October 26, 1994

Experimental Radio License
Renewal and Modification Request
Call Sign: K I 2 X A G
File Number: 4398-EX-ML-94
Effective Date: June 11, 1993
Expiration Date: January 1, 1995

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

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

Dear Mr. Wright:

BNR Inc. hereby requests Renewal and Modification of the Experimental Radio License (File Number 4398-EX-ML-94; call sign K I 2 X A G) issued to BNR Inc. The current license is being used for development of systems for Broadband PCS licensees, and new low power systems for wireless providers and users in both the United States and the international market. License authority is requested to support continued development, testing and product demonstration which is needed to develop new and better systems.

Attached is Form 442, with Exhibits #1 through #15. BNR, Inc., is the research and development affiliate of Northern Telecom, Inc. The current Experimental Radio License, (File Number 4398-EX-ML-94 call sign K I 2 X A G), will expire January 1, 1995, and development and demonstration needs will continue through 1997. The BNR/NT PCS 1900 and low power PCTS test programs will use fixed stations at Various locations described in Table 2, Exhibit #1, and will use frequencies described in Table 1, Exhibit #1. The License Renewal and Modification seeks authority to continue testing in the frequencies listed in Table 1, Exhibit #1. BNR Inc., requests authorization for joint development, testing, operation, and system demonstrations with Northern Telecom Inc., BNR Inc.'s affiliate and the equipment manufacturer (hereinafter called BNR/NT), with respect to the hereinafter described activities .

Due to the rapid development of new digital radio products, which are being tested and demonstrated, BNR/NT will most likely need to add new indoor or outdoor fixed stations within the Vicinity of Richardson, Texas, Mountain View & Santa Clara, California, and Research Triangle Park, North Carolina before the Experimental License is again renewed. The new stations would use frequencies, power levels, and radio emission types identified in this Modification and Renewal request. BNR/NT requests Experimental License authority to construct and operate fixed stations in the Vicinity of (1) Richardson, Texas,(2) Mountain View & Santa Clara, California (3) Research Triangle Park, North Carolina.

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, fixed stations, inside BNR/NT buildings, BNR/NT will provide the building location information and the quantity of fixed stations 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.

For the purpose of this request the Vicinity of Richardson, Texas, Mountain View & Santa Clara, California, and Research Triangle Park, North Carolina would include areas within 15 miles of the city boundaries.

The PCTS test programs will use the Experimental License during 1995 through 1997 for continued testing inside the BNR/Northern Telecom buildings. These systems are intended for low power and low mobility applications for all markets. Systems are being designed for both public and private use. All these programs utilize handsets and fixed stations operating at less than 100 milliwatts. The outdoor antenna system for Richardson will allow testing between the buildings of the Richardson Campus.

The PCS 1900 test program will use the Experimental License during 1995 through 1997 Indoor testing and demonstrations will be within BNR/Northern Telecom buildings. An outdoor antenna is located in Richardson, and a second outdoor location is requested for Research Triangle Park, North Carolina. PCS 1900 will serve the Broadband PCS market, which will see License Auctions starting on December 5, 1994. Much testing will use low power indoor fixed and closed loop testing, but some tests will need to use the outdoor antenna at power levels equivalent to commercial operations. BNR/NT will closely coordinate test activities with existing users, including future PCS licensees.

Customer training is conducted at the NT buildings at 1055, 1057, and 1059 Sherman Street, Richardson, Texas. The training and test activity will use low power handsets and fixed stations in conjunction with closed loop RF systems. All indoor fixed stations at the training facilities will use "closed loop" systems to avoid interference. BNR/NT conducts extensive laboratory radio system testing and verification activities inside the BNR/NT campus of buildings identified in Exhibit #2. The Lab testing activities are with closed loop systems, where the radio is not connected to an antenna, and the radio signal does not extend beyond the grounds of the building.

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 /ck

Raymond L. Strassburger
Director Government Relations, Telecommunications Policy

Attached: BNR Inc. License Renewal Request on FCC Form 422, with fifteen (15) Exhibits