⁸ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 58; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17603-05 ¶¶ 32, 34.

⁹⁹ See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17604 ¶ 35.

¹⁰⁰ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 57; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17604 ¶ 35.

¹⁰¹ See *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 57; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17605 ¶ 35.

¹⁰² See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17603 ¶ 32 (finding that it was appropriate to analyze competitive effects on both a national and local level).

case-by-case analysis? Commenters should discuss any other issues with respect to geographic market definition that might be relevant to adopting a bright-line limit, case-by-case analysis, or any other approach that would promote competition and prevent excessive concentration of spectrum in any given area.

4. Applicable Spectrum Threshold

33. As part of the current case-by-case review process, the Commission examines the amount of spectrum suitable and available on a market-by-market basis for the provision of mobile telephony/broadband service. The Commission uses a spectrum screen, which is approximately one-third of the total spectrum suitable and available for mobile telephony/broadband services, to help identify markets where the acquisition of spectrum provides particular reason for further competitive analysis. The Commission conducts the further competitive analysis to determine whether the transaction would result in an increased likelihood or ability in those markets for the combined entity to behave in an anticompetitive manner.¹⁰³

34. The spectrum threshold can affect the number of competitors in a geographic market. The one-third threshold currently used in our case-by-case review envisions at least three competitors having access to approximately the same amount of suitable spectrum for providing mobile wireless broadband service. Whether we use the threshold in a case-by-case review or as a bright-line limit, is one-third the appropriate threshold level, or should the threshold be higher in rural areas? Given that the licensed geographic areas of different spectrum bands, and even within the same band, may not be the same, commenters should address any issue that may arise in calculating mobile spectrum holdings at the local level. Finally, for transactions that involve a large geographic area with national characteristics, we seek comment on how to calculate mobile spectrum holdings at the national level.¹⁰⁴ For example, should we use an approach similar to the one used in *AT&T-Qualcomm*, in which the Commission calculated providers' spectrum holdings on a "MHz*POPs" basis?¹⁰⁵ Would it be better to use population-weighted average megahertz, which the Commission reported in the *Verizon Wireless-SpectrumCo Order*,¹⁰⁶ and/or a nationwide-weighted average market share? Are there are other methods to compute spectrum holdings at the national level?

5. Making Distinctions Among Bands

35. We also seek comment on whether we should adopt an approach to evaluating a licensee's mobile spectrum holdings that accounts for differing characteristics of spectrum bands. The Commission has recognized that spectrum resources in different frequency bands can have disparate technical characteristics that affect how the bands can be used to deliver mobile services.¹⁰⁷ In particular, the Commission has noted that the more favorable propagation characteristics of lower frequency spectrum, *i.e.*, spectrum below 1 GHz, allow for better coverage across larger geographic areas and inside

¹⁰³ See Section III.A.1, *supra*.

¹⁰⁴ See also the discussion regarding evaluating competitive effects at the national level in Section III.B.3, *supra*.

¹⁰⁵ See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17608 ¶ 45. The Commission noted that it calculated MHz*POPs by multiplying the megahertz of spectrum held in an area by the population in that area. See *id.* n.128.

¹⁰⁶ *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 77. Population-weighted average megahertz is calculated by adding the provider's MHz*POPs and dividing by the U.S. population. See *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9830 ¶ 288, 9831, Table 28.

¹⁰⁷ See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17609-11 ¶ 49. See also *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9832-37 ¶¶ 289-97. In its consideration of mobile wireless competition issues, the DOJ has noted the differences between the use of lower and higher frequency bands. See, *e.g.*, *United States of America et al. v. Verizon Communications Inc. and ALLTEL Corporation*, Competitive Impact Statement, Case No. 08-cv-1878, at 5-6 (filed Oct. 30, 2008), available at <http://www.justice.gov/atr/cases/f238900/238947.pdf> (last visited Sept. 6, 2012).

buildings,¹⁰⁸ while higher frequency spectrum may be well-suited for providing capacity, such as in high-traffic urban areas.¹⁰⁹ Because the properties of lower and higher frequency spectrum are complementary, the Commission has recognized that both types of spectrum may be helpful for the development of an effective nationwide competitor that can address both coverage and capacity needs.¹¹⁰ The Commission also has noted that there currently is significantly more spectrum above 1 GHz potentially available for mobile broadband services than spectrum below 1 GHz.¹¹¹ We seek comment on whether our policies regarding mobile spectrum holdings should include separate consideration of spectrum in different frequency bands, *e.g.*, below or above 1 GHz. Would a separate spectrum threshold limit for spectrum holdings below 1 GHz, as some countries have adopted, advance the goals of promoting wireless competition, innovation, investments and broadband deployment in rural areas?¹¹²

36. If the Commission were to adopt differential treatment for different spectrum bands, what mechanism should we use to evaluate the aggregation of below 1 GHz spectrum? Should we add a threshold limit for below 1 GHz spectrum as part of our current case-by-case review? For example, we could establish a trigger under which an entity that would hold, post-transaction, more than one third of the relevant spectrum below 1 GHz in a geographic market would be subject to a more detailed competitive review in that market. Or, alternatively, we could establish bright-line limits for spectrum holdings below 1 GHz. If so, what should those limits be? Should we consider adopting limits on the amount of below 1 GHz spectrum that entities could acquire in the context of spectrum auctions? We also could adopt a hybrid approach, for instance, in which we establish a bright-line limit for below 1 GHz spectrum and conduct a case-by-case analysis of total mobile spectrum holdings. Under such an approach, no licensees could aggregate more than the specified percentage of spectrum below 1 GHz in the market, but we would conduct a case-by-case review on total mobile spectrum holdings, with a particular focus on markets where an applicant's post-transaction spectrum holdings would exceed a spectrum screen threshold. What are the costs and benefits of these various approaches? Is 1 GHz an appropriate demarcation line for a separate competitive analysis and associated threshold? Consistent

¹⁰⁸ See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17609-11 ¶ 49. See also, *e.g.*, Service Rules for the 698-746, 747-762 and 777-792 MHz Band, WT Docket No. 06-150, *Second Report and Order*, 22 FCC Rcd 15289, 15349 ¶ 158, 15354-55 ¶ 176, 15400-401 ¶ 304 (2007); Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, *Second Report and Order and Memorandum Opinion and Order*, 23 FCC Rcd 16807, 16820-21 ¶ 32 (2008); Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, *Second Memorandum Opinion and Order*, 25 FCC Rcd 18661, 18662 ¶ 1 (2010).

¹⁰⁹ See *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9832 ¶ 289, 9836 ¶ 296; see also *AT&T-Qualcomm Order*, 26 FCC Rcd at 17609-11 ¶ 49.

¹¹⁰ See, *e.g.*, *AT&T-Qualcomm Order*, 26 FCC Rcd at 17609-11 ¶ 49, n.140; *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9837 ¶ 297.

¹¹¹ See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17611 ¶ 49; *Fifteenth Mobile Wireless Competition Report*, 26 FCC Rcd at 9836 ¶ 296.

¹¹² Some countries conducting or planning auctions of spectrum reclaimed as part of the transition from analog to digital television have adopted various measures that recognize the differences between lower-frequency and higher-frequency spectrum in the context of spectrum aggregation limits. See, *e.g.*, Federal Network Agency, Decisions of the President's Chamber of the Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway of 12 October 2009 on Combining the Award of Spectrum in the Bands 790 to 862 MHz, 1710 to 1725 MHz and 1805 to 1820 MHz with Proceedings to Award Spectrum in the Bands 1.8 GHz, 2 GHz and 2.6 GHz for Wireless Access for the Provision of Telecommunications Services, at 6 (2009), available at http://www.bundesnetzagentur.de/cae/servlet/contentblob/138364/publicationFile/3682/DecisionPresidentChamberTenor_ID17495pdf.pdf (adopting limits on sub-1GHz spectrum in Germany's 4G auction) (last visited Sept. 6, 2012); Office of Communications (Ofcom), *Statement on Assessment of Future Mobile Competition and Award of 800 MHz and 2.6 GHz*, at Executive Summary, page 3, (2012), available at <http://stakeholders.ofcom.org.uk/binaries/consultations/award-800mhz/statement/Statement-summary.pdf> (adopting limits on sub-1 GHz spectrum in United Kingdom's upcoming 4G auction) (last visited Sept. 6, 2012).

with our intention regarding the applicability of any revised policies for overall spectrum holdings,¹¹³ we would not anticipate revisiting licensees' current spectrum holdings under any revised policy for below 1 GHz spectrum, but instead would grandfather those holdings.

37. Are there other ways we should distinguish among spectrum bands, such as taking into account the value of spectrum held by each licensee rather than the amount of spectrum held, as some parties have proposed?¹¹⁴ For example, Sprint Nextel has proposed that an analysis of the book values of spectrum holdings as reflected in providers' SEC filings would be helpful in our analysis.¹¹⁵ To address what it contends is a growing "spectrum gap" between the largest spectrum providers and other competing providers, Public Knowledge suggested, among other things, that spectrum be weighted by its suitability for mobile data use and, further, that spectrum held by providers with substantial existing spectrum holdings or spectrum that has not yet been built out be weighted more heavily.¹¹⁶ Free Press similarly argued that the Commission should use "inputs that determine value" and suggested that these inputs should primarily be "wavelength, contiguous block size, block pairing, market density and demographics, and interference issues."¹¹⁷ T-Mobile has asked the Commission to recognize the difference in value of spectrum above and below 1 GHz by assigning different value weights to each of the spectrum bands.¹¹⁸ The value weights would be derived from analysts' reports, which in turn are based on prices paid at auction and publicly available information about spectrum transactions.¹¹⁹ T-Mobile proposed the following specific value weights: cellular, 1.7; 700 MHz, 1.5; SMR, 1.5; AWS/PCS, .75; and BRS, .2.¹²⁰ AT&T argued that we should not adopt such an approach for several reasons, including because the Commission already considers propagation and other physical characteristics in determining whether to count spectrum in the case-by case analysis, the marketplace already accounts for cost differences between different spectrum bands, and there are many factors other than propagation characteristics that determine the relative value of spectrum.¹²¹ We seek comment on these suggested approaches.

38. If we were to assign value to spectrum for purposes of our policy on mobile spectrum holdings, what variables should we consider? We recognize, for example, that license values tend to vary with geographic location.¹²² Moreover, in recent auctions, licenses in densely populated markets generally were sold at higher winning bids than those in less populated areas.¹²³ The value of a license

¹¹³ See *infra* at ¶ 49.

¹¹⁴ See Free Press Reply To Opposition, WT Docket No. 12-4, at 23; Free Press Petition to Deny, WT Docket No. 12-4, at 12; Public Knowledge *et al.* Petition to Deny, WT Docket No. 12-4, at 47; RCA Petition to Condition or Deny, WT Docket No. 12-4, at 52; T-Mobile Comments, WT Docket No. 11-186, at 6-7.

¹¹⁵ See Sprint Nextel Comments, WT Docket No. 12-4, at 18 n. 45.

¹¹⁶ See Letter from Harold Feld, Legal Director, Public Knowledge, to Marlene Dortch, Secretary, FCC, WT Docket No. 12-4 (Apr. 30, 2012) at 3.

¹¹⁷ See Free Press Petition to Deny, WT Docket No. 12-4, at 16.

¹¹⁸ See T-Mobile Comments, WT Docket No. 11-186, at 6-8.

¹¹⁹ See T-Mobile Comments, WT Docket No. 11-186, at 7.

¹²⁰ See T-Mobile Comments, WT Docket No. 11-186, at 7.

¹²¹ See AT&T Supplemental Reply Comments, WT Docket No. 11-186, at 6-13.

¹²² See Kimberly M. Randolph, *Spectrum Licenses: Valuation Intricacies*, available at <http://www.srr.com/article/spectrum-licenses-valuation-intricacies> (last visited Sept. 6, 2012).

¹²³ For example, in the 700 MHz band auction (Auction No. 73), the winning bid for the lower 700 MHz B-Block license in New York City (\$4.57 per MHz*POP, or \$884 million) was much higher, both in dollars per MHz per person and in total dollars, than the winning bid for the lower 700 MHz B Block license in Binghamton, NY (\$.04 (continued...))

can also depend on its location within the spectrum band.¹²⁴ For instance, spectrum blocks at the edge of a band can be less valuable due to the increased risk of interference to and from operations on neighboring bands.¹²⁵ Should we take these factors into account in assigning value to licenses? Should we consider changes in the value of spectrum as technology evolves?¹²⁶ As a practical matter, how should we quantify differences in value? How would we use spectrum valuation in applying bright-line limits, as opposed to a case-by-case analysis? What are the costs and benefits of attaching a value to spectrum?

