

**EXHIBIT 1**  
**REQUEST FOR STA AND**  
**DESCRIPTION OF THE EXPERIMENT**

Ubiquiti Networks, Inc. (“Ubiquiti” or “Applicant”) seeks special temporary authority (“STA”) under Part 5 of the Commission’s Rules to conduct experiments to evaluate propagation in the 3-30 MHz band (the “HF Band”).<sup>1</sup> The STA is sought for a period of 180 days beginning not later than August 15, 2016. Consistent with the requirements set forth in Section 5.61 of the Commission’s Rules, 47 C.F.R. § 5.61, Ubiquiti outlines below its need for the requested STA and the compelling reasons why the STA should be granted expeditiously.

Ubiquiti develops innovative proprietary technologies, including high-performance wireless networking systems for service providers and enterprises, and is among the largest manufacturers of unlicensed U-NII and ISM band hardware. Its technology platforms focus on delivering highly advanced and easily deployable solutions that appeal to a global customer base in underserved and underpenetrated markets. Ubiquiti’s leading edge platforms include: airMAX™, UniFi™, airFiber™, airVision™, mFi™ and EdgeMAX™ which offer innovative technology, disruptive price performance, and the support of a global user community to eliminate barriers to connectivity, particularly in underpenetrated markets. Among other U.S. markets, Ubiquiti’s technologies have provided important wireless solutions for providers and users in rural and remote areas of the United States.

Ubiquiti continues to invest in the development of advanced wireless technologies that offer innovative wireless solutions in the face of soaring demand for wireless services, especially data services, and increasingly scarce spectrum resources. The testing that will be conducted under this requested authorization will advance Applicant’s research and development efforts and support continued innovation. Development of new communications technologies in the HF Band will serve the public interest and advance the Commission’s policies to promote wireless innovation and competition.

**1. Request for STA**

Applicant respectfully requests STA for a period of 180 days beginning not later than August 15, 2016. STA is required to permit Applicant to begin experimentation during the summer months, which is particularly vital to experimentation involving signal propagation in the HF Band due to higher noise levels in this spectrum caused by common summer electrical storms. Applicant expects to conduct experiments and assess propagation in all season conditions and hopes to include data from summer and late summer months in 2016. Moreover, developing and adjusting the prototype equipment in preparation for experimentation will require fair weather conditions to prevent damage to delicate internal system components and a mid-August start date will ensure sufficient time for equipment set up and adjustment without risk of winter weather, particularly important for the Barrington, IL and Rochester, NY sites.

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<sup>1</sup> Applicant has filed a conventional experimental application to permit it to continue experimentation under a 2-year experimental license. *See* File No. 0419-EX-PL-2016 (filed July 7, 2016).

## 2. Description of Experiment

Ubiquiti proposes to conduct the experimental transmissions at the following fixed locations:

<b>Location</b>	<b>Coordinates</b>
1250 S. Grove Ave. Barrington, IL	42°8'7.15" N, 88°7'58.41" W
271 Edgemoor Rd. Rochester, NY	43°7'55.81" N, 77°33'17.18" W

In addition, Ubiquiti proposes to conduct temporary, fixed transmissions using a portable station at points to be determined within a 50 km radius of the following locations:

<b>Location</b>	<b>Coordinates</b>
Morgantown, WV	39°37'46.2" N, 79°57'21.2" W
Knoxville, TN	35°57'38.2" N, 83°55'14.5" W
Charlotte, NC	35°13'37.6" N, 80°50'35.2" W
Omaha, NE	41°15'08.6" N, 95°59'52.8" W

The temporary, fixed locations noted above were selected based on their geography relative to the fixed locations in Barrington, IL and Rochester, NY. Applicant seeks to evaluate signal propagation with low power relative to other users in the HF Band and intends to operate with low duty cycle transmissions not to exceed 100 Watts and EIRP of 200 Watts in the frequency ranges proposed in Appendix A. Ubiquiti intends to test multiple waveforms and modulation schemes in each frequency band examined as further described in Exhibit 2- Technical Information. Applicant does not propose to supply station identification as set forth in Section 5.115 of the Commission's Rules.

