Exhibit 1

US Wirefree Holding Group, Inc.

MMDS Experimental License Proposal

001-010-052101

NextNet Expedience™ Product

Revision: 1.2

Revision Date: July 15th, 2001

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1 INTRODUCTION

This document is a proposal for obtaining an experimental license from the FCC Mass Media Bureau, Video Services Division. This is for beta testing of the high-speed fixed wireless system developed by NextNet Wireless, Inc. Beta testing is the initial test of the system deployed in an actual real world field environment.

1.1 Overview

US Wirefree Holding Group, Inc. has control of all MMDS frequencies in a 35 mile PSA centered in Olympia, Washington. *(See Exhibit 2).* It is our intent to offer a competitive alternative to high speed / next generation Internet access to residential and SOHO customers within our PSA in Washington State. We have determined that a need to perform a beta test of the NextNet Expedience™ wireless equipment is necessary to meet our business plan objectives.

NextNet Expedience™ is an end-to-end, high-speed wireless network access system designed for the ITFS and MMDS frequency bands. It is a local loop wireless alternative offering business and residential users high-speed access to network communication systems, such as private networks and the Internet. The system consists of two major components:

1) a base station component connecting to a service provider's backbone network which may ultimately provides access to the Internet, and
2) a subscriber unit (CPE) installed and operated at each end users computer.

The base station may be deployed in a cellularized and sectorized fashion and is designed to provide high-speed throughput for dense user capacities. It is targeted to be best utilized and deployed in high-density suburban or urban areas. The base station coverage area (sector) is approximately a 1 to 3 mile radius from the transmitting tower, 5 miles maximum. These sectors may overlap when an additional base stations are deployed thus allowing a given user in an area to potentially communicate to one of multiple base stations depending upon the signal quality. Adding a base station to a cell increases the user density and maintains the quality of service intended for a particular subscriber.

The subscriber unit or customer premises equipment (CPE) is a transceiver, modem and directional antenna integrated into a single enclosure. The CPE is a low cost, customer-installable device. This is intended to be mass marketed and sold as a consumer device; much in the same way as dial-up modems or other commercial off the shelf components are sold.

The NextNet air link functions as an Ethernet bridge. NextNet can support various network layer methods e.g. IP. Initial NextNet CPE end modems can be movable to allow the user to select a base station of the best quality signal. Time division duplex and cellular deployment support considerable flexibility in adjusting downlink vs. uplink airtime to actual two-way traffic flow. The system deploys in 6 MHz increments of spectrum.

1.2 Objectives

The primary objective of this document is to provide the FCC the proper information to issue an experimental license to US Wirefree Holding Group, Inc. in the MMDS frequency band for three facilities located in the cities of Olympia, and Tumwater, in Washington State

1.3 Revision History

Revision	Date	Author	Description
1.0	05/21/01	James Mains	Initial draft revision.
1.1	05/24/01	James Mains	3rd site addition.
1.2	07/15/01	James Mains	Combined "Proposal" document with "Written Application" document

2 SYSTEM COMPONENTS

2.1 Background

The Federal Register as of November 25, 1998 pp. 65087-65128 contains amended versions of FCC 47 CFR Ch. 1 Parts 1, 21, and 74 pertaining to the ITFS and MMDS frequency bands, 2500-2686 MHz. Pertinent paragraphs include: 74.936 Emissions and bandwidth; 74.937 Antennas; 74.938 Transmitting equipment (includes emission mask); and 74.939 response stations (Sections regarding transmitter output power, EIRP, directional antennas, and interference analysis, is most pertinent.). FCC/IEEE rules on personal exposure to RF from a non-portable or non-handheld unit apply to NextNet CPE unit equipment.

The RF system uses the spectrum in the 2500-2686 MHz ITFS/MMDS band. The FCC licenses these frequencies as 31 different channels, each with 6 MHz bandwidth.

2.2 Modulation

The modulation is orthogonal frequency division multiplexing (OFDM). The OFDM shall consist of 1024 sub-carriers with only 811 sub-carriers transmitted. Each sub-carrier is quadrature phase shift keyed (QPSK) on each of the information sub-carriers in each OFDM modulation symbol. The QPSK provides for 2 bits, i.e. dibit, of information for each sub-carrier.

