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I. INTRODUCTION AND SUMMARY

1. I have been asked by the Expanding Opportunities for Broadcasters Coalition (“Coalition”) to provide my opinion with respect to certain economic issues raised in the Commission’s Notice of Proposed Rulemaking (“NPRM”) in this matter, including Appendix C.¹

2. Two inescapable economic facts should guide the Commission’s efforts. First, the potential economic benefits from allowing spectrum to flow to its highest value use are extremely large, likely in the scores of billions, if not hundreds of billions, of dollars.² Second, the secondary market for most spectrum usage rights (including specifically the rights at issue in this matter) continues to be hampered by the lack of license flexibility and other factors.³ Taken together, these facts imply that the rewards for success in this initiative are very large while the costs, if the Commission is unable to carry off the auction as planned, or if the amount of spectrum reallocated falls below the economically efficient level, would be substantial. As the Commission has noted, “[t]he process of revisiting or revising spectrum allocations has historically taken 6-13 years.”⁴ The current effort is already approaching its third birthday. Given the dynamic nature of the markets that rely on spectrum as an essential input, the delays associated with “starting over” would be extremely costly.⁵

¹ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, Notice of Proposed Rulemaking*, WT Docket No. 12-268 (October 2, 2012); and, Paul Milgrom *et al*, “Incentive Auction Rules Option and Discussion” (September 12, 2012). The opinions expressed here are based on currently available information and are subject to revision should new information become available.

² See e.g., Council of Economic Advisors, *The Economic Benefits of New Spectrum for Wireless Broadband* (February 2012).

³ See e.g. Jeffrey A. Eisenach, “Spectrum Reallocation and the National Broadband Plan,” *Federal Communications Law Journal* 64 (December 2011) 88-135.

⁴ See Federal Communications Commission, *Connecting America: The National Broadband Plan* (2010) at 79 (available at <http://www.broadband.gov/download-plan/>).

⁵ See Eisenach (2011) at 20. See also Evan Kwerel and Alex D. Felker, “Using Auctions to Select FCC Licensees,” Federal Communications Commission, OPP Working Paper #16 (May 1985), calculating the cost of delays in spectrum reallocations to the applicants at approximately nine percent annually. Hazlett and Muñoz

3. From an economic perspective, success in the incentive auction should be defined as the timely transfer from willing sellers to willing buyers of as much spectrum as the former are prepared to sell and the latter are prepared to buy at market clearing prices. In the National Broadband Plan, the Commission established a target of reallocating 120 MHz of spectrum in the 600 MHz band from broadcast television to wireless broadband.⁶ There is every reason to think that *at least* this much spectrum would change hands in a freely-functioning market, and no reason for the Commission to set its sights any lower.⁷ In addition, achieving the statutory objectives established by Congress in The Spectrum Act of 2012⁸ – including the desire to raise as much as \$7 billion for a national interoperable public safety network – will depend upon maximizing the amount of spectrum that changes hands through the auction.

4. As the Commission recognizes, the success of the incentive auction is not a foregone conclusion. The rights at issue are inherently complex and heterogeneous and, at least with respect to the broadcast participants, not easily valued *ex ante*. The participants are operating in an economically and technologically dynamic environment, generating uncertainty about valuations over time. The fixed costs of participation are substantial. And, the technical difficulties of conducting reverse and forward auctions while repacking the 600 MHz band create unprecedented execution challenges.

estimate that the annual increase in consumer surplus from deployment of additional spectrum is approximately equal to the total value of the spectrum to producers. (See Thomas W. Hazlett and Roberto E. Muñoz, “A Welfare Analysis of Spectrum Allocation Policies,” *Rand Journal of Economics* 40;3 (2008) 424-454.) Thus, the annual loss of consumer surplus from a one year delay is roughly equal to the transaction price.

⁶ National Broadband Plan at 88.

⁷ Indeed, given the Commission’s proposed band-plan, using 5 MHz blocks, more than 120 MHz (20 broadcast licenses) will need to be cleared in each EA in order to net 120 MHz of usable licensed spectrum for mobile broadband.