39. We seek comment on other methods or considerations that might be relevant in reviewing our policies regarding mobile spectrum holdings. In our current case-by-case approach, we consider factors such as the number of rival service providers, firms' network coverage, rival firms' and the licensee's market shares, the applicant's post-transaction spectrum holdings, and the spectrum holdings of each of the rival service providers.¹²⁷ Should we modify the factors we consider or include other marketplace conditions that may affect competition? For example, in order to be considered a meaningful competitor for purposes of a market-by-market analysis, should a licensee have a particular weighted average market share or hold a particular amount of spectrum in the geographic market at issue? We also seek comment on how we should take into account special circumstances, such as how efficiently the licensee is using its existing spectrum resources and whether it has alternatives to meet its competitive needs aside from acquiring more spectrum. Would imposing some level of spectral efficiency and/or a spectrum utilization requirement, perhaps coupled with a higher level bright-line limit or a higher case-by-case spectrum threshold, help prevent spectrum warehousing and encourage more efficient spectrum use? Some parties have suggested that as part of a case-by-case analysis, the Commission should calculate the spectrum HHI, or the increase in concentration of spectrum shares post-transaction.¹²⁸ What would be the benefits and costs of such measures?

(Continued from previous page) _____

per MHz*POP, or \$186,000). See more information about the 700 MHz band auction, available at http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=73 (last visited on Sept. 6, 2012).

¹²⁴ See Kimberly M. Randolph, *Spectrum Licenses: Valuation Intricacies*, available at <http://www.srr.com/article/spectrum-licenses-valuation-intricacies> (last visited Sept. 6, 2012).

¹²⁵ For example, the average auction price for A-Block licenses was much lower than the average price for B-Block licenses in the lower 700 MHz band. See Auction 73 results, available at http://wireless.fcc.gov/auctions/default.htm?job=releases_auction&id=73&page=P (last visited Sept. 6, 2012). See also ITU Broadband Series, *Exploring the Value and Economic Valuation of Spectrum*, April 2012, page 1, available at http://www.itu.int/ITU-D/treg/broadband/ITU-BB-Reports_SpectrumValue.pdf (last visited Sept. 6, 2012).

¹²⁶ Spectrum values can be affected by technologies adopted by licensees. For example, spectrum aggregation technologies might affect spectrum value. See Mohammed Alotaibi, and Marvin A. Sirbu, *Spectrum Aggregation Technology: Benefit-Cost Analysis and its Impact on Spectrum Value*, at 12-13, 39th Research Conference on Communication, Information, and Internet Policy, 2011, available at http://papers.ssrn.com/so13/papers.cfm?abstract_id=1985738 (last visited Sept. 6, 2012). Similarly, for those service providers that hold spectrum in high frequency bands, Wi-Fi off-load may mitigate the disadvantage of inferior indoor coverage. See J.P. Morgan, *The Economics of Wireless Data—Part 3*, at 50, March 26, 2012, available at https://mm.jpmorgan.com/stp/t/c.do?i=83100-F7&u=a_p*d_814984.pdf*h_-177n712 (last visited Sept. 6, 2012).

¹²⁷ See, e.g., *AT&T-Verizon Wireless Order*, 25 FCC Rcd at 8732 ¶ 63; *Verizon Wireless-ALLTEL Order*, 23 FCC Rcd at 17487-88 ¶ 91.

¹²⁸ For example, U.S. Cellular has argued that the Commission should apply HHI measurements to “greenfield” spectrum acquired at auction. See U.S. Cellular (USCC) Comments, RM No. 11498, at 8; USCC Reply Comments (RM No. 11498) at 2; see also Letter from John Bergmayer, Senior Staff Attorney, Public Knowledge, to Marlene Dortch, Secretary, FCC, WT Docket No. 12-4 (March 27, 2012) at 4; Sprint Nextel Comments, WT Docket No. 12-4, at 19-20; Free Press Reply to Opposition, WT Docket No. 12-4, at 24.

6. Attribution Rules

40. No matter which approach we decide to take, we need attribution rules to determine which of a licensee's spectrum interests counts toward that licensee's total mobile spectrum holdings. Under the spectrum cap, the Commission's attribution rules were designed to protect competition in the wireless services marketplace by making certain equity and non-equity interests attributable. Some non-equity interests in spectrum, as well as equity interests in spectrum that are less than controlling, can potentially confer the ability to significantly influence wireless service offerings and prices to one or a few parties, and we seek to make these interests cognizable under our attribution rules.¹²⁹

41. Over time, while our policies regarding mobile spectrum holdings have changed, our attribution rules consistently have focused on a licensee's controlling interests, as well as non-controlling and other interests above a certain percentage threshold or that result in *de facto* influence or control. Today, when reviewing transactions on a case-by-case basis, the Commission generally considers all equity ownership interests of ten percent or more to be attributable to those interest holders, but it has the flexibility to examine equity and non-equity ownership and other interests that do not meet the ten percent equity interest threshold, as the Commission deems those interests relevant.¹³⁰ In the past, the Commission had attribution rules for counting controlling and some non-controlling interests toward the CMRS spectrum cap that were generally consistent with current practice.¹³¹ Under those rules, the Commission attributed to a licensee's total spectrum holdings both controlling interests and a number of non-controlling interests, including in most cases equity interests of twenty percent or more.¹³² For purposes of its cellular cross-interest rule described above, the Commission generally included as attributable interests, in addition to any controlling interest, partnership and other ownership interests of twenty percent or more.¹³³

42. In light of these past and present approaches, we seek comment on whether and how the attribution rules that are used to implement our policies regarding mobile spectrum holdings should be amended if we decide to continue our existing case-by-case review of transactions or in the event that we alter our transaction review mechanism. Regardless of which approach we decide to take, what interests should be attributable for purposes of reviewing mobile spectrum holdings? The attached draft rules generally follow the attribution standards we currently apply,¹³⁴ but we seek comment on whether we should make any changes in those standards. For instance, we seek comment on what level of non-

¹²⁹ See, e.g., Implementation of Sections 3(n) and 332, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, *Fourth Report and Order*, 9 FCC Rcd 7123, 7124 ¶¶ 5-6 (1994).

¹³⁰ See, e.g., Sprint Nextel Corporation and Clearwire Corporation Applications for Consent to Transfer Control of Licenses, Leases, and Authorizations, WT Docket No. 08-94, *Memorandum Opinion and Order*, 23 FCC Rcd 17570, 17601-02 ¶ 78 (2008) (*Sprint Nextel-Clearwire Order*) (declining to attribute interests below ten percent). See also *AT&T-Centennial Order*, 24 FCC Rcd at 13917 ¶ 7, 13946-47 ¶¶ 71-74.

¹³¹ See 47 C.F.R. § 20.6(d)(1)-(10). The relevant rules governing divestiture of interests are in subsection (e) of the same rule. See 47 C.F.R. § 20.6(e). Section 20.6 ceased to be effective on January 1, 2003. See 47 C.F.R. § 20.6(f). See also 47 C.F.R. § 1.2110 (attribution rules for competitive bidding purposes).

¹³² These non-controlling interests included partnership and other ownership interests; interests of investment companies, insurance companies, and banks holding stock through their trust departments; non-voting stock interests; debt interests and instruments such as warrants, convertible debentures, and options; limited partnership interests; officers and directors; ownership interests held indirectly through an intervening corporation; managing interests; and parties with joint marketing arrangements. See 47 C.F.R. § 20.6(d)(1)-(10). Section 20.6 ceased to be effective on January 1, 2003. See 47 C.F.R. § 20.6(f). See also 47 C.F.R. § 1.2110 (attribution rules for competitive bidding purposes).

¹³³ See 47 C.F.R. § 22.942 (repealed 2004), available at <http://www.gpo.gov/fdsys/pkg/CFR-2002-title47-vol2/pdf/CFR-2002-title47-vol2-sec22-942.pdf> (last visited Sept. 6, 2012).

¹³⁴ See Appendix A: Proposed Rules.

controlling interest should be attributable, and whether that level should be different whether we adopt a case-by-case approach or a bright-line limit. We seek comment on the types of interests that should be of primary importance when we review proposed transactions, and whether and how the importance of any attributable interests may have changed over time. Should we define as attributable any interests that have not been attributed in the past or exclude any non-controlling interests that have been attributed in the past? If we make any changes to our spectrum holdings review process, how, if at all, should we attribute leased mobile spectrum holdings? Finally, we note that the draft attribution rules include a waiver provision. We seek comment on this provision.

7. Remedies

43. In considering applications for initial licenses and applications for the assignment or transfer of control of licenses, including spectrum leasing, the Commission must determine whether the applicants have demonstrated that the application will serve the public interest, convenience, and necessity.¹³⁵ The Commission reviews the competitive effects of a transaction under the broad public interest standard,¹³⁶ and may impose remedies, such as requiring divestitures of certain licenses, to address potential harms likely to result from a transaction or to help ensure the realization of potential benefits promised for the transaction.¹³⁷

44. We seek comment on what remedies, including divestitures, would be appropriate for the Commission to require in order to prevent competitive harm. We seek comment on the value of divestitures as a remedy to redress particular competitive harms, and whether different approaches or types of divestitures would best serve the Commission's goals, including providing clarity and certainty to parties while promoting competition. If granting a license application or an assignment or transfer of control of licenses to a licensee would result in competitive harm, should that licensee be required to divest spectrum only in markets where it would exceed the spectrum aggregation threshold, or should it be required to divest more broadly across its licensed markets, and under what, if any, conditions? We note that there are a number of approaches to divestitures, including a clustered approach that would require divestitures of population centers to allow a prospective purchaser to offer a viable service and to minimize or prevent piecemeal divestiture.¹³⁸ Other approaches could include full business unit divestitures, spectrum-only divestitures, divestitures with a "right of first refusal" to a particular set of licensees, particular limits on parties that have licenses divested to them (such as requiring divestiture to rural or midsize carriers that may be in a position to offer roaming),¹³⁹ or divestiture of spectrum by sale on the secondary market. We seek comment on these or other approaches, including remedies that could provide greater predictability to allow the industry to better make needed investment decisions. We also seek comment on measures we can adopt to facilitate spectrum being divested expeditiously to licensees that will put it to use quickly and efficiently.¹⁴⁰ If we decide to permit divestiture of spectrum by sale on the secondary market, what conditions, limits, or other rules should apply?

45. Many licensees hold spectrum in multiple frequency bands with different propagation or

¹³⁵ 47 U.S.C. § 310(d).

¹³⁶ See, e.g., *AT&T-Qualcomm Order*, 26 FCC Rcd at 17599-600 ¶ 25.

¹³⁷ See, e.g., *AT&T-Verizon Wireless Order*, 25 FCC Rcd at 8718 ¶ 25; *AT&T-Centennial Order*, 24 FCC Rcd at 13929 ¶ 30; *Verizon Wireless-ALLTEL Order*, 23 FCC Rcd at 17463 ¶ 29; *Sprint Nextel-Clearwire Order*, 23 FCC Rcd at 17582 ¶ 22; *Cingular-AT&T Wireless Order*, 19 FCC Rcd at 21546 ¶ 43.

¹³⁸ See *Verizon Wireless-ALLTEL Order*, 23 FCC Rcd at 17517 ¶ 160.

¹³⁹ See *id.*

¹⁴⁰ *Verizon Wireless-SpectrumCo Order*, FCC 12-95, Statement of Commissioner Ajit Pai, approving in part and concurring in part, at 1, available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0823/FCC-12-95A6.pdf (last visited Sept. 6, 2012).

other characteristics, and some spectrum holdings may be more valuable than others. Some parties have proposed that the Commission should adopt different criteria for divestiture based on whether the spectrum to be divested is from lower or upper frequency bands¹⁴¹ or is immediately “useable” by another licensee, perhaps for a particular technology.¹⁴² We seek comment on these proposals and any other factors we should consider when determining which and how much spectrum should be divested to prevent competitive harms. We also seek comment on any other approach to spectrum divestiture that would meet our goals of promoting competition yet make our policies regarding mobile spectrum holdings more clear, transparent, and predictable.