The modulation bandwidth is 5.544503 MHz. The modulation and emissions meet Part 21.905. The emissions designator is 5M80XXD. The FCC identifier for the Base Station is PHX-MMDS-BASE1, and the CPE is PHX-MMDS-CPE1.

2.3 Time Division Duplex

The system uses time division duplex (TDD) operation. The base station transmits for a period and then the CPE equipment transmits for a period, if allowed. Both the base station equipment and the CPE equipment use the same frequency for transmit and receive. The protocol between the base station and CPE equipment controls when the CPE equipment can transmit. The CPE equipment cannot transmit unless it can hear a base station and is locked to the base station via control through the protocol; information from the base station is received and decoded. The base station has a minimum duty cycle of 42.8% with a maximum of 91%. The CPE equipment has a maximum duty cycle of 7.143% with a minimum of 1.14% transmit on time.

2.4 Transmit Power

The power transmitted by the base station or subscriber equipment is 2.0 watts average for each symbol transmitted. The CPE uses a time-division multiple access (TDMA) scheme allowing a “source-based” time averaging of the power that is transmitted. The CPE equipment is restricted by the protocol to transmit less than 7.143% of the time, giving a time averaged power of 0.143 watts average. The emissions meet Part 74.936.

The transmit power of the CPE is controlled to meet a minimum signal level at the base station. This further reduces the maximum amount of power that the CPE transmits. This reduces the potential of interference to a co-channel frequency user.

The CPE equipment is below the recommended maximum limit of 1 milliwatt per square centimeter at 20 centimeters for time averaged power RF exposure. This includes the 13 dBi gain of the subscriber unit internal antenna.

2.5 Base Station Site Antennas

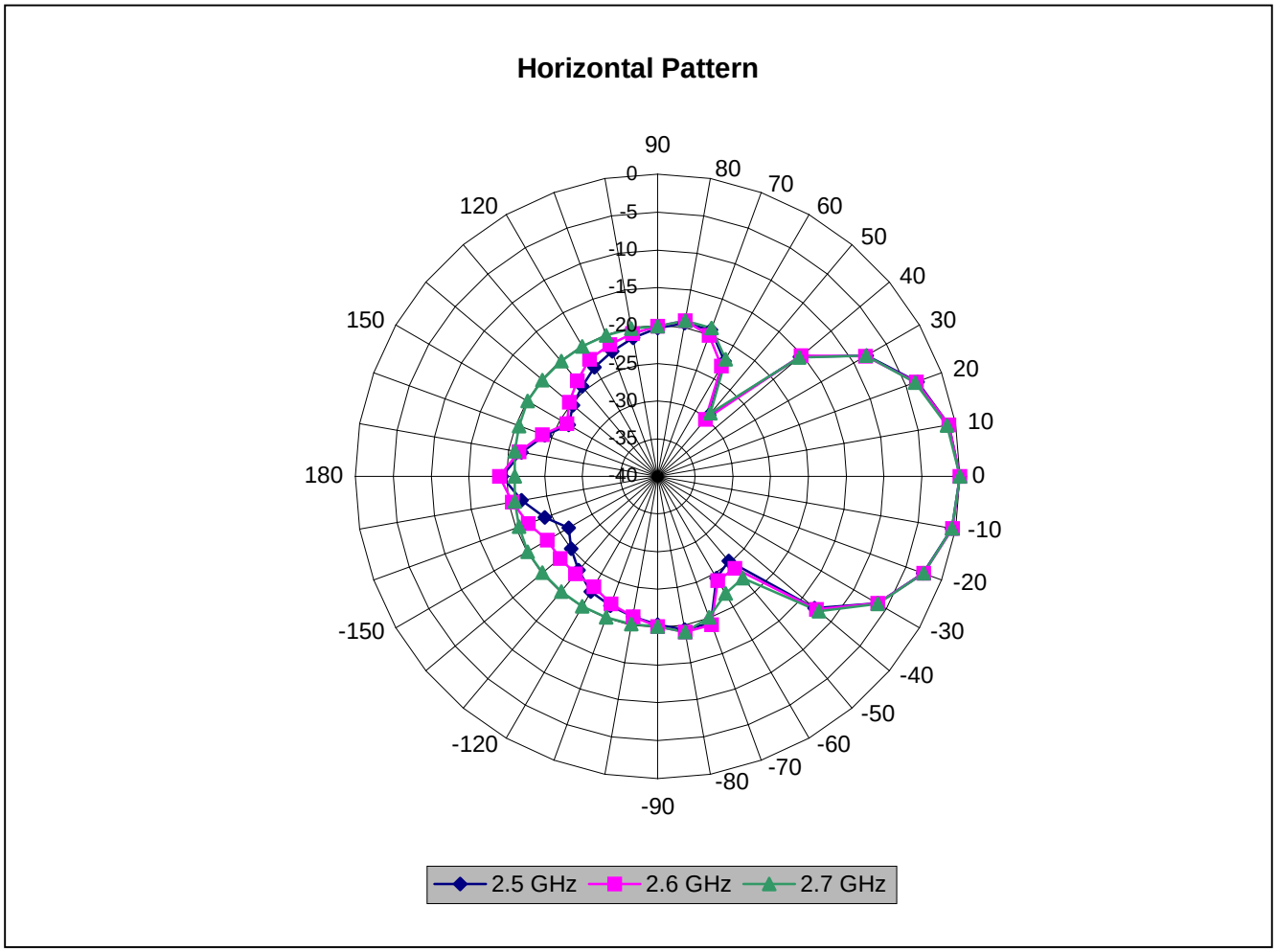
The base station site is typically equipped with six (6) base stations each with their own independent antenna. The antenna is typically a panel antenna with a 65° horizontal beam width with a maximum of 19 dBi of gain. This provides an overall omni-directional base station site coverage. The antenna is vertically polarized. Other sectorization patterns of 90°, 120°, and omni-directional antenna patterns may also be used with different gains. There is approximately 2 dB of line loss providing an EIRP of 97 watts average.