⁸ *Middle Class Tax Relief and Job Creation Act of 2012*, Pub. L. No. 112-96, §§ 6402-6403, 125 Stat. 156 (2012)

5. With all of this in mind, the Commission should adopt an auction framework that maximizes the likelihood of a successful auction and minimizes the likelihood of failure. To do so, it should be guided by three principles: the auction process must (a) elicit participation from the widest possible group of buyers and sellers; (b) foster a process of price discovery in which both buyers and sellers are faced with the opportunity costs of obtaining (or retaining) the spectrum rights at issue; and, (c) strike a careful balance between accommodating the degree of complexity required to achieve (a) and (b), on the one hand, and, on the other hand, ensuring that the design is sufficiently straightforward to be workable and engender confidence in the outcome. All three of these objectives must be met, or the auction will fail to achieve the overall goal of facilitating the largest feasible and economically efficient reallocation of spectrum rights to higher-valued, more flexible uses.

6. These three principles lead directly to concrete and specific answers to many of the auction design questions raised in the NPRM. Specifically, as discussed below, they imply the following conclusions: (a) the forward and reverse auctions should be conducted concurrently, to ensure effective price discovery between buyers and sellers; (b) a multiple dynamic bidding approach should be used (on both sides) to further promote price discovery; (c) a descending (ascending) clock auction should be used in the reverse (forward) auction to limit bid complexity; (d) initial bid prices in the reverse auction should be set at very high levels, to foster broad participation; (e) in order to facilitate high initial bid prices while limiting the number of rounds, the reverse auction should permit large bid decrements combined with intra-round bidding; (f) the auction should not be hampered by the adoption of rules designed to handicap particular buyers or sellers; and, specifically, (g) the auction is not the appropriate

venue for addressing whatever concerns the Commission may have about the structure of the wireless broadband market.

7. The remainder of this Declaration is organized in five sections. Section II below describes my qualifications. Section III addresses issues relating to overall auction design, focusing on the three objectives just discussed. Section IV addresses the reverse auction, including bidding structure and scoring. Section V addresses the forward auction, including specifically issues relating to spectrum concentration. Section VI is a brief conclusion.

II. QUALIFICATIONS

8. My name is Jeffrey A. Eisenach. I am a Managing Director and Principal in the Washington, DC office of Navigant Economics, LLC, a Visiting Scholar at the American Enterprise Institute, and an Adjunct Professor at George Mason University Law School, where I teach the course on Regulated Industries. My business address is 1900 M Street NW, Washington, DC 20036. Navigant Economics is a wholly-owned subsidiary of Navigant Consulting Inc. (NYSE: NCI), a Chicago, Illinois-based consulting firm with offices throughout North America. I hold a Ph.D. in Economics from the University of Virginia and a B.A. in Economics from Claremont McKenna College. I have previously served in senior policy positions at the U.S. Federal Trade Commission and the White House Office of Management and Budget, and on the faculties of Harvard University's Kennedy School of Government and Virginia Polytechnic Institute and State University. I have been studying, writing about and teaching telecommunications regulation for nearly 20 years, and have published articles on telecommunications regulation in refereed journals such as the *Review of Network Economics* and *Telecommunications Policy*. I have also testified and/or submitted expert reports on communications matters before the U.S. Congress and the Federal Communications Commission (FCC), before regulatory agencies in numerous U.S. states and territories, and before regulatory

bodies in several foreign countries, including Australia, Canada and Chile. My current affiliations include serving as a member of the Advisory Board for the Pew Project on the Internet and American Life and on the Board of Directors of the Information Technology and Innovation Foundation. A copy of my curriculum vita is at Exhibit A.

III. KEY PRINCIPLES AND IMPLICATIONS FOR OVERALL AUCTION DESIGN

9. The auction should be designed so as to achieve the three objectives described above: Broad participation, price discovery, and workability. This section first elaborates on each of these objectives and explains why they are crucial to the auction's success, and then explains their implications for overall auction design issues. The following sections make specific recommendations for how these principles apply to the reverse and forward auctions, respectively.