46. As an alternative or supplement to divestiture, we have also placed conditions on transactions to remedy certain aspects that may be contrary to the public interest, convenience, and necessity, including any potential anti-competitive effects of the transaction. For example, in the *Verizon Wireless-ALLTEL Order*, in addition to requiring divestiture, the Commission conditioned its approval on Verizon Wireless’s commitments regarding roaming availability and rates, a phase down of competitive ETC high cost support, and using counties for measuring compliance with the Commission’s E911 location accuracy rules governing handset-based technologies.¹⁴³ In the *AT&T-Qualcomm Order*, as another example, the Commission required AT&T to make roaming commitments and imposed additional conditions designed to protect against interference with competitors using neighboring 700 MHz spectrum.¹⁴⁴ In the *Verizon Wireless-SpectrumCo Order*, the Commission required Verizon Wireless to make roaming commitments and imposed accelerated buildout requirements on the AWS-1 spectrum Verizon Wireless acquired.¹⁴⁵ We seek comment on the extent to which we should remedy the potential harms posed by a transaction by placing other conditions, such as, for example, requirements to offer leasing, roaming or collocation, in conjunction with, or in lieu of, requiring divestitures. Would application of such remedies be appropriate if we adopt bright-line limits? How can we provide clarity and guidance on such remedies and the circumstances under which such remedies may be appropriate?

47. We also seek comment on whether there are other remedial approaches we could require and how we might apply them. Commenters should discuss and, to the extent possible, quantify any associated costs or benefits of implementing any remedial approaches or any other proposals. Commenters should address the particular benefits associated with these remedies, and the cost savings, if any, that may be available from requiring certain conditioned spectrum access.

48. With regard to spectrum acquired through competitive bidding, the Commission prospectively applies a competitive analysis of spectrum to be acquired through auctions in order to determine whether granting a winning bidder’s license application is in the public interest and whether requiring divestiture prior to granting such application is necessary to protect the public interest.¹⁴⁶ We seek comment on what changes and clarifications might be needed in using divestiture as a remedy to cure competitive harm resulting from spectrum acquired in an auction in the context of a case-by case analysis. Are there any differences or additional considerations among remedies that are applicable to spectrum acquired through auctions and those applicable to licenses acquired through secondary market transactions? What else should we take into account when determining and applying remedies in the

¹⁴¹ See Letter from Carl W. Northrop, Counsel for MetroPCS, to Marlene Dortch, Secretary, FCC, WT Docket No. 12-4, (Apr. 26, 2012) at 3; see also RCA Reply to Opposition to Petition to Condition or Otherwise Deny Transactions, WT Docket No. 12-4, at 35.

¹⁴² See, e.g., RCA Reply Comments, WT Docket No. 12-4, at 35; RCA Petition to Condition or Deny, WT Docket No. 12-4, at 55.

¹⁴³ See *Verizon Wireless-ALLTEL Order*, 23 FCC Rcd at 17546-47 ¶ 233.

¹⁴⁴ See *AT&T-Qualcomm Order*, 26 FCC Rcd at 17613-14 ¶¶ 56-57, 17616-18 ¶¶ 61-68.

¹⁴⁵ *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 121.

¹⁴⁶ *Verizon Wireless-Union Tel. Order*, 23 FCC Rcd at 16791 ¶ 9.

event we adopt bright-line limits that apply in an auction?

8. Transition Issues

49. If we were to change our current case-by-case approach or adopt new rules or policies, we seek comment on transition issues to consider as new rules or policies are implemented. For example, we would not anticipate revisiting licensees' current spectrum holdings under any revised policy, but instead we would anticipate grandfathering those holdings. We seek comment on that issue, as well as on any other transition issues that may arise in implementing the new rules or policies.

IV. PROCEDURAL MATTERS

A. Initial Regulatory Flexibility Analysis

50. As required by the Regulatory Flexibility Act of 1980 (RFA),¹⁴⁷ the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules proposed in the *NPRM*. The analysis is found in Appendix B. We request written public comment on the analysis. Comments must be filed by the same dates as listed on the first page of this document and must have a separate and distinct heading designating them as responses to the IRFA. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of this Notice, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

B. Paperwork Reduction Act Analysis

51. This document does not contain proposed information collection(s) subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4).

C. Ex Parte Rules

52. *Permit-But-Disclose*. The proceeding initiated by this Notice of Proposed Rulemaking shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.¹⁴⁸ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must: (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda, or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

¹⁴⁷ 5 U.S.C. § 603.

¹⁴⁸ 47 C.F.R. § 1.1200 *et seq.*

D. Filing Requirements

53. Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

54. *Availability of Documents.* Comments, reply comments, and *ex parte* submissions will be available for public inspection during regular business hours in the FCC Reference Center, Federal Communications Commission, 445 12th Street, S.W., CY-A257, Washington, D.C., 20554. These documents will also be available via ECFS. Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat.

55. *Accessibility Information.* To request information in accessible formats (computer diskettes, large print, audio recording, and Braille), send an e-mail to fcc504@fcc.gov or call the FCC's Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY). This document can also be downloaded in Word and Portable Document Format (PDF) at: <http://www.fcc.gov>.

56. *Additional Information.* For additional information on this proceeding, contact Christina Clearwater, Christina.Clearwater@fcc.gov, of the Wireless Telecommunications Bureau, Spectrum and Competition Policy Division, (202) 418-1893 or Nicole McGinnis, Nicole.McGinnis@fcc.gov, of the Wireless Telecommunications Bureau, Spectrum and Competition Policy Division, (202) 418-2877.

V. ORDERING CLAUSES

57. Accordingly, IT IS ORDERED, pursuant to Sections 1, 2, 4(i), 4(j), 301, 303(g), 303(r), 309(j) and 310(d) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 154(j), 301, 303(g), 303(r), 309(j) and 310(d), that this Notice of Proposed Rulemaking in WT Docket No. 12-269 IS ADOPTED.

58. IT IS FURTHER ORDERED that the Commission's Consumer & Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small

Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A**Proposed Rules**

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR part 20 as follows:

PART 20 – COMMERCIAL MOBILE SERVICES

1. The authority citation for Part 20 continues to read as follows:

Authority: 47 U.S.C. 154, 160, 201, 251-254, 301, 303, 316, and 332 unless otherwise noted. Section 20.12 is also issued under 47 U.S.C. 1302.

2. Part 20 – COMMERCIAL MOBILE SERVICES is amended by adding section 20.21 to read as follows:

§ 20.21 Rules Governing Mobile Spectrum Holdings

(a) This section applies to mobile spectrum holdings that are suitable and available for commercial use. Applicants for mobile spectrum licenses for commercial use, for assignment or transfer of control of such licenses, or for long-term *de facto* transfer leasing arrangements as defined in § 1.9003 of Subpart X of Part 1 of these rules and long-term spectrum manager leasing arrangements as identified in § 1.9020(e)(1)(ii) must demonstrate that the public interest, convenience, and necessity will be served thereby. The Commission will evaluate any such license application consistent with the standards set forth in WT Docket No. 12-269.

(b) Divestiture of interests as required by the Commission, in conjunction with the grant of a license application or a transfer of control or assignment of authorization, must occur expeditiously, and within the time period specified by the Commission.

(c) *Attribution of Interests.* Ownership and other interests in mobile spectrum holdings for commercial use will be attributable to their holders pursuant to the following criteria:

(1) Controlling interests shall be attributable. Controlling interest means majority voting equity ownership, any general partnership interest, or any means of actual working control (including negative control) over the operation of the licensee, in whatever manner exercised.

(2) Non-controlling interests of 10 percent or more in mobile spectrum holdings shall be attributable. Non-controlling interests of less than 10 percent in mobile spectrum holdings shall be attributable if the Commission determines that such interest confers *de facto* control, including but not limited to partnership and other ownership interests and any stock interest in a licensee.

(3) The following interests in mobile spectrum shall also be attributable to holders:

(i) Officers and directors of a licensee shall be considered to have an attributable interest in the entity with which they are so associated. The officers and directors of an entity that controls a licensee or applicant shall be considered to have an attributable interest in the licensee.

(ii) Ownership interests that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting

product, except that if the ownership percentage for an interest in any link in the chain exceeds 50 percent or represents actual control, it shall be treated as if it were a 100 percent interest. (For example, if A owns 20% of B, and B owns 40% of licensee C, then A's interest in licensee C would be 8%. If A owns 20% of B, and B owns 51% of licensee C, then A's interest in licensee C would be 20% because B's ownership of C exceeds 50%.)

(iii) Any person who manages the operations of a licensee pursuant to a management agreement shall be considered to have an attributable interest in such licensee if such person, or its affiliate, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence, the nature or types of services offered by such licensee, the terms upon which such services are offered, or the prices charged for such services.

(iv) Any licensee or its affiliate who enters into a joint marketing arrangement with another licensee or its affiliate shall be considered to have an attributable interest in the other licensee's holdings if it has authority to make decisions or otherwise engage in practices or activities that determine or significantly influence the nature or types of services offered by the other licensee, the terms upon which such services are offered, or the prices charged for such services.

(v) Limited partnership interests shall be attributed to limited partners and shall be calculated according to both the percentage of equity paid in and the percentage of distribution of profits and losses.

(vi) Debt and instruments such as warrants, convertible debentures, options, or other interests (except non-voting stock) with rights of conversion to voting interests shall not be attributed unless and until converted or unless the Commission determines that these interests confer *de facto* control.

(vii) Long-term *de facto* transfer leasing arrangements as defined in § 1.9003 of Subpart X of Part 1 of these rules and long-term spectrum manager leasing arrangements as identified in § 1.9020(e)(1)(ii) that enable commercial use shall be attributable to lessees, lessors, sublessees, and sublessors for purposes of this section.

(4) Requests for waivers of paragraph (c) of this section, pursuant to § 1.925 of the Commission rules, must contain the information necessary to make an affirmative showing to the Commission that:

(a) the interest holder is not likely to affect the relevant geographic market(s) in an anticompetitive manner;

(b) the interest holder is not involved in the day-to-day operations of the licensee and does not have the ability to influence the licensee on a regular basis; and

(c) grant of a waiver is in the public interest because the benefits to the public of common ownership outweigh any potential harm to the market.

APPENDIX B

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹⁴⁹ the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact of the policies and rules proposed in the Notice of Proposed Rulemaking (NPRM) on a substantial number of small entities. Written public comments are requested on the IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadline for comments on the NPRM provided in the item. The Commission will send a copy of the NPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).¹⁵⁰ In addition, the NPRM and IRFA (or summaries thereof) will be published in the Federal Register.¹⁵¹

2. Although Section 213 of the Consolidated Appropriations Act of 2000 provides that the RFA shall not apply to the rules and competitive bidding procedures for frequencies in the 746-806 MHz Band,¹⁵² we believe that it would serve the public interest to analyze the possible significant economic impact of the proposed policy and rule changes in this band on a substantial number of small entities. Accordingly, this IRFA contains an analysis of this impact in connection with all spectrum that falls within the scope of the NPRM, including spectrum in the 746-806 MHz Band.

A. Need for, and Objectives of, the Proposed Rules

3. With this NPRM, the Commission initiates a review of its policies governing mobile spectrum holdings in order to ensure that they fulfill our statutory objectives given changes in technology, spectrum availability, and the marketplace since the Commission's last comprehensive review. Specifically, we seek comment on retaining or modifying the current case-by-case analysis used to evaluate mobile spectrum holdings in the context of transactions and auctions, as well as on bright-line limits advocated by some providers and public interest groups. In addition, we seek comment on updating the spectrum bands that should be included in any evaluation of mobile spectrum holdings, and whether we should make distinctions between different bands. We also take a fresh look at the relevant product market, geographic market, and other implementation issues such as attribution rules, remedies, and transition issues. We initiate this proceeding to provide rules of the road that are clear and predictable, and that promote the competition needed to ensure a vibrant, world-leading, innovation-based mobile economy.

4. In our examination of the current case-by-case analysis used to evaluate mobile spectrum holdings, we seek comment on the costs and benefits of a case-by-case analysis to consumers, wireless service providers and others, as well as the overall effectiveness of such an approach in achieving our public policy objectives. We also seek comment on the specific costs and benefits of applying a case-by-case approach to initial licenses acquired through competitive bidding. In this regard, we seek comment on whether a case-by-case analysis affords auction participants sufficient certainty to determine whether they would be allowed to hold a given license post-auction and on whether the lack of a bright-line spectrum limit deters participation or provides an opportunity for bidding, regardless of whether bidders

¹⁴⁹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601 – 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (“SBREFA”), Pub. L. No. 104-121, 110 Stat. 847 (1996).

