

0077-EX-ST-1998

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December 4, 1998

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

Re: SOPHIA Licensee, Inc. — Request for Immediate Special Temporary Authority
for New Experimental Radio Service Authorization

Dear Sir/Madam:

SOPHIA Licensee, Inc. ("Applicant") hereby submits for filing an original and one copy of an immediate request for special temporary authority ("STA") pursuant to Section 5.56 of the Commission's rules.

Applicant seeks STA to conduct tests establishing the technical and commercial viability of new technology for the provision of mobile radio services in the 220 MHz band. Applicant seeks STA immediately and for a period of 60 days pending processing and grant of its FCC Form 442 application for permanent authorization filed December 4, 1998. For reference, a copy of this application is enclosed.

Applicant submits the following information in support of its immediate STA request:

(1) Name and address:

SOPHIA Licensee, Inc.
800 Brickell Avenue, Suite 1110
Miami, FL 33131

(2) Need for special action:

SOPHIA Licensee, Inc., is one of the winning bidders for several licenses in the recent Phase II 220 MHz Service Auction, including a nationwide license (license number: QANWA255M). By this application, Applicant seeks to conduct experimentation of the nationwide channels in order to test mobile radio service technologies in the 220 MHz band.

The purpose of this experimental license is to exploit newly developed technologies in a wide-area, wireless-data network. The developing system will utilize components of TDMA and CDMA techniques in a narrowband, linear environment at 220 MHz. Data rates starting at 9600 bps will migrate during the period of this research to a target rate of 28.8 kbps using a recently

developed data protocol that promises increased RF bandwidth efficiency and increased reliability (and therefore increased data throughput) over prevalent data protocols. The research includes a number of related investigations including the management of cellular-like sectoring of packet-data transmissions at VHF frequencies and the end-to-end management of wireless packet data messages.

The research objective is to reduce the delivery costs and improve the reliability of wide-area wireless data transmissions through the combined use of overlapping coverage from multiple channels at multiple sites, an improved data protocol, and linear modulation with digital signal processing; while capitalizing on the advantages of 220 MHz RF propagation over frequencies of 900 MHz or higher. The results of this development will provide valuable assistance to those developing wireless data transmission systems for SMR and public safety networks.

Substantial research concerning propagation, frequency re-use, co-channel interference and cellular sectoring has been conducted at frequencies above 900 MHz, while counterpart research at VHF frequencies has been virtually non-existent due to the limited spectrum available below 900 MHz. The results of these studies will help to limit the risks involved in the deployment of this and similar wireless data systems. Further, the knowledge to be gained by this development will be directly supportive of the FCC's effort to quickly and effectively re-farm the VHF (and UHF) spectrum.

Applicant will conduct its experiments in full coordination with authorized users in the area to ensure that no harmful interference occurs. Applicant's subsidiary is the auction winner for the remaining channels in the area of proposed operation. Applicant otherwise understands that its experimental use of the spectrum is secondary to existing tenants' use and will immediately discontinue experimental activity whenever such activity causes harmful interference to primary users.

(3) Type of operation to be conducted:

The subject request for STA involves the operation of three base stations and up to ten mobile stations per base station across the continental United States. The frequencies to be utilized are those for which Applicant was the high bidder in the 220 MHz auction. The proposed authorization (being filed simultaneously with subject request for STA) for a new experimental license proposes use of the same frequencies. Applicant will in any event conduct its experiments in full coordination with authorized users in the area to ensure that no harmful interference occurs. Applicant acknowledges that its experimental use of the spectrum is secondary to existing tenants' use and will immediately discontinue experimental activity whenever such activity causes harmful interference to primary users.

(4) Purpose of operation:

The purpose for this experimental license authorization is to exploit newly developed technologies in a wide-area, wireless-data network. The subject request for STA seeks authorization for those frequencies that Applicant acquired at auction. The developing system will utilize components of TDMA and CDMA techniques in a narrowband, linear environment at 220 MHZ. Data rates starting at 9600 bps will migrate during the period of this research to a target rate of 28.8 kbps using a recently developed data protocol that promises increased RF bandwidth efficiency and increased reliability (and therefore increased data throughput) over prevalent data protocols. The research includes a number of related investigations including the management of cellular-like sectoring of packet-data transmissions at VHF frequencies and the end-to-end management of wireless packet data messages.