A. The Auction Must Achieve Broad Participation

10. Broad participation by both buyers and sellers is essential to achieving the auction's overall goal of reallocating an economically efficient amount of spectrum. This is true for the obvious reason – that a sufficient supply of spectrum must be available, and a sufficient demand must exist, in order for transactions to occur – but for a possibly less obvious reason as well: Auction participants on both sides of the auction will base their willingness to participate, and to bid, on the extent of participation on the other side.

11. In this context, it is important for the Commission to recognize that potential sellers have choices: First, they can elect to pursue other business strategies, such as investing in and broadening their existing businesses; second, they can simply wait, in the expectation that they will have other opportunities to divest their spectrum in the future – especially if the incentive auctions fail. Simply put, the incentive auction has competition, and the Commission,

in its role as “third-party auctioneer,”⁹ can only succeed by creating a marketplace in which buyers and sellers are persuaded they are achieving the most advantageous trades possible, which means having access to the full spectrum of potential counterparties.

B. The Auction Must Achieve Effective Price Discovery

12. The Commission’s objective should be to conduct an auction that facilitates transactions between willing buyers and willing sellers at economically efficient prices – that is, prices which reflect the opportunity costs to sellers and the value to buyers. In general, effective price discovery is essential to ensure that the economically efficient volume of spectrum is exchanged. In the context of the incentive auctions, where there is tremendous uncertainty about valuations, especially on the seller side, the ability of the Commission to ensure participants that transaction prices will accurately reflect market valuations will be crucial to success.

13. The assurance of effective price discovery is important both during the auction, as firms choose whether and at what point to discontinue their participation, and prior to the auction, as firms choose whether to participate at all. Effective price discovery and broad participation are thus mutually reinforcing: Without broad participation, effective price discovery is less likely; and, the adoption of a process that gives participants confidence that there will be effective price discovery will be essential to garnering broad participation.

C. The Auction Must Address Complexity without Becoming Unworkable or Generating Unnecessary Uncertainty

14. As the Commission rightly acknowledges, the incentive auctions represent an inherently complex, and therefore challenging, undertaking. The central *and unavoidable* task -- matching the demand for one set of rights (wireless broadband licenses) with the supply of a similar, but distinctly different set of rights (broadcast licenses), while simultaneously

⁹ National Broadband Plan at 81.

transmogrifying the latter set of rights (through reallocation, repacking and channel sharing) – is a daunting one which will test the capabilities of even the fastest computers and the most accomplished engineers and auction theorists.

15. The fact that the task is challenging is not offered as handwringing, but rather in support of a third principle to which the Commission should rigorously adhere: Complexity should be accommodated and embraced *where it is necessary to promote broad participation and ensure effective price discovery*, and otherwise eschewed. For example, auction rules needed to accurately reflect the fundamental characteristics of underlying supply and demand must be accommodated to the maximum extent possible, even if doing so increases the complexity of the auction. On the other hand, the Commission should not introduce additional complexities in pursuit of ancillary objectives, such as the desire to affect the structure of the wireless broadband market.

D. Implications for Overall Design Issues

16. These three principles have direct and specific implications for auction design. First, almost by definition, efficient price discovery demands that the reverse and forward auctions be held concurrently – i.e., that buyers face choices defined by the willingness of sellers to relinquish spectrum, and sellers face choices defined by the willingness of buyers to acquire it.¹⁰ Any other approach would necessarily involve the setting, by the Commission, of reserve prices on the basis of inherently arbitrary metrics,¹¹ thereby defeating the purpose of the two-sided auction in the first instance. For the same reason, the Commission should adopt a multiple dynamic bid format, on both sides of the auction. Thus, both buyers and sellers will have an

¹⁰ See NPRM at ¶¶66-68.

¹¹ See e.g., Jeffrey A. Eisenach, “Revenues from a Possible Spectrum Incentive Auction: Why the CTIA/CEA Estimate is not Reliable,” (March 31, 2011) (available at <http://ssrn.com/abstract=1800132>).

opportunity to become more informed during the course of the auction and to adjust their bidding strategies accordingly.¹²

17. Second, effective price discovery implies the need to recognize complementarities between spectrum licenses. In particular, to the extent buyers value nationwide footprints, and are therefore willing to pay more to acquire packages of licenses that include spectrum in areas where supply is relatively scarce, the Commission should not hesitate to reflect this aspect of demand in its bids for broadcast spectrum.

18. Conversely, if supply and demand are such that buyers are not prepared to pay the prices necessary to achieve uniform national spectrum allocations, the Commission should not second-guess the marketplace, but instead allow for the non-uniform band plans required to meet market demands. Thus, both the amount and the “shape” of the rights reallocated through the auction should be dictated by the price discovery process.

19. Third, effective price discovery also implies that the auction should adopt “threshold” or “Vickrey” pricing on both sides, as Vickrey pricing provides incentives for bidders to reveal their true reservation prices.¹³

IV. REVERSE AUCTION

20. The auction’s ultimate objective of reallocating as much spectrum as possible – at least 120 MHz – consistent with market supply and demand can only be achieved if the

¹² See Peter Cramton, “Spectrum Auction Design” (August 24, 2012) at 3 (“[E]ncouraging price discovery is extremely important. We need a dynamic process, because unlike some situations, in the case of spectrum auctions, there is much uncertainty about what things are worth. The bidders need to do a lot of homework to develop a crude valuation model, and they need the benefit of some collective market insights, which can be revealed in a dynamic auction process, in order to improve their decision-making. The nice thing about a dynamic auction is that through this price process the bidders gradually have their sights focused on the most relevant part of the price space.”) (available at <http://www.cramton.umd.edu/papers2005-2009/cramton-spectrum-auction-design.pdf>).

¹³ See Cramton 2012 at 12 (“In contrast, Vickrey pricing provides ideal incentives for truthful bidding. Each winner pays the social opportunity cost of its winnings, and therefore receives 100 percent of the incremental value created by its bids. This aligns the maximization of social value with the maximization of individual value for every bidder.”)

Commission is successful in persuading suppliers to participate in the auction and, having so, facing them with bids that reflect the full market value of their spectrum rights. Any design element that discourages full participation will detract from the auction's ultimate success by causing broadcasters who might otherwise have been willing to sell to choose other alternatives. The reverse auction must be designed with the objective of maximizing broadcaster participation both by minimizing the costs of participation and by maximizing the likely payoff.

A. The Commission Should Utilize a Descending Clock Auction

21. For the reasons described in the NPRM,¹⁴ the reverse auction should utilize a descending clock auction and avoid a single sealed bid approach. The descending clock auction design eliminates the need for broadcasters to determine in advance their reservation prices, and may avoid the need for them to incur certain costs (e.g., expert economists) that would be incurred in attempting to formulate a reserve price in the absence of the information that will naturally be revealed in the course of a clock auction. The dynamic nature of a descending clock auction will provide broadcasters with information about the value of their licenses in alternative use, which they do not now possess, thereby reducing uncertainty.

B. The Commission Should Not Place Artificial Limits on Opening Bids

22. In designing the reverse auction, the Commission should be attentive to a fundamental difference between previous auctions and this one: In prior auctions, the Commission set out to allocate a set amount of spectrum, and had a fiduciary duty to see that taxpayers received fair value for that spectrum. Hence, a key part of the Commission's task was to establish reserve prices which reflected the lowest amount the U.S. Treasury would receive in

¹⁴ See e.g., NPRM at ¶40.

auction proceeds and, conversely, to ensure that the auction did not close at prices that were “too low.”

23. In the current auction, there is no analogous concern. The Commission’s objective is to auction as much spectrum as the market will bear, at least 120 MHz, and the primary risk appears to be that too little spectrum will change hands to meet market demand. If, as recommended here, the forward and reverse auctions are conducted concurrently, closing prices in the reverse auction will be established by bidders in the forward auction. There is no need for the Commission to guess what broadcast licenses are worth; if the auction is properly designed, the buyers will set the value through their voluntary bids.