¹⁵⁰ See 5 U.S.C. § 603(a).

¹⁵¹ *Id.*

¹⁵² In particular, this exemption extends to the requirements imposed by Chapter 6 of Title 5, United States Code; Section 3 of the Small Business Act (15 U.S.C. 632); and Sections 3507 and 3512 of Title 44, United States Code. See Consolidated Appropriations Act 2000, Pub. L. No. 106-113, 113 Stat. 2502, app. E, § 213(a)(4)(A)-(B); *see also* 145 Cong. Rec. H12493-94 (daily ed. Nov. 17, 1999); 47 U.S.C.A. 337 note at § 213(a)(4)(A)-(B).

believe they ultimately would be allowed to hold the licenses, in order to raise bidding costs or foreclose other competitors from acquiring certain licenses. Further, we request comment on whether there are additional measures we would need to adopt to promote an effective and efficient auction process while discouraging the potential for anticompetitive behavior, such as including band-specific limits adopted prior to an auction.

5. In addition, we seek comment on whether the adoption of bright-line limits would serve the public interest now, and on the specific costs and benefits of adopting bright-line limits. We also seek comment on related implementation issues with respect to applying bright-line limits to both initial licenses acquired through competitive bidding as well as to licenses acquired through the secondary market. We further request comment on whether we should consider applying a band-specific spectrum limit in the context of any band-specific service rules that we adopt prior to an auction. Are there any alternative approaches to evaluate the competitive effect of spectrum aggregation, such as adopting a case-by-case analysis that does not include an initial spectrum screen? We seek comment on these approaches and how they could be implemented, and on any other alternatives.

6. If the Commission were to adopt any new or modified approach to reviewing mobile spectrum holdings, certain threshold issues would need to be considered, including initial definitions of the relevant product and geographic markets, deciding the relevant spectrum bands and their treatment, as well as attribution rules and potential remedies. Toward that end, we seek comment on whether the relevant product market has changed and, if so, whether these changes warrant any modifications to our product market definition. We also seek comment on how we should determine what spectrum to include in our overall evaluation. We request comment on any measures that might increase the transparency with which we determine what spectrum we would include in a case-by-case spectrum analysis or in implementing bright-line limits. We further seek comment on the costs and benefits of implementing a new process for identifying the spectrum to include in a case-by-case spectrum analysis. Finally, what are the legal, economic, and engineering justifications to support the existing or any modified criteria for determining suitability and availability of spectrum?

7. Aside from general factors we should consider in determining whether spectrum is suitable and available, we also seek comment on the application of these factors to particular spectrum bands. Specifically, we seek comment on which spectrum bands should be included, reduced, or removed from consideration in our spectrum analysis and whether there are any band-specific factors the Commission should consider in determining suitability and availability of a particular band.

8. The Commission also seeks comment on the appropriate geographic market definition to use when evaluating a licensee's mobile spectrum holdings, including any other issues with respect to geographic market definition that might be relevant to adopting a bright-line limit, case-by-case analysis, or any other approach that would promote competition and prevent excessive concentration of spectrum in any given area. Should we adopt a two-tiered approach under which there is a spectrum threshold at the local level and a separate threshold that applies on a nationwide basis? In addition, we seek comment on the appropriate spectrum threshold to be used in evaluating mobile spectrum holdings, including whether the threshold should be higher in rural areas. For transactions that involve a large geographic area with national characteristics, we also seek comment on how to calculate mobile spectrum holdings at the national level.

9. The Commission has recognized that spectrum resources in different frequency bands can have disparate technical characteristics that affect how the bands can be used to deliver mobile services. Therefore, we seek comment on whether the Commission should adopt an approach to evaluating a licensee's mobile spectrum holdings that accounts for differing characteristics of spectrum bands, including whether the spectrum is below or above 1 GHz. If the Commission were to adopt differential treatment for different spectrum bands, we seek comment on what mechanism we should use to evaluate the aggregation of below 1 GHz spectrum and whether to apply different threshold limits – for example one to spectrum below 1 GHz and another to spectrum above 1 GHz. We also seek comment on whether to take into account the value of spectrum held by each licensee rather than the amount of spectrum held.

If we were to assign value to spectrum, we seek comment on what variables we should consider when doing so. Possible variables include geographic location and location within the spectrum band itself.

10. Further, we seek comment on other methods or considerations that might be relevant in reviewing our policies regarding mobile spectrum holdings. For instance, should we take into account special circumstances, such as how efficiently the licensee is using its existing spectrum resources and whether it has alternatives to meet its competitive needs aside from acquiring more spectrum? As part of a case-by-case analysis, should we calculate the spectrum HHI, or the increase in concentration of spectrum shares post-transaction?

11. No matter which approach we decide to take, we need attribution rules to determine which of a licensee's spectrum interests counts toward that licensee's total mobile spectrum holdings. Whether or not we decide to alter our review mechanism for transactions and license applications, we seek comment on whether and how the attribution rules that are used to implement our policies regarding mobile spectrum holdings should be amended and on what interests should be attributable for purposes of reviewing mobile spectrum holdings. We also seek comment on the types of interests that should be of primary importance when we review proposed transactions, and whether and how the importance of any attributable interests may have changed over time. Additionally, we seek comment on whether we should define as attributable any interests that have not been attributed in the past or exclude any non-controlling interests that have been attributed in the past. Further, if we make any changes to our spectrum holdings review process, how, if at all, should we attribute leased mobile spectrum holdings.

12. In considering applications for initial licenses and applications for the assignment or transfer of control of licenses, including spectrum leasing, the Commission must determine whether the applicants have demonstrated that the application will serve the public interest, convenience, and necessity. The Commission reviews the competitive effects of a transaction under the broad public interest standard, and may impose remedies, such as requiring divestitures of certain licenses, to address potential harms likely to result from a transaction or to help ensure the realization of potential benefits promised for the transaction. With this in mind, we seek comment on what remedies, including divestitures, would be appropriate for the Commission to require in order to prevent competitive harm. We also seek comment on the value of divestitures as a remedy to redress particular competitive harms, and whether different approaches or types of divestitures including a clustered approach, full business unit divestitures, spectrum-only divestitures, divestitures with a "right of first refusal" to a particular set of licensees, particular limits on parties that have licenses divested to them (such as requiring divestiture to rural or midsize carriers that may be in a position to offer roaming), or divestiture of spectrum by sale on the secondary market, would best serve the Commission's goals.

13. We also seek comment on measures we can adopt to facilitate spectrum being divested expeditiously to licensees that will put it to use quickly and efficiently, and what conditions, limits or other rules should apply if we should decide to permit divestiture of spectrum by sale on the secondary market. Toward that end, the Commission proposes rules governing mobile spectrum holdings. These include proposed Section 20.21(b), which would require applicants subject to divestiture of interests as required by the Commission, in conjunction with the grant of a license application or a transfer of control or assignment of authorization, to divest expeditiously, and within the time period specified by the Commission.¹⁵³ The Commission also proposes rules governing the attribution of interests, including controlling interests, non-controlling interests, and waivers.¹⁵⁴ These proposed rules generally follow the attribution standards we currently apply, but we seek comment on whether we should make any changes in those standards, including the level of non-controlling interest that should be attributable, and whether that level should be different whether we adopt a case-by-case approach or a bright-line limit.

¹⁵³ See proposed 47 C.F.R. § 20.21(b), Appendix A, *supra*.

¹⁵⁴ See proposed 47 C.F.R. § 20.21(c), Appendix A, *supra*.

14. In addition, many licensees hold spectrum in multiple frequency bands with different propagation or other characteristics, and some spectrum holdings may be more valuable than others. We seek comment on whether the Commission should adopt different criteria for divestiture based on whether the spectrum to be divested is from lower or upper frequency bands or is immediately “useable” by another licensee, perhaps for a particular technology, and any other factors we should consider when determining which and how much spectrum should be divested to prevent competitive harm. We also seek comment on any other approach to spectrum divestiture that would meet our goals of promoting competition yet make our policies regarding mobile spectrum holdings more clear, transparent and predictable.

15. Further, as an alternative or supplement to divestiture, we have previously placed conditions on transactions to remedy certain aspects that may be contrary to the public interest, convenience, and necessity, including any potential anti-competitive effects of the transaction. We seek comment on the extent to which we should remedy the potential harms posed by a transaction by placing other conditions on it, including leasing, roaming, or collocation, in conjunction with or in lieu of requiring divestitures. We also seek comment on whether there are other remedial approaches we could require and how we might apply them. We further seek comment on what changes and clarifications might be needed in using divestiture as a remedy to cure competitive harm resulting from spectrum acquired in an auction in the context of a case-by case analysis.

16. Finally, we seek comment on whether there are any transition issues to consider if new rules or policies are implemented. We anticipate that grandfathering existing holdings in excess of any spectrum limit we may adopt would serve the public interest. We seek comment on the grandfathering issue, as well as on any other transition issues that may arise in implementing the new rules or policies.

B. Legal Basis

17. The sources of authority for the actions proposed in this NPRM are contained in Sections 1, 2, 4(i), 4(j), 301, 303(g), 303(r), 309(j) and 310(d) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 154(j), 301, 303(g), 303(r), 309(j) and 310(d).

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

18. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted.¹⁵⁵ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”¹⁵⁶ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.¹⁵⁷ A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.¹⁵⁸

19. In the following paragraphs, the Commission further describes and estimates the number and type of small entities that may be affected by our proposals regarding mobile spectrum holdings. Implementing new policies regarding mobile spectrum holdings would affect entities that hold or lease

¹⁵⁵ 5 U.S.C. § 603(b)(3).

¹⁵⁶ 5 U.S.C. § 601(6).

¹⁵⁷ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

¹⁵⁸ 15 U.S.C. § 632.

spectrum within spectrum bands that are available for mobile wireless service.

20. This IRFA analyzes the number of small entities affected on a service-by-service basis. When identifying small entities that could be affected by the Commission's new rules, this IRFA provides information that describes auction results, including the number of small entities that were winning bidders. However, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily reflect the total number of small entities currently in a particular service. The Commission does not generally require that licensees later provide business size information, except in the context of an assignment or a transfer of control application that involves unjust enrichment issues.

21. **Small Businesses, Small Organizations, and Small Governmental Jurisdictions.** Our action may, over time, affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three comprehensive, statutory small entity size standards that encompass entities that could be directly affected by the proposals under consideration.¹⁵⁹ As of 2009, small businesses represented 99.9% of the 27.5 million businesses in the United States, according to the SBA.¹⁶⁰ Additionally, a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."¹⁶¹ Nationwide, as of 2007, there were approximately 1,621,315 small organizations.¹⁶² Finally, the term "small governmental jurisdiction" is defined generally as "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."¹⁶³ Census Bureau data for 2007 indicate that there were 89,527 governmental jurisdictions in the United States.¹⁶⁴ We estimate that, of this total, as many as 88,761 entities may qualify as "small governmental jurisdictions."¹⁶⁵ Thus, we estimate that most governmental jurisdictions are small.

22. **Cellular Licensees.** The SBA has developed a small business size standard for small businesses in the category "Wireless Telecommunications Carriers (except satellite)."¹⁶⁶ Under that SBA category, a business is small if it has 1,500 or fewer employees.¹⁶⁷ The census category of "Cellular and Other Wireless Telecommunications" is no longer used and has been superseded by the larger category

¹⁵⁹ See 5 U.S.C. § 601(3)–(6).

¹⁶⁰ See SBA, Office of Advocacy, "Frequently Asked Questions," available at <http://web.sba.gov/faqs/faqindex.cfm?areaID=24> (last visited Sept. 6, 2012).

¹⁶¹ 5 U.S.C. § 601(4).

¹⁶² INDEPENDENT SECTOR, THE NEW NONPROFIT ALMANAC & DESK REFERENCE (2010).

¹⁶³ 5 U.S.C. § 601(5).

¹⁶⁴ U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2011, Table 427 (2007) available at www.census.gov/prod/2011pubs/11statab/stlogov.pdf (last visited Sept. 18, 2012).