2.6 Subscriber Unit Antenna

The subscriber units contain their own internal gain antenna. The subscriber unit antenna has 13 dBi of gain with a 30° to 40° horizontal beam width. The antenna is vertically polarized.

The following is a diagram of the horizontal pattern of the internal antenna of the subscriber unit. The 0 dB is referenced to a gain of 13 dBi.

Figure 2.6A



3 PROPOSAL

US Wirefree Holding Group Inc. is proposing to perform a beta system field test in Olympia and Tumwater Washington. This shall consist of twelve (12) base stations and approximately one hundred (100) subscriber units. The base stations will be mounted at three different locations, with four (4) antennas at each location

3.1 Frequencies

WS Wirefree Holding Group, Inc. has obtained agreements with the MMDS license holders to use their frequencies, with a total of eight (8) channels of 6 MHz each, see attached letters, *(Exhibit 2)*. The license numbers are WMH725, and WMI350 comprising channels E, 1 through 4, and F, 1 through 4.

3.2 Base Site

The twelve base stations will be located at three different sites, all within 5.66 miles from each other.

The first site is on top of Saint Peters Hospital, located at W122° 50' 46.7" N 47° 03' 10.1". We will mount four antennas to the elevator penthouse at 150 feet above ground level. The ground elevation is 210 feet, for a total height of 360 feet. We will attach three Racal antennas model # 2600-VP-65-19, *(see Exhibit 3*), and one Swedcom antenna, model # SIW5015N, *(see Exhibit 4)*. The four base stations will be mounted to a temporary plywood attachment on the north side of the penthouse structure. The power supply, UPS, and network equipment will be housed inside an existing equipment shelter designed for telecommunications use.

The second site is located on a 140 foot Microflect, self supporting tower, at W122° 56' 31.9" N 47° 00' 33.8". . We will attach three Racal antennas model # 2600-VP-65-19, *(see Exhibit 3*), and one Swedcom antenna, model # SIW5015N, *(see Exhibit 4)*, at the 50 foot level on the tower. The four base stations will be mounted to a temporary 8-foot fence section next to the tower base. The electronics will be housed in a separate equipment building already in place. The ground elevation of this site is 446 feet. The total height of the transmitting antennas will be at 496 feet to the center of the panel antenna.

The third location is a water tower located at W122° 50' 50.2" N 47° 01' 17.5". We will attach three Racal antennas model # 2600-VP-65-19, *(see Exhibit 3*), and one Swedcom antenna, model # SIW5015N, *(see Exhibit 4)*, mounted to the top of the 130' water tank. The four base stations will be mounted to a temporary 8-foot fence section next to the tower base. The electronics will be housed in a separate equipment building already in place. The ground elevation of this site is 238 feet. The total height of the transmitting antennas will be at 368 feet to the center of the panel antenna.

