

Laverentz, Jennifer

Subject: FW: Consent requested for FCC STA request for the University of Kansas

From: WENGRYNIUK, JOHN J [mailto:jw0854@att.com]

Sent: Monday, March 27, 2017 9:18 AM

To: Laverentz, Jennifer <jenlav@ku.edu>

Subject: RE: Consent requested for FCC STA request for the University of Kansas

Jennifer,

Given that, I can confirm that DIRECTV has no objection to this experimental license and offers its consent. I assume that this e-mail trail will satisfy the FCC requirement mentioned below.

Good luck with your testing.

Regards,

Jack Wengryniuk

Sr. Director

Spectrum Management and Regulatory Affairs

DIRECTV

From: Londono, Jaime
To: [Arnold, Emily J](#); [Laverentz, Jennifer](#)
Cc: [Rodriguez-Morales, Fernando](#)
Subject: RE: Consent requested for FCC STA request for the University of Kansas
Date: Monday, April 17, 2017 10:56:27 AM

Good morning Emily,

After our review of the material and our meeting on this matter EchoStar hereby grants its consent provided the following conditions are met:

The test are performed in accordance with the transmission parameters as detailed in the license application and documents discussed including adherence to a) the transmit power levels, b) the performance of the transmit antenna.

EchoStar understands that the duration of the tests will be for a period of 6 months.

In the unlikely event that interference is experienced by a DTH customer receiving transmissions from an EchoStar satellite, University of Kansas, UK, will immediately cease all test being performed under this license upon notification by EchoStar. UK may commence the testing once a resolution is found for the interference, which shall be agreed to by EchoStar and UK.

Please feel free to contact me with any questions.

Best regards,

Jaime Londono

VP Advanced Programs and
Spectrum Management

EchoStar Satellite Services L.L.C.

From: David Weinreich
To: [Laverentz, Jennifer](#)
Subject: RE: Consent requested for FCC STA request for the University of Kansas
Date: Tuesday, April 11, 2017 1:46:01 PM
Attachments: [image001.png](#)

Jennifer,

I don't need anything further. Please consider this e-mail as approval from Globalstar to proceed with your tests.

I would appreciate being notified when your tests are completed.

Thank you.

Best regards,
David Weinreich



David Weinreich | Director, Spectrum & Regulatory Engineer
20146 Beach Cliff Blvd. | Rocky River, OH 44116
(OFFICE) [1-216-767-5091](tel:1-216-767-5091)
(EMAIL) David.Weinreich@globalstar.com



From: Laverentz, Jennifer [<mailto:jenlav@ku.edu>]
Sent: Tuesday, April 11, 2017 1:54 PM
To: David Weinreich
Subject: RE: Consent requested for FCC STA request for the University of Kansas

David,

Just wanted to follow up and see where we are. Our extension from the FCC will expire soon. Please let me know if there is anything further that I can provide.

Thanks

Jennifer

From: David Weinreich [<mailto:David.Weinreich@globalstar.com>]
Sent: Wednesday, March 8, 2017 4:13 PM
To: Laverentz, Jennifer <jenlav@ku.edu>
Subject: RE: Consent requested for FCC STA request for the University of Kansas

From: Blitz, James
To: Laverentz, Jennifer
Subject: RE: Consent requested for FCC STA request for the University of Kansas
Date: Thursday, March 9, 2017 10:20:36 AM

Ms. Laverentz - Sirius XM has no objection to this request. Please let me know if you need anything further.

Jim Blitz, V.P., Regulatory Counsel
1500 Eckington Place, NE
Washington, DC 20002
202-380-1383



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From: Laverentz, Jennifer [mailto:jenlav@ku.edu]
Sent: Wednesday, March 8, 2017 3:11 PM
To: Blitz, James <James.Blitz@siriusxm.com>
Subject: Consent requested for FCC STA request for the University of Kansas

Dear James,

The Center for Remote Sensing of Ice Sheets at The University of Kansas is in the process of applying for a special temporary authority (STA) with the Federal Communication Commission (FCC). As part of this process, we have been asked to obtain permission from your company.

We propose to operate a UAV (Unmanned Aerial Vehicle) radar system during test flights (1-4 hours each flight) between April 1, 2017 and October 1, 2017, near the Perry Lake Area – Oskaloosa Kansas (Lat.: 39.1489 long: -95.4257), with a nominal altitude no higher than 500 feet AGL and a radius of 1 km. We are integrating our miniaturized 2-18 GHz radar on to Pulse Aerospace's Vapor 55 Helicopter UAV (<http://www.pulseaero.com/uas-products/vapor-55>).

The effective radiated power (ERP) will not exceed .1 W peak for 2-18 GHz. For 2 - 18 GHz, the signal is an FMCW (frequency modulated continuous wave) radar signal with a pulse width of 192 μ s, duty cycle of 96%, and a pulse repetition frequency of 5 kHz. The primary emission designator is 16G0Q3N for 2 - 18 GHz.

The FCC is requiring a consent letter/email before they will proceed with our application.

Please feel free to contact me via email or at the number below.

From: Minea, Alison
To: [Laverentz, Jennifer](#)
Cc: [Sorond, Mariam](#); [Pathania, Amit](#); [Kim, John Y](#)
Subject: RE: Consent requested for FCC STA request for the University of Kansas
Date: Monday, April 17, 2017 3:48:31 PM
Attachments: [UniversityofKansas_DISH.KMZ](#)

Dear Ms. Laverentz,

This email responds to your email of March 8, 2017 to Mariam Sorond.

DISH Network L.L.C. ("DISH") consents to The University of Kansas ("KU") use of the 12.2-12.7 GHz band for radio transmission for the April 1 to October 1, 2017 duration at Perry Lake Area – Oskaloosa Kansas (Lat.: 39.1489 long: -95.4257) on following conditions:

1. The aircraft will operate at AGL below 100 ft (30 meters) and maintain an operating radius of up to 1640 ft (500m). Maximum transmit power will be 0dBm.
2. The radar will use 500 microsecond pulse and chirp only for 240 microseconds.
3. The helicopter drone will avoid flying in the exclusion zones as given in UniversityofKansas_DISH.kmz file attached to this email.
4. KU further agrees to:
 - a. No testing in the exclusion zone (attached). This means that the helicopter/radar equipment cannot fly over the excluded area in active testing mode.
 - b. Suspend testing if DISH indicates that testing impacted subscribers' experience, and work with DISH to revise parameters to resume testing.
 - c. Suspend testing if new subscribers are added during the testing period, and work with DISH to revise parameters to resume testing.

Please contact us if you have questions or would like to discuss further.

Sincerely,

Alison Minea

Alison A. Minea
Director & Senior Counsel, Regulatory Affairs
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Begin forwarded message: