

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

In the Matter of)
)
Promoting More Efficient Use of Spectrum) ET Docket No. 10-237
Through Dynamic Spectrum Use Technologies)
)

**REPLY COMMENTS OF THE
NATIONAL ASSOCIATION OF BROADCASTERS**

The National Association of Broadcasters (NAB)¹ submits these brief reply comments in response to the Federal Communications Commission’s (FCC or Commission) request for information and comment on how dynamic spectrum use technologies can provide for more efficient use of the radio spectrum.² As the Commission rightfully notes, “we must ensure that any available spectrum is used as efficiently and productively as possible.” *Notice* at 1. NAB applauds the Commission for initiating this holistic examination of technologies that will enable more efficient use of all spectrum and is encouraged and impressed by the innovations presented by commenters in this proceeding.

NAB continues to believe that the Commission should look more aggressively at technologies that might be better suited to helping address anticipated capacity issues on wireless networks than more disruptive means like spectrum reallocations that could

¹ NAB is a nonprofit trade association that advocates on behalf of local radio and television stations and also broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the courts.

² *Promoting More Efficient Use of Spectrum Through Dynamic Spectrum Use Technologies*, Notice of Inquiry, ET Docket No. 10-237 (rel. Nov. 30, 2010) (“*Notice*”).

harm the public interest.³ This proceeding is a good first step. NAB also agrees with commenters such as Google who call for the Commission to conduct a comprehensive spectrum inventory.

As many of the comments in this proceeding show, innovations in the wireless industry are happening at lightening speed. The comments here identify new technologies that will vastly improve spectrum efficiency and are currently in late stages of development. Significant investment in this space suggests that even more promising technologies will soon follow.

NAB calls specific attention to just a few of the comments. Qualcomm, for example, highlights a series of promising technologies that could help wireless broadband providers offload data intensive traffic from their cellular networks more quickly.⁴ Those technologies include Authorized Shared Access (ASA), which would allow mobile broadband operators to dynamically share spectrum with government users; a proximal communication technology called Flashling, which allows devices near one another to communicate without burdening cellular infrastructure; hetnets, dense networks of small cell sites that could help alleviate capacity issues in crowded areas; and supplemental downlink technology, which allows “mobile operators to combine unpaired spectrum with paired spectrum bands to better support mobile

³ See NAB Comments in ET Docket 10-235 at 6 (filed March 18, 2011) (“The Commission should scrutinize fully the nature of a projected capacity crunch and objectively consider the extent to which network congestion can be addressed by means other than disruptive spectrum reallocations. The alternatives include upgrading network technology; using non-spectrum infrastructure such as fiber-optic cable, wire, and coaxial cable; deploying network management practices; leveraging consumer architecture such as femtocells and wi-fi; and enhancing carrier architecture, such as by investing in picocells and smart antennas, improved backhaul, sectorization, and cell splitting.”).

⁴ See Comments of Qualcomm Inc. in ET Docket No. 10-237 (filed Feb. 28, 2011).

broadband download needs.” *Id.* Similarly, Professor Dick Grunwald of the University of Colorado highlights in his comments how new technologies like wide-spectrum radios will “greatly increase spectrum utilization.”⁵ These innovations, along with many others on the horizon, should substantially increase the ability of mobile broadband operators and others to manage increasing demand on their networks. NAB encourages the Commission to remain aware of these technologies and to factor them into agency spectrum policy.

Finally, NAB joins Google and others within this proceeding and without who have called upon the Commission to conduct a comprehensive inventory of spectrum.⁶ Although it may be unlikely that there are large swaths of unassigned prime spectrum, the Commission would be well-served to know what spectrum may be being held to serve future needs. NAB agrees with Google, who notes that an “inventory should measure the effective utilization of licensed and allocated spectrum so that the Commission and NTIA, with input from stakeholders, can make informed decisions regarding bands suitable for reallocation and dynamic access.” Google at 6. Armed with such data, the Commission can make more informed decisions on ways that opportunistic spectrum use could play a greater role in wireless communications.

⁵ See Comments of Dick Grunwald, *How New Technologies Can Turn a Spectrum Crisis into a Spectrum Opportunity*, in ET Docket No. 10-237 at 2 (filed on Feb. 28, 2011).

⁶ See Comments of Google in ET Docket No. 10-237 at 5-6 (filed on Feb. 28, 2011); See also Testimony of Michael Calabrese, Vice President and Director, Wireless Future Program, New America Foundation, Before the Committee on Energy and Commerce, Subcommittee on Communications, Technology and the Internet at 5 (Dec. 15, 2009) (“A critical step toward making substantially more spectrum capacity available for wireless broadband services and innovation is to determine and disclose how, where and when this publicly-owned resource is currently being used – or not used – by current public agency and private sector licensees.”).

Again, NAB commends the Commission for launching this proceeding. As we have noted here and in other spectrum-related proceedings, the Commission should take a holistic approach to all spectrum management policies, which must include due consideration of the impact of spectrum innovations on wireless efficiency.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Scott Goodwin". The signature is stylized with a large, sweeping initial 'S' and a distinct dot above the final 'i'.

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