24. In this scenario, the initial price in the descending clock auction has no economic function, only a mechanical one: Some opening price is necessary in order for the auction to begin. In the interests of maximizing supply, the Commission (which *ex ante*, prior to completion of the forward auction, cannot know what the closing price on any broadcast license will be) should aim to set the initial price sufficiently high to ensure that all broadcasters who have incurred the fixed costs of participating in the first place continue to at least the second round.

25. The primary argument against setting very high initial bids is that doing so could require either large bid decrements or an inefficiently large number of rounds, thereby extending the duration of the auction and increasing its costs. The problem is resolved, however, by adopting the proposal discussed in Milgrom *et al* (Appendix C) to utilize intra-round bidding, which allows broadcast license holders to specify a price point between the start-of-round and

end-of-round prices at which she would modify his or her choice (e.g., of whether to go off-air).¹⁵

26. To further ensure that potential sellers are not prematurely excluded, the Commission should consider a modified intra-round bidding process at the outset of the auction, under which broadcasters who are not willing to participate further at the initial price are able to proffer a reserve price (above the initial offer price) at which they would be willing to sell. If the Commission is able to achieve its clearing goals without relying on such an interim bid, the broadcaster would be considered as having exited the auction; if, on the other hand, the broadcasters' license is needed to achieve the clearing objective, the bidding can continue with the broadcaster's reserve price bid taking the place of initial price.

C. The Commission Should Not “Score” Sellers

27. The NPRM appears to contemplate that the Commission might attempt to “score” the value of broadcast licenses based on population served or other metrics designed to proxy for the FCC's subjective assessment of the value of a broadcast license.¹⁶ While the precise algorithm for setting bid prices for broadcast licenses, both across and within EAs, depends in part on aspects of the auction design and repacking process which have not yet been specified (e.g., the extent and nature of package bidding rules in the forward auction; the coverage and interference standards used for repacking), whatever standard is used should be based on “demand-side” valuations – i.e., the value of the spectrum in achieving the largest possible

¹⁵ See Milgrom *et al* at 11.

¹⁶ See e.g. NPRM at ¶45

amount of repurposed spectrum for wireless broadband use – not on the efforts to guess what broadcast licenses “should” be worth in their current use.¹⁷

28. Scoring on the basis of the Commission’s estimate of the enterprise value of a broadcast station is both unnecessary and inimical to the success of the auction. First, as noted above, if the incentive auction is properly constructed, closing prices in the reverse auction will be dictated by bids in the forward auction, i.e., by market demand, and reserve prices will be revealed as the clock descends. The role of the Commission, in other words, is as market-maker, not as fiduciary agent trying to get the best “deal” for the taxpayers.

29. Second, distorting prices by discounting bids based on the enterprise value of broadcasters would potentially result in reducing the amount of spectrum reallocated through the auction. That is, broadcasters who received discounted “net” bids as a result of any such system of scoring would be less likely to tender their licenses at any given “gross” bid price, ultimately reducing the supply of spectrum for any given level of demand in the forward auction. It should be noted that this problem is present for scoring systems based on *any* metric other than the value of a broadcaster’s spectrum to the clearing process.

V. FORWARD AUCTION

30. As noted above, the incentive auction is not “the only game in town.” Both buyers and sellers have alternatives to participation. For the auction to achieve its objective of reallocating the economically efficient amount of spectrum, sellers must enter the auction with confidence that they will face the full demand curve, and that demand will not be reduced by the

¹⁷ Indeed, the example offered in the NRPM, which suggests that, if faced with identical bids from a station with a large coverage area and one with a small coverage area, each of which would have the same value for repacking, the Commission would choose the bid from the station with the large coverage area (See e.g., NPRM at n. 83.), seems to reach the wrong conclusion. Presumably, if the value of clearing each station is indeed the same in terms of the amount of spectrum made available for wireless broadband, the Commission should clear the “smaller” station and leave the “larger” one in place, since it would disrupt fewer viewers.

exclusion, or handicapping, of some potential buyers. If the Commission excludes or limits potential bidders from the auction in an effort to address concerns about market structure in the market for wireless broadband, it will reduce the amount of spectrum that is ultimately reallocated. Thus, whatever concerns the Commission may have about the structure of the wireless broadband market should be addressed – if necessary – through alternative mechanisms, without detracting from the larger objective of increasing the supply of wireless spectrum and thereby lowering prices and increasing quality for all consumers.

