# Narrative

Anduril Industries, Inc. seeks experimental authority to evaluate the Teledyne FLIR R20SS V2 radar (the "Teledyne FLIR radar") using frequencies in the 9.3-9.5 GHz band at the University of Arizona Tech Park Arizona System Integration Lab range in Tucson, Arizona. Experimental authority would allow Anduril to test the radar's detection and tracking system used for force protection and border surveillance and protection.

## 1) Company Background

Anduril Industries, Inc.'s address and FCC Registration Number are as follows:

Anduril Industries, Inc.
1375 Sunflower Avenue
Costa Mesa, CA 92626
FRN: 0028824514

Anduril is a private, for-profit engineering company devoted to technology development for security and defense applications by the U.S. Government. Approximately 80% of Anduril's business is for the U.S. Government.

## 2) Need for Experimental Authority

Anduril seeks experimental authority to operate one Teledyne FLIR radar at the Arizona System Integration Lab range for system performance evaluation. Anduril will assess the Teledyne FLIR radar's ability to detect, track, and identify airborne targets and report target information to a local command-and-control system.

Grant of experimental authority would allow Anduril to support observation, monitoring, and evaluation of the devices and operating parameters throughout the two-year duration of the experiment. A term of two years will offer flexibility should issues with inclement weather, variations in government travel requirements, or other logistical problems arise.

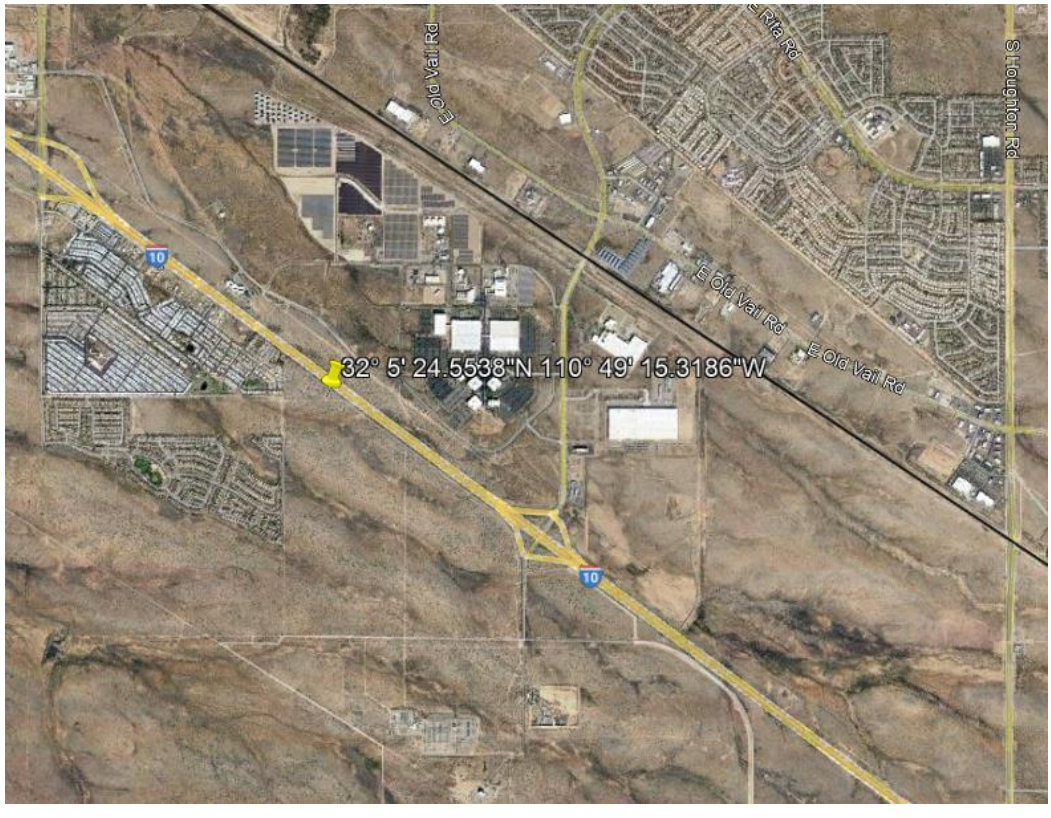
The following table summarizes the proposed frequencies of use and other key operating parameters that Anduril seeks to add to the existing experimental license.

