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October 27, 1994
Mr. H. Franklin Wright
Frequency Liaison Branch Chief
Federal Communications Commission
2025 M Street
Washington, DC 20554

Experimental Radio License
Call Sign: K O 2 X E U
File Number: 3545-EX-PL-93
Effective June 11, 1993
Expires January 1, 1995

Subject: **Renewal and Modification** of Experimental Radio Station
Construction Permit and License for MicroCell Product
Development Testing and Demonstration

Dear Mr. Wright:

BNR Inc. hereby requests Renewal and Modification of the Experimental Radio License (File Number 3545-EX-PL-93; call sign K 0 2 X E U) previously issued to BNR Inc. BNR Inc. is the research and development affiliate of Northern Telecom Inc. BNR Inc. requests authorization for joint development testing, operations and systems demonstration by itself and Northern Telecom Inc. (hereinafter called "BNR/NT") as described hereinafter.

The current license is being used for development of new low power systems for Cellular operators; and, continued development testing and product demonstration is critically needed to develop new and better systems. The existing program is being conducted at the BNR/NT Richardson campus of buildings formerly described as NL 32° 58' 47", WL 96° 42' 36". The BNR/NT program has been expanded to include external antennas at another BNR/NT campus building, 2150 Lakeside Blvd., which is approximately 450 feet from the BNR/NT buildings where tests are also conducted. Several new low power indoor fixed station radios have been added within the 2201 and 2221 Lakeside Blvd. buildings to provide expanded coverage for the test program. Therefore, BNR Inc. requests authority to conduct test activities in locations described in the current license as "The Vicinity of Richardson, Texas."

Attached is Form 442, with Exhibits #1 through #8, and a letter supporting the BNR/NT live air test program from Southwestern Bell Mobile Systems. The current Experimental Radio License, (File Number 3545-EX-PL-93; call sign K 0 2 X E U), will expire January 1, 1995, and development and demonstration needs will continue through 1997. The License Renewal and Modification seeks renewed authority to test in the frequencies authorized by the current license. The "B" carrier frequencies assigned to Southwestern Bell Mobile Systems will be used for the live air radio testing. Closed loop laboratories evaluate a wide range of customer needs and are essential for validation and development of equipment. Therefore this application requests renewal of the authorization to use frequencies in the current license, but at reduced power levels.

To provide the FCC with timely information regarding the location of new low power fixed stations BNR/NT proposes the following notice procedure:

For new indoor, base station antenna units, inside BNR/NT buildings, BNR/NT will provide the building location information and the quantity of antenna units in the next quarterly report filed with the FCC.

For new outdoor, fixed stations, BNR/NT will provide prior written notification, including the antenna location, height, frequency used, and if directional, the beam width and orientation, to the FCC before any new outdoor, fixed station is installed. The Richardson, Texas vicinity would include areas within 15 miles of the City boundaries of Richardson, Texas.

The Microcell test program will use the Experimental License during 1995 through 1997 for continued live air radio testing in the BNR/NT complex buildings located at 2201 and 2221 Lakeside Blvd. New outdoor testing is between the 2201 and 2150 Lakeside Blvd. buildings in Richardson, Texas. Closed loop radio testing is conducted in the BNR/NT building complex. Customer training is conducted with closed loop systems at the NT buildings at 1055, 1057, and 1059 Sherman Street Richardson, Texas. BNR/NT will closely coordinate testing activity with existing users to avoid interference. The test activity will use low power handsets and fixed stations that will avoid interference problems with existing Cellular service in the area.

The current test program has identified unique methods of deploying low-power fixed stations to achieve full in-building coverage with significantly less radiated power from the fixed stations. The expanded test program provides the opportunity for BNR/NT to develop new, in-building wireless systems for Cellular operators without interfering with frequency channels being used for traditional cellular service. Outdoor radiation is required to test the interaction between in-building and outdoor radiation.

Please call me at (202) 347-4610 in the event that you have any questions concerning this application. Should you desire to reach me by FAX, the number is (202) 508-3612. A check in the amount of \$45.00, together with the original of this application, and fee processing form, has been sent by express mail to The Melon Bank, 3 Melon Bank Center, Room 153-2713, Pittsburgh, Pa., 15259, Attn: Wanda Jordan (Phone 412-234-5494).

Please send the Original Experimental Radio Station Construction Permit and License to me in the self addressed, postage paid envelope, attached hereto.

Very truly yours,



Raymond L. Strassburger
Director Government Relations, Telecommunications Policy

Attached: BNR INC. License Renewal Request on FCC Form 422, with eight (8) Exhibits