The locations of the units, both base and subscriber, are not in any "quiet zone" area where radio use is restricted.

There will be no environmental effect if the license is granted.

3.3 Subscriber Unit Sites

The subscriber units will be fixed but may be moved to any location within a five-mile radius of any base station. The area map below, *(figure 3.3A)*, shows three circles, one around each transmit site. Each circle represents a five-mile radius, indicating the maximum distance a CPE can operate from a base station antenna. With our system, we will offer a maximum of three miles distance from any one transmit site to ensure future advertised quality standards.

The subscriber unit has an internal 13 dBi gain directional antenna with a 30° to 40° horizontal beam width. For this experimental license the subscriber unit antenna should be viewed as an omni-directional antenna with 13 dBi gain. This is due to the fact that the subscriber unit (with internal antenna) may be positioned in any direction. This will be done for testing to investigate the base station selection process.

The EIRP of the subscriber unit is 40 watts average power for each modulated symbol when the internal antenna gain is taken into account. The subscriber unit uses a time-division multiple access (TDMA) scheme allowing a "source-based" time averaged signal that is 2.9 watts maximum.

The subscriber units will be located inside of buildings, next to the user's computer. This will introduce a certain amount of additional propagation loss.

Figure: 3.3A


Transmit Sites in Olympia _Tumwater Washington
W122 50 46 7" N47 03 10 1"
W122 50 50 2" N47 01 17 5"
W122 56 31 9" N47 00 33 8"
DeLORME

4 INTERFERENCE PROTECTION

This system will be operating 100% within the boundaries of the licensed PSA for the MMDS license applicable to this area.

Our three transmit sites will have a maximum overall EIRP of 104 watts of a modulated symbol when cable losses and antenna gains are taken into effect.

Refer to *Exhibits 5 & 6,* to see the radiation pattern over the affected areas.

5 WRITTEN APPLICATION

APPLICATION FOR AN
EXPERIMENTAL LICENSE
IN THE ITFS/MMDS FREQUENCY BAND

General Information

Legal Name: US Wirefree Holding Group, Inc.
Mailing address: PO Box 8200
Lacey, WA. 98509

Attention: James L. Mains
Ph # 360-459-0919
Cell #: 360-789-0403
e-mail: jmains@uswirefree.com

Certification

Person responsible for preparing Engineering information:

Date: 05/24/01 Name (printed): James L. Mains Signature: _____
Title: Technical Operations Manager, US Wirefree

US Wirefree, nor any party to the application is subject to a denial of federal benefits.

Date: 05/24/01 Name (printed): John B. Mayse Signature: _____
Title: CEO, US Wirefree Holding Group, Inc.

Request

This is a request for an experimental license in the MMDS frequency band to be in effect from the grant date to that time that is six (6) months later for the purpose of testing equipment and market needs. The request is for a service area as circular protected areas with a 32.18 km (20 mile) radius from any of our three transmit sites.

Base Station Information

Antennas: We will be deploying four base stations at each of three sites. Each site will have three Racal antennas and one Swedcom antenna. The engineering data for these two antenna types are attached as Exhibits 3 & 4.

Base Antenna Manufacturer: Racal Antennas, Inc. MMDS Relay Antenna
See attached engineering data sheet 19 dBi gain
Vertically polarized
Panel Antenna

Base Antenna Manufacturer: Swedcom Corporation. ITFS/MMDS Relay Antenna
See attached engineering data sheet 16 dBi gain
Vertically polarized
Panel Antenna

Location A: 47° 03' 10.1" N 122° 50' 46.7" W Ground AMSL: 64.61 meters (210 feet)
Existing Hospital Structure, Overall height 45.52 meters (150 feet)
Radiating center of antenna height above ground: 45.52 meters (150 feet)
Base Transmit Power: 2 watts of modulated signal
Time average duty cycle of base station is 43 to 91%

The expected EIRP of the base station is 97 watts of a modulated symbol when cable losses and antenna gains are taken into effect.

Four base stations will be installed. The directional antennas shall cover an area within 5 miles of each base station location**.** Each base station will use/reuse a frequency from either E, or F block frequency groups.

