

From: Mark McHenry

To: Web Filer

Date: April 17, 2018

Subject: 0712-EX-ST-2018 pre-coordination data request

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Message:

Sirs,

Below is the FAA coordination.

Thanks,

--Mark

From: Thomas.Ahn@faa.gov [mailto:Thomas.Ahn@faa.gov]

Sent: Tuesday, October 31, 2017 11:54 AM

To: Mark McHenry

Cc: rodney.murphy@faa.gov; Todd Martin; donald.nellis@faa.gov

Subject: RE: Frequency Coordination Request

My mistake. The expiration date is 11/30/2019 for two-year experiment measurement.

Sincerely

Thomas Ahn (AJW-1C2)

FAA Spectrum Assignment and Engineering

202-267-4909

From: Mark McHenry [mailto:mark.mchenry@sharespectrum.com]

Sent: Tuesday, October 31, 2017 11:49 AM

To: Ahn, Thomas (FAA)

Cc: Murphy, Rodney (FAA) ; Todd Martin ; Nellis, Donald (FAA)

Subject: RE: Frequency Coordination Request

Thomas,

Can you change the dates to be from 12/15/2017 to 5/15/2018? We plan to deploy the measurement mid-December after we complete negotiating the site leases. We need to operate for a six-month period because we are investigating atmospheric ducting conditions. Ducting depends on the weather conditions, so we need to operate over a long period to investigate seasonable factors. Ducting is probabilistic, so we need to measure over long periods to obtain a statistically significant result.

Yes. We will wait until we get the FCC license before we begin transmitting.

Thanks,

--Mark

From: Thomas.Ahn@faa.gov [mailto:Thomas.Ahn@faa.gov]  
Sent: Tuesday, October 31, 2017 11:36 AM  
To: Mark McHenry  
Cc: rodney.murphy@faa.gov; Todd Martin; donald.nellis@faa.gov  
Subject: RE: Frequency Coordination Request

Mark

The following is the NG T numbers you may need to submit FCC for your license.

1371 MHz, NG T170729, Great River, NY, N 40 42 00 W 73 0932,  
1384 MHz, NG T170730, Great River, NY, N 40 42 00 W 73 0932,  
1371 MHz, NG T170732, Atlantic City, NJ, N 39 21 19 W 74 25 34  
1384 MHz, NG T170733, Atlantic City, NJ, N 39 21 19 W 74 25 34  
1371 MHz, NG T170734 Rodanthe, NC, N 35 36 01 W 75 27 56  
1384 MHz, NG T170737 Rodanthe, NC, N 35 36 01 W 75 27 56

I put the expiration date is 11/30/2017 which is enough to take experimental measurement, and also you need to have valid FCC license to begin transmission.

Sincerely  
Thomas Ahn (AJW-1C2)  
FAA Spectrum Assignment and Engineering  
202-267-4909

From: Mark McHenry [mailto:mark.mchenry@sharespectrum.com]  
Sent: Tuesday, October 31, 2017 9:50 AM  
To: Ahn, Thomas (FAA)  
Cc: Pham, Vu (FAA) ; Motley, James (FAA) ; Murphy, Rodney (FAA) ; Todd Martin ; Nellis, Donald (FAA)  
Subject: RE: Frequency Coordination Request

Thomas,

The transmitter equipment name is a Windfreak Technologies SynthNV 34MHz &ndash; 4.4GHz RF Signal Generator w/ Power Detector. We also use an external Mini-Circuits ZHL-42W+ power amplifier.

Thanks,

--Mark

From: Thomas.Ahn@faa.gov [mailto:Thomas.Ahn@faa.gov]  
Sent: Tuesday, October 31, 2017 9:38 AM  
To: Mark McHenry  
Cc: Vu.Pham@faa.gov; james.motley@faa.gov; rodney.murphy@faa.gov; Todd Martin; donald.nellis@faa.gov  
Subject: RE: Frequency Coordination Request

Mark

By reviewing your proposal, the FAA can approve 1371 and 1384 MHz.

Please provide transmitter equipment name.

Sincerely  
Thomas Ahn (AJW-1C2)  
FAA Spectrum Assignment and Engineering  
202-267-4909

From: Mark McHenry [mailto:mark.mchenry@shedspectrum.com]  
Sent: Thursday, October 19, 2017 10:52 AM  
To: Ahn, Thomas (FAA)  
Cc: Pham, Vu (FAA) ; Motley, James (FAA) ; Murphy, Rodney (FAA) ; Andres.CTR.Rosa@faa.gov; Todd Martin  
Subject: Frequency Coordination Request

Sirs,

We were asked by the FCC to coordinate our frequency use with you. This frequency coordination document was prepared by Shared Spectrum Company (SSC) for the FAA to obtain an FCC approval for an experimental Special Temporary Authority (STA), File Number: 1527-EX-ST-2017. SSC desires to operate an experimental communications system at the frequencies 1358.00000000 MHz, 1371.00000000 MHz, and 1384.00000000 MHz for a several month period (starting December 2017) at three locations along the east coast of the United States. The transmitter EIRP is 5 watts, the antenna is less than 5 meters above the ground, and the emissions is CW (&lt;10 Hz BW). Additional details are in the attached memo. This is in support of a DoD project (DARPA Anomalous Propagation Communications System (APCS), Proposal Title: Long Link Range Maritime Communications, Contract Number: D17PC00411).

An STA is needed to determine the performance of an experimental radio system and to conduct scientific investigations of ducting phenomena. Our radio system purposes are:

- Develop and demonstrate innovative methods to increase the distance and predictability of maritime surface-to-surface and air-to-surface communications
- Show that that our networking algorithms work and that the system provides the link range connectivity needed for the DoD mission.

The scientific investigations purposes are to obtain a better understanding of ducting phenomena which will lead to:

- Improved prediction of anomalous radio propagation
- Allow for better spectrum planning/use for a range of maritime and airborne applications
- Allow for better interference avoidance and enforcement.

The primary application is to for national defense purposes, although there are potential commercial applications. These tests support the public good because they provide validation of new communications technology that is critical for national defense and commercial applications.

Ducting potentially effects FAA radar operations. We would be happy to provide our ducting measurement data to the FAA.

--Mark

Mark McHenry  
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703 462 6943 (direct)  
703 862 7495 (mobile)