Applicant recognizes that the frequency bands requested are allocated for licensed uses and that its proposed testing must operate on a secondary, non-interference basis. Applicant will endeavor to avoid interference by excluding from its requested frequencies those frequencies currently assigned to licensees (based on the Commission's available database) within a 50 kilometer radius of the center of the requested areas of operation, by using relatively low power transmissions, spectrum analysis, and listen-before-talk procedures prior to transmitting. Applicant's technical and stop buzzer contact information is provided below. While Applicant does not anticipate any harmful interference resulting from its operations, it will promptly address any reports of interference, discontinuing operations if necessary.

## **Contact Information**

### **Technical and Stop Buzzer Contact**

Lance Lascari  
RFdude.com  
271 Edgemoor Road  
Rochester, NY 14618 USA  
tel: (585) 857-9338  
email: [lance@rfdude.com](mailto:lance@rfdude.com)

### **Company Contact**

Greg Bedian  
Ubiquiti Networks  
1250 S Grove Ave  
Suite 100  
Barrington, IL 60010  
tel: (847) 387-6793  
email: [greg.bedian@ubnt.com](mailto:greg.bedian@ubnt.com)

## APPENDIX A - PROPOSED FREQUENCIES

Band (MHz)
3.05-3.18
4.000-4.063
4.435-4.65
4.75-4.85
5.06-5.13
5.2-5.45
6.765-7.0
7.4-7.46
7.50-7.75
8.10-8.195
9.04-9.80
9.9-9.995
10.15-11.175
11.4-11.6
12.1-12.23
13.41-13.57
13.87-14.0
14.35-14.99
15.8-16.36
17.41-17.48
18.03-18.068
18.168-18.80
18.87-18.900
19.02-19.99
20.01-21.0
21.450-21.850
22.18-23.2
23.35-24.89
25.20-25.33
25.550-26.175
26.950-26.960
27.41-28.0
29.7-29.890

**EXHIBIT 2**  
**TECHNICAL INFORMATION**

**Applicant Name:** Ubiquiti Networks, Inc.

**Applicant FRN:** 0017894585

**Contact Details**

<b>Name of Contact:</b>	Catherine Wang
<b>Contact Mailing Address:</b>	Morgan, Lewis & Bockius, LLP 2020 K Street, NW Washington, DC 20006 (202) 373-6037

**1. Technical Specifications**

<b>Transmitter Output Power</b>	100 W Peak
<b>Maximum Effective Isotropic Radiated Power (EIRP)</b>	200 W
<b>Necessary Bandwidth</b>	3 KHz
<b>Emissions</b>	F2D G2D
<b>Frequencies</b>	As listed in Appendix A to Exhibit 1
<b>Antenna</b>	Omnidirectional

**Note:** Other emission modes may be utilized, but in no event will the emissions extend beyond the frequency bands granted. All power levels will comply with the limits set forth in the FCC's rules, including those relating to human exposure to radiation.

**2. Proposed Locations**

As provided in the accompanying application, Ubiquiti proposes to conduct the experimental transmissions at fixed locations at its or its consultant's offices located at:

<b>Location</b>	<b>Coordinates</b>
1250 S. Grove Ave. Barrington, IL	42°8'7.15" N, 88°7'58.41" W
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As discussed in Exhibit 1, the temporary, fixed locations noted above were selected based on their geography relative to the fixed locations in Barrington, IL and Rochester, NY.

### **3. Equipment to be Used**

Ubiquiti proposes to conduct its experiments with a limited number of prototype units meeting the technical specifications described above. As specified in accompanying application, these antennas will include FlexRadio Systems (FLEX-6700); Elecraft (K3S); MFJ (G5RV); and Alpha Delta Communications Inc. (DX-CC); and may include other antennas affixed to prototype units with an EIRP not to exceed 200 Watts, to evaluate signal propagation in the HF Band. In all experiments, Ubiquiti will limit power and transmitting times to the minimum necessary to conduct its experiments. The antennas to be deployed will not extend more than 6 meters above the ground or manmade structure and all antennas will be installed and operated in accordance with FCC and FAA rules and regulations.