

S-3505-EX-1998

COVINGTON & BURLING

1201 PENNSYLVANIA AVENUE, N. W.

P.O. BOX 7566

WASHINGTON, D.C. 20044-7566

(202) 662-6000

FACSIMILE: (202) 662-6291

LAUREL E. MILLER

DIRECT DIAL NUMBER

(202) 662-5554

DIRECT FACSIMILE NUMBER

(202) 778-5554

lmiller@cov.com

LECONFIELD HOUSE

CURZON STREET

LONDON W1Y 8AS

ENGLAND

TELEPHONE: 44-171-495-5655

FACSIMILE: 44-171-495-3101

KUNSTLAAN 44 AVENUE DES ARTS

BRUSSELS 1040 BELGIUM

TELEPHONE: 32-2-549-5230

FACSIMILE: 32-2-502-1598

August 28, 1998

By Courier

Federal Communications Commission

STA Department

Experimental Radio Services

P.O. Box 358320

Pittsburgh, PA 15251-5320

Re: STA Request of Wavtrace, Inc.

Dear Sir or Madam:

Wavtrace, Inc. hereby requests Special Temporary Authority ("STA") pursuant to 47 C.F.R. § 5.56 for a field test at two locations for its point-to-multipoint broadband access system, as described below. Simultaneous with this request, Wavtrace is filing an application for experimental radio service authorization on FCC Form 442 for this field test. Wavtrace submits this STA request because the schedule for its experimental program calls for the field test to commence on or about September 28, 1998; Wavtrace seeks an STA to cover the period from that date until approval of its application for experimental authorization.

1. Name and address:

Wavtrace, Inc.

1545 134<sup>th</sup> Avenue, N.E.

Bellevue, Washington 98005

6249 PL 98  
granted 9/28/98 (encl)

2. Need for special action: Wavtrace requests special temporary authority to begin a field test of its point-to-multipoint broadband access system, designed to operate at 38 GHz, for which it is submitting an experimental radio service authorization simultaneous with this request. Wavtrace requests special temporary authority so that it may begin its field test on or about September 28, 1998, in accordance with the schedule for its experimental program.

The goal of the proposed field test is to demonstrate that Wavtrace's product is technically capable of delivering voice, high speed Internet data, and video in a consistent and reliable manner. The test will be conducted both at an alpha site in Bellevue, Washington, where Wavtrace is headquartered, and at a beta site in Denver, Colorado, the location of a potential purchaser of Wavtrace's product.

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Both the alpha and beta configurations will be introduced gradually, beginning with a single, fixed "subscriber" unit communicating bi-directionally with a roof-top "hub" unit capable of supporting multiple remote subscriber units via an array of transceivers affixed to 30-degree-wide horn antennas. Both hub and subscriber units have indoor and outdoor elements and connect to each other via coaxial cable. The hub indoor unit multiplexes and de-multiplexes all traffic to and from the subscriber units, each of which will range from one to four or five kilometers from the hub. The antennas at the subscriber unit project a 2.2-degree beam width.

Over several months, additional subscribers will be added to the alpha and beta configurations, exercising the multiple time-slot, independent QAM modulation per RF carrier aspect of the product. Testing will include but not be limited to Rx/Tx power levels and cable loss, fade margins, atmospheric measurements, cross polarization, link reliability and availability, network interoperability, maximum loading, network management, and application testing.

The product that is the subject of this test uses Time Division Duplexing (TDD) and has been tested successfully at 38 GHz in a laboratory environment. TDD at 38 GHz has been neither demonstrated nor commercialized. Use of experimental 38 GHz spectrum will allow Wavtrace to take the next step of validating this technology in the field. The alpha configuration also will serve as a testbed to allow Wavtrace to apply new features and software upgrades.

3. Type of operation to be conducted: Experimental operation of a point-to-multipoint broadband access system for delivery of voice, high speed Internet data, and video.

4. Purpose of operation: As explained above, the purpose of the operation is to enable Wavtrace to demonstrate that Wavtrace's point-to-multipoint broadband access system is technically capable of delivering voice, high speed Internet data, and video in a consistent and reliable manner.

5. Time and date of proposed operation: Operation will commence upon grant of this request, and will run continuously.

6. Class of station, call sign of station, and nature of service: Experimental service under Part 5 of the Commission's Rules, operating in the desired frequency (stated below) in the 38 GHz band. This request is for a new station.

7. Location of proposed operation: 500 108<sup>th</sup> Avenue, Bellevue, Washington (north 47° 36' 53"; west 122° 11' 41"), and 720 Colorado Blvd., Denver, Colorado (north 39° 42' 16"; west 104° 56' 25").

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8. Equipment to be used: Experimental equipment manufactured by Wavtrace. The model number of the equipment to be used is PTM 1000L.

9. Frequency desired: 38.6-39.3 GHz.

10. Plate power input to final radio frequency stage: DC input power to final stage is 1.4W. (Net efficiency is 2 to 3% due to linearity requirements and 38 GHz device technology.)

11. Type of emission: W7W.

12. Overall height of antenna structure above ground: For Bellevue site, 2-3 meters above the roof of a 27-storey building. For Denver site, 2-3 meters above the roof of a 13-storey building.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Laurel E. Miller", with a stylized, flowing script.

Laurel E. Miller

*Counsel for Wavtrace, Inc.*