

From: [Joseph A. Godles](#)
To: [Smith, William T.](#)
Cc: [Joseph A. Godles](#)
Subject: RE: General Submission: William Smith
Date: Friday, July 24, 2020 6:03:46 PM

CAUTION: External Sender

You should be okay at 50-60 km, too.

I did not contact Mr. Ghaffari or see a need to. But within the conditions we have been discussing, you should not have to seek experimental authority.

From: Smith, William T. <william.smith@uky.edu>
Sent: Friday, July 24, 2020 4:50 PM
To: Joseph A. Godles <JGodles@g2w2.com>
Subject: RE: General Submission: William Smith

Thank you for your patience, working with a space license rookie. Once the capsules are released from their housing (approx.. 50-60 km), power will be applied to the Iridium modem (NAL Research modem and antenna) and data collection will begin. Our first Iridium data transmission will occur when it reaches the 20-30 km altitude. What are your thoughts about the modem being on above 20-30 km, even though we won't be transmitting data our data in that "gray" 30 km space after powering up? Would we still require a space-to-space license for that region?

BTW, did you contact Behnam Ghaffari?

Thanks again and have a good weekend - Bill

William T Smith, Associate Professor
Dept of Electrical and Computer Engineering
(859) 257-1009

From: Joseph A. Godles <JGodles@g2w2.com>
Sent: Friday, July 24, 2020 1:31 PM
To: Smith, William T. <william.smith@uky.edu>
Cc: Joseph A. Godles <JGodles@g2w2.com>
Subject: RE: General Submission: William Smith

CAUTION: External Sender

Thanks for your patience.

As long as you will be using a type-approved Iridium transceiver, no experimental authority should be necessary for you or Iridium. The FCC considers the 20-30 km altitude at which you will be operating to be part of the Earth, not space, and so operations are covered by Iridium's blanket

mobile earth station license. Experimental authority is required at higher altitudes that are in space, such as when an Iridium transceiver is on a smallsat, because Iridium's blanket license does not authorize space-to-space communications.

From: Smith, William T. <william.smith@uky.edu>

Sent: Thursday, July 23, 2020 11:04 PM

To: Joseph A. Godles <JGodles@g2w2.com>

Subject: Re: General Submission: William Smith

Behnam Ghaffari. Their email is Behnam.Ghaffari@fcc.gov

From: "Joseph A. Godles" <JGodles@g2w2.com>

Date: Thursday, July 23, 2020 at 6:48 PM

To: "Smith, William T." <william.smith@uky.edu>

Subject: RE: General Submission: William Smith

CAUTION: External Sender

Who have you been dealing with at the FCC?

From: Smith, William T. <william.smith@uky.edu>

Sent: Thursday, July 23, 2020 3:27 PM

To: Joseph A. Godles <JGodles@g2w2.com>

Subject: RE: General Submission: William Smith

Hello again Joe,

Hope all is well. Just checking in to see if you need any more information from me or have any questions about our project. In response to a question from the FCC, I have to submit a document next week on our radio control system in support of our license application. I will include any updates on your companion license application if there are any available. Thanks for your time and help.

Regards - Bill

William T Smith, Associate Professor
Dept of Electrical and Computer Engineering
(859) 257-1009

From: Smith, William T.

Sent: Thursday, July 9, 2020 3:23 PM

To: Joseph A. Godles <JGodles@g2w2.com>

Subject: RE: General Submission: William Smith

Hey Joe,

We are applying for a Special Temporary Authorization. The scheduled launch is 2/1/21. On my

application, that is the date I requested as the start of STA. This is my first time requesting a license from the FCC (other than my ham license). I was unaware that I needed Iridium to also apply until I got a response from the FCC about my application.

The overall goal of the project is to collect various re-entry data pertaining to thermal protection materials and to compare to computer models. We will be deploying three small non-orbiting capsules from a vehicle returning from the ISS. We are deploying three for redundancy and to test different materials.