¹⁶⁵ The 2007 U.S. Census data for small governmental organizations are not presented based on the size of the population in each such organization. There were 89,476 local governmental organizations in 2007. If we assume that county, municipal, township, and school district organizations are more likely than larger governmental organizations to have populations of 50,000 or less, the total of these organizations is 52,125. If we make the same assumption about special districts and also assume that special districts are different from county, municipal, township, and school districts, in 2007 there were 37,381 special districts. In 2011, there were a total of 715 cities and towns (incorporated places and minor civil divisions) with populations over 50,000. CITY AND TOWNS TOTALS: VINTAGE 2011 – U.S. Census Bureau, available at <http://www.census.gov/popest/data/cities/totals/2011/index.html>. Of these 89,476 local government organizations, if we subtract the 715 cities and towns that meet or exceed the 50,000 population threshold, we conclude that approximately 88,761 are small. *Id.* at Tables 426, 427 (Data cited therein are from 2007).

¹⁶⁶ 13 C.F.R. § 121.201, NAICS code 517210.

¹⁶⁷ *Id.*

“Wireless Telecommunications Carriers (except satellite).” The Census Bureau defines this larger category to include “establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services.”¹⁶⁸

23. In this category, the SBA has deemed a wireless telecommunications carrier to be small if it has fewer than 1,500 employees.¹⁶⁹ For this category of carriers, Census data for 2007, which supersede similar data from the 2002 Census, shows 1,383 firms in this category.¹⁷⁰ Of these 1,383 firms, only 15 (approximately 1%) had 1,000 or more employees.¹⁷¹ While there is no precise Census data on the number of firms in the group with fewer than 1,500 employees, it is clear that at least the 1,368 firms with fewer than 1,000 employees would be found in that group. Thus, at least 1,368 of these 1,383 firms (approximately 99%) had fewer than 1,500 employees. Accordingly, the Commission estimates that at least 1,368 (approximately 99%) had fewer than 1,500 employees and, thus, would be considered small under the applicable SBA size standard.

24. **Wireless Telecommunications Carriers (except satellite).** This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services.¹⁷² The appropriate size standard under SBA rules is for the category Wireless Telecommunications Carriers (except satellite). The size standard for that category is that a business is small if it has 1,500 or fewer employees.¹⁷³ For this category, census data for 2007 show that there were 1,383 firms that operated for the entire year.¹⁷⁴ Of this total, 1,368 firms had 999 or fewer employees and 15 had 1000 employees or more.¹⁷⁵ Thus, under this category and the associated small business size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities that may be affected by our proposed action.¹⁷⁶

25. **2.3 GHz Wireless Communications Services.** This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined “small business” for the wireless communications services (“WCS”) auction as an entity with average gross

¹⁶⁸ U.S. Census Bureau, Industry Statistics Sampler, “Wireless Telecommunications Carriers (Except Satellite),” 2007 NAICS Definitions available at <http://www.census.gov/econ/industry/def/d517210.htm> (last visited Sept. 6, 2012).

¹⁶⁹ 13 C.F.R. § 121.201, NAICS Code 517210.

¹⁷⁰ U.S. Census Bureau, American Fact Finder, 2007 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 517210 (rel. Nov. 19, 2010), available at <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml> (last visited Sept. 6, 2012).

¹⁷¹ *Id.*

¹⁷² United States Census Bureau, *North American Industry Classification System*, available at http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ2&prodType=table (last visited Sept. 6, 2012).

¹⁷³ 13 C.F.R. § 121.201, NAICS code 517210.

¹⁷⁴ U.S. Census Bureau, Subject Series: Information, Table 5, “Establishment and Firm Size: Employment Size of Firms for the United States: 2007 NAICS Code 517210” (issued Nov. 2010).

¹⁷⁵ *Id.* Available census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

¹⁷⁶ See United States Census Bureau, *American Fact Finder*, available at <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml> (last visited Sept. 6, 2012).

revenues of \$40 million for each of the three preceding years, and a “very small business” as an entity with average gross revenues of \$15 million for each of the three preceding years.¹⁷⁷ The SBA approved these definitions.¹⁷⁸ The Commission conducted an auction of geographic area licenses in the WCS service in 1997. In the auction, seven bidders that qualified as very small business entities won 31 licenses, and one bidder that qualified as a small business entity won a license.

26. **1670-1675 MHz Services.** This service can be used for fixed and mobile uses, except aeronautical mobile.¹⁷⁹ An auction for one license in the 1670-1675 MHz band was conducted in 2003. The Commission defined a “small business” as an entity with attributable average annual gross revenues of not more than \$40 million for the preceding three years, which would thus be eligible for a 15 percent discount on its winning bid for the 1670-1675 MHz band license.¹⁸⁰ Further, the Commission defined a “very small business” as an entity with attributable average annual gross revenues of not more than \$15 million for the preceding three years, which would thus be eligible to receive a 25 percent discount on its winning bid for the 1670-1675 MHz band license.¹⁸¹ The winning bidder was not a small entity.

27. **3650-3700 MHz Band Licensees.** In March 2005, the Commission released an order providing for the nationwide, non-exclusive licensing of terrestrial operations, utilizing contention-based technologies, in the 3650 MHz band (*i.e.*, 3650–3700 MHz).¹⁸² As of April 2010, more than 1270 licenses have been granted and more than 7433 sites have been registered. The Commission has not developed a definition of small entities applicable to 3650–3700 MHz band nationwide, non-exclusive licensees. However, we estimate that the majority of these licensees are Internet Access Service Providers (ISPs) and that most of those licensees are small businesses.

28. **Wireless Telephony.** Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. As noted, the SBA has developed a small business size standard for Wireless Telecommunications Carriers (except Satellite).¹⁸³ Under the SBA small business size standard, a business is small if it has 1,500 or fewer employees.¹⁸⁴ Census data for 2007 shows that there were 1,383 firms in the Wireless Telecommunications Carriers (except Satellite) category that operated that year.¹⁸⁵ Of those 1,383, 1,368 had fewer than 100 employees, and 15 firms had more than 100 employees.¹⁸⁶ Thus under this category and the associated small business size standard, the majority of firms can be considered small. According to Trends in Telephone Service data, 434 carriers reported that they were engaged in wireless telephony.¹⁸⁷ Of these, an estimated 222 have

¹⁷⁷ Amendment of the Commission’s Rules to Establish Part 27, the Wireless Communications Service (WCS), GN Docket No. 96-228, *Report and Order*, 12 FCC Rcd 10785, 10879 ¶ 194 (1997).

¹⁷⁸ See Letter from Aida Alvarez, Administrator, SBA, to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, FCC (Aug. 10, 1999) (*Alvarez Letter 1999*).

¹⁷⁹ 47 C.F.R. § 2.106; *see generally* 47 C.F.R. §§ 27.1–.70.

¹⁸⁰ Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1GHz Bands, WT Docket No. 02-353, *Report and Order*, 18 FCC Rcd 25162, 25220 ¶149 (2003).

¹⁸¹ *Id.*

¹⁸² The service is defined in section 90.1301 *et seq.* of the Commission’s Rules, 47 C.F.R. § 90.1301 *et seq.*

¹⁸³ 13 C.F.R. § 121.201, NAICS code 517210.

¹⁸⁴ *Id.*

¹⁸⁵ U.S. Census Bureau, 2007 Economic Census, Sector 51, 2007 NAICS code 517210 (rel. Oct. 20, 2009), available at <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml> (last visited Sept. 6, 2012).

¹⁸⁶ *Id.*

¹⁸⁷ See FCC, *Trends in Telephone Service*, Table 5.3 (2008).

1,500 or fewer employees and 212 have more than 1,500 employees.¹⁸⁸ Therefore, approximately half of these entities can be considered small. Similarly, according to Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) Telephony services.¹⁸⁹ Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees.¹⁹⁰ Consequently, the Commission estimates that approximately half or more of these firms can be considered small. Thus, using available data, we estimate that the majority of wireless firms can be considered small.

29. **Broadband Personal Communications Service.** The broadband personal communications services (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission initially defined a “small business” for C- and F-Block licenses as an entity that has average gross revenues of \$40 million or less in the three previous years.¹⁹¹ For F-Block licenses, an additional small business size standard for “very small business” was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three years.¹⁹² These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.¹⁹³ No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that claimed small business status in the first two C-Block auctions. A total of 93 bidders that claimed small and very small business status won approximately 40 percent of the 1,479 licenses in the first auction for the D, E, and F Blocks.¹⁹⁴ On April 15, 1999, the Commission completed the re-auction of 347 C-, D-, E-, and F-Block licenses in Auction No. 22.¹⁹⁵ Of the 57 winning bidders in that auction, 48 claimed small business status and won 277 licenses.

30. On January 26, 2001, the Commission completed the auction of 422 C and F Block Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in that auction, 29 claimed small business status.¹⁹⁶ Subsequent events concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant. On February 15, 2005, the Commission completed an auction of 242 C-, D-, E-, and F-Block licenses in Auction No. 58. Of the 24 winning bidders in that auction, 16 claimed small business status and won 156 licenses.¹⁹⁷

¹⁸⁸ See *id.*

¹⁸⁹ See *FCC, Trends in Telephone Service*, Table 5.3 (2008).

¹⁹⁰ See *id.*

¹⁹¹ See Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, WT Docket No. 96-59, GN Docket No. 90-314, *Report and Order*, 11 FCC Rcd 7824, 7850–52 ¶¶ 57–60 (1996) (*PCS Report and Order*); see also 47 C.F.R. § 24.720(b).

¹⁹² See *PCS Report and Order*, 11 FCC Rcd at 7852 ¶ 60.

¹⁹³ See *Alvarez Letter 1999*.

¹⁹⁴ See D, E and F Block Auction Closes, *Public Notice*, DA 97-81 (rel. Jan. 15, 1997).

¹⁹⁵ See C, D, E, and F Block Broadband PCS Auction Closes, Winning Bidders of 302 Licenses Announced, *Public Notice*, 14 FCC Rcd 6688 (WTB 1999). Before Auction No. 22, the Commission established a very small standard for the C Block to match the standard used for F Block. Amendment of the Commission’s Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees, WT Docket No. 97-82, *Fourth Report and Order*, 13 FCC Rcd 15743, 15768 ¶ 46 (1998).

¹⁹⁶ See C and F Block Broadband PCS Auction Closes, Winning Bidders Announced, *Public Notice*, 16 FCC Rcd 2339 (2001).

¹⁹⁷ See Broadband PCS Spectrum Auction Closes, Winning Bidders Announced for Auction No. 58, *Public Notice*, 20 FCC Rcd 3703 (2005).

On May 21, 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction No. 71.¹⁹⁸ Of the 14 winning bidders in that auction, six claimed small business status and won 18 licenses.¹⁹⁹ On August 20, 2008, the Commission completed the auction of 20 C-, D-, E-, and F-Block Broadband PCS licenses in Auction No. 78.²⁰⁰ Of the eight winning bidders for Broadband PCS licenses in that auction, six claimed small business status and won 14 licenses.²⁰¹

31. **AWS Services (1710–1755 MHz and 2110–2155 MHz bands (AWS-1); 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz bands (AWS-2); 2155–2175 MHz band (AWS-3)).** For the AWS-1 bands, the Commission has defined a “small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a “very small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million.²⁰² In 2006, the Commission conducted its first auction of AWS-1 licenses.²⁰³ In that initial AWS-1 auction, 31 winning bidders identified themselves as very small businesses.²⁰⁴ Twenty-six of the winning bidders identified themselves as small businesses.²⁰⁵ In a subsequent 2008 auction, the Commission offered 35 AWS-1 licenses.²⁰⁶ Four winning bidders identified themselves as very small businesses, and three of the winning bidders identified themselves as a small business.²⁰⁷ For AWS-2 and AWS-3, although we do not know for certain which entities are likely to apply for these frequencies, we note that the AWS-1 bands are comparable to those used for cellular service and personal communications service. The Commission has not yet adopted size standards for the AWS-2 or AWS-3 bands but has proposed to treat both AWS-2 and AWS-3 similarly to broadband PCS service and AWS-1 service due to the comparable capital requirements and other factors, such as issues involved in relocating incumbents and developing markets, technologies, and services.²⁰⁸

¹⁹⁸ See Auction of Broadband PCS Spectrum Licenses Closes, Winning Bidders Announced for Auction No. 71, *Public Notice*, 22 FCC Rcd 9247 (2007).

¹⁹⁹ *Id.*

²⁰⁰ See Auction of AWS-1 and Broadband PCS Licenses Closes, Winning Bidders Announced for Auction 78, *Public Notice*, 23 FCC Rcd 12749 (WTB 2008).