(5) Time and date of proposed operation:

Applicant would like to commence operations on the additional frequencies immediately, and requires STA until its application for modification to its permanent authority is granted.

(6) Class of station, call sign of station and nature of service:

The operation involves base and mobile stations for purposes of testing 220 MHZ operations. As the subject stations are proposed, there are no existing call signs.

(7) Location of proposed operation:

Various locations throughout the continental United States.

(8) Equipment to be used, including name of manufacturer, model and number of units:

The transmitting equipment to be installed for purposes of this STA request includes the following transmitters:

Base Stations: SEA, model ESP1000 / 1000T (FCC ID: BZ68RIESP1000T)
 SEA, model ESP1100 / 1100T (FCC ID: BZ6ESP1100)

Total No. of Base Units: 3

Mobile Stations: SEA, model ESP520 / 520D / 520DX (FCC ID: BZ68RIESP504)
 SEA, model 504 (FCC ID: BZ68RIESP504)
 SEA, model SEA700 (FCC ID: BZ6ESP700)
 SOPHIA, model EXPERIMENTAL

Total No. of Mobile Units: 30

(9) Frequencies desired (MHZ):

220-222 MHz

The 220 MHz channels for the nationwide authorization are:

220.7025
220.7075
220.7125
220.7175
220.7225
220.7275
220.7325
220.7375
220.7425
220.7475
221.7025
221.7075
221.7125
221.7175
221.7225
221.7275
221.7325
221.7375
221.7425
221.7475

(10) Plate power input to final radio frequency stage: (Not applicable.)

(11) Type of emission:

The following emission designators are specified: 4K00J2D and 4K00J3E.

(12) Overall height of antenna structure above ground:

The overall height above ground to the antennas will vary. Accordingly, Applicant will determine if notification to the FAA is required prior to constructing and operating the proposed system. If notification is required, Applicant will obtain any necessary clearance or ensure that clearance has already been obtained.

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Applicant certifies that no party to the application, including its partners and affiliates, is subject to a denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 853(a).

Should you have any questions regarding this matter, please contact Applicant's counsel, Jeffrey S. Cohen, Wilkinson, Barker, Knauer & Quinn, LLP, 2300 N Street, N.W., Suite 700, Washington, D.C. 20037-1128, (202) 783-4141.

Sincerely,

SOPHIA Communications, Inc.

A handwritten signature in black ink, appearing to read "J. Dombrowski", written over the printed name.

James P. Dombrowski
Vice President of Technical Operations

ORIGINAL

WILKINSON, BARKER, KNAUER & QUINN, LLP

Washington, DC
Frankfurt, Germany

2300 N Street, NW
Washington, DC 20037-1128

telephone: 202.783.4141
facsimile: 202.783.5851

December 7, 1998

Via Hand Delivery
Federal Communications Commission
Experimental Radio Services
P.O. Box 358320
Pittsburgh, PA 15251-5320

c/o Mellon Bank
Three Mellon Bank Center
525 William Penn Way, 27th Floor, Room 153-2713
Pittsburgh, PA 15259-0001
Attn: Wholesale Lockbox Shift Supervisor

Re: SOPHIA Licensee, Inc. — Request for Immediate Special Temporary Authority
for New Experimental Radio Service Authorization

Dear Sir/Madam:

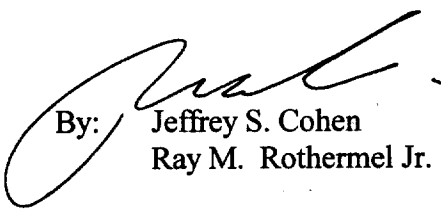
Pursuant to Section 5.56 of the Commission's rules, SOPHIA Licensee, Inc., by its attorneys, hereby submits an original and one copy of a Request for Special Temporary Authority ("STA") to operate a new Experimental Radio Service station.

This request is accompanied by an FCC Form 159 and a check made payable to the Federal Communications Commission for \$45 for the prescribed filing fee (Fee Code EAE).

Should you have any questions regarding this matter, please contact the undersigned.

Sincerely,

WILKINSON, BARKER, KNAUER & QUINN, LLP

By:  Jeffrey S. Cohen
Ray M. Rothermel Jr.

Enclosures