



Squire Sanders (US) LLP  
1200 19th Street, NW  
Suite 300  
Washington, D.C. 20036

O +1 202 626 6600  
F +1 202 626 6780  
squiresanders.com

Bruce A. Olcott  
T +1 202 626 6615  
bruce.olcott@squiresanders.com

July 9, 2012

**VIA ELECTRONIC FILING**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th St. S.W.  
Washington, D.C. 20554

**Re: Promoting Expanded Opportunities for Radio Experimentation and Market Trials Under Part 5 of the Commission’s Rules and Streamlining Other Related Rules, ET Docket 10-236**

**2006 Biennial Review of Telecommunications Regulations – Part 2 Administered by the Office of Engineering and Technology, ET Docket 06-155**

**Permitted Written *Ex Parte* Presentation**

Dear Ms. Dortch:

The Boeing Company (“Boeing”), through its counsel, respectfully submits this letter in response to the June 21, 2012 *ex parte* letter filed by Clearwire Corporation (“Clearwire”).<sup>1</sup> Boeing appreciates Clearwire’s interest in the proposed coordination safe harbor for experimental licenses and willingness to help develop a solution that will promote innovation and efficiency for both experimental and primary licensees. Boeing writes to clarify some points regarding its safe harbor proposal and to address the additional suggestions raised in Clearwire’s letter. Boeing agrees with Clearwire that the experimental radio service (“ERS”) is a necessary and beneficial service, and the experimental licensing process should be designed to minimize the burden on licensees, both experimental and primary. A well-designed safe harbor provision can advance these goals and streamline the experimental process to facilitate innovation while protecting incumbent spectrum users.

---

<sup>1</sup> Letter from Cathleen A. Massey, Vice President Regulatory Affairs & Public Policy, and Nadja S. Sodos-Wallace, Senior Regulatory Counsel, Clearwire Corporation, ET Docket Nos. 10-236 and 06-155 (filed June 21, 2012) (“*June Clearwire Ex Parte*”).

Pursuant to Boeing's proposal, experimental license applications that qualify for the coordination safe harbor would be subject to all the rules governing experimental licenses except that, upon a showing that they comply with the safe harbor requirements, they would be relieved of coordination obligations. To qualify for safe harbor treatment, an applicant must show that all radiated emissions will be at or below the Section 15.109(b) power levels at the edges (fence line) of the controlled test area. The safe harbor would apply to all types of licenses, including standard experimental licenses, applications for special temporary authority ("STA"), and any of the new program experimental licenses adopted through the Commission's pending experimental licensing proceeding in which this letter is filed.

Boeing generally agrees with the bulleted summary of the safe harbor proposal provided by Clearwire,<sup>2</sup> but notes that Boeing's proposal for an experimental safe harbor does not include a requirement that the experimental test area be RF-shielded.<sup>3</sup> Such a requirement would be redundant and unnecessary because of the nature of the safe harbor. Experimental licensees qualifying for the coordination safe harbor will control not only their transmissions but also the physical surroundings so as to ensure that regardless of their operations, emissions at the fence line are no higher than the level of radiated emissions limits indicated in Section 15.109(b) of the Commission's rules.

Although the safe harbor concept does not require RF-shielding, it does draw on the same rationale that the Commission has recognized for RF-shielded testing, that facilities which pose no legitimate potential for harmful interference should be afforded a reduced threshold for operations because the test circumstances themselves have already protected co-frequency users.<sup>4</sup> Strict control of emissions, however, does not imply or require that non-interfering experimental operations be limited to RF enclosures. Careful attention to power levels, transmission directions, and test siting can achieve the same result without the expense and limitations of RF-shielded facilities. In fact, the safe harbor approach offers advantages over RF-shielded testing because it allows experimenters to better approximate real-world conditions, an important aspect of research and development. Unlike RF-shielded testing, which relieves experimenters not only of coordination requirements but also of the underlying licensing requirement, applicants seeking coordination safe harbor treatment will be subject to the full experimental licensing process, as well as an additional technical showing to qualify for safe harbor. Once an applicant has made a safe harbor showing to the Commission, coordination requirements will not be imposed because, like experimental operations in RF-

---

<sup>2</sup> *Id.* at 1-2.

<sup>3</sup> Letter from Bruce A. Olcott, Counsel, The Boeing Company, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket Nos. ET Docket 10-236 and ET Docket 06-155 (filed May 2, 2012).

<sup>4</sup> *Promoting Expanded Opportunities for Radio Experimentation and Market Trials under Part 5 of the Commission's Rules and Streamlining Other Related Rules*, ET Docket No. 10-236, 2006 Biennial Review of Telecommunications Regulations – Part 2 Administered by the Office Of Engineering and Technology (OET), ET Docket No. 06-105, Notice of Proposed Rulemaking, FCC 10-197, ¶ 82 (rel. Nov. 30, 2010) ("NPRM").

shielded facilities, the potential for interfering with other services is “practically non-existent,”<sup>5</sup> and the Commission’s rules for the safe harbor should reflect this.

