

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C., 20554**

In the Matter of

Fostering Innovation and Investment in the
Wireless Communications Market

A National Broadband Plan For Our Future

GN Docket No. 09-157

GN Docket No. 09-51

**REPLY COMMENTS OF
THE BOEING COMPANY**

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The Boeing Company (“Boeing”), by its attorneys and pursuant to the Commission’s Notice of Inquiry (“NOI”), hereby submits these reply comments in response to comments filed in the above-referenced docket.¹ Boeing supports those comments filed by parties advocating revisions to the Commission’s experimental licensing rules and urges the Commission to establish deadlines on experimental testing coordination procedures.² Boeing further requests that the Commission instruct its Office of Engineering and Technology (“OET”) to exercise its discretion in refraining from imposing coordination requirements on all experimental licensees that use shared spectrum with commercial licensees. Finally, Boeing supports comments made

¹ See Notice of Inquiry, *In the Matter of Fostering Innovation and Investment in the Wireless Communications Market, A National Broadband Plan For Our Future*, FCC 09-66 (Aug. 27, 2009) (“*Notice of Inquiry*”).

² See, e.g., *Comments of Lockheed Martin Corporation*, GN Docket No. 09-157 and GN Docket No. 09-51, at 5 (filed Sept. 30, 2009) (“*Lockheed Comments*”) (requesting that the Commission amend Part 5 of its Rules to prohibit incumbent users from refusing to coordinate spectrum use with experimental licensees).

by the National Association of Manufacturers, MRFAC, Inc. and others that seek to increase the resources of OET and the Enforcement Bureau to ensure that the Commission's Rules are fully enforced.³ Each of these actions would promote spectrum innovation and investment and thereby serve the public interest.

I. THE COMMISSION'S CURRENT EXPERIMENTAL LICENSING RULES SUPPRESS THE GROWTH OF WIRELESS INNOVATION

Under the Commission's current experimental licensing regime, holders of experimental licenses are often required to secure the consent of all other licensees authorized to use the same spectrum in a given geographic region prior to commencing operations.⁴ OET's Experimental Licensing Branch has imposed these coordination requirements even in cases where the nature of the proposed testing generally ensures that other licensees in the region will not suffer harmful interference. Boeing recognizes and appreciates that the Commission is obligated to protect spectrum users from harmful interference caused by experimental licensees.⁵ Such coordination and consent requirements, however, often overburden holders of experimental licenses, thereby hindering wireless innovation.

As explained in Boeing's comments to the Commission, commercial licensees have no incentive to furnish their consent to experimental testing and, in Boeing's experience, have

³ See, e.g., *Comments of the National Association of Manufacturers and MRFAC, Inc.*, GN Docket No. 09-157 and GN Docket No. 09-51, at 4 (filed Sept. 30, 2009) ("*NAM/MRFAC Comments*") (noting that clearly defined rights and rules are vital to the growth of wireless innovation because, without such rules, new entrants would be hesitant to "[risk] the investment capital necessary to develop" their products).

⁴ See 47 C.F.R. § 5.85(e) (stating that the Commission "may, at its discretion, condition any experimental license or STA on the requirement that before commencing operation, the new licensee coordinate its proposed facility with other licensees that may receive interference as a result of the new licensee's operations").

⁵ See *id.* § 5.85(c).

frequently refused consent to coordination requests.⁶ Because licensees seem willing to reject coordination for any reason, or no reason at all,⁷ some have refused consent even though they have not constructed their networks. Others have refused even though their networks would not suffer harmful interference. In effect, Boeing and other manufacturers have been prevented from conducting necessary experimental testing despite the lack of anticipated effect on any commercial wireless receivers, resulting in certification and delivery delays of their products as well significant costs.⁸

II. THE COMMISSION SHOULD AMEND ITS EXPERIMENTAL LICENSING RULES AND COORDINATION REQUIREMENTS TO INCLUDE ESTABLISHED TIMEFRAMES, AFFIRM OET'S DISCRETION TO IMPOSE SUCH REQUIREMENTS, AND INCREASE ENFORCEMENT RESOURCES

Boeing applauds OET's Experimental Licensing Branch for its recent efforts to expedite the processing of experimental licensing applications and to institute procedures to encourage such applications. Boeing believes the Commission can further improve its experimental licensing procedures by amending the coordination requirements imposed on experimental licensees, requirements that thus far have been upheld by only one commenting party as an effective tool for protecting incumbent licensees.⁹ Amending the Commission's Rules to ease

⁶ See *Comments of the Boeing Company*, GN Docket No. 09-157 and GN Docket No. 09-51, at 9-10 (filed Sept. 30, 2009) ("*Boeing Comments*") (describing Boeing's difficulty in coordinating consent with wireless service licensees to enable High Intensity Radiated Field testing of new aircraft).