| Equipment | Frequency Range (GHz) | Station Class | Output Power / ERP | Frequency Tolerance | Emission Designators | Modulation Signal |
|---|---|---|---|---|---|---|
| Teledyne radar | 9.3-9.5 | Fixed | 25 W (Output Power) | .0005% | 92M0F3N<br>46M0F3N | FM Continuous Wave |

### 3) Station Location

Anduril seeks authority to operate radiocommunication equipment at a test range at the Arizona System Integration Lab range. The range is a research and development complex in Tucson, Arizona. An image of the site appears below; the proposed station location is identified by a yellow pin in the image.

Station Location: 32° 5' 24.5538"N 110° 49' 15.3186"W



## 4) Request for Waiver of Station Identification Requirements

Anduril requests a waiver of the station identification requirements in section 5.115 of the Commission's rules.[1] Grant of the requested waiver will promote the public interest by allowing Anduril to determine the capabilities and most effective operating settings of the antennas and associated equipment involved in this experiment.

## 5) Frequencies Requested

Anduril seeks authority to use the 9.3-9.5 GHz band on a temporary, unprotected, non-interference basis within a two-kilometer radius of the site location.

## 6) Power Levels

Anduril will operate with the minimum necessary power to conduct its operations and will not exceed the power levels specified in this application.

## 7) Type of Emission, Modulation Technique, and Bandwidth Required

Anduril will operate with the emissions, modulation techniques, and frequency ranges specified in this application. If other emission modes and modulation techniques are used, in no event will the emissions extend beyond the frequency bandwidths or bands requested.

## 8) Duty Cycle

Anduril will use all radars on an intermittent basis. Testing of the Teledyne radar will occur for a period of 10 hours or less during any 24-hour period. Anduril understands that other stations may be licensed on the channels Anduril has requested. If any interference occurs, Anduril will discontinue its operations or take other immediate steps to resolve the interference.

## 9) Safety

Anduril will comply with all Federal Aviation Administration ("FAA") and FCC rules and regulations regarding the installation and operation of antennas and their support structures. Anduril has analyzed the proposed operations using the Commission's TOWAIR database, which identified the site and structure as more than five miles distant from the nearest airport and not subject to a registration requirement. All power levels will

[1] *See* 47 C.F.R. § 5.115(a).

comply with the limits set forth in the FCC's rules, including those relating to human exposure to radiofrequency radiation. In addition, all personnel who will operate the equipment are knowledgeable as to the effects of radiofrequency energy and will have the ability to control their exposure.

## 10) Interference Protection

Anduril recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized facilities. Anduril also recognizes that its proposed operations may require coordination not only with the Interdepartment Radio Advisory Committee ("IRAC") of the National Telecommunications and Information Administration ("NTIA"), but also with existing non-Federal government licensees authorized on the proposed frequencies of operation. Anduril will fully coordinate and operate on a non-interference, unprotected basis with anyone affected or reasonably likely to be affected by its proposed operations.

Anduril's experimental operations are unlikely to cause interference. Anduril's operations will be conducted on a limited basis. Anduril will also limit the power and transmitting times of the proposed operations to the minimum necessary to conduct its evaluations. Should interference occur, Anduril will take immediate steps to resolve the interference.

## 11) Restrictions on Operation

Anduril recognizes that permission to operate under FCC experimental authority confers no long-term rights. Anduril does not propose to market, sell, or lease equipment to end users or conduct a market trial in conjunction with this test.

## 12) Technical and "Stop Buzzer" Contact Information

Jeff Oleen is the technical point of contact for this request, and he will serve as the "stop buzzer" if operations must be terminated because of any interference concerns. His contact information is as follows:

Jeff Oleen
Senior Manager, c-Intrusion
Anduril Industries, Inc.
1375 Sunflower Avenue
Costa Mesa, CA 92626
Telephone: 301-221-2632
Email: joleen@anduril.com

## 13) Conclusion

Granting experimental authority for this application would allow Anduril to enhance the radar detection and tracking systems it is developing to protect public assets and personnel from hostile and threatening activity. The experiments would serve to improve location data and allow for better, more timely, and more detailed information about airborne threats to infrastructure and aviation. For the foregoing reasons, Anduril requests expeditious grant of this application.