

October 14, 2005

VIA EMAIL AND ELECTRONIC SYSTEM

James Burtle
Chief, Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: The Boeing Company, Progress Report, Experimental Radio Station Construction Permit and License, Call Sign WXC9CX, File Nos. 0014-EX-ST-2005 and 0559-EX-ST-2005

Dear Mr. Burtle:

On behalf of The Boeing Company ("Boeing"), attached please find a copy of the progress report for the experimental radio station construction permit and license Call Sign WXC9CX, File Nos. 0014-EX-ST-2005 and 0559-EX-ST-2005. The progress report describes the operations Boeing has conducted under its experimental authority and is required under Special Condition 3 of the authorization.

A copy of this progress report is being filed through the FCC's electronic filing system for experimental licensing. Please let us know if you have any questions.

Sincerely,

/s/
Carlos M. Nalda
Christopher R. Bjornson
Counsel to The Boeing Company

Attachment

cc: Anthony Serafini

WDC 376155v.2

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

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EXPERIMENTAL PROGRESS REPORT

October 13, 2005

The Boeing Company (“Boeing”), licensee of the Connexion by BoeingSM (“Connexion”) Aeronautical Mobile-Satellite Service (“AMSS”) system,¹ in accordance with Special Condition 3 of experimental special temporary authorization (“STA”) Call Sign WC9XCX, File Nos. 0144-EX-ST-2005 and 0559-EX-ST-2005, hereby files this Experimental Progress Report to describe the operations conducted under experimental authority. Experimental STA Call Sign WC9XCX authorized Boeing to test and demonstrate CDMA and GSM picocell base stations communicating with wireless handsets onboard aircraft in-flight and on the ground. File No. 0144-EX-ST-2005 (effective March 21, 2005) authorized such operations within the United States, and File No. 0559-EX-ST-2005 (expired October 13, 2005) added authority to operate over international waters.

During the experimental STA period, Boeing conducted a number of experiments with picocell base stations onboard the Connexion One testbed aircraft. In-flight operation occurred only while the aircraft was above 10,000 ft and only the 1900 MHz PCS band was used during these experiments. For all of these operations, the Connexion system served as the off-board link to the terrestrial network. In addition, the handsets used were equipped with specially designed SIM cards that allow the handsets to connect and communicate with the onboard picocells only. Thus, there was no possibility that the handsets would connect with terrestrial base stations. No reports of interference were received during any of Boeing’s experimental operations, which included:

March 22, 2005

Initial RF site survey on Connexion One to determine proper placement and power levels for picocell base station antennas.

First week May 2005

Ground tests in which first cellular calls were made GSM and CDMA calls made using handsets communicating with picocell base stations.

¹ See The Boeing Company, File No. SES-MOD-20030512-00639, Call Sign E000723 (granted November 14, 2003); The Boeing Company, File No. SES-MOD-20020308-00429, Call Sign E000723 (granted September 26, 2002); The Boeing Company, *Order and Authorization*, 16 FCC Rcd 22645 (2001).

May 22, 2005

Calls placed from a CDMA handset on Connexion One (while on the ground) to a GSM handset on 777LR aircraft (operating under separate authority) while in flight.

May 23, 2005

Additional on-ground demonstration of CDMA picocell operations.

Third week June 2005

On-ground testing of GSM picocell operations.

July 1, 2005

First flight test round-trip from Seattle, Washington to Glasco, Montana; CDMA and GSM voice and data operations with picocell tested.

July 14, 2005

Second flight test round-trip Seattle, Washington to Boise, Idaho; CDMA and GSM voice and data operations with picocell tested.

First week October 2005

During the European leg of a recent Connexion One "World Tour" to several Asian and European countries, Boeing tested the onboard GSM picocell system to provide wireless voice communications services onboard the aircraft while in flight over international waters.

Boeing is in the process of evaluating the technical data and operational information obtained during the foregoing experiments and related tests. When Boeing's evaluation is complete and it has had the opportunity to fully analyze the information, Boeing will submit a report of its findings into the record of the Commission proceeding WT Docket 04-435 consistent with Special Condition 3 of experimental STA Call Sign WC9XCX.