Attached is a document I submitted to the FCC to describe the project. During descent, the capsules will be ejected from a return vehicle at around 50-60 km altitude when it breaks up. By the time our capsules power up, they will be around 20-30 km altitude before sending any Iridium transmissions. The capsules will continue to transmit until at least splashdown. If they survive splashdown, the transmissions could continue a little longer, until the batteries run out of power.

Take a look at the attached and please let me know what else you need from me.
Thanks - Bill

William T Smith, Associate Professor
Dept of Electrical and Computer Engineering
(859) 257-1009

From: Joseph A. Godles <JGodles@g2w2.com>
Sent: Thursday, July 9, 2020 12:35 PM
To: Smith, William T. <william.smith@uky.edu>
Subject: RE: General Submission: William Smith

CAUTION: External Sender

I can put together a list of questions.

But first it would be helpful to have a few basics. When will the test occur and by when would an FCC authorization need to be in place?

Also, what do you mean by a "test platform"? Are we talking about a launch vehicle or a satellite? And if a launch vehicle, or even a satellite if we are only talking about the period when the atmosphere is being re-entered, at what altitude(s) would transmissions occur in the Iridium band?

From: Smith, William T. <william.smith@uky.edu>
Sent: Wednesday, July 8, 2020 5:15 PM
To: Joseph A. Godles <JGodles@g2w2.com>
Subject: RE: General Submission: William Smith

Hello Joe,
Thanks for the prompt reply. What do you need from me to process the application on your end?

Regards - Bill

William T Smith, Associate Professor
Dept of Electrical and Computer Engineering
(859) 257-1009

From: Joseph A. Godles <JGodles@g2w2.com>
Sent: Wednesday, July 8, 2020 12:18 PM
To: Smith, William T. <william.smith@uky.edu>
Cc: Maureen McLaughlin <Maureen.McLaughlin@iridium.com>
Subject: General Submission: William Smith

CAUTION: External Sender

Greetings.

I am outside FCC counsel to Iridium, and Maureen McLaughlin, copied here, is Iridium's Vice President, Public Policy. Maureen and I have handled Iridium's side of a number of these projects and can be your points of contact.

Joe Godles

From: iridium.online@iridium.com <iridium.online@iridium.com>
Sent: Tuesday, July 7, 2020 3:36 PM
To: Iridium Online <Iridium.Online@iridium.com>; Michelle Lawrence <Michelle.Lawrence@iridium.com>; Ariana Bahrami <Ariana.Bahrami@iridium.com>
Subject: General Submission: William Smith

NAME: **William Smith**

QUESTION/COMMENT: **I am a professor at the University of Kentucky and am involved in a NASA sponsored project. It involves a test platform to study atmospheric re-entry thermal protection systems. I am applying for an FCC license for our Iridium transmitters and was informed that Iridium also needs to apply for a companion license. I need contact information at Iridium Communications Inc. so that I may facilitate that process. Please have someone contact me about the licensing request. Thanks - Bill Smith**

ENTRY ID: **53060**

Topic of Interest
General Inquiry
First Name
William
Last Name
Smith

City, State/Province, Country

Lexington, KY
United States
[Map It](#)

Telephone

8594925606

Email

william.smith@uky.edu

Line of Business

- Other

Questions, Comments & Concerns

I am a professor at the University of Kentucky and am involved in a NASA sponsored project. It involves a test platform to study atmospheric re-entry thermal protection systems. I am applying for an FCC license for our Iridium transmitters and was informed that Iridium also needs to apply for a companion license. I need contact information at Iridium Communications Inc. so that I may facilitate that process. Please have someone contact me about the licensing request. Thanks - Bill Smith

Consent

- I acknowledge that my personal information will be used by Iridium as explained in Iridium's [Privacy Policy](#), and consent to receiving marketing communications from Iridium about products and services that may be interest to me. I can withdraw my consent to receiving marketing communications at any time by Unsubscribing using a link provided in such emails or by sending my request to iridium.online@iridium.com.