A. Limiting Buyer Participation is Not Necessary to Address Concerns about Market Structure

31. Evidence on the performance of the wireless marketplace does not support concerns about excessive spectrum aggregation. For example, as the Commission notes in its parallel proceeding regarding spectrum holdings:

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.¹⁸

Such performance is not easily squared with concerns about excessive market concentration. Indeed, the need for additional spectrum to which the incentive auction responds is itself a result of rapid output expansion in the mobile wireless market. .

32. Concerns about market structure and performance cannot be inferred from the Commission’s decision to block the AT&T-T-Mobile merger. That decision was specific to the facts of that case, including the Commission’s findings that the two firms’ products were close

¹⁸ *In the Matter of Policies Regarding Mobile Spectrum Holdings, Notice of Proposed Rulemaking*, WT Docket No. 12-269 (September 28, 2012) at ¶2. The U.S. has and can expect to maintain leadership in 4G “for the foreseeable future.” See Remarks of FCC Chairman Julius Genachowski, “Winning the Global Bandwidth Race: Opportunities and Challenges for the U.S. Broadband Economy,” (September 25, 2012) at 2 (available http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-316462A1.pdf).

substitutes for one another and that T-Mobile was a “maverick” in the mobile marketplace, two factors which have little if any relationship to the firms’ spectrum holdings.

33. More broadly, the dynamic nature of the mobile wireless market means that any presumptions about market power, or spectrum aggregation, are inherently ephemeral. In the brief period since the Commission acted to block the AT&T-T-Mobile merger the market has changed dramatically as a result, for example, of Verizon’s transfer of spectrum to T-Mobile, T-Mobile’s proposed merger with MetroPCS, the Commission’s approval of the Dish reassignment, and the issuance (and approval by the courts) of the Commission’s data roaming regulations. Further change appears to be on the immediate horizon, as indicated by the discussions currently underway among Sprint, Clearwire, Dish and others.

34. Evidence from recent auctions is that firms of all sorts have been successful in acquiring spectrum, including new entrants (e.g., SpectrumCo) and smaller firms (e.g., MetroPCS and T-Mobile). On the other hand, there is no evidence that firms facing meaningful spectrum constraints have been excluded from participation.

35. In short, there is no basis for believing that limits on buyer participation in the incentive auction designed to reduce concentration the mobile wireless market would lead to improved market performance. To the contrary, in the absence of compelling evidence that larger firms possess monopoly power, constraining their ability to acquire spectrum needed to expand output can only harm consumer welfare.

B. Limiting Buyer Participation Would Put the Auction at Risk of Failure

36. The imposition of spectrum caps, set-asides or other means of limiting the participation of some bidders on the basis of concerns about market power or otherwise would place the auction at risk of failure.

37. First, and most obviously, limitations on the participation of major potential bidders will lower demand and thus lower transaction prices. Barring excess supply – a condition few anticipate -- lower prices will result in less spectrum being reallocated. Put differently, limitations on buyer participation conflict directly with the key objective of fostering broad participation.

38. Second, as noted above, broadcasters will choose whether to participate, and at what prices to relinquish their licenses, based not only on supply and demand conditions (and prices) in the incentive auction, but also on their expectations about the future, including their ability, at some point in the future, to obtain better terms. Today's Commission can exclude certain buyers or limit demand, but it cannot credibly commit that such limitations will persist in the future. In effect, limitations on buyer participation defeat the objective of effective price discovery by creating, at a minimum, an expectation that higher prices may be available in the future.

