



NORTHWEST IOWA POWER COOPERATIVE

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December 22, 1999

Federal Communications Commission
Experimental Radio Service
P.O. Box 358320
Pittsburgh, PA 15251-5320

~~Gentlemen:~~

This letter constitutes an informal application, as described in Section 5.55 of the Commission's rules, for a six-month extension of a Special Temporary Authority (STA) to operate transmitting equipment in the Experimental Radio Service.

Applicant: North West Rural Electric Cooperative
Attn: Lyle Korver
Manager
415 Eighth Street S.E.
Orange City, Iowa 51041-1999
(712) 737-4935

By: Dennis L. Hill
Vice President of Telecommunications Services
Northwest Iowa Power Cooperative
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Need for Action: The STA is being requested primarily due to the limited duration of planned experimental operation. North West Rural Electric Cooperative desires to further evaluate the technical and economic feasibility of providing local loop and data service in a rural service area using 1.9 GHz fixed wireless equipment. The proposed trial will use radio equipment that has not been type accepted by the FCC.

Type of Operation: Operation of a single code division multiple access (CDMA), wireless local access, base station and fewer than thirty subscriber terminals at fixed sites in the immediate vicinity of the base station tower located within the city of Orange City, Iowa is proposed. The trial will be provided at no cost to the participants.

Purpose of Operation: Experimental operation is planned in order to evaluate radio system dynamic performance in free space propagation conditions, radio equipment reliability, equipment installation procedures, and antenna alignment techniques associated with the wireless fixed access equipment.

Duration: Experimentation to conclude six months after grant of authorization. A grant date of January 31, 2000 is requested.

Call Sign: WA9XGA



Nature of

Service: The radio equipment being evaluated is capable of providing basic telephone and data service using a digital radio channel.

Location: The base station is located at North West REC's headquarters, 415 Eighth Street S.E., Orange City, Iowa. The coordinates of this site are:

Latitude 42:59:52.0 (NAD 27)
Longitude 96:02:58.0

All subscriber terminals will be within fifteen miles of the base station location.

Equipment: Airspan, model AS4000 Code Division Multiple Access (CDMA) base transceiver (quantity one), model AS4000 subscriber transceivers (quantity fewer than thirty), and associated interface, non-radio transmission, and network management equipment. This equipment will be modified for this trial and has not been type accepted.

Frequency

Desired: Base Station 1930 - 1990 MHz Transmit (carrier frequency)
Subscriber Terminals 1850 - 1910 MHz Transmit (carrier frequency)

Authorization of carrier frequencies within the ranges listed is requested; a single operating channel pair will be selected based on the local interference environment. As planned, the operational channel pair will be operated in the PCS C-block (carrier frequencies 1930.25 MHz / 1898.25 MHz), which today is licensed to Polycell Communications, INC. North West REC has entered into an agreement to purchase the PCS "C" block license from Polycell. Polycell is the current licensee for the Sioux City BTA. The request for the change of ownership is currently before the Commission. If the C-block operation is not compatible with other operations in the band, another channel within the requested frequency range will be selected after obtaining the consent of the PCS license holder. Prior to operation, frequency coordination with potentially affected operational-fixed microwave incumbents (co-channel and adjacent to the proposed operating frequency) in the area will be completed.

Radiated

Power: The effective radiated power (EIRP) of the subscriber terminal will be less than 41 dBm, or 13 Watts. The effective radiated power (EIRP) of the base station transmitter will be less than 45 dBm, or 32 Watts. The subscriber terminal uses a transmit power control system.

Actual transmit power of the base station will be less than 35 dBm, or 3.1 Watts; actual transmit power of each subscriber terminal will be less than 28 dBm, or 631 milliwatts.

Emission: G7W - QPSK Modulation Using Direct Sequence CDMA Multiple Access Technique.

Bandwidth: 3500 kHz (base and subscriber transmitters)
(Equipment will meet FCC out-of-block emission limits specified in Part 24.238.)

Antenna

Height: Base Station 1420 Feet AMSL or less, 150 Feet AGL or less
Subscriber Terminal 1500 Feet AMSL or less, 40 Feet AGL or less

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The base station antenna will be mounted on an existing tower structure below the current FAA approved height. The subscriber antenna height is expected to be below the height of the rooftop of the dwelling.

Signature of applicant

North West Rural Electric Cooperative



Lyle Korver
Manager

If you have any questions associated with this application or require additional technical information, please contact me at (712) 546-3529.

Sincerely,

NORTHWEST IOWA POWER COOPERATIVE



Dennis L. Hill
Vice President of Telecommunications Services

DLH