

Oral Testimony of Coleman Bazelon, The Brattle Group, Inc.
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Subcommittee on Communication and Technology
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Chairman Walden, Ranking Member Eshoo, members of the committee, it is an honor to speak here today.

This Committee is considering an important issue of spectrum policy that will have profound impacts on the development of wireless broadband. I am sure everyone is familiar with the projections of demand for wireless broadband, including forecasts of wireless data demand virtually doubling every year for the next few years. Industry capacity will struggle to keep up. Rising demand will be met in part by rapidly building out spectrum acquired at auction in the past few years and re-farming the older allocations in order to deploy newer, more efficient technologies. Carriers will also use other techniques to increase effective capacity such as WiFi offloading, off-peak transmission and on-device storage, and innovative pricing schemes aimed at reducing peak usage. Nevertheless, if future demand for wireless broadband services is to be met and those services are to remain affordable, it is clear that new allocations of spectrum will be needed. Absent those additional allocations, much of the potential benefit of mobile broadband to consumers and the economy will be lost.

Exactly how much more radio spectrum is needed for wireless broadband is uncertain. Given this uncertainty, policymakers should apply a principle of spectrum reallocation—based on current allocations, if a higher valued use exists, spectrum should be reallocated from the

lower valued use to the higher valued use. Our economy benefits when resources are moved to higher valued uses. Every band of spectrum should be examined with this Principle of Spectrum Reallocation in mind. As long as there are financial gains and additional consumer welfare to be had from reallocating more spectrum, further reallocation should take place.

This Principle of Spectrum Reallocation has been applied to the television band twice before. First, the initial cellular allocations were from the upper reaches of the UHF band originally allocated to TV broadcasters. Then, as a result of the digital television transition, the 700 MHz band was reallocated to wireless broadband and public safety uses. At the conclusion of the digital television transition, rights to the 700 MHz band were more valuable for wireless broadband services than broadcasting, and were reallocated to wireless service providers accordingly.

Or, I should say that the Principle of Spectrum Reallocation has *almost* been applied twice to the TV band. The D block remains unassigned. There seem to be three options: assign the D Block to public safety, auction it for wireless broadband uses with public safety obligations or auction it without public safety obligations. I have testified before, and reiterate today, my belief that auctioning the D Block unencumbered with any public safety obligations would be best. Last summer, I told this Committee that I estimated a well structured auction of the D Block would raise between \$3 billion and \$4 billion and I believe that to still be true. The loss in value from public safety obligations on private licensees or the relatively small amount of cost savings to public safety from an additional 10 MHz of spectrum suggest that an unencumbered auction would put the D Block to its highest valued uses.

There is an option to apply the Principle of Spectrum Reallocation to the TV bands again through the use of incentive auctions. Incentive auctions are two-sided or dual auctions. On one side is a reverse or procurement auction where broadcasters bid offers to return their current broadcast licenses and on the other side is a forward auction where unencumbered spectrum is sold through standard FCC auction procedures. A portion of the proceeds from the forward auction are used to compensate the broadcasters who offer their current licenses in the reverse auction. One of the key advantages of incentive auctions is that they are designed with the Principle of Spectrum Reallocation in mind. That is, by design, they will not reallocate spectrum from a higher valued use to a lower value use.

My colleague Charles Jackson and I are working on a detailed analysis of what an incentive auction of the television bands might produce. This research was sponsored by the High Tech Spectrum Coalition, but today I am testifying on my own behalf. I want to provide the Committee with a few highlights of our preliminary findings.

- An incentive auction could clear 120 MHz of spectrum that could be reallocated to wireless broadband uses.
- Broadcasters that do not participate in the auction or whose bids are not accepted in the auction will not have any diminution in their service areas.
- At a minimum, 4 full-powered broadcasters would remain in every top 30 market serving the same households they do today, although probably more than four existing stations

would continue broadcasting by moving to VHF channels, co-broadcasting with other broadcasters and adjusting their service areas.

- Payments to broadcasters in an incentive auction would probably not be more than about \$15 billion, but would likely be much less.
- Expected revenues from auctioning 120 MHz of spectrum would likely exceed \$35 billion.
- An incentive auction would be expected to raise about \$20 billion for deficit reduction or for other priorities Congress may have such as funding a public safety network.

Finally, in closing, I would like to remind the Committee that the real beneficiaries of spectrum reallocations are consumers. Broader access to higher bandwidth wireless networks at lower cost is the real benefit of applying the Principle of Spectrum Reallocation. The benefits to consumers are generally estimated to be 10 to 20 times auction receipts. Consequently, the cost of inaction in reallocating these valuable spectrum bands is very high.