39. Third, even those with concerns about market power in the mobile wireless market concede that efforts to address this issue in the context of auctions are prone to uncertainty and error. In a recent article by Cramton, Kwerel, Rosston and Skrzypacs, for example, the authors find that “experience with [spectrum caps, bidding credits, and set asides] has been mixed,” and that these tools have sometimes resulted in “lengthy delay in the use of the spectrum.”¹⁹ Thus, they write, “[o]ur conclusion is that these instruments must be used with care. The phrase attributed to the Hippocratic Oath very much applies: first, do no harm.”²⁰

¹⁹ See generally Peter Cramton, Evan Kwerel, Gregory Rosston and Andrzej Skrzypacs, “Using Spectrum Auctions to Enhance Competition in Wireless Services,” *Journal of Law and Economics* 54 (November 2011) S167-S188 (available at <http://www.cramton.umd.edu/papers2010-2014/cramton-kwerel-rosston-skrzypacz-spectrum-auctions-and-competition.pdf>).

²⁰ *Id.*

40. As noted above, auction design elements that add complexity should be embraced only where they contribute to broad participation and effective price discovery. Limitations on buyer participation fail this test on all counts: They *add* complexity while *detracting* from broad participation and effective price discovery.

C. Competition and Consumer Welfare are Best Served by Maximizing the Amount of Spectrum Reallocated

41. The rapidly changing nature of the wireless marketplace ensures that the Commission will have many opportunities in the future to address wireless competition issues, both in the context of future transactions and otherwise. The incentive auctions, on the other hand will likely occur at least four years after they were first formally proposed in the National Broadband Plan. As noted above, the costs to consumers and the economy of allowing the incentive auctions to fail, or to reallocate a sub-optimal volume of spectrum rights, are extremely high.

42. In that context, the Commission should carefully consider the tradeoff between steps to limit spectrum aggregation, on the one hand, and the effects of such actions on the overall supply of spectrum. To be specific, even if one believes that concentration in the market for wireless services results in higher prices or reduced output, a failure to increase the supply of spectrum through the incentive auctions would have precisely the same effects. Indeed, the more spectrum is released into the market for mobile wireless services, the lower spectrum prices are likely to be in the secondary market, thereby reducing costs of entry.

VI. CONCLUSIONS

43. The economic benefits from a successful incentive auction – one which reallocates as much spectrum from willing sellers to willing buyers as possible -- are extremely high, while the costs of failure or unnecessary delay are equally large. Success depends on

maximizing participation among both buyers and sellers, and on adopting auction design rules that ensure effective price discovery while avoiding unnecessary complications.

JEFFREY AUGUST EISENACH

Education

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Member, Board of Advisors, Washington Mutual Investors Fund, 2008-2012
Member, Board of Advisors, Pew Project on the Internet and American Life, 2002-
Member, Board of Directors, The Progress & Freedom Foundation, 1993-2009
Member, Attorney General's Identity Theft Task Force, Virginia, 2002

Member of the Board of Directors, Privacilla.com, 2002-2003
Member, Executive Board of Advisors, George Mason University Tech Center, 2001-2004
Contributing Editor, *American Spectator*, 2001-2002
Member, Bush-Cheney Transition Advisory Committee on the FCC, 2001
Member, Governor's Task Force on E-Communities, State of Virginia, 2000-2001
Member, 2000-2001 Networked Economy Summit Advisory Committee, 1999-2001
Member, Board of Directors, Internet Education Foundation, 1998-2003
Member, Internet Caucus Advisory Committee, 1998-2003
Member, American Assembly Leadership Advisory Committee, 1996 -2002
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Member, Reagan-Bush Transition Team on the Federal Trade Commission, 1981
Henry Salvatori Award, Claremont Men's College, 1979
Frank W. Taussig Award, Omicron Delta Epsilon, 1978

White Papers and Academic Publications

“Putting Consumers First: A Functionality-Based Approach to Online Privacy,” (with H. Beales)
Navigant Economics LLC, January 2013
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- “Exploring Developments in the Communications Sector,” National Regulatory Conference, May 17, 2012
- “Platform Competition in the Internet Ecosystem: Implications for Regulation,” Mercatus Institute, November 8, 2011
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- “The Communications Sector and Economic Growth,” Innovation Policy Institute, March 2, 2011
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