⁷ See *Lockheed Comments*, at 3-4 (stating that recent experience has shown that incumbent users have been allowed to reject coordination "*even when no objectively verifiable interference concern exists*").

⁸ See, e.g., *id.*

⁹ See *Comments of Qualcomm Incorporated*, GN Docket No. 09-157 and GN Docket No. 09-51, at 48-49 (filed Sept. 30, 2009).

burdensome coordination requirements will enable the Commission to encourage wireless innovation, while still affording protection to incumbent spectrum users.

Boeing fully supports proposals to amend Part 5 of the Commission's Rules to limit the ability of incumbent users to refuse to coordinate spectrum use with experimental licensees.¹⁰ The Commission should amend Part 5 of its Rules to obligate commercial licensees to act in good faith and to respond promptly to requests for consent and coordination in accordance with firmly established timelines. The Commission should also establish a timeframe within which commercial licensees are allowed to raise technical or interference concerns. If a commercial licensee fails to respond or raise its concerns within the established deadlines, the Commission should deem the licensee's consent granted by operation of law or, in the alternative, OET's Experimental Licensing Branch should be instructed to waive the consent and coordination requirement. Further, the Commission should establish rules detailing dispute resolution procedures in the event a dispute arises between an experimental licensee and an incumbent user.

Boeing also urges the Commission to affirm that the Experimental Licensing Branch has discretion regarding whether to impose the notification and consent requirements on experimental licensees.¹¹ Boeing notes that the coordination requirement set forth in Section 5.85(e) of the Commission's Rules is permissive, not mandatory. This requirement should not be imposed on experimental licensees in instances where the Experimental Licensing Branch determines that the licensee's action will not create an objective interference concern. For

¹⁰ See, e.g., *Lockheed Comments*, at 5 (requesting the Commission to make clear that "incumbent users may not refuse to coordinate spectrum use with experimental licensees—except in cases of potential harmful interference").

¹¹ See also *NAM/MRFAC Comments*, at 6 (arguing that a determination of what constitutes "harmful interference" and how it should be resolved should be done on a case-by-case basis).

example, if the nature of the proposed testing generally ensures that incumbent spectrum users will not experience harmful interference or if the potentially affected licensees have not constructed their networks, OET should not impose the coordination and consent requirement on an experimental license. In these situations, there is no risk of harmful interference to licensees and therefore no need for additional protections through coordination and consent requirements.¹²

In recognizing that revised rules, once established, will have little effect without proper enforcement mechanisms, Boeing supports comments that call on the Commission to ensure that the funding and staffing needs of OET and the Enforcement Bureau are fully met.¹³ Increasing personnel at OET's Experimental Licensing Branch, such as engineers, will ensure that a decision not to impose coordination and consent requirements on an experimental license was properly reached upon a careful review and determination that no harmful interference concerns exist. Additional engineers may also help resolve complex spectrum sharing and other technical disputes between experimental licensees and incumbent users. Similarly, increasing staff and resources at the Enforcement Bureau will facilitate enforcement of the Commission's Rules. By increasing the resources of these two branches, the Commission can reduce uncertainty in the wireless market and encourage new entrants and experimental licensees to invest in and develop new technologies.

¹² In its comments to the Commission, Boeing also emphasized that several precautions have already been put into place by many experimental licensees to protect incumbent licensees from harmful interference. *See Boeing Comments*, at 10. These precautions provide ample protection to incumbent licensees and further support Boeing's proposal to revise the Commission's Rules.

¹³ *See NAM/MRFAC Comments*, at 5 (asking the Commission to "significantly enhance the resources of [OET] as well as of the Enforcement Bureau").

III. CONCLUSION

As the Commission acknowledges, experimentation is a key element of wireless innovation. Boeing, therefore, respectfully requests that Commission take action to alleviate the cumbersome coordination and consent requirements imposed on experimental licensees by amending Part 5 of its Rules as discussed above. Such revisions will expedite the experimental licensing process and foster the growth and development of innovative technologies to the benefit of the public interest, while fulfilling the Commission's mandate to protect incumbent users from harmful interference.

Respectfully submitted,

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