²⁰¹ *Id.*

²⁰² See Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, *Report and Order*, 18 FCC Rcd 25162, App. B (2003), *modified by* Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, *Order on Reconsideration*, 20 FCC Rcd 14058, App. C (2005).

²⁰³ See Auction of Advanced Wireless Services Licenses Scheduled for June 29, 2006, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Procedures for Auction No. 66, AU Docket No. 06-30, *Public Notice*, 21 FCC Rcd 4562 (2006) (*Auction 66 Procedures Public Notice*).

²⁰⁴ See Auction of Advanced Wireless Services Licenses Closes, Winning Bidders Announced for Auction No. 66, *Public Notice*, 21 FCC Rcd 10521 (2006) (*Auction 66 Closing Public Notice*).

²⁰⁵ See *id.*

²⁰⁶ See Auction of AWS-1 and Broadband PCS Licenses Rescheduled for August 13, 2008, *Public Notice*, 23 FCC Rcd 7496, 7498 (2008). Auction 78 also included an auction of broadband PCS licenses.

²⁰⁷ See Auction of AWS-1 and Broadband PCS Licenses Closes, Winning Bidders Announced for Auction 78, Down, *Public Notice*, 23 FCC Rcd 12749 (2008).

²⁰⁸ Service Rules for Advanced Wireless Services in the 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz Bands et al., *Notice of Proposed Rulemaking*, 19 FCC Rcd 19263, App. B (2005); Service Rules for Advanced Wireless Services in the 2155–2175 MHz Band, *Notice of Proposed Rulemaking*, 22 FCC Rcd 17035, App. (2007); Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band, *Further Notice of Proposed Rulemaking*, 23 FCC Rcd 9859, App. B (2008).

32. **Lower 700 MHz Band Licenses.** The Commission previously adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits.²⁰⁹ The Commission defined a “small business” as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years.²¹⁰ A “very small business” is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.²¹¹ Additionally, the Lower 700 MHz Service had a third category of small business status for Metropolitan/Rural Service Area (“MSA/RSA”) licenses —“entrepreneur”— which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.²¹² The SBA approved these small size standards.²¹³ An auction of 740 licenses was conducted in 2002 (one license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)). Of the 740 licenses available for auction, 484 licenses were won by 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business, or entrepreneur status and won a total of 329 licenses.²¹⁴ A second auction commenced on May 28, 2003, closed on June 13, 2003, and included 256 licenses.²¹⁵ Seventeen winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.²¹⁶ In 2005, the Commission completed an auction of 5 licenses in the lower 700 MHz band (Auction 60). All three winning bidders claimed small business status.

33. In 2007, the Commission reexamined its rules governing the 700 MHz band in the *700 MHz Second Report and Order*.²¹⁷ An auction of A, B and E block licenses in the Lower 700 MHz band was held in 2008.²¹⁸ Twenty winning bidders claimed small business status (those with attributable average annual gross revenues that exceed \$15 million and do not exceed \$40 million for the preceding three years).²¹⁹ Thirty three winning bidders claimed very small business status (those with attributable average annual gross revenues that do not exceed \$15 million for the preceding three years).²²⁰ In 2011, the Commission conducted Auction 92, which offered 16 lower 700 MHz band licenses that had been made available in Auction 73 but either remained unsold or were licenses on which a winning bidder

²⁰⁹ See Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), GN Docket No. 01-74, *Report and Order*, 17 FCC Rcd 1022, 1087-88 ¶ 172-73 (2002) (*Channels 52-59 Report and Order*).

²¹⁰ See *id.*, 17 FCC Rcd at 1087-88 ¶ 172.

²¹¹ See *id.*

²¹² See *id.*, 17 FCC Rcd at 1088 ¶ 173.

²¹³ See *Alvarez Letter 1999*.

²¹⁴ See Lower 700 MHz Band Auction Closes, Winning Bidders Announced, *Public Notice*, 17 FCC Rcd 17272 (WTB 2002).

²¹⁵ See Lower 700 MHz Band Auction Closes, Winning Bidders Announced, *Public Notice*, 18 FCC Rcd 11873 (WTB 2003).

²¹⁶ See *id.*

²¹⁷ Service Rules for the 698-746, 747-762 and 777-792 MHz Band, WT Docket No. 06-150, *Second Report and Order*, 22 FCC Rcd 15289 (2007) (*700 MHz Second Report and Order*).

²¹⁸ See Auction of 700 MHz Band Licenses Closes, *Public Notice*, 23 FCC Rcd 4572 (WTB 2008).

²¹⁹ See Auctions Summary, Auction 73, 700 MHz Band, available at http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=73 (last visited Sept. 6, 2012).

²²⁰ *Id.*

defaulted.²²¹ Two of the seven winning bidders in Auction 92 claimed very small business status, winning a total of four licenses.²²²

34. **Upper 700 MHz Band Licenses.** In the *700 MHz Second Report and Order*, the Commission revised its rules regarding Upper 700 MHz licenses.²²³ On January 24, 2008, the Commission commenced Auction 73 in which several licenses in the Upper 700 MHz band were available for licensing: 12 Regional Economic Area Grouping licenses in the C Block, and one nationwide license in the D Block.²²⁴ The auction concluded on March 18, 2008, with 3 winning bidders claiming very small business status (those with attributable average annual gross revenues that do not exceed \$15 million for the preceding three years) and winning five licenses.

35. **700 MHz Guard Band Licenses.** In 2000, the Commission adopted the *700 MHz Guard Band Report and Order*, in which it established rules for the A and B block licenses in the Upper 700 MHz band, including size standards for “small businesses” and “very small businesses” for purposes of determining their eligibility for special provisions such as bidding credits.²²⁵ A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years.²²⁶ Additionally, a very small business is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.²²⁷ SBA approval of these definitions is not required.²²⁸ An auction of these licenses was conducted in 2000.²²⁹ Of the 104 licenses auctioned, 96 licenses were won by nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses was held in 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.²³⁰

36. **Specialized Mobile Radio.** The Commission adopted small business size standards for the purpose of determining eligibility for bidding credits in auctions of Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands. The Commission defined a “small business” as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years.²³¹ The Commission defined a “very small business” as an entity that, together with its affiliates and controlling principals, has average gross

²²¹ See Auctions Summary, Auction 92, 700 MHz Band, available at http://wireless.fcc.gov/auctions/default.htm?job=auCTION_summary&id=92 (last visited Sept. 6, 2012).

²²² *Id.*

²²³ See *700 MHz Second Report and Order*, 22 FCC Rcd 15289.

²²⁴ See Auction of 700 MHz Band Licenses Closes, *Public Notice*, 23 FCC Rcd 4572, 4573 (WTB 2008).

²²⁵ See Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, *Second Report and Order*, 15 FCC Rcd 5299 (2000) (*700 MHz Guard Band Report and Order*).

²²⁶ See *id.*, 15 FCC Rcd at 5343 ¶¶ 106-08.

²²⁷ See *id.*

²²⁸ See *id.*, 15 FCC Rcd at 5344 ¶ 108 n.246 (“For the 746-764 MHz and 776-794 MHz bands, the Commission is exempt from 15 U.S.C. § 632, which requires Federal agencies to obtain SBA approval before adopting small business size standards”).

²²⁹ See 700 MHz Guard Bands Auction Closes, Winning Bidders Announced, *Public Notice*, 15 FCC Rcd 18026 (2000).

²³⁰ See 700 MHz Guard Bands Auction Closes, Winning Bidders Announced, *Public Notice*, 16 FCC Rcd 4590 (WTB 2001).

²³¹ 47 C.F.R. §§ 90.810, 90.814(b), 90.912.

revenues not exceeding \$3 million for the preceding three years.²³² The SBA has approved these small business size standards for both the 800 MHz and 900 MHz SMR Service.²³³ The first 900 MHz SMR auction was completed in 1996. Sixty bidders claiming that they qualified as small businesses under the \$15 million size standard won 263 licenses in the 900 MHz SMR band. In 2004, the Commission held a second auction of 900 MHz SMR licenses and three winning bidders identifying themselves as very small businesses won 7 licenses.²³⁴ The auction of 800 MHz SMR licenses for the upper 200 channels was conducted in 1997. Ten bidders claiming that they qualified as small or very small businesses under the \$15 million size standard won 38 licenses for the upper 200 channels.²³⁵ A second auction of 800 MHz SMR licenses was conducted in 2002 and included 23 BEA licenses. One bidder claiming small business status won five licenses.²³⁶

37. The auction of the 1,053 800 MHz SMR licenses for the General Category channels was conducted in 2000. Eleven bidders who won 108 licenses for the General Category channels in the 800 MHz SMR band qualified as small or very small businesses.²³⁷ In an auction completed in 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were awarded.²³⁸ Of the 22 winning bidders, 19 claimed small or very small business status and won 129 licenses. Thus, combining all four auctions, 41 winning bidders for geographic licenses in the 800 MHz SMR band claimed to be small businesses.

38. In addition, there are numerous incumbent site-by-site SMR licensees and licensees with extended implementation authorizations in the 800 and 900 MHz bands. We do not know how many firms provide 800 MHz or 900 MHz geographic area SMR pursuant to extended implementation authorizations, nor how many of these providers have annual revenues not exceeding \$15 million. One firm has over \$15 million in revenues. In addition, we do not know how many of these firms have 1500 or fewer employees.²³⁹ We assume, for purposes of this analysis, that all of the remaining existing extended implementation authorizations are held by small entities, as that small business size standard is approved by the SBA.

39. **1.4 GHz Band Licensees.** The Commission conducted an auction of 64 1.4 GHz band licenses in the paired 1392-1395 MHz and 1432-1435 MHz bands, and in the unpaired 1390-1392 MHz band in 2007.²⁴⁰ For these licenses, the Commission defined “small business” as an entity that, together with its affiliates and controlling interests, had average gross revenues not exceeding \$40 million for the preceding three years, and a “very small business” as an entity that, together with its affiliates and

²³² *Id.*

²³³ *See Alvarez Letter 1999.*

²³⁴ *See 900 MHz Specialized Mobile Radio Service Spectrum Auction Closes, Winning Bidders Announced, Public Notice, 19 FCC Rcd. 3921 (WTB 2004).*

²³⁵ *See Correction to Public Notice DA 96-586 FCC Announces Winning Bidders in the Auction of 1020 Licenses to Provide 900 MHz SMR in Major Trading Areas, Public Notice, 18 FCC Rcd 18367 (WTB 1996).*

²³⁶ *See Multi-Radio Service Auction Closes, Winning Bidders Announced, Public Notice, 17 FCC Rcd 1446 (WTB 2002).*

²³⁷ *See 800 MHz Specialized Mobile Radio (SMR) Service General Category (851-854 MHz) and Upper Band (861-865 MHz) Auction Closes; Winning Bidders Announced, Public Notice, 15 FCC Rcd 17162 (2000).*

²³⁸ *See 800 MHz SMR Service Lower 80 Channels Auction Closes, Winning Bidders Announced, Public Notice, 16 FCC Rcd 1736 (2000).*

²³⁹ *See generally* 13 C.F.R. § 121.201, NAICS code 517210.

²⁴⁰ *See Auction of 1.4 GHz Band Licenses Scheduled for February 7, 2007, Public Notice, 21 FCC Rcd 12393 (WTB 2006); Auction of 1.4 GHz Band Licenses Closes, Winning Bidders Announced for Auction No. 69, Public Notice, 22 FCC Rcd 4714 (2007) (Auction No. 69 Closing PN).*

controlling interests, has had average annual gross revenues not exceeding \$15 million for the preceding three years.²⁴¹ Neither of the two winning bidders claimed small business status.²⁴²

40. **Broadband Radio Service and Educational Broadband Service.** Broadband Radio Service systems, previously referred to as Multipoint Distribution Service (“MDS”) and Multichannel Multipoint Distribution Service (“MMDS”) systems, and “wireless cable,” transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service (“BRS”) and Educational Broadband Service (“EBS”) (previously referred to as the Instructional Television Fixed Service (“ITFS”).²⁴³ In connection with the 1996 BRS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of no more than \$40 million in the previous three years.²⁴⁴ The BRS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (“BTAs”). Of the 67 auction winners, 61 met the definition of a small business. BRS also includes licensees of stations authorized prior to the auction. At this time, we estimate that of the 61 small business BRS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent BRS licensees that are considered small entities.²⁴⁵ After adding the number of small business auction licensees to the number of incumbent licensees not already counted, we find that there are currently approximately 440 BRS licensees that are defined as small businesses under either the SBA or the Commission’s rules. In 2009, the Commission conducted Auction 86, which resulted in the licensing of 78 authorizations in the BRS areas.²⁴⁶ The Commission offered three levels of bidding credits: (i) a bidder with attributed average annual gross revenues that exceed \$15 million and do not exceed \$40 million for the preceding three years (small business) will receive a 15 percent discount on its winning bid; (ii) a bidder with attributed average annual gross revenues that exceed \$3 million and do not exceed \$15 million for the preceding three years (very small business) will receive a 25 percent discount on its winning bid; and (iii) a bidder with attributed average annual gross revenues that do not exceed \$3 million for the preceding three years (entrepreneur) will receive a 35 percent discount on its winning bid.²⁴⁷ Auction 86 concluded in 2009 with the sale of 61 licenses.²⁴⁸ Of the ten winning bidders, two bidders that claimed small business status won 4 licenses; one bidder that claimed very small business status won three licenses; and two bidders that claimed entrepreneur status won six licenses.