Location B: 47° 00' 33.8" N, 122° 56' 31.9" W Ground AMSL: 135.94 meters (446 feet)
Existing Tower Structure, Overall height 42.67 meters (140 feet)
Radiating center of antenna height above ground: 15.24 meters (50 feet)
Base Transmit Power: 2 watts of modulated signal
Time average duty cycle of base station is 43 to 91%

The expected EIRP of the base station is 97 watts of a modulated symbol when cable losses and antenna gains are taken into effect.

Four base stations will be installed. The directional antennas shall cover an area within 5 miles of each base station location**.** Each base station will use/reuse a frequency from either E, or F block frequency groups.

Location C: 47° 01' 17.5" N, 122° 50' 50.2" W Ground AMSL: 72.54 meters (238 feet)
Existing Water Tower, Overall height 39.62 meters (130 feet)
Radiating center of antenna height above ground: 40.54 meters (133 feet)
Base Transmit Power: 2 watts of modulated signal
Time average duty cycle of base station is 43 to 91%

The expected EIRP of the base station is 97 watts of a modulated symbol when cable losses and antenna gains are taken into effect.

Four base stations will be installed. The directional antennas shall cover an area within 5 miles of each base station location**.** Each base station will use/reuse a frequency from either E, or F block frequency groups.

Subscriber Unit Information

There shall be up to 100 subscriber unit locations within a five mile range of the base stations
Subscriber Unit Antenna Manufacturer: Internal 13 dBi gain antenna vertically polarized
Nextnet design.
Subscriber Unit Transmit Power: 2 watts of modulated signal
Time average duty cycle of subscriber unit is 7.2 to 1.2%

The expected EIRP of the subscriber is 40 watts of a modulated symbol when the internal antenna gain is taken into effect. The subscriber unit uses a time-division multiple access (TDMA) scheme allowing a "source-based" time averaged signal that is 2.9 watts maximum.

The internal antenna is directional but the subscriber unit can be turned a full 360°. Therefore for the purposes of interference the subscriber unit antenna shall be used as an omni-directional antenna with 13 dBi of gain.

The subscriber units will be placed at a height above ground from 1 meter (3 feet) to 5 meters (16.4 feet). These will be placed inside a building or residence, adding additional loss.

Quiet Zone and Environmental

The locations are not in any "quiet zone" area where this radios use is restricted.
There is no environmental effect if license is granted.

Frequencies

US Wirefree Holding Group, Inc. has obtained exclusive rights to the E and F channel blocks (eight total channels), within the MMDS Band. These frequencies are under license numbers WMH725 and WMI350. Each base station will use/reuse a frequency from either E, or F block frequency groups. Each transmit location will utilize four channels using 2 channels each from blocks E and F.

Modulation

The modulation is orthogonal frequency division multiplexing (OFDM). The OFDM shall consist of 1024 sub-symbols with only 811 sub-symbols transmitted. Each sub-symbol is quadrature phase shift keyed (QPSK) on each of the information sub-symbols in each OFDM modulation symbol. The QPSK provides for 2 bits, i.e. dibit, of information for each sub-symbol.

The modulation bandwidth is 5.544503 MHz. The modulation and emissions meet Part 21.905.

Interference

See the attached plots, *(Exhibit 5 & 6)*, identifying our coverage area. We have no other users of the MMDS frequency band within our 35-mile PSA.

The signal level of the base station at 10 miles is –71.2 dBw/meter^2 power flux density and –82.1 dBw/meter^2 at 35 miles for the frequency band of interest. This is near or below the power flux density of –73 dBw/meter^2 that is allowed at the boundary of a protected service area. The closest inference would be to WlX511 at Byron, MN. They were contacted and they have not constructed or are operational, therefore, they do not represent an interference issue.

The signal level of the base station at 95 feet above ground at 10 miles with a receive antenna at 6.6 feet with 13 dBi of gain is –119.9 dBm using the Okumura-Hata model for suburban area. The Okumura-Hata loss model is the standard being used for PCS deployment calculations. This is a power flux density of about –119.6 dBw/meter^2, again well below the allowed limit.

Additional Information

Additional information is attached, including:

MMDS Experimental License Proposal with Written Application – Exhibit 1
Letters from leaseholders of the frequencies identified. – Exhibit 2
Base station, Racal Antenna, engineering data. – Exhibit 3
Base station, Swedcom Antenna, engineering data. – Exhibit 4
Signal propagation study for US Wirefree Holding Group, Inc. - Exhibit 5
Co-Channel Interference Maps – Exhibit 6