In its *ex parte* letter, Clearwire recommended that applications for experimental licenses that qualify for safe harbor treatment should be placed on public notice for 30 days prior to grant.<sup>6</sup> Boeing believes that there would be little to be gained as a result of such a public notice process. First, applications for experimental licenses are not placed on public notice today, regardless of the characteristics of the proposed tests. Imposing a public notice requirement for those applications that qualify for safe harbor treatment would therefore illogically subject some of the most innocuous and least offensive applications to greater scrutiny than applications processed under the current rules. The experimental operations to be conducted pursuant to the safe harbor are those operations that pose the least risk of harmful interference. The strict technical parameters of the safe harbor are a significant asset to ERS operators, incumbents, and the Commission staff because they represent a certain class of operations that have a demonstrably low risk of causing harmful interference. For such operations, the assessment of the Office of Engineering and Technology is fully sufficient to assure the Commission and primary licensees that the experimental program proposed in the safe harbor application will protect primary licensees.

A second reason why public notice is inappropriate is that many experimental license applications, including those that would qualify for safe harbor treatment, are filed under a request for confidentiality, meaning that a public notice would provide little information for incumbent licensees to base their objections on. Lacking substantive information to discriminate between innocuous applications and those posing a potential concern, incumbents would either object to all of safe harbor applications or none of them. Neither approach would serve administrative efficiency or the goal of promoting innovation and effective spectrum sharing.

To ensure that primary licensees can expand their service footprint into new areas, Clearwire also proposes a six month limit on experimental licenses qualifying for safe harbor treatment.<sup>7</sup> Such a limit is unnecessary because a safe harbor site will not prevent incumbent licensees from expanding their service. An experimental safe harbor site is not a risk to services outside of it because experimental emissions are strictly controlled to be no greater than the Section 15.109(b) power levels at the fence line of the test site. Nor is the site itself a potential lost market for incumbent services, because all personnel on the premises would be on notice that RF transmissions within the site are strictly controlled by the experimental licensee. Moreover, the program experimental license proposed in the *NPRM* does not have such a truncated time limit.<sup>8</sup> Indeed, the *NPRM* proposes a term of five years for program

---

<sup>5</sup> *Id.*

<sup>6</sup> *Clearwire Ex Parte* at 2.

<sup>7</sup> *Id.* at 2.

<sup>8</sup> *NPRM*, ¶¶ 35, 44, 53.

experimental licenses.<sup>9</sup> This duration is consistent with existing experimental licensing procedures and the needs of experimental licensees.<sup>10</sup>

Licenses qualifying for safe harbor treatment should be subject to the same duration limits and showing requirements as regular experimental licenses; the rules already require applicants for experimental license authority to provide “justification” for licenses of particularly long duration, as well as “an adequate showing of need” at renewal.<sup>11</sup> The strict technical requirements ensure that experimental programs proposed for safe harbor treatment will be among the most carefully controlled and low-risk experimental operations, and therefore their duration should not be limited to less than a standard experimental license.

Finally, Boeing addresses herein a previous *ex parte* filing submitted by Clearwire addressing its experience coordinating with experimental licensees.<sup>12</sup> Clearwire acknowledges in its letter that many experimental licensees, including Boeing, do adhere to the coordination requirements of their ERS licenses.<sup>13</sup> Clearwire suggests, however, that not all experimental licensees are as diligent in the coordination process.<sup>14</sup> In raising this concern, Clearwire does not indicate whether such disregard by experimental licensees has been increasing in frequency. To the extent the problem has been growing, this upward trend may coincide with the greatly increased frequency with which coordination obligations have been imposed on experimental licensees, often without any apparent regard to whether coordination is actually needed or appropriate given the nature of the tests proposed. Although coordination requirements are appropriate in some circumstances, their use has expanded to become a matter of course, even for experimental programs with low risk of harmful interference. This trend risks creating a misimpression that coordination requirements constitute boilerplate language imposed reflexively by the Commission without an underlying technical or policy justification.

For this reason, Boeing advocates the coordination safe harbor as one part of a three-pronged strategy to increase compliance with the Commission’s rules. First, the safe harbor would relieve some of the most modest experimental license applications from unnecessary coordination obligations. Boeing believes, however, that a safe harbor alone is insufficient because a substantial number of experimental license applications that might not qualify for safe harbor treatment will nonetheless present such a low risk of harmful interference that

---

<sup>9</sup> *Id.*

<sup>10</sup> 47 C.F.R. § 5.71(a).

<sup>11</sup> *Id.*

<sup>12</sup> See Letter from Cathleen A. Massey, Vice President Regulatory Affairs & Public Policy, and Nadja S. Sodos-Wallace, Senior Regulatory Counsel, Clearwire Corporation, ET Docket Nos. 10-236 and 06-155 (filed May 17, 2012) (“*May Clearwire Ex Parte*”).

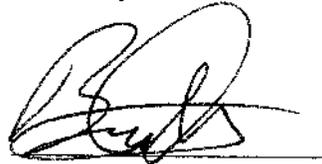
<sup>13</sup> *Id.* at 5, n.8.

<sup>14</sup> *Id.* at 1.

coordination requirements are not necessary or appropriate. Thus, the second prong is a more targeted approach to coordination requirements that judiciously imposes them only on experimental operations that pose an appreciable risk of causing harmful interference. The use of a more discretionary approach by the Commission in imposing coordination obligations on experimental licensees could also significantly reduce the administrative burden that some primary licensees claim to experience in responding to coordination requests. Finally, the third prong would be increased enforcement of non-compliance with coordination requirements among the remaining applications, those that may pose legitimate risks of harmful interference that coordination may be necessary in order to mitigate.

Boeing is pleased with the progress made in promoting experimental operations, and appreciates the comments of Clearwire and others in helping to develop a coordination safe harbor that can further facilitate innovation while protecting primary users.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce A. Olcott", written over a horizontal line.

Bruce A. Olcott  
Counsel to The Boeing Company