41. In addition, the SBA’s Cable Television Distribution Services small business size standard is applicable to EBS. There are presently 2,032 EBS licensees. All but 100 of these licenses are

²⁴¹ *Auction No. 69 Closing PN*, Attachment C.

²⁴² *See Auction No. 69 Closing PN*.

²⁴³ Amendment of Parts 21 and 74 of the Commission’s Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service, MM Docket No. 94-131, *Report and Order*, 10 FCC Rcd 9589, 9593 ¶ 7 (1995).

²⁴⁴ *Id.* at 9670-9673, ¶¶ 190-92.

²⁴⁵ 47 U.S.C. § 309(j). Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of Section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA’s small business size standard of 1500 or fewer employees.

²⁴⁶ Auction of Broadband Radio Service (BRS) Licenses, Scheduled for October 27, 2009, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auction 86, *Public Notice*, 24 FCC Rcd 8277 (2009).

²⁴⁷ *Id.* at 8296 ¶ 73.

²⁴⁸ Auction of Broadband Radio Service Licenses Closes, Winning Bidders Announced for Auction 86, *Public Notice*, 24 FCC Rcd 13572 (2009).

held by educational institutions. Educational institutions are included in this analysis as small entities.²⁴⁹ Thus, we estimate that at least 1,932 licensees are small businesses. Since 2007, Cable Television Distribution Services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: “This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies.”²⁵⁰ For these services, the Commission uses the SBA small business size standard for the category “Wireless Telecommunications Carriers (except satellite),” which is 1,500 or fewer employees.²⁵¹ To gauge small business prevalence for these cable services we must, however, use the most current census data. According to Census Bureau data for 2007, there were a total of 955 firms in this previous category that operated for the entire year.²⁵² Of this total, 939 firms employed 999 or fewer employees, and 16 firms employed 1,000 employees or more.²⁵³ Thus, the majority of these firms can be considered small.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

42. The NPRM initiates a review of the FCC’s policies and rules governing mobile spectrum holdings. The FCC seeks comment on whether it should retain or modify its current rules. To the extent the Commission retains its current policies, this proceeding will not result in any additional reporting, recordkeeping, or other compliance burdens. If the FCC modifies its rules, those changes could alter the compliance requirements (and burdens) that apply to small entities. Those burdens, which may be offset by efficiencies associated with any modified rules, could include professional skills necessary to monitor and abide by the new rules, burdens associated with the ability to retain or acquire additional spectrum, and costs associated with changes in market competition.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities and Significant Alternatives Considered

43. The RFA requires an agency to describe any significant alternatives that it has considered in developing its approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.²⁵⁴

44. In light of the surge in consumer demand for mobile broadband services that require greater bandwidth, spectrum is becoming increasingly critical for all providers. With that in mind, the Commission initiates a review of policies governing mobile spectrum holdings. This proceeding provides the opportunity to obtain valuable input from a broad range of active participants in the mobile broadband

²⁴⁹ The term “small entity” within SBREFA applies to small organizations (nonprofits) and to small governmental jurisdictions (cities, counties, towns, townships, villages, school districts, and special districts with populations of less than 50,000). 5 U.S.C. §§ 601(4)–(6). We do not collect annual revenue data on EBS licensees.

²⁵⁰ U.S. Census Bureau, 2007 NAICS Definitions, 517110 Wired Telecommunications Carriers, (partial definition), www.census.gov/naics/2007/def/ND517110.HTM#N517110.

²⁵¹ 13 C.F.R. § 121.201, NAICS code 517210.

²⁵² U.S. Census Bureau, 2007 Economic Census, Subject Series: Information, Table 5, Employment Size of Firms for the United States: 2007, NAICS code 5171102 (issued November 2010).

²⁵³ *Id.*

²⁵⁴ *See* 5 U.S.C. § 603(c).

industry, trade associations, and consumer groups that have requested that our policies be revised to keep pace with market changes. We seek comment on whether and how to revise our policies and rules regarding mobile spectrum holdings. In particular, we seek alternatives that address how to ensure that our policies and rules afford all interested parties greater certainty, transparency and predictability to make investment and transactional decisions, while reducing the regulatory burdens on small entities.

45. First, we seek comment on retaining or modifying the current case-by-case analysis used to evaluate mobile spectrum holdings in the context of transactions and auctions, as well as on bright-line limit proposals advocated by some providers and public interest groups. We seek comment on the costs and benefits of a case-by-case analysis to consumers, wireless service providers and others, as well as the overall effectiveness of such an approach in achieving our public policy objectives. The Commission requests alternatives that would reduce the burdens on small entities while making the process more transparent, predictable, or better tailored to promote our goals.

46. We also seek comment on whether adoption of bright-line limits would now serve the public interest, and if so on its potential application, and on the specific costs and benefits of adopting bright-line limits. The Commission seeks possible alternatives that would best balance the goal of providing greater certainty, clarity, and predictability with regard to auction participation and secondary market transactions while maximizing the Commission's flexibility to consider individualized circumstances and respond swiftly to the changing needs of the mobile wireless industry and consumers, all while reducing the burden on small entities. Further, we seek comment on any alternative approaches regarding the competitive effect of spectrum aggregation, how alternative approaches could be implemented, and on any other alternatives that would further reduce burdens on small businesses.

47. The Commission also seeks comment on whether the current approach to the product and geographic market definitions continues to be appropriate when evaluating a licensee's mobile spectrum holdings. We seek alternate proposals that might increase the transparency with which we determine what spectrum we would include in a case-by-case spectrum analysis or in implementing bright-line limits, as well as any other approach that would promote competition and prevent excessive concentration of spectrum in any given area. Such alternative proposals should address the issue of reducing burdens on small business.

48. In addition, we seek comment on updating the spectrum bands that should be considered in any evaluation of mobile spectrum holdings and whether to make distinctions between bands. The Commission requests alternatives that would reduce the burdens on small entities while advancing the goals of promoting wireless competition, innovation, investments and broadband deployment in rural areas.

49. The Commission also seeks comment on whether and how the attribution rules that are used to implement our policies regarding mobile spectrum holdings should be amended if we decide to continue our existing case-by-case review of transactions and in the event that we alter our transaction review mechanism. Further, we seek comment on our proposed rules regarding attribution standards, which include a waiver provision, and more generally on the types of interests that should be of primary importance when we review proposed wireless transactions, and whether and how the importance of any attributable interests may have changed over time. The Commission seeks to receive alternate proposals regarding potential changes to the attribution rules in general, and more specifically how any proposed changes could limit the burdens on small entities.

50. The Commission also seeks comment on what remedies, including divestitures, would be appropriate to prevent competitive harm, and how we might apply them. We seek comment on the value and types of divestitures that would be effective remedies to redress particular competitive harms, our proposed divestiture rule, and any other alternative approaches that could provide greater predictability to allow the industry to better make needed investment decisions, while easing the burden on small entities. Commenters should discuss and quantify any associated costs or benefits of implementing any remedial approaches or any other proposals that would best serve the Commission's goals of providing clarity and certainty to parties while promoting competition and further reducing the burden on small business.

51. Finally, if we were to change our current case-by case approach or adopt new rules or polices, the Commission seeks comment on whether there are any transition issues to consider as new rules or policies are implemented, such as considering grandfathering spectrum held before the effective date of any new rule or policy. The Commission seeks alternate proposals that would best achieve the goal of reducing the burdens on small business while making our policies regarding mobile spectrum holdings more clear, transparent and predictable.

52. For each of the proposals in the Notice, we seek discussion, and where relevant, alternative proposals, on the effect that each prospective new requirement, or alternative rules, might have on small entities. For each proposed rule or alternative, we seek discussion about the burden that the prospective regulation would impose on small entities and how the Commission could impose such regulations while minimizing the burdens on small entities. For each proposed rule, we ask whether there are any alternatives the Commission could implement that could achieve the Commission's goals while at the same time minimizing the burdens on small entities. For the duration of this docketed proceeding, we will continue to examine alternatives with the objectives of eliminating unnecessary regulations and minimizing any significant economic impact on small entities.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

53. None.

**STATEMENT OF
CHAIRMAN JULIUS GENACHOWSKI**

Re: *Policies Regarding Mobile Spectrum Holdings, WT Docket No. 12-269*

As recently as July 2007, there was no iPhone, no Android phones, no tablets, no app stores. Back then only 9 million Americans, or about 4% of the mobile market, had smartphones. Today, the majority of mobile subscribers have smartphones, and those phones generate 35 times more traffic than old feature phones. For tablets, it's 121 times more traffic.

This past decade has also seen significant changes in the amount and nature of spectrum used for mobile broadband.

While we have seen major changes in all aspects of the mobile marketplace, the FCC hasn't reviewed its policies for mobile spectrum holdings in more than a decade. And stakeholders from throughout the mobile ecosystem have increasingly been saying it's time to take a fresh look, and that we can increase certainty and predictability for the marketplace.

Today we launch a rulemaking to review the FCC's mobile spectrum holding policies and make changes as appropriate, in order to enable a healthy and competitive wireless marketplace with clear and predictable rules of the road.

Getting these policies right is key to facilitating efficiency-enhancing secondary market transactions and promoting vibrant competition, both of which are necessary to drive the massive mobile investment and innovation we need to grow our economy.

It's another part of our multi-pronged strategy to ensure that the U.S. maintains and extends the global leadership in mobile services and innovation that we've regained over the last few years.

This proceeding will consider a wide range of viewpoints – we're open to all ideas and are not prejudging the outcome.

Launching this proceeding does not reflect a change in our views. As I've said before, efficiency-improving spectrum transactions can certainly be consistent with a competitive market. Nothing in this Notice changes that. Over the past three years, we've approved hundreds of transactions involving more than 1,000 licenses, while also significantly reducing the review time for major transactions.

We've also shown that we recognize when transactions require conditions or spectrum divestitures to preserve competition. Competition is the lifeblood of our free market economy. Indifference to competition is not good for innovation, investment or economic growth. And when we concluded that a proposed transaction simply didn't serve the public interest, we said so.

There's been one suggestion that, instead of the rulemaking notice we issue today, we begin with a Notice of Inquiry. This would needlessly add red tape, slow-roll the review, and delay possible improvements to current policies

This is an important Notice of Proposed Rulemaking. It is timely, appropriate, and necessary. It will contribute to our goal of increasing certainty and predictability. It will contribute to our goal of U.S. leadership in mobile.

Thank you to the Wireless Bureau for your thoughtful work on this item.

**STATEMENT OF
COMMISSIONER ROBERT M. McDOWELL
APPROVING IN PART, CONCURRING IN PART**

Re: *Policies Regarding Mobile Spectrum Holdings, WT Docket No. 12-269*

Although we may sometimes disagree on substance, I commend Chairman Genachowski on his longstanding ability to maintain an open and constructive dialogue. As always, I take him at his word when he explains that his intent for this notice is to create more certainty for the wireless sector. That is a goal we both share, although we may prefer different paths to get there. In short, today we agree on process, but respectfully disagree on much of the substance.

Even though I have some reservations, I am taking a small step down this path to examine the Commission's approach to analyzing spectrum holdings. I agree that the Commission -- and all government agencies for that matter -- have an obligation to review regulations from time to time. Moreover, I respect the views of the service providers and civil society groups that have asked us to do this. I also recognize that many wireless carriers expressly asked the Commission to undertake a rulemaking on this issue.

Nonetheless, despite being able to find some common ground, I cannot agree with the view that the Commission's current flexible approach, which examines spectrum holdings on a case-by-case basis transparently and within the unique context of each auction or proposed transaction, is broken at its foundation. Further, I question whether these proposals are compatible with the Commission's oft-stated goal of making spectrum more abundant in the mobile marketplace.

Spectrum, which ultimately ends up in the hands of our nation's wireless broadband consumers, is *the* path to all of the new innovations that boost broadband adoption. Also, I wonder about the uncertainty we may be creating by merely releasing this notice, contrary to the intent of the notice's more enthusiastic proponents. We must always remember that when government just "keeps a watchful eye" on markets, our scrutiny has an effect on commerce. Indeed, going further with a one-size-fits-all cap, as suggested in this notice, will likely have unintended negative consequences later.

By way of brief background, in 2001, the Commission adopted the current process after determining that spectrum aggregation limits were no longer necessary due to meaningful competition among providers of telecommunications services. Since that time, the Commission has analyzed commercial wireless spectrum holdings on a case-by-case basis, oftentimes in close consultation with the Department of Justice. The current approach was created to result in narrowly-tailored, transaction-specific spectrum remedies that safeguard against anticompetitive behavior, encourage increased investment, and spur the creation of innovative consumer offerings.

Our unfettered wireless market is the envy of the world. The growth of the mobile industry over the past decade has been staggering. Just listen to some statistics from the Commission's most recent Wireless Competition Report: Since 2001, average minutes of use per subscriber per month increased from 385 minutes²⁵⁵ to about 700 today.²⁵⁶ More important, given today's emphasis on broadband, is the growth in mobile data usage. In 2001, analysts estimated that there were between eight to ten million

²⁵⁵ Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, *Seventh Report*, 17 FCC Rcd 12985, 13006 (2002) (*Seventh Report*).

²⁵⁶ Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, *Fifteenth Report*, 26 FCC Rcd 9664, 9783 ¶ 191 (2011) (*Fifteenth Report*).

mobile Internet users.²⁵⁷ By 2009, 55.8 million users accessed the Internet through mobile devices and with more powerful technologies.²⁵⁸ Additionally, even with such great innovation in the mobile industry, consumers are paying less for their service.²⁵⁹ Finally, the number of subscribers has increased from 128.4 million to 285.6 million through 2009 since the Commission sunset the spectrum cap in 2001.²⁶⁰

Despite this positive and constructive progress, a proposal to cap spectrum holdings is discussed at length not only in this notice, but also in the companion notice on incentive auctions that we adopt today. I am concerned that reviving this concept could create unnecessary and harmful market uncertainty. Until now, spectrum caps were a dead and buried 20th Century industrial policy relic. I am further concerned that significant language in the Commission's most recent Wireless Competition and Section 706 reports, coupled with recent important comments doubting the benefits of usage-based pricing, or what I call "pricing freedom," are creating a mosaic of evidence that increasingly points to greater regulation of the wireless industry. For these reasons, I encourage interested parties to comment on the potential for negative market effects should the Commission inch down the road toward spectrum caps or other new mandates.

Our light touch regulatory policy for mobile technologies, which includes the case-by-case analytical structure for spectrum, has enabled our wireless sector to flourish and continue to lead the world. I am hopeful that the Commission will not put all of this positive and constructive progress at risk as we explore the myriad options outlined in this notice. As none of us can predict the next disruptive technology, or where its spectrum home will be, I caution against inadvertently preventing further innovation and stifling future uses of spectrum based on what's-cool-at-the-moment. For instance, these trends include: labeling certain spectrum as "prime" (*i.e.*, that located below 1 GHz); classifying other bands as "junk;" or prejudging the "value" of spectrum bands that have yet to be auctioned. History shows us that today's "junk" is often tomorrow's "prime."

I take heart in knowing that we are at the beginning of what will surely be a lengthy and complicated process. Hard decisions have yet to be made. With that in mind, I humbly urge my colleagues to keep in mind just how robust our unfettered wireless market is when contemplating its regulatory future. I am hopeful that, rather than imposing artificial limits, we will instead work together to bring additional spectrum to market through auctions for exclusive use licenses to further promote competition and to foster continued innovation and progress in the wireless arena.

For these reasons, I vote to approve in part (on the process) and concur in part (on the substance). As always, I acknowledge and thank Ruth Milkman and her team in the Wireless Telecommunications Bureau for your work on this notice.

²⁵⁷ *Seventh Report*, 17 FCC Rcd at 12989 (noting the usage of users on a legacy cellular system).

²⁵⁸ *Fifteenth Report*, 26 FCC Rcd at 9871 ¶ 366.

²⁵⁹ *Id.* at 9782.

²⁶⁰ *Id.* at 9760.

**STATEMENT OF
COMMISSIONER MIGNON L. CLYBURN**

Re: *Policies Regarding Mobile Spectrum Holdings, WT Docket No. 12-269*

There is no question that it is time for the Commission to update its policies on measuring how spectrum aggregation impacts competition in the wireless industry. Our last comprehensive review of these policies occurred in 2003, and since then, we have seen a number of developments in mobile wireless services. The two most significant are the dramatic increase in demand for wireless services especially mobile broadband, and the reduction in the number of carriers, providing competitive mobile service options for consumers. It is also worth noting that, in the spectrum provisions of the Act passed earlier this year, Congress reaffirmed the Commission's authority to, and I quote: "adopt rules of general applicability, including rules concerning spectrum aggregation that promote competition."

Under Chairman Genachowski's leadership, the Commission staff has been working diligently to improve our understanding about how all relevant aspects of the wireless market impact competitive options for consumers. We have substantially improved our analysis of the market structure in the annual mobile wireless reports. We have also adopted a number of important rules or proposed policies in the areas of universal service reform, tower siting, data roaming, spectrum sharing, wireless backhaul, and of course, the allocation of more spectrum, for commercial mobile services, to ensure the Commission is doing what it can to promote rapid deployment of more wireless broadband networks.

To ensure the mobile wireless ecosystem continues to offer consumers the highest quality services at affordable prices, we must also review our spectrum aggregation policies to facilitate access, by all providers, to valuable spectrum resources. Therefore, the NPRM properly identifies several relevant factors, the Commission should consider, in properly reviewing and revising these policies. I particularly appreciate the analysis and discussion about how the Commission should evaluate different technical characteristics of the spectrum bands allocated for commercial wireless service. This is relevant to whether spectrum below 1 GHz should be valued as highly as spectrum above 1 GHz. It is also important in determining which currently allocated bands should be included in any spectrum screen we may use in the future. As we learned from the lack of interoperability in the lower 700 MHz band, just because the Commission auctions a spectrum band, does not necessarily mean it becomes immediately available and suitable to offer services to the public.

It is important that we review these policies, in a timely fashion, and take into account any considerations that could also help us design our voluntary incentive auctions. I thank Ruth Milkman, Jim Schlichting, Nese Guendelsberger, and Maria Kirby for their detailed briefing. I also wish to commend Christina Clearwater, and Monica DeLong, along with the other staff members who worked hard to produce an excellent item.

**STATEMENT OF
COMMISSIONER JESSICA ROSENWORCEL**

Re: *Policies Regarding Mobile Spectrum Holdings, WT Docket No. 12-269*

It has been nearly a decade since the Commission put in place its current approach to spectrum holdings. Ten years ago the agency eliminated the spectrum cap in favor of a case-by-case analysis of how much spectrum any one entity can hold. A decade is a lifetime in the world of wireless—and perhaps even several generations. The mobile transformation that has taken place over this time has been built on a foundation of access to spectrum. But as the wireless revolution reaches new heights, the demand for airwaves has escalated, and the call to revisit our policies regarding spectrum holdings has grown louder.

Today the Commission answers this call. Section 309(j) of the Communications Act directs the agency to promote economic opportunity and competition in the wireless industry. That means rules that encourage a competitive marketplace, with opportunities for incumbents as well as new entrants. Our policies should foster an environment that will allow businesses to innovate and grow.

At the same time, we must keep a steady eye on the larger context in which this spectrum holdings review is taking place. We are in the middle of an unprecedented push to identify new spectrum for wireless broadband services. As part of this effort, Congress has entrusted the Commission to conduct incentive auctions and use the proceeds from these auctions to support a nationwide, wireless broadband network for first responders. It is imperative that we not lose sight of this goal.

Thank you to the Wireless Telecommunications Bureau for its work on this rulemaking. I look forward to the record that develops.

**CONCURRING STATEMENT OF
COMMISSIONER AJIT PAI**

Re: *Policies Regarding Mobile Spectrum Holdings, WT Docket No. 12-269*

I share the concerns of my colleagues and many stakeholders that today's process for evaluating carriers' spectrum holdings is flawed. In my view, our framework has failed to keep pace with the evolving marketplace and is simply unpredictable.

On the first point: Our spectrum screen currently fails to account for all spectrum suitable for mobile broadband. This includes spectrum in the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) that companies like Clearwire are using today to provide 4G service across America. And our approach to spectrum attribution assumes that one company gains *de facto* control of another even if it holds no more than 10% equity. Together, these factors ensure that our current process for evaluating spectrum holdings consistently understates competition in the marketplace.

On the second point: Our approach to evaluating carriers' spectrum holdings creates needless regulatory uncertainty. As carriers plan their investments to meet consumer demand, they need to know the rules of the road, namely, which purchases will trigger the spectrum screen and which won't. Unfortunately, that is not the case today. Instead, we only consider whether to adjust the screen on an ad hoc, transaction-by-transaction basis.

Although there is substantial room for improvement when it comes to the spectrum screen, there is little consensus when it comes to identifying particular problems, let alone specific solutions. Some think that the screen includes too little spectrum; others, too much. Some favor the imposition of a hard cap; others support a more flexible case-by-case approach. Some want to weigh different spectrum bands differently; others believe taking that step would be counterproductive. I could go on, but you get the point.

It is for this reason that I find it odd that outside of the attribution issue, today's Notice of Proposed Rulemaking contains no notice of proposed rules. In fact, the word "propose" does not appear in the document. Nor do we reach any tentative conclusions. We simply ask a lot of questions about where things stand, which is typically what we would do in a Notice of Inquiry. While I of course support soliciting comment as we begin this journey, I think the better approach here would have been to ask for input on *where* we intend to go. The public is better served if attention can be focused on proposed rules, and the FCC's ultimate decisions are better informed by direct, as opposed to general, public engagement.

But since this remains a Notice of Proposed Rulemaking and since we may well adopt rules for mobile spectrum holdings around the same time that we adopt rules for the broadcast incentive auction, I want to highlight the linkage between these two proceedings. It is critical that the incentive auction be a success, and that, in turn, requires vigorous participation and competition for spectrum in the forward auction. I am thus skeptical of any steps that would depress participation in the auction, such as tightening the spectrum screen, adopting a hard cap on spectrum holdings, or imposing requirements that would enable the Commission to second-guess how wireless operators run their networks and thus reduce the value of spectrum.²⁶¹

I am particularly concerned about two consequences that would likely result. *First*, constricting the spectrum screen will be bad for public safety. By law, the net revenues of a successful incentive auction must be deposited into the Public Safety Trust Fund. In other words, the more money we raise through that auction, the more money that will become available for the First Responder Network Authority, or FirstNet. And given the high costs of rural deployment, raising substantial funds is

²⁶¹ See, e.g., Notice of Proposed Rulemaking at ¶¶ 20–21, 39, 46.

especially critical if states like Kansas and West Virginia are going to become a part of the nationwide public safety broadband network. On the other hand, artificially depressing demand in the auction will lower net revenues and thus reduce the amount of money received by public safety.

Second, narrowing the spectrum screen will aggravate the spectrum crunch. Unlike in normal auctions, there is a direct relationship in an incentive auction between aggregate auction demand and the amount of spectrum that will be made available for mobile broadband: The more demand for spectrum in the auction, the more spectrum that will be sold. On the other hand, a stricter spectrum screen will lower overall auction demand, and thus less spectrum will be made available for mobile broadband.

In conclusion, we have the opportunity to make some real improvements in our spectrum screen. I look forward to reviewing the record that will be developed in the coming months and working through the issues with my colleagues. And I hope that we will make the right decisions. Considering the stakes associated with the incentive auction, we should, at